Development, Implementation and Evaluation of a Cognitive Behavioural Therapy Based Intervention Programme for the Management of Anxiety Symptoms in South African Children with Visual Impairments

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Dissertation presented for the degree of Doctor of Philosophy in the Department of Psychology, Faculty of Arts and Social Sciences at Stellenbosch University

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December 2016

Declaration

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Date: December 2016

Abstract

Anxiety is the most common psychological problem reported by children and adolescents. Anxiety is even more common in children with visual impairments. If anxiety symptoms occur and are left untreated, this may result in negative consequences. Promising is that Cognitive behaviour therapy (CBT) interventions have proven successful in treating childhood anxiety. However, most existing CBT-based anxiety intervention programmes are not suitable for use with children with visual impairments, as their content (i.e., cartoons, colouring-in pictures, workbook and visual-based activities) are not very accessible to this specific population.

Therefore, the present study was motivated by the dearth of research on this topic and the study aimed to develop, implement and evaluate a specifically tailored anxiety intervention programme which could be used with South African children who have visual impairments.

A randomised wait-list control group design with pre-, post- and follow-up intervention measures was employed. The final sample of 52 assenting children (aged 9-13) with varying degrees of visual impairment from two special schools in the Western Cape were delivered the anxiety intervention (PAM programme). Participants were randomly allocated to either an immediate intervention group (IIG) (*n* = 27) or a delayed intervention group (DIG) (*n* = 25) at each of the two schools. Participants were followed over a course of ten months during which participants' anxiety symptoms were assessed quantitatively at four time points (T1-T4). All children were administered a short biographical questionnaire and two anxiety measures including the 30-item Revised Child Anxiety and Depression Scale (RCADS-30) and the Penn State Worry Questionnaire for Children (PSWQ-C). The administration of these measures was adapted according to the participant's degree of visual impairment. Qualitative data pertaining to the accessibility and feasibility of the PAM programme were also gathered.

In terms of the main outcome measure, contrary to what was expected, initial statistical results indicated that the PAM programme did not bring about a significant reduction in symptoms of anxiety within the sample of children with visual impairments. More specifically, anxiety scores on the RCADS-30 and PSWQ-C yielded non-significant outcomes throughout, as neither significant between-group nor within-group effects were noted for the IIG (*n* = 27) or DIG (*n* = 25) at any of the four times of testing (T1-T4).

However, although desired intervention effects were not obtained, the programme showed promise in terms of preventive effects, as no participant who reported sub-clinical symptoms of anxiety at T1 had moved to within the clinical range at T4. Thus, although this was not statistically determined, it seems that exposure to the PAM programme prevented an increase in anxiety symptoms. The qualitative data revealed that both participants ($N = 52$) and research facilitators ($n = 3$) deemed the accessibility of the PAM programme to be acceptable. It appears that it was feasible to deliver the PAM programme at the two special schools. However, good infrastructure, discipline, organisation and routine play an important role to make the implementation of the programme much easier. In conclusion, a critical review of the present study and recommendations for future research are provided.

Keywords: anxiety, prevention, cognitive behaviour therapy en children with visual impairment

Opsomming

Angs is die mees algemene sielkundige probleem wat deur kinders en adolessente gerapporteer word. Angs is selfs meer algemeen by kinders met visuele gestremdhede. Indien angssimptome aanwesig is en nie behandel word nie, mag dit negatiewe gevolge hê. Dit is egter belowend dat kognitiewe gedragsterapeutiese intervensies suksesvol bewys is vir die behandeling van angs by kinders. Die meeste angsintervensie programme, gebaseer op kognitiewe gedragsterapie, is vanweë die inhoud daarvan (byvoorbeeld tekenprentjies, inkleurprentjies, werkboeke en visueel-gebaseerde aktiwiteite) egter nie toeganklik vir hierdie spesifieke populasie van kinders met visuele gestremdhede nie.

Die huidige studie is dus gemotiveer deur die gebrek aan navorsing oor hierdie onderwerp en het die ontwikkeling, implementering en evaluering van ʼn angsintervensieprogram wat spesifiek op Suid-Afrikaanse kinders met visuele gestremdhede toegespits is, ten doel gehad.

Daar is van ‘n toevallige waglys- kontrolegroepontwerp met pre-, post-, en opvolg - intervensiemaatreëls gebruik gemaak. Die angsintervensieprogram (PAM program) is geïmplementeer met ‘n finale steekproef van 52 instemmende kinders (tussen die ouderdommevan 9-13 jaar), met verskeie grade van visuele gestremdhede, verbonde aan twee spesiale skole in die Wes-Kaap. Die deelnemers by elk van die twee skole is toevallig toegedeel tot ʼn onmiddellike intervensiegroep (IIG) (*n*=27) en ʼn uitgestelde intervensiegroep (DIG) (*n*=25). Die deelnemers is oor ʼn tydperk van tien maande opgevolg waartydens hulle angssimptome oor die tyd by vier toetstydgeleenthede (T1-T4) kwantitatief geassesseer is. Die deelnemers het ʼn kort biografiese vraelys sowel as twee angsmeetmiddels, insluitende die 30-item Revised Child Anxiety and Depression Scale (RCADS-30) en die Penn State Worry Questionnaire for Children (PSWQ-C) voltooi. Die voltooiïngsproses van hierdie vraelyste is aangepas in ooreenstemming met die betrokke deelnemer se graad van visuele gestremdheid. Kwalitatiewe data met betrekking tot die toeganklikheid en die uitvoerbaarheid van die PAM program is ook ingesamel.

In teenstelling met die verwagting wat die hoofuitkomste meting betref, het aanvanklike statistiese resultate aangedui dat die PAM program nie ʼn beduidende vermindering in angssimptome binne die steekproef van kinders met visuele gestremdhede tot gevolg gehad het nie. Meer spesifiek, tellings wat angsvlakke volgens die RCADS-30 en die PSWQ-C aandui, het deurgaans onbeduidende uitkomste gelewer, aangesien beduidende effekte nóg tussen-groep, nóg binne-groep aangeteken is vir die onmiddellike intervensiegroep (*n*=27) of die uitgestelde intervensiegroep (*n*=25) by enige van die vier toetstydgeleenthede (T1-T4). Hoewel die verlangde intervensie effekte nie verkry is nie, het die program egter belofte getoon wat voorkomende effekte betref, aangesien geen deelnemers wat sub-kliniese angssimptome by T1 aangedui het, tot binne die kliniese skaalwydte beweeg het teen T4 nie. Dus, hoewel dit nie statisties bepaal is nie, blyk dit dat blootstelling aan die PAM program ʼn verergering van angssimptome voorkom het. Die kwalitatiewe data het getoon dat beide die deelnemers (*N*=52) en die navorsingsfasiliteerders (*n*=3) die PAM program se toeganklikheid as aanvaarbaar beskou het. Dit blyk dat dit wel uitvoerbaar was om die PAM program aan te bied by beide die twee skole. Goeie infrastruktuur, dissipline, organisasie en roetine speel egter ‘n belangrike rol om die implementering van die program heelwat te vergemaklik. Ter afsluiting word ʼn kritiese oorsig oor die studiegebied asook aanbevelings vir toekomstige navorsing gemaak.

Trefwoorde: angs, voorkoming, kognitiewe gedragsterapie en kinders met visuele gestremdhede.

Acknowledgements

This research could only have been completed with the assistance of many others, and I would like to express my sincere gratitude and appreciation to the following people:

- Pieter, my partner and constant, for his continuous support, love and encouragement. Thank you for always listening and being willing to help whenever I needed you.
- Prof Helene Loxton and Prof Leslie Swartz, my supervisors. Thank you for your expert guidance, direction and continuous support throughout the process of completing my dissertation. I look forward to continue working with you both in the future.
- To all the participants who took part in the PAM programme. Thank you for your time and enthusiasm; without your help this study would not have been possible.
- To Ms Marita Meiring, Dr John Philander and Ms Zoleka Klaas, the contact persons at the two schools. Thank you for answering all my e-mails and phone calls, and for all your help regarding the organisation and logistical aspects of the study. Without your support this research would not have been possible.
- The research assistants Michelle, Andrea and Olivia who assisted during the process of data collection and capturing. Thank you for your time, patience and invaluable contributions.
- Mr Henry Steel, for his insights and help relating to the statistical analysis and interpretation of results. Thank you for your willingness to help and your un-ending patience.
- My friend Doret Jordaan, thank you so much for your ongoing support and motivation and also for reading my final document and your help with the translation of the consent documents and the abstract.
- Prof Paul Stallard from Bath University. Thank you for your insightful and invaluable contributions and enthusiasm regarding my study.
- Prof Wendy Silverman from Yale University’s Child Study Centre. Thank you for your contributions to this study and for hosting me from September to December 2013 and making me feel so welcome in New Haven.
- Marli Lyon who offered her creative and artistic expertise to bring the PAM metaphor and PAM manual to life.

- Pippa, Meagan and Jonathan at the Stellenbosch University braille office. Thank you so much for all your help with various administrative and logistical aspects of my thesis. It was very reassuring to know that your door was always open and a helping hand was always available.
- Jacqueline Gamble and Marieanna le Roux for their help relating to the technical and grammatical aspects of my thesis.
- Joan, my fellow PhD candidate and friend, thank you for your continuous support and words of encouragement.
- And last, but certainly not least, to my friends and family, thank you for your love, words of encouragement, continued support and interest in my work.

Financial Acknowledgement

The financial assistance of the National Research Foundation (NRF), South Africa, The Ernst and Ethel Eriksen trust, Stellenbosch University merit bursary, Blind SA as well as the Fulbright scholarship programme towards this research is hereby acknowledged. Opinions expressed and conclusions arrived at are those of the authors and are not necessarily to be attributed to the NRF, Eriksen Trust or the Fulbright scholarship programme.

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List of Abbreviations Used

ADHD	Attention deficit hyperactivity disorder
APA	American Psychological Association
CBT	Cognitive behaviour therapy
CPT	Cognitive parent training
CR	conditioned response
CS	conditioned stimulus
DIG	Delayed intervention group
DSM-IV	Diagnostic and statistical manual of mental disorders 4th edition
FEAR (mnemonic)	F = Feeling frightened
	E = Expecting bad things to happen
	A = Attitudes and actions to help, and
	R = Results and rewards
FESA	F = Ffamily-based education, support and attention
FINE (mnemonic)	F = Feeling scared?
	I = Inner thoughts
	N = New helpful thoughts and plans
	E = Evaluate and reward
FRIENDS (mnemonic)	F = Feeling worried?
	R = Relax and feel good;
	I = Inner thoughts;
	E = Explore plans of action;
	N = Nice work, reward yourself!;
	D = Don't forget to practice; and
	S = Stay cool and calm!
FSSC-SA	South African Fear Survey Schedule for Children
FSSC-R	Fear Survey Schedule for Children Revised
GAD	Generalised anxiety disorder
GCBT	Group-based cognitive behaviour therapy
ICBT	Individual cognitive behaviour therapy
IIG	Immediate intervention group
NS	neutral conditioned stimulus
OCD	Obsessive compulsive disorder

OSSA	Ophthalmological Society of South Africa
PACES	Preventing Anxiety in Children through Education in Schools
PAM	Positive And Motivating
PTSD	Post-traumatic stress disorder
QEIPAP	Queensland Early Intervention and Prevention of Anxiety Project
RCADS-30	Revised Child Anxiety and Depression 30-item Scale
RCMAS	Revised Child Manifest Anxiety Scale
RCT	Randomised controlled trial
SAD	Separation anxiety disorder
SCARED-R	Screen for Child Anxiety Related Disorders-Revised
SCAS	Spence Children's Anxiety Scale
SDQ	Strengths and Difficulties Questionnaire
SPSS	Statistical Package for the Social Sciences
T1	Testing time 1
T2	Testing time 2
T3	Testing time 3
T4	Testing time 4
UCR	unconditioned response
UCS	unconditioned unpleasant stimulus
UN	United Nations
UNCRPD	United Nations Convention on the Rights of Persons with Disabilities
WHO	World health organisation
WLC	Wait list control group
ZPD	Zone of proximal development

Papers and Conference Presentations

The following papers and conference presentations have emanated from this dissertation:

Visagie, L., Loxton, H., Stallard, P., & Silverman, W. K. (in press). Insights into feelings, thoughts and behaviours from children with visual impairments: A focus group study prior to adapting a CBT-based anxiety intervention. *Journal of Visual Impairment and Blindness*.

Visagie, L., & Loxton, H. (2015, July). *Perceptions on feelings, thoughts and behaviours relating to anxiety from children with visual impairments.* Paper presented at the 14th European Congress of Psychology, Milan, Italy.

Visagie, L., Loxton, H., & Silverman, W. K. (2015). Research protocol: Development, implementation and evaluation of a cognitive behavioural therapy based intervention programme for the management of anxiety symptoms in South African children with visual impairments. *African Journal of Disability*, *4*(1), 160-170.

Visagie, L., Loxton, H., & Stallard, P. (2015, July). *Meet PAM: Using the metaphor of a guide dog to 'guide' children with visual impairments through a CBT-based anxiety intervention programme.* Poster presented at the 10th International Conference on Child and Adolescent Psychopathology, Roehampton, London.

CHAPTER 1: INTRODUCTION

Chapter One provides a general introduction to the present study; thereafter the motivation for and significance of the study is discussed. The research question and aims are noted briefly, key concepts are defined, and the chapter concludes with a chapter-by-chapter outline of the organisation of the dissertation.

1.1 Introduction to and motivation for the present study

A substantial body of literature which indicates that anxiety in childhood presents a serious mental health problem has now been amassed (Barrett & Turner, 2001; Muris & Broeren, 2009). Firstly, anxiety is one of the most common psychological complaints that children and adolescents report (Barrett & Sonderegger, 2005; Cartwright-Hatton, McNicol, & Doubleday, 2006; Dadds, Spence, Holland, Barrett, & Laurens, 1997). A recent meta-analytic prevalence study indicated that an average of 12% of school-aged children (aged 6-12) experience significant symptoms of anxiety (e.g., Costello, Mustillo, Erkanli, Keeler, & Angold, 2003; Costello, Egger, Copeland, Erkanli, & Angold, 2011; Heiervang et al., 2007; McArdle, Prosser, & Kolvin, 2004; Mullick & Goodman, 2005; Petersen, Bilenberg, Hoerder, & Gillberg, 2006). Over and above these high prevalence rates, various authors (Liddle & Macmillan, 2010; Stallard, 2010) noted that many more children experience symptoms of anxiety which fall below (sub-threshold) the clinical cut-off for a formal anxiety diagnosis, but which are none the less still significant.

Secondly, although it is expected that children will experience transient fears and anxieties as part of normal development, for a significant majority of children these “normal” experiences may intensify and persist over time, impeding on developmental trajectories and interfering in daily functioning (Barrett, Lock, & Farrell, 2005; Stallard, 2010).

Thirdly, linking to the latter, experiencing childhood anxiety has been associated with a number of somatic difficulties (including: fatigue, restlessness, irritability, muscle tension, nausea and sleep disturbances) (Beidel, Christ, & Long, 1991; McLoone, Hudson, & Rapee, 2006; Pina & Silverman, 2004) and psychosocial impairments (including: problems with peer relations, low self-esteem, immaturity, impaired academic functioning, and concentration problems) (Cooley, Boyd, & Grados, 2004; Farrell & Barrett, 2007; McLoone et al., 2006; Messer & Beidel, 1994; Motoca, Williams, & Silverman, 2012; Wood, 2006). Thus, anxiety symptoms may be more than just a transient developmental phenomenon. Anxiety symptoms can interfere in a number of areas and they should not be discounted as short-lived or insignificant in children.

Fourthly, even more concerning is that despite the high frequency of anxiety in children, anxiety concerns are the least treated (Chavira, Stein, Bailey, & Stein, 2004; Rose, Miller, & Martinez, 2009). If left untreated, severe symptoms of anxiety can take on a chronic and unremitting course (Barrett & Turner, 2001; Ollendick & King, 1994; Weems & Silverman, 2013) and may place children at risk for depression, substance abuse, higher suicide ideation, illicit drug dependence, higher rates of school drop-out and unemployment in late adolescence and adulthood (Ahlen, Breitholtz, Barrett, & Gallegos, 2012; Bittner et al., 2007; Donovan & Spence, 2000; McLoone et al., 2006; Stallard, 2010; Stallard, Simpson, Anderson, Hibbert, & Simpson, 2007; Woodward & Fergusson, 2001). Many adults who are diagnosed with an anxiety disorder report that they can trace the onset of symptoms back to their childhood (Rapee & Barlow, 1993). Given this suggested relationship between childhood anxiety and adult psychopathology, and the potentially serious consequences associated with childhood anxiety if left untreated, it is essential that anxiety symptoms be addressed as effectively and early as possible (Cobham, 2003; Kendall, 1994).

Taken together, the above-mentioned factors have strongly prompted researchers to develop effective ways to intervene, reduce and remediate the cognitive, behavioural and emotional difficulties associated with anxiety (Lowry-Webster, Barrett, & Dadds, 2001). Very promising in this regard is the increased evidence pointing to the amenability of childhood anxiety symptoms to brief psychosocial interventions (such as CBT) (Lowry-Webster et al., 2001; Silverman, Pina, & Viswesvaran, 2008). Linking to this, cognitive behaviour therapy (CBT) is recognised as an empirically supported, well-established, efficacious intervention modality for the treatment and management of childhood anxiety and depression (Briesch, Sanetti, & Briesch, 2010; Cartwright-Hatton et al., 2006; Cartwright-Hatton et al., 2004).

However, despite CBT's promising results, it is still concerning that less than 20% of children who require treatment for anxiety will receive clinical intervention (Day & Roberts, 1991; Essau, Conradt, Sasagawa, & Ollendick, 2012; Olfson, Gameroff, Marcus, & Waslick, 2003), and of those who do, a large number will terminate treatment prematurely (Kazdin, 1996; Pina, Silverman, Weems, Kurtines, & Goldman, 2003; Wergeland et al., 2015); fail to respond (Donovan & Spence, 2000; Rey, Marin, & Silverman, 2011); or continue to experience recurrent difficulties despite treatment (Last, Perrin, Hersen, & Kazdin, 1996). Additionally, adults most often seek treatment for children who act out or behave aggressively, but often overlook children who withdraw socially (Kendall, 1994). Because of the internalising nature of anxiety – as Children with anxiety tend to be shy, cooperative and compliant when in school – children who are anxious are often overlooked, and relatively few children who suffer from anxiety problems are thus referred for treatment (Essau et al., 2012; Muris et al., 2006; Spence, 2001). There is also often a significant delay relating to treatment seeking, with people often only seeking treatment between 6 to 14 years after the onset of initial anxiety symptoms (Ahlen et al., 2012; Kessler et al., 2005). Furthermore, based on studies assessing mental health services in a number of countries, some barriers which also influenced treatment seeking included: long waiting lists, the high cost of treatment, fears about confidentiality, parents and children's time scheduling, the commitment, availability and location of therapists and the stigma associated with receiving mental health care (Barrett & Pahl, 2006; Essau et al., 2012; Infantino, Donovan, & March, 2016; Weist, 1999).

Not surprisingly, these above-mentioned factors (limited availability, reach and effectiveness) with regard to psychological treatments has led to increased interest in preventive and early intervention approaches (Stallard, 2013). As a result, health policies across the world are increasingly promoting prevention as the most important direction in which mental health services should move (Barrett & Turner, 2004; Lowry-Webster, Barrett, & Lock, 2003). Prevention in mental health aims to reduce the impact of risk factors and to strengthen protective factors involved in the development of mental disorders (Coei et al. cited in Ahlen et al., 2012). Prevention offers a positive adjunct to treatment, as prevention programmes can reach a large number of children over a shorter period of time; avoid high levels of personal distress for children and their families; and offer a cost-effective and efficient means of intervention prior to the onset of psychopathology (Farrell & Barrett, 2007).

Noting the above-mentioned factors, and the limited access to treatment, very concerning is that South African prevalence rates of anxiety symptoms are even higher than the above-mentioned international estimates suggest. Muris and colleagues (Muris, Schmidt, Engelbrecht, & Perold, 2002) reported prevalence rates of anxiety symptomology between 22-26% in South African children aged 7 to 13. These findings were also confirmed in subsequent South African studies (Burkhardt, Loxton, & Muris, 2003; Muris et al., 2006). Mostert and Loxton (2008) noted these high prevalence rates and identified the need for a suitable anxiety intervention programme which could be implemented within the South African context.

In an attempt to address this need, Mostert and Loxton (2008) noted that previous international studies, as well as the World Health Organization (WHO) (2004), had identified Barrett's (Barrett & Ryan, 2004; Barrett, 2005) CBT-based FRIENDS Programme to be an efficacious intervention for the reduction of anxiety symptoms in youth (see Briesch et al., 2010 for an overview).

As a result, Mostert and Loxton (2008) conducted a pilot study to explore the effectiveness and suitability of the FRIENDS Programme as a school-based anxiety prevention and early intervention programme for use with South African children. Their study reported promising results and its outcomes were in line with the government's white paper on the transformation of the South African health care system, as the study promoted prevention as an important strategy for the enhancement of the mental and physical health of the nation (Department of Health, 1997).

These above-mentioned anxiety factors, high South African prevalence rates, and identified need for a suitable intervention programme become even more significant when viewed in terms of the often marginalised population of children with visual impairments, as previous research involving children with physical disabilities suggests that they may be at increased risk for the development of psychological difficulties when compared to their non-disabled peers (see Gullone (1996) for an overview). Despite this identified risk, the population of children with visual impairments has been neglected in previous fear and anxiety research. The last international study to touch on this topic was conducted more than two decades ago by Weimer and Kratochwill (1991) in Wisconsin (USA).

Identifying this gap in the literature, the researcher and others (Visagie, Loxton, Ollendick, & Steel, 2013) conducted an exploratory (base-line) study to gain greater insight into the fear profiles of South African children with visual impairments. Contrary to what was expected, results indicated that the overall fear profiles of South African children with visual impairments and children with normal sight did not differ significantly. This similarity indicates that the two populations (children with and children without visual impairments) have similar needs. As prevalence rates of anxiety in South African children are high, and the need for a suitable anxiety intervention programme was highlighted in the general South African population (children without visual impairments) (Burkhardt et al., 2003; Mostert & Loxton, 2008; Muris et al., 2006), the same can be said for this specific group; children with visual impairments also need a suitable and accessible anxiety intervention programme (Loxton, Visagie, & Ollendick, 2012; Visagie, Loxton, Ollendick, & Steel, 2013; Visagie, Loxton, & Silverman, 2015).

Although Mostert and Loxton (2008) obtained favourable outcomes with Barrett's (2004) FRIENDS Programme with a group of South African children, their study did incur some limitations. It was noted that the FRIENDS mnemonic which is aimed to prompt children in remembering the coping steps to take when faced with a problem, was difficult for some South African children to remember and problematic to translate into Afrikaans (Mostert & Loxton, 2008). Furthermore, Mostert and Loxton (2008) concluded that although FRIENDS has been used successfully in other countries (such as Australia, Canada, the UK and USA) South African socio-contextual issues (i.e., the high incidence of crime and poverty) should not be ignored – research should in addition be focused on constructing a socially relevant anxiety prevention/intervention programme that considers the impact of these factors (Mostert & Loxton, 2008). In addition, FRIENDS is not suitable for use with children with visual impairments, as its content (i.e., cartoons, colouring-in pictures, workbook and visual-based activities) is not very accessible to this specific population. Thus, to summarise, the following seven factors motivated the present study:

1. The high prevalence rates of anxiety symptomology in children (especially in South Africa);
2. The suggestion that visually impaired children may be at increased risk for the development of anxiety when compared to their non-disabled counterparts;
3. The lack of anxiety research involving children with visual impairments;
4. The negative consequences associated with anxiety symptoms if left untreated;
5. The unique South African socio-cultural context;
6. The benefits associated with prevention and early intervention with regards to childhood anxiety; and
7. The inaccessibility and inappropriateness of existing anxiety intervention programmes.

1.2 Research question and aims of the study

As mentioned above, international literature recognises CBT as an empirically supported, well-established, efficacious intervention modality for the treatment and management of childhood anxiety and depression (Briesch et al., 2010; Cartwright-Hatton et al., 2006; Cartwright-Hatton et al., 2004). Previous South African research by Mostert and Loxton (2008) supports this finding, and as a result the international and South African literature base focussing on anxiety and its treatment will be used as the foundation for the present study.

The purpose of the present study was to investigate the effectiveness of a specifically tailored prevention/early intervention programme for anxiety (from here on referred to as an anxiety intervention programme) in reducing anxiety symptomology in South African children with visual impairments. As far as the researcher could ascertain, at the commencement of the present study, no studies focussed on anxiety prevention and early intervention programmes for children with visual impairments had been conducted previously. Therefore, the present study aimed to answer the following research question:

Can an anxiety intervention programme specifically tailored for use with children with visual impairments within the South African context be helpful in managing symptoms of anxiety in this specific population?

Following from this question, the primary aim in the present study was to develop, implement and evaluate a specifically tailored anxiety intervention programme for use with South African children with visual impairments. This aim unfolded in the following three steps:

- Step 1 = develop an accessible anxiety intervention programme which can be used with South African children with visual impairments (programme development phase).
- Step 2 = implement the anxiety intervention programme successfully (programme implementation phase).
- Step 3 = evaluate the effectiveness of the anxiety intervention programme in maintaining emotional health (i.e., preventing an increase in symptoms of anxiety as measured on the Revised Child Anxiety and Depression 30-item Scale (RCADS-30) (Chorpita, Moffitt, & Gray, 2005; Sandín, Chorot, Valiente, & Chorpita, 2010) and the Penn State Worry Questionnaire for children (PSWQ-C (Chorpita, Tracey, Brown, Collica, & Barlow, 1997) (programme evaluation phase)).

The secondary aim in the present study was to record qualitative process information relating to the way children with visual impairments experienced and evaluated the anxiety intervention programme. This qualitative information would add to the literature pertaining to the acceptability and feasibility of the anxiety intervention programme (these concepts are described in more detail in Chapter 7) and may be of some use for the design of similar future intervention programmes.

These research questions also contributed towards the six hypotheses which were to be tested in the present study. The hypotheses are detailed in Section 5.6.4.1 in Chapter 5.

1.3 Defining key concepts

1.3.1 Anxiety

In literature anxiety is usually considered to be an emotional state relating to fear (Sweeney & Pine, 2014), and not surprisingly the terms fear and anxiety are often used interchangeably in day-to-day language (Muris, 2007). This being the case, according to Mash and Wolf (2015), anxiety can be defined as “a mood state characterized by strong negative emotion and bodily symptoms of tension in which the child apprehensively anticipates future danger” (p. 357). From this definition it is clear that anxiety is a multi-faceted concept, and according to Lang’s (1968) three-system model anxiety typically manifests in one of three ways, singularly or in combination: cognitively, behaviourally and/or physiologically.

The cognitive response involves the appraisal of events and situations according to their anticipated risk (Stallard, 2010) and cognitive symptoms of anxiety may include difficulty with memory, concentration, problem-solving and attention. Kendall (cited in Huberty, 2012) states that cognitive problems related to anxiety can be viewed as distortions and deficiencies. When a child distorts (misinterprets incoming information) problems with thinking and problem-solving may occur (Huberty, 2012). The following is an example of a cognitive distortion: a child who is socially anxious enters into a social situation and the other children start to laugh, a child who is non-anxious may not think of the laughter as being directed at her individually, however, the child who is anxious is more likely to interpret the situation as threatening and view the laughter as being directed at her. Thus, an anxious child distorts the information and reaches a possibly incorrect conclusion which is not founded on verifiable data. Anxious children often experience cognitive distortions which in turn lead to attributional errors, irrational errors and feelings of lack of competence (Huberty, 2012).

Behavioural responses to anxiety aim to keep the child safe by anticipating and avoiding future danger (Stallard, 2010). These behavioural responses manifest in a variety of symptoms which may include: withdrawal, avoidance, motor restlessness and irritability. These behavioural symptoms are the most easily observable anxiety indicators. Some behavioural symptoms (e.g., withdrawal or avoidance) are voluntary and are aimed at reducing anxiety; while other behavioural symptoms (e.g., motor restlessness and irritability) are involuntary and are indicative of a high level of anxiety (Huberty, 2012).

Lastly, the physiological response results in a number of symptoms which may often be distressing for the child (Stallard, 2010). Physiological symptoms occur involuntarily and are indicative of a high state of anxious arousal and distress. Symptoms such as headaches and stomach-aches can be highly unpleasant and lead to frequent doctor’s visits, while other symptoms (e.g., blushing, flushing of the skin and shaking) may occur in situations such as public speaking and may cause embarrassment and self-consciousness. While other symptoms may be chronic and unobservable (e.g., rapid heart rate, dizziness and tense muscles) (Huberty, 2012).

Experiencing some level of anxiety constitutes a normal part of children's development, as anxiety provides the impulse to avoid danger and promotes the development of behaviours which are beneficial in dealing with stressful life events (Lane & Gullone, 1999). However, in some cases anxiety may become excessive and interfere with normal daily functioning. In such cases an anxiety disorder may be diagnosed (Mash & Wolf, 2015; Sadock & Sadock, 2011; Stallard, 2010). Thus, a certain level of anxiety is required for optimum functioning, but excessive anxiety may interfere with normal daily functioning, causing this normally useful emotion to become problematic (Mash & Wolf, 2015).

According to Barlow (2004), normal anxiety can be distinguished from an anxiety disorder in terms of the intensity and duration of symptoms. Normal anxiety is characterised by symptoms of anxiety (as described above), however, these symptoms are only temporary and occur when a stressful or fear provoking situation is eminent. On the other hand, anxiety can be classified as a disorder when anxiety symptoms are persistent (occur even when no threat is eminent) and severe enough to cause disruption and impairment.

A distinction should thus be made between "anxiety symptoms" and an "anxiety disorder". Anxiety symptoms refer to the construct being measured by the RCADS-30 (Chorpita et al., 2005; Sandín et al., 2010) while the term anxiety disorder refers to a more severe mental health problem which may require specialist treatment (the various DSM-IV defined anxiety disorders are described in more detail in Section 3.1 in Chapter 3) (Stallard, 2010). For the purpose of the present study, anxiety symptoms (as measured by the RCADS-30 (Chorpita et al., 2005; Sandín et al., 2010)) will refer to the cognitive, behavioural and physiological manifestations of childhood anxiety. The terms anxiety and anxiety symptoms will be used interchangeably throughout this dissertation, and refer to anxiety as described above.

The researcher is aware that at the time of the present study, a fifth edition of the diagnostic and statistical manual of mental disorders (DSM-5) (American Psychiatric Association, 2013) exists, however, the present study's measure of anxiety symptoms (The RCADS-30, (Chorpita et al., 2005; Sandín et al., 2010)) is based on the previous version (4th edition of the DSM, DSM-IV) (American Psychiatric Association, 2000).

1.3.2 Cognitive behaviour therapy (CBT)

Cognitive behaviour therapy, also referred to as CBT, is a structured form of psychotherapy that focusses on the relationship between thoughts, feelings and behaviours. CBT's underpinning theoretical model states that dysfunctional or distorted cognitions (thoughts) lead to negative feelings/emotional states (e.g., anxiety), which are regulated, often unhelpfully, through certain behaviours (e.g., avoidance) (Stallard, 2010). Thus, CBT aims to address this dysfunctional relationship between thoughts, feelings and behaviours by employing “an amalgam of behavioural and cognitive interventions, guided by the principles of applied science” (Craske cited in Arch & Craske, 2009, p. 525). The cognitive interventions in CBT target cognitions (thoughts) and aim to modify/change the cognitions, self-statements, and beliefs which are seen as maladaptive; while the behavioural interventions in CBT target behaviours and aim to decrease maladaptive behaviours (e.g., avoidance) and increase adaptive ones by implementing behavioural practices (i.e., exposure techniques, problem solving skills, relaxation strategies) that ultimately result in new learning (Arch & Craske, 2009). From the latter it can be concluded that the hallmark features of CBT are problem-focussed intervention strategies which are based on the principles of both cognitive and learning (behavioural) based theories. Therefore, when dealing with childhood anxiety (whether in terms of treating elevated symptoms or preventing the onset of a full-blown anxiety disorder), CBT aims to help children reduce their distress by altering their cognitive and behavioural responses.

Thus, in the present study CBT refers to the cognitive and behavioural intervention techniques which children were taught during the tailored anxiety intervention programme. The terms cognitive behaviour therapy, cognitive behavioural therapy and CBT are synonymous and are thus used interchangeably throughout this dissertation. More information pertaining to the theoretical underpinnings, principles, and treatment components of CBT are provided in Chapter Two of this dissertation.

1.3.3 Prevention / Early intervention programme

Schneider, Hastings, Guyer, Brendgen, and Cwinn (2014a) noted that authors have invested considerable energy in defining prevention, and in delineating various levels of intervention that can be classified as preventive. Caplan (1964) presented the first taxonomy for classifying prevention, and described a three-tiered model of prevention. The first tier, primary prevention, referred to interventions that aim to reduce the incidence of pathology by intervening before any symptoms arise. The second tier, secondary prevention, referred to interventions which aim to detect symptoms early and treat them swiftly, in this way preventing the development of further pathology. The last tier, tertiary prevention, referred to interventions which aim to reduce the severity of impairment caused by existing pathology, in this way preventing further disability and incapacitation (Schneider et al., 2014a). According to Barrett and Turner (2001) the disadvantage of Caplan’s (1964) model was that it was somewhat confusing, as the secondary and tertiary tiers seem to relate more to treatment than to prevention. Consequently, Mrazek and Haggerty (1994) sought to eliminate this confusion, and defined preventive programmes as interventions administered before diagnostic criteria for a psychological disorder are met, and treatment programmes as interventions which are designed to manage or treat a psychological disorder which has already been diagnosed (Mrazek & Haggerty, 1994). The prevention literature has adopted Mrazek and Haggerty’s (1994) model as an alternative to classify prevention programmes.

Mrazek and Haggerty’s (1994) model classifies prevention programmes depending on the way in which the target population is selected (Stallard, 2010) and on the presence and extent of risk factors relating to the possible development of a given disorder (Barrett & Turner, 2001; Lowry-Webster et al., 2001; Offord, 2000). Accordingly, they (Mrazek and Haggerty, 1994) distinguished three levels of prevention, including indicated, selective and universal which are defined as follows:

- Indicated interventions (or early interventions) target members of a population who are displaying minimal, but detectable symptoms (sub-clinical symptoms) related to a given disorder, and who are at high risk for the future development of a full-blown psychological disorder (e.g., a programme targeted towards children reporting elevated symptoms of anxiety who are considered to be at high risk for the development of a full-blown anxiety disorder).
- Selective interventions are targeted at those who are not yet displaying significant problems, but who are at a higher than average risk of developing a specific disorder, due to the presence of certain risk factors (e.g., because parental depression is a risk factor for childhood depression a selective intervention programme might be targeted towards children with depressed or anxious parents).
- While on the broadest level, universal interventions target whole populations, regardless of their risk status or presence of symptoms (e.g., a programme focussing on the development of coping skills aimed at preventing anxiety is delivered to all 5th grade students in a school) (Barrett & Turner, 2004; Liddle & Macmillan, 2010; Lowry-Webster et al., 2001; Mrazek & Haggerty, 1994; Stallard, 2010; Stallard, 2013).

Considering these three levels, the anxiety intervention programme developed in the present study is categorised as a universal prevention programme, as all 9 to 13-year-old children with visual impairments who attended two special schools in the Western Cape Province (South Africa) (*N* = 52) were delivered the programme regardless of their anxiety status. However, a further distinction as to the programme description can be made. Based on each participant's total score on the RCADS-30 (Chorpita et al., 2005; Sandín et al., 2010) at T1, the programme can be classified as either an early intervention programme (where the total score is equal to or greater than 49) or prevention programme (where significant symptoms of anxiety are absent).

Additionally, according to the dictionary of the American Psychological Association (VandenBos, 2007) for a programme to be considered preventive, it must: (a) be delivered in a group format, (b) be implemented before the symptoms of the disorder that it is targeting manifest, and (c) be intentional (i.e., the purpose of the programme must be explicitly orientated towards prevention) (Schneider et al., 2014a; VandenBos, 2007). The present study ticks all these boxes, as the programme was delivered to children in a group format (group sizes ranged between 5-13 participants); children who had sub-clinical levels of anxiety were delivered the programme; and the programme specifically aimed to teach children skills to reduce symptoms of anxiety, thus preventing the onset of a full-blown anxiety disorder. Thus, prevention in the present study refers to the actions taken to overt the onset of a full-blown anxiety disorder.

As mentioned above (see section 1.1), the literature suggests that children with physical disabilities (including visual impairment) have a higher risk for the development of psychological difficulties when compared to their non-disabled peers (see Gullone, 1996 for an overview). Thus, based on this increased risk and Mrazek and Haggerty's (1994) delineations, one would think that these children should receive a selective intervention. However, two factors make it difficult to fully embrace this conclusion and thus supports the researcher's choice to implement the anxiety intervention programme universally.

Firstly, it is "suggested" that children with visual impairments are at higher risk for the development of anxiety, but just as in the general population this is not always the case (e.g., Loxton et al., 2012; Visagie et al., 2013), and this discrepancy makes it even more compelling to pursue this line of research – in order to shed more light on this topic. This discrepancy withstanding, whether there is a higher risk or not, the population of children with visual impairments has been neglected in previous research, and something needs to be done – these children need to be helped. Thus, the researcher made the decision to administer the programme to all children with visual impairments (universal approach); in this way no child was denied the opportunity to learn helpful skills that can enhance their emotional resilience and inoculate them from anxiety disorders (Barrett & Turner, 2001).

The second reason for choosing to implement the anxiety intervention programme universally relates to the fact that selective interventions have some limitations. It has been suggested that the screening tools used to identify “at risk” children may be subject to possible false-negative errors, this leading to children who need assistance being overlooked and excluded from programmes (e.g., Dadds et al., 1997). Additionally, subjecting children to screenings which identify them as “at risk” carries a possible social stigma (Barrett & Turner, 2001), as children are singled-out. Noting this possibility, the researcher did not want to double-stigmatise children by identifying them as having an anxiety disorder on top of their visual impairment. Universal prevention programmes can overcome these afore-mentioned limitations, as they are provided to all participants, regardless of their risk status, this then eliminating possible false-negative errors and minimising the potential for stigmatisation (Lowry-Webster et al., 2001).

The anxiety intervention programme which was developed, delivered and evaluated in the present study was named the PAM programme. This name was chosen for the following reasons: As mentioned above, most existing CBT-based programmes make use of materials which are not accessible to all children who have visual impairments. As a result, the researcher had to devise alternative ways to engage children with visual impairments in the tailored anxiety intervention. She did this by making use of a tangible toy dog which she named PAM. At the start of the anxiety intervention programme (in session 1) participants were introduced to PAM. PAM is represented as a tangible soft-toy dog which children could hold and feel (see a photo of PAM in Figure 6 in Chapter 5). PAM was introduced to participants as follows: “PAM is a guide-dog so she helps people who can’t see find their way – she is also going to be the one to help you find your way through the programme. PAM’s name is very special because each letter has a special meaning: P = positive, A = and, M = Motivating! So, PAM wants to teach you to be positive and keep you motivated to take part in the programme!” Thus, PAM refers to the metaphorical guide dog that was used throughout the 10 sessions of the anxiety intervention to convey certain CBT concepts and skills to participants. PAM was also used as an acronym for the programme’s name, as the tailored anxiety intervention aimed to help children to be positive and stay motivated (P = positive A =&, and M = motivated). Thus, PAM refers to three aspects, the metaphorical guide dog which was used, the programme name as well as the acronym “Positive And Motivating” (more information pertaining to the theoretical foundation, process of adaptation, session content and the PAM metaphor is provided in Section 5.6.2 in Chapter 5). From here on the anxiety intervention programme which was developed, delivered and evaluated in the present study is referred to as the PAM programme.

1.3.4 Children with visual impairments (vision)

The Encyclopaedia of Special Education (Pierangelo & Giuliani, 2007) defines "visual impairment" as impairment in vision that even with correction adversely affects a child's educational performance. The term includes "both partial sight and blindness" (Pierangelo & Giuliani, 2007, p. 331). However, in literal terms, children with visual impairments include children from all walks of life who have some ocular (visual) deviation as a result of damage, disease or abnormal development of one or both of their eyes (Henderson, 1974).

Children in the present study experience different levels of sight loss and accordingly they were classified into one of three visual sub-groups by the school psychologist at their respective schools. These three levels of visual impairment are distinguished according to defining criteria of the WHO (2000) as follows:

- Totally blind – Children have no measurable visual acuity.
- Severely visually impaired – Children may have a degree of movement detection and light perception, but they cannot function optimally without assistance and cannot read print material.
- Partially sighted – This is the most difficult category to define; children's degree of sight may fluctuate and differ depending on the environment in which the child finds him or herself. Factors which can influence vision include: inappropriate lighting, light glare, or fatigue (Keller & Henderson, 2005; World Health Organization, 2000).

According to Philander (2007) there is wide spread controversy around terminology with respect to visual impairment. He stated that the disability literature deems terminology to be so important as the past terms which were used to describe disabled people reflect historical perceptions – which promoted discrimination and marginalisation – and the contemporary beliefs that society has of disability (Philander, 2007). Internationally, different terms have been used to describe people with visual impairments, including: visually impaired, low vision, visually disabled and partially sighted. However, in keeping with the perspective of Lyon, Knickelbaum, and Wolf (cited in Seligman & Darling, 2009) who state that disability is secondary to the person; it does not define who he or she is as a human being; South African terminology emphasises, promotes and recommends that person-first-language is used. Therefore, the correct terminology to use is "child with a visual impairment". Person-first language, which can occasionally be awkward, acknowledges that a person who happens to have a disability is a person first, therefore first recognising the child and then his or her disability. The child is thus not labelled before acknowledging his or her existence (Parekh & Jackson, 1997).

In line with the above, the American Psychological Associations (APA) committee on disability issues in psychology provides the following guidelines for “non handicapping” language: (a) put people first, not their disability (child with a visual impairment as opposed to visually impaired child); (b) do not label the child by his or her disability, because the person is not the disability the two concepts should remain separate (people with disabilities as opposed to the disabled); (c) avoid words with superfluous, negative, overtones (person with a visual impairment as opposed to person afflicted with/suffering with blindness); or (d) words that are regarded as being offensive or slurs (for instance “cripple” or “deformed”) (American Psychological Association, 2015).

The aim throughout the present study was to incorporate the afore-mentioned APA guidelines and use person-first terminology as far as possible (i.e., child with a visual impairment). However, the three terms (child with a visual impairment, visually impaired child, and blind child) were used interchangeably. The intent was not to label or categorise children with visual impairments, but simply to aid in the written flow of the document. It was found that especially the term child with a visual impairment could be very cumbersome and difficult to fit into some sentences, therefore making the conveying of ideas and thoughts difficult (Bensch, 2010).

1.3.5 Middle-childhood children (age)

As mentioned previously, participants in the present study included 52 (*N* = 52) children aged 9-13 years. Traditionally, according to Newman and Newman’s (2009) 11 stages of psychosocial development, children between the ages of 6 and 12 years fall within the developmental stage of middle-childhood. Thus, it is important to note that the 13-year-olds in the present study are entering the stage of early adolescence.

During middle-childhood, children experience a slower growth rate, and physical development does not occur as rapidly as in the earlier stage of early childhood and later stage of adolescence (Louw & Louw, 2007a). However, middle-childhood children are emotional, cognitive, social, and self-concept development is of great importance (Louw & Louw, 2007a; Wait, 2005). In line with this statement, middle-childhood children are faced with various developmental tasks including: (a) developing concrete operational thought, (b) forming friendships, (c) taking part in team play, and (d) self-evaluation (Newman & Newman, 2009). Newman and Newman (2009) noted that these developmental tasks together with the acquisition of new capacities for complex cognitive, social, and emotional activities produce a remarkable synergy.

When referring to the cognitive development of middle-childhood children, Piaget's third stage of development, namely concrete operational thought (ages 7 to 12) is applicable. During the concrete operational stage children start showing beginnings of the capacity for adult reasoning. However, in contrast to adults, their thought processes are generally related to tangible, real objects as opposed to abstract ideas. It is for this reason that Piaget referred to the thinking of children in this stage as "concrete" (Rathus, 2014) (The development of middle-childhood children's cognitive abilities and Piaget's cognitive developmental theory are discussed in more detail in Section 2.2.1 in Chapter 2).

Children's cognitive ability is not the only thing which advances during middle-childhood, their social world also expands and friendships evolve. Peers take on greater importance, and friendships deepen becoming more intense and intimate. This is due to advances in social cognition (Berger, 2015; Rathus, 2014). Middle-childhood friendships also differ in duration and intensity when compared to those in the earlier years. Younger children may like anyone of the same sex and age who is willing to play with them, while older middle-childhood children demand more of their friends. They share secrets and expect loyalty. Older children also change friends less often, become more upset when a friendship breaks up, and find it harder to make new friends (Berger, 2015). Furthermore, older children tend to choose friends whose interests, values, and backgrounds are similar to their own. Thus, towards the end of middle-childhood, close friendships are more often than not between children of the same sex, age, ethnicity, and socioeconomic status. This occurs not because children naturally become more prejudiced over the course of middle-childhood (they do not) but because they seek friends who understand and agree with them (Berger, 2015). This evolution in friendships leads to the term "best friend" often being uttered by middle-childhood children. It is this "special" relationship that makes an important contribution to the child's emotional and social development (Wait, 2005). Thus, same-aged peers increasingly influence the middle-childhood child's view of his or herself and subsequently influence their self-esteem. If there is anything that labels a child as "different" this may influence his or her belonging to the friendship group. This is especially relevant to children with visual impairments as their "belonging" may be threatened when they are not able to take part in some activities as a result of their visual difficulties. This importance that middle-childhood children place on friendship and friends is a prominent aspect which is emphasised in the PAM programme, as friends can play an important part in supporting and helping one another to face problems and deal with anxiety.

A further developmental task faced by children in middle-childhood relates to the development of “team play”. Children begin to develop an appreciation for togetherness, team work, and winning together. Games that are played, tend to be defined by rules, and these games have different role players and children learn the different roles and positions to play. Success in becoming part of a team lies in the adaptability and preparedness of the child to take turns and try out different roles (Wait, 2005). This aspect is especially relevant to the present study, as the PAM programme was applied in a group format. Thus, it was important for participants to be able to keep to certain group guidelines and to be able to take turns talking and performing certain tasks.

The fourth and final developmental task in middle-childhood relates to self-evaluation. Two concepts come to the fore in relation to self-evaluation, namely, self-esteem (the view and expectations the child has of him- or herself, be this positive or negative), and social expectations (the views and demands that others including parents, teachers, friends, and society place on the child, be these positive or negative) (Dowling, 2005; Wait, 2005).

Middle-childhood children are tasked with resolving the psychosocial crisis of industry versus inferiority (Erikson, 1963). Children who successfully master the various developmental tasks and challenges of this developmental stage develop a sense of industry. While on the other hand, children who have difficulties in school or with peer relationships during this stage may develop a sense of inferiority (Berger, 2015) (Erikson’s psychosocial theory is discussed in more detail in Section 2.3.1 in Chapter 2).

To reiterate, in the present study, middle-childhood refers to children within the age group of 9 to 13 years. Data was collected from children in grades 4 to 7, currently attending two primary schools that cater for children with visual impairments in the Western Cape Province, South Africa. The reason that middle-childhood children were chosen as the target group for the present study relates to findings by Lock and Barrett (2003) and Barrett et al. (2005) who noted that early intervention in middle-childhood is potentially more advantageous than when intervention occurs at a later age. The terms middle-childhood and school-aged children will be used interchangeably throughout this dissertation to refer to the group of children aged 9-13 years who took part in the present study.

1.3.6 The South African context

The South African context is unique, and the population of South Africa has been described as one of the most complex and diverse populations in the world. Of the estimated 52 million people who live in South Africa, an estimated 41 million (79.2%) are Black, 4.6 million (8.9%) Coloured, 4.6 million (8.9%) White and 1.3 million (2.5%) Indian (SouthAfrica.info, 2016). In addition to the diverse cultures which inhabit South Africa, South African people also speak a variety of languages, and the country boasts 11 official languages (Explore South Africa, 2010). South Africa has often been referred to as the “rainbow nation”; this is a title which epitomises the country’s cultural, linguistic and ethnic diversity.

However, this “rainbow” status was not always embraced, and the vestiges of apartheid still shape and influence the country’s policies and social atmosphere. Despite the post-apartheid government’s efforts to rectify and overcome past inequalities, severe disparities as a result of apartheid are still visible between various race groups and people from differing socio-economic backgrounds (Biersteker & Robinson, 2000; Muris et al., 2006; Neves & Toit, 2013). These disparities negatively impact upon some families and make it very difficult for parents and caregivers to even provide for the most basic needs of their children (Biersteker & Robinson, 2000). Additionally, South Africa is plagued by very high rates of crime and violence, extreme poverty, unemployment and poor healthcare (Demombynes & Özler, 2005; Seedat, Van Niekerk, Jewkes, Suffla, & Ratele, 2009; Wege, 2014), and unfortunately it is in this context that South African children live and grow.

South African children are protected by a progressive first-world constitution, which promotes and upholds their well-being. Section 28, sub-section 2 of the South African Constitution states that: “A child’s best interests are of paramount importance in every matter concerning the child” (Republic of South Africa, 1996, Section 28). The aims of the present study echo this statement, as the study is aimed at teaching children helpful problem solving skills and coping strategies which they can use in their day-to-day lives. In combination these skills and strategies increase children’s emotional resilience and offer protection against stress and change. Furthermore, the intervention programme which was implemented in the present study was developed keeping South Africa’s unique socio-cultural context in mind.

Considering the afore-mentioned factors, it is also important to remember that the 52 children who took part in the present study represent a diverse sample of cultures, races and socio-economic groups, therefore these children live in differing home environments and may experience different daily stressors that in turn may determine their individual experiences of anxiety (Barbarin, Richter, & DeWet, 2001; Muris et al., 2006).

Besides the socio-contextual aspects mentioned above, when referring to South African children with visual impairments, there are various additional factors which should be kept in mind. According to The Ophthalmological Society of South Africa (OSSA) (2015), the representative association for South African eye specialists, it is estimated that there are more than 21 thousand blind children in South Africa. International statistics indicate that 500 000 children across the world lose their eyesight every year, which amounts to one new case of visual impairment every minute.

According to OSSA, there are many causes of childhood blindness, and the causes of childhood blindness in South Africa, like elsewhere in the world, are varied. A study of South African children in schools for the visually impaired showed that retinal diseases account for nearly 40% of childhood blindness, optic nerve abnormalities account for 15% and corneal scarring for 11% (Ophthalmological Society of South Africa, 2015).

The occurrence of visual impairment is not distributed uniformly around the world, and according to the WHO (2011) Africa is one of the regions which is most highly affected. During the 2011 South African census it was recorded that approximately 2.8 million people (7.5% of the population) had a disability. Visually impaired persons (persons who reported seeing difficulties) were recorded at 11% or approximately 300 thousand persons, making up the largest disability group in the country (Statistics South Africa, 2014).

Due to the nature of visual impairment (i.e., that it requires specialist intervention and the use of assistive devices and adapted materials) many visually impaired children attend school far away from home, staying in hostel facilities. Currently there are only two schools with hostel facilities for children with visual impairments in the Western Cape Province. These two schools which will be referred to as School 1 and School 2 were the study sites for the present study. The Western Cape (where both schools 1 and 2 are located) is the fourth largest of South Africa’s nine provinces, and Afrikaans is spoken by the majority of the province’s inhabitants (55%), with isiXhosa (24%) and English (19%) being the province’s other main languages (Statistics South Africa, 2012).

Although both of the above-mentioned schools cater for learners with visual impairments, Philander (2007), who previously conducted research at these two schools, noted that a marked socio-economic difference exists between the two schools. As mentioned above, after-effects of apartheid and its policies have caused severe social disparities amongst various racial groups and this is especially evident at School 1. This school was historically a Black school under the Bantu or Black Education Act (Act no. 47, 1953) (Union of South Africa, 1953), and still today children who attend this school are mostly from disadvantaged communities with a Black population of 46% (Philander, 2007). Today the school's demographics are still similar, and according to the school psychologist at this school, approximately 85-90% of children who attend this school live below the breadline with their parents unemployed receiving disability grants, and the majority of children receiving government child grants (personal communication, J Philander, 4 December 2014). The breadline is a poverty line which estimates how much money a person needs to meet basic daily dietary requirements, currently this estimate amounts to R26.70 (approximately $2.34) per person per day. Those who are living below this breadline are unable to purchase or consume enough food to supply them with the basic energy requirement of 2 100 kilocalories a day, and are considered to be living in "extreme poverty" (Musgrave, 2015).

However, Philander's (2007) observation where he stated that "a large proportion of participants from the (school's name removed) are from advantaged white communities" (p. 90) is no longer accurate. According to the school psychologist at School 2, approximately 70% of learners at this school are Black or Coloured, and an estimated 55% of children live in poverty and receive government child grants (personal communication, M Meiring, 2 October 2015). However, because this school was historically a White school (under the Bantu education act) (Union of South Africa, 1953) this school has better infrastructure, facilities and a greater access to funding.

With reference to the racial terminology used above, South African researchers have little choice but to make use of such terminology as it describes our historical past and apartheid policies. Although apartheid racial categories are no longer legislated, they still continue to hold social relevance (Philander, 2007). The racial categories of "Black", "Coloured" and "White" were used to describe different racial groups. The present study will also make use of these terms to describe the different ethnic groups of children who took part, however, use of these terms does not imply acceptance of apartheid categories.

1.4 Organisation of the dissertation

This dissertation is presented across eight chapters. A brief overview of each chapter is given below.

Chapter 1 provides an introduction to the study. The motivation and significance of the research regarding the South African context is outlined, and the research question and aims are discussed briefly. Thereafter, concepts central to the study are defined.

The study's theoretical framework is outlined in Chapter 2. Concepts of cognitive behavioural theory, cognitive developmental theory, psychosocial developmental theory, social learning theory and disability theory are discussed.

In Chapter 3 a review of the relevant literature pertaining to CBT and the treatment and prevention of childhood anxiety and visual impairment is provided.

Due to scant research on anxiety and children with visual impairments, a preparatory focus group interview (before the development of the anxiety intervention programme) was conducted to gain insight into the experience/perception of anxiety from children with visual impairments themselves. These perceptions/experiences were explored by conducting two focus group interviews. Chapter 4 reports on the findings from these focus group interviews and their implications for the adaptation of the anxiety intervention programme are outlined.

The research methodology is outlined in Chapter 5. The research design, participants and study contexts, research process, method of data collection, and the four phases of the research are discussed.

Chapter 6 reports the results of the quantitative findings pertaining to the evaluation of the anxiety intervention (PAM programme).

Chapter 7 provides an analysis of the qualitative data which was gathered during the intervention and reports on the acceptability and feasibility of the anxiety intervention (PAM programme).

The study is concluded in Chapter 8, where the quantitative and qualitative findings are summarised and discussed in light of the research questions. Conclusions are drawn; limitations and challenges are outlined; and recommendations for future research are made.

1.5 Chapter summary

Chapter 1 started with a general introduction to research regarding anxiety and its effects in children, followed by an explanation of the motivation for and significance of the present study. The research question was then presented and the study's aims and key concepts were defined. The chapter concluded with a chapter-by-chapter outline of the organisation of the dissertation.

Chapter 2 provides an overview of the theoretical framework underpinning the present study.

CHAPTER 2: THEORETICAL FRAMEWORK

Chapter Two provides a theoretical framework for the present study, and theories relevant to childhood anxiety and children with visual impairments will be discussed. Firstly, cognitive behavioural theory and the cognitive behavioural perspective on anxiety is presented. Thereafter, the major developmental theories including Piaget's (1972) theory of cognitive development, Vygotsky's (1978, 1986) socio-cultural cognitive theory, Erikson's (1963) psychosocial developmental theory and various learning (behavioural) theories are presented. The chapter concludes with a brief overview of disability theory and the relevance of certain disability factors to children with visual impairments.

2.1 Cognitive behaviour therapy (CBT) for childhood anxiety

Cognitive behavioural treatment/therapy (CBT) and theory was selected as the underpinning theory of choice for the present study for the following three reasons: Firstly, CBT is built upon theoretically determined testable models (i.e., the cognitive model and the behavioural model) (Stallard, 2002); secondly, CBT is the best-supported intervention modality for the treatment and prevention of childhood anxiety; and lastly, CBT-based programmes for childhood anxiety (such as the one developed in the present study) are based upon sound theories of developmental psychology (McLeod, Jensen-Doss, Wheat, & Becker, 2013) making them suitable to use with children. The interventions contained in the PAM programme were developed to target specific factors which were linked to the development, maintenance and amelioration of anxiety as noted in the developmental psychology literature (McLeod et al., 2013). Just as the PAM programme which was developed in the present study is based on CBT, so too is the current dissertation grounded in the cognitive behavioural perspective. Thus, this section will give a broad overview of CBT and outline the cognitive processes and behavioural responses which are thought to be involved in childhood anxiety. The purpose of this section is to elucidate the theoretical underpinnings, principles and components of CBT as it applies to the treatment of anxiety in children. This applies to the aspects that are relevant when using a CBT-based manualised treatment protocol for middle-childhood children (i.e., the PAM programme).

2.1.1 Theoretical underpinnings of CBT (What is CBT?)

CBT, as we know it today, can be traced back to the development of behaviour therapy during the early 20th century, the development of cognitive therapy in the 1960's, and the subsequent merging of these two therapies (for a brief overview of the history and evolution of CBT see Westbrook, Kennerley, & Kirk, 2011). As its name and evolution implies, CBT is the amalgamation of two types of therapy that were developed independent of one another – cognitive therapy and behaviour therapy. Cognitive therapy relates to the understanding and claiming of one's own beliefs and assumptions, and behaviour therapy relates to how one acts under certain circumstances and in various conditions. When these two therapies are combined, they together form CBT (Bowers, 2013). Thus, when therapists engage in CBT they employ both cognitive and behavioural strategies. However, at this point it is important to note that CBT does not simply refer to one single kind of therapy, but should be viewed as a generic (umbrella) term which describes a "diverse collection of complex and subtle interventions" (Stallard, 2005, p. 129).

As described in Chapter 1 (see section 1.3.2), for the present study CBT is viewed as a structured form of psychotherapy that focusses on the relationship between cognitions (thoughts), feelings and behaviours. CBT's underpinning theoretical model (cognitive behaviour theory) states that dysfunctional or distorted cognitions (thoughts) lead to negative feelings/emotional states (e.g., anxiety), which are regulated, often unhelpfully, through certain behaviours (e.g., avoidance) (Stallard, 2010). Thus, CBT employs both cognitive and behavioural strategies to bring about changes in thinking, feeling and behaviour (Kendall, 1993). CBT emphasises the relationship between thoughts, feelings and behaviours and assumes that the inter-play between these three components contributes to the onset and maintenance of anxiety in children. The interaction between these three components is bi-directional (i.e., each component effects and is effected by the other components) (Huberty, 2012). Figure 1 below illustrates the relationship and bi-directionality between the three components (i.e., cognitions (thoughts), emotions (feelings) and behaviours) underpinning CBT.

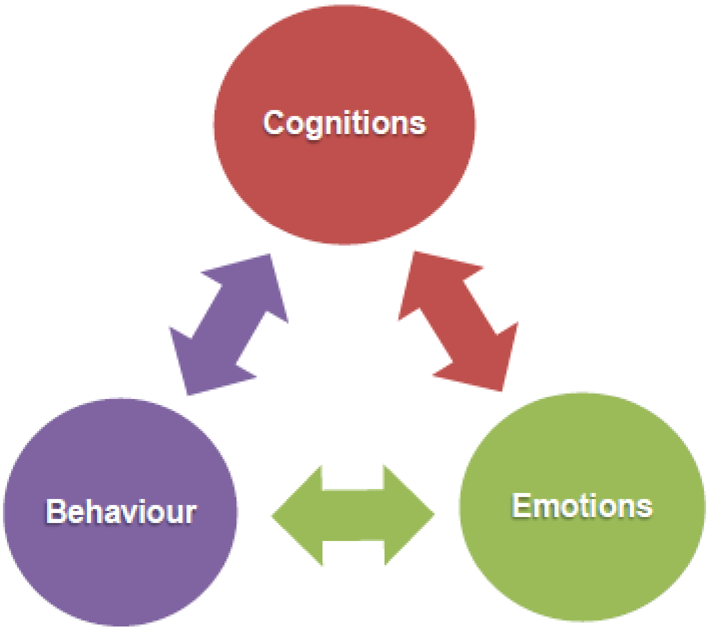


Figure 1. An illustration of the bi-directional relationship underpinning Cognitive Behavioural Theory, sourced from Lake (2014).

Although these three components (i.e., cognitions, behaviours and feelings) are viewed as influencing one another bi-directionally, in terms of CBT's conceptualisation of anxiety, cognition is one of the components which plays a fundamental and important role in the generation and maintenance of anxiety (Beck & Emery, 1985). Cognition refers to "how we acquire information about the world by means of our senses, how we process and interpret such information, and how we store, retrieve and use this knowledge to direct our behaviour" (Louw & Kail, 2007, p. 7). Put simply, cognition is the process whereby people use their cognitive capacities to make sense of incoming information (Mostert, 2007).

As cognitions are one of the factors which play such an important role in determining how we feel and behave, it is important to take note of the following cognitive factors which can be viewed as etiological to anxiety: maladaptive automatic thoughts, maladaptive schemas and cognitive distortions (Freeman, Pretzer, Flemming, & Simon, 1990).

- Automatic thoughts can be understood as instant, spontaneous, telegraphic thoughts and images that occur in certain situations and influence how a person appraises and interprets events in that situation. Importantly, these thoughts occur automatically, with no conscious effort to formulate them (Beck, 1976; Mostert, 2007).

- Schemas can be understood as a person's cognitive frame of reference. Schemas help people to arrange new incoming information and assist them in the interpretation thereof. Information which people acquire through their personal experiences with the social world is stored in schemas for later use. When a person refers to a cognitive schema, the schema functions in such a way that it gives precedence to the retrieval and processing of information that is congruent to the schema. Thus, schemas exert a profound impact on how people interpret situations and events in their lives (McLeod et al., 2013). Schemas influence a person's cognition and they have the potential to distort reality (Baron & Burn, 2000). Beck (cited in Mostert, 2007) states that the schemas of persons who are diagnosed with anxiety disorders revolve around themes of danger. Thus, it can be deduced from the above that situations and themes which are congruent to themes of danger will receive precedence when processing incoming information. It can thus be concluded that children with anxiety disorders will put most focus on danger-related information when processing incoming information. Thus, a person's interpretation of a given situation is influenced by the person's underlying assumptions which are stored in schemas, which in turn may predispose them to develop an anxiety disorder (Kendall, 1985; Mostert, 2007). Schemas and automatic thoughts typical of anxiety disorders most often include inaccurate information about the presence of threat. Automatic thoughts make a person more likely to interpret ambiguous situations as threatening, whereas inaccurate and sometimes catastrophic cognitions at the deeper levels of schemas are responsible for maladaptive emotional and behavioural responses. For example, if a child holds a catastrophic schema which pertains to separation from parents, then the child is likely to experience panic and fear when separation is imminent and thus engage in corresponding fight-flight behaviour (e.g., clinging, refusing to leave) which is aimed to prevent the feared consequence (as predicted by the faulty schema) from coming to pass (McLeod et al., 2013).
- Lastly, cognitive distortions can be understood as faulty conclusions that come about as a result of a person's faulty cognitive processing (Kendall, 1985). These cognitive distortions are further factors which are implicated in the aetiology of anxiety disorders. The most common cognitive distortions involved in anxiety include: selective abstraction, dichotomous thinking and catastrophizing. In selective abstraction, a person attends to the negative aspects of a situation and ignores the positive aspects. Dichotomous thinking occurs when a person thinks of a situation in terms of two

extremes. When catastrophizing a person blows the situation out of proportion (Beck & Emery, 1985). Because they distort reality, cognitive distortions influence a person’s interpretation of a given situation. Think of the child in the example in Chapter One: a child who is socially anxious enters into a social situation and the other children start to laugh; a child who is non-anxious may not think of the laughter as being directed at her individually, however, the child who is anxious is more likely to interpret the situation as threatening and view the laughter as being directed at her. Thus, an anxious child distorts the information and reaches a possibly incorrect conclusion that is not founded on verifiable data.

To summarise, because cognitions (the way we think) play an important role in determining how we feel and behave, the following processes can be viewed as etiological to anxiety: (a) dysfunctional schemas which contribute to the faulty interpretation of incoming information; (b) incorrect cognitive content which may be stored in schemas; (c) cognitive operations which may be used incorrectly to transform information from the environment and make subsequent inferences; and lastly (d) distorted thinking which may contribute to the precipitation and exacerbation of negative self-talk (inner-thoughts) (Prins, 2001). Thus, when CBT is used in the treatment and prevention of childhood anxiety, CBT-based interventions aim to address the faulty cognitive processes and problematic behaviours which are maintaining the child’s anxious behaviour. In this way the functional impairments that the anxiety brings about can be reduced (Barlow, 2008).

2.1.2 Principles and components of CBT for childhood anxiety

CBT is one of the most extensively researched forms of psychotherapy (Akiko Iizuka, Barrett, & Morris, 2013)and it (CBT) is considered to be the gold-standard when it comes to the treatment and prevention of anxiety in children and adults (Silverman et al., 2008; Walkup et al., 2008). Since the early 1990’s, CBT-based anxiety intervention programmes for children and adolescents have been researched extensively (see Chapter Three for an overview of this research). These studies have shown that by teaching children anxiety management skills and by providing exposure to fear-evoking stimuli through CBT-based programmes (these programmes are reviewed in Section 3.2 in Chapter 3) marked improvements in symptoms and levels of anxiety have been found (Rapee, Schniering, & Hudson, 2009; Wuthrich, Cunningham, & Rapee, 2013).

The difference between CBT and other forms of psychotherapy (e.g., traditional psychodynamic psychotherapies) is that CBT emphasises modifying behaviours and cognitions that are considered to be currently maintaining a problem (here and now), rather than uncovering historical antecedents of maladaptive behaviour or thought patterns (Hersen & Rosqvist, 2005). Furthermore, CBT is a structured, brief, time-limited form of therapy, usually consisting of approximately 10-20 sessions, making it an efficient and cost-effective treatment option.

As mentioned above, CBT employs both cognitive and behavioural processes and strategies which are used in various combinations to address particular difficulties relating to each of the cognitive, behavioural or physiological components of anxiety (Stallard, 2005). These various techniques make up the clinician's toolbox which is summarised in Figure 2 below.

Typical cognitive strategies which are used most frequently when addressing anxiety may include: cognitive restructuring (which is aimed at controlling negative self-talk; correcting faulty (distorted) cognitions; and building self-efficacy); and the identification of negative self-talk (unhelpful inner thoughts). While behavioural strategies include: problem solving skills; modelling; role-playing; relaxation training (which aims to lower physiological arousal and somatic symptoms); systematic and graded hierarchical exposures to anxiety provoking stimuli and situations (which aim to address the child's avoidance behaviours); contingency management training (which aims to increase motivation and compliance); and lastly training in relapse prevention (which aims to help the child to deal with possible future stressors and setbacks at school or home) (Barmish & Kendall, 2005; Hudson, 2005; King, Heyne, & Ollendick, 2005; Lake, 2014).

Figure 2. The clinician's CBT toolbox sourced from Stallard (2005).

Whilst the main objective of CBT and the strategies which are used may differ from one participant to the next, all CBT interventions share the following key principles (Huberty, 2012; Lake, 2014; Somers et al., 2007; Stallard, 2005):

- CBT is based on the cognitive-behavioural model (thoughts influence feelings and behaviour and vice versa).

- CBT is brief and time-limited.
- CBT is structured, directive, goal-orientated and problem-focussed.
- There is a collaborative, problem solving approach between the client and therapist in CBT.
- The CBT therapist acts as a coach, diagnostician and educator.
- The CBT therapist does not take on the role of an "expert" or major bringer of change (therapist is an expert on CBT, but client is an expert on their own life).
- The client participates actively in the process of therapy.
- CBT seeks commitment, participation and permission from the client.
- CBT makes use of homework to rehearse that which was learnt during sessions.
- CBT also provides the client with the opportunity to rehearse that which was learnt under the guidance of the therapist.
- CBT incorporates mechanisms to evaluate a client's progress and to provide the client with feedback regarding this progress.
- CBT techniques are (for the most part) evidence-based.

The above-mentioned general principles are central to CBT when it is applied to the treatment of various psychiatric problems, and should always be kept in mind by the CBT therapist. However, when CBT is used to treat and prevent anxiety in children the following specific components are important and used most often (Akiko Iizuka et al., 2013; Albano & Kendall, 2002; Barrett & Turner, 2004; Stallard, 2010):

- Psychoeducation – this component aims to educate children (and sometimes their parents) into the cognitive-behavioural model and provide them with corrective information about anxiety and feared stimuli.
- Identification of feelings and thoughts – this component introduces children to feelings (i.e., helps children to become aware of their own unique anxiety response and to identify helpful ways in which they can manage this response) and thoughts (cognitions) (i.e., helps children to recognise their own cognitions (self-talk) in anxiety-provoking situations and addresses some of the bias and distorted cognitive processes that have been associated with anxiety).
- Recognition of the link between feelings and thoughts – this component emphasises the underlying cognitive behavioural model which states that how we think influences the way that we feel and behave.

- Training in somatic management skills (relaxation training) – this component teaches children to become aware of their physiological responses to anxiety and teaches them techniques which target autonomic arousal and the related physiological responses (i.e., progressive muscle relaxation, breathing techniques and guided imagery).
- Cognitive restructuring – this component teaches children developmentally appropriate skills which first focus on identifying maladaptive (unhelpful) thoughts and secondly on the replacement of these maladaptive thoughts with realistic, coping focussed thoughts (replacing unhelpful thoughts with more helpful thoughts).
- Attention training – this component teaches children to focus on and attend to the positive aspects of a situation.
- Problem solving – this component focuses on teaching children practical skills to deal with interpersonal challenges.
- Self-reward – this component teaches children the concepts of self-monitoring and self-reinforcement. The child is encouraged to acknowledge and celebrate positive attempts at facing and overcoming his or her anxieties.
- Exposure methods – this component refers to techniques which involve graduated, systematic and controlled exposure to anxiety-evoking stimuli and situations. The child practices the “new” cognitive and emotional skills that have been learnt in both imaginal and in vivo exposures.
- Relapse prevention methods – this component introduces methods that focus on consolidating and generalising treatment gains over time. Emphasis is put on planning for future setbacks and challenges. Children are taught relapse prevention strategies to increase their repertoire of appropriate behaviours and responses to use in anxiety-provoking situations that may be encountered in the future.

The PAM programme which was developed in the present study incorporated all of these components to help children with visual impairments manage their anxiety and to prevent the onset of full-blown anxiety disorders.

2.1.3 The child-friendly use of CBT for childhood anxiety

CBT was originally developed for adults, but over the past 15 to 20 years it has been more readily used with children (Huberty, 2012). Early forms of CBT for childhood anxiety were borrowed from adult treatment models, and these models were “downloaded” on to children with the misleading assumptions that: (a) children are little adults, and (b) that all children (regardless of their developmental level) would be catered for with a single treatment approach (Barrett, 2000). Luckily however, more recently there has been recognition for the need to design treatments from a child-based perspective. According to Nelson and Tusaie (2011) the key for CBT's effective use with children is modification in a developmentally sensitive manner. This is a broad and somewhat abstract term, but it implies the need to modify complex CBT concepts to correspond with the child's level of cognitive development (Nelson & Tusaie, 2011).

To this end, the cognitive, learning and developmental theories which are discussed below will outline the developmental and contextual aspects which should be kept in mind when implementing CBT with middle-childhood children (see Sections 2.2, 2.3 and 2.4).

Furthermore, although the principles (mentioned above) of CBT are similar for adults, adolescents and children, there are fundamental differences which the therapist should keep in mind when conducting CBT with children. Besides the obvious developmental and cognitive factors mentioned, firstly, a major difference between children and adults is that children rarely refer themselves for treatment. It is the parent or caregiver who perceives the child as having a problem, subsequently leading them to refer them for intervention. Secondly, linked to the latter, children do not typically have much choice relating to their therapy (i.e., they cannot choose who they want to see, how many sessions will occur and may not understand the mode of therapy or orientation of the therapist) (Huberty, 2012).

It is the CBT therapist's task to establish a collaborative relationship with the child; build rapport; educate the child about the therapeutic process; and enable the child to be a collaborative participant throughout therapy (Huberty, 2012). Although middle-childhood children in the present study took part in a universal intervention, and they were not referred for formal CBT treatment it was still very important that the researcher kept the afore-mentioned factors in mind.

Noting all the above-mentioned principles and components, it is important to remember that when CBT is implemented preventatively in a group format (as was the case in the present study), the CBT programme is concerned with developing “new” skills and with helping the child to understand key elements of the cognitive-behavioural model. Once understanding has been reached, children are then able to rely on this model, and they can recall it and apply it when faced with challenges and problems in the future. This is different to when CBT is used for therapy, where the child is encouraged to detail personal problems and worries in depth to enable the therapist to obtain a detailed picture of their onset and maintenance (Stallard, 2010).

In the present study the researcher delivered a manualised intervention (The PAM programme) which is based upon a standard set of procedures and structured delivery.

2.2 Cognitive developmental theories

As mentioned above, cognition is one of the three important fundamental components in CBT. For this reason, an understanding of middle-childhood children's cognitive development is important. The CBT therapist's understanding of how middle-childhood children think and learn is fundamental to all aspects of the implementation of CBT, and this understanding is likely to impact on nearly all aspects of the intervention (Fuggle, Dunsmuir, & Curry, 2013). Thus, to this end two main theories of cognitive development namely Piaget's (1972) cognitive developmental theory and Vygotsky's (1978, 1986) sociocultural cognitive theory will be used to contextualise the cognitive development of middle-childhood children. These theories will also be linked to central aspects of CBT.

2.2.1 Piaget's theory of cognitive development

Jean Piaget's (1972) cognitive developmental theory has been described as one of the single most comprehensive and compelling theories of cognitive development in children. Piaget considered cognitive development to occur largely as a consequence of the child's actions on the environment (Fuggle et al., 2013), and he believed that children possess an innate tendency which drives them to try to make sense of their world's (Louw & Kail, 2007).

Piaget defined intelligence as "a basic life process that helps an organism (in the case of the present study the child with a visual impairment) adapt to its environment" (Shaffer, 2002, p. 50). This adaptation refers to the child's ability to expand their thinking by including new information. The inclusion of new information (adaptation) involves two processes: assimilation and accommodation. Assimilation is the process whereby new information is fitted in with existing cognitive structures (schemas) or modified to fit more easily (i.e., children interpret new experiences by incorporating them into that which is already known. Note that the existing cognitive schema is not changed; the new experience is changed to fit into the existing schema). Accommodation is the process of restructuring or modifying cognitive structures (schemas) so that new information can fit into them more easily (i.e., children modify existing knowledge in order to accommodate new experiences. In this instance schemas are expanded and changed) (Gerrig & Zimbardo, 2002; Louw & Kail, 2007; Loxton, 2005).

The ways in which these processes of adaptation take place are dependent on the child's level of cognitive development. Piaget (1972) delineated four stages of cognitive development and he believed that a child proceeds through an invariant developmental sequence, with each cognitive stage building on the preceding one (Bukatko & Daehler, 2011; Piaget, 1971). Each of these stages represents a fundamental change in how children understand and organise their environment, and each stage is characterised by more sophisticated reasoning (Louw & Kail, 2007).

Piaget (cited in Fuggle et al., 2013) stated that a child makes developmental progress when disequilibrium (cognitive conflict) occurs. This “disequilibrium” refers to an imbalance between assimilation and accommodation, and in order to resolve this state of disequilibrium children must adopt more complex ways of thinking (Fuggle et al., 2013). In this way children’s cognitive capacities develop and they progress from one stage of cognitive development to the next.

As mentioned previously in Chapter One (see section 1.3.5) Piaget’s third stage of cognitive development, namely concrete operational thought (approximately applicable to ages 7-12) coincides with middle-childhood, making it applicable to the present study. During the concrete operational stage children start showing beginnings of the capacity for adult reasoning. However, in contrast to adults, their thought processes are generally related to tangible, real objects as opposed to abstract ideas (Rathus, 2014). There are three qualities namely: decentration, sensitivity to transformation and reversibility which are central to concrete operational thought (Seifert, Hoffnung, & Hoffnung, 2000). Concrete operational children rely on logical operations to form their own conclusions. Things which were previously done physically are now done mentally (e.g., counting and mathematics) and they are able to classify things and arrange them hierarchically (Craig, 1996).

At around age 11 (as children move closer to Piaget’s 4th stage of formal operations) they develop an additional cognitive capacity, and most children are able to hold images in mind. This indicates their capability for being able to apply some core-meta-cognitive processes (thinking about thinking). This capability enables children to think about states of mind that are not determined by immediate (concrete) circumstances (this is relevant to CBT) (Fuggle et al., 2013). Keeping this age difference in mind, it was important for the researcher in the present study to make sure that the younger children (aged 9-10) understood the underlying principles of CBT and that these concepts were explained in a concrete and understandable manner.

Additionally, concrete-operational children are less ego-centric than younger preoperational children, and they possess a greater ability to take on the roles of others and to view the world and themselves from other peoples’ perspectives. They can recognize that people see things in different ways as a result of their differing circumstances, situations and values (Rathus, 2014). Furthermore, in comparison to preoperational children, who are only able to focus on one dimension of a problem at a time, concrete-operational children can engage in decentration (as mentioned above); this means that they can focus on multiple parts of a problem at once (Rathus, 2014). They realise that many problems have many facets (thereby decentring) (Louw & Louw, 2007a). The afore-mentioned abilities are very important when implementing CBT with middle-childhood children, as decentration is important when interpreting stories and narratives and teaching problem solving skills; and being able to consider the opinions of others is important when learning about thinking differently in CBT.

To summarise in simple terms, Piaget's (1972) theory suggests that children will develop new ways of thinking by discovering that there is a mis-match between what they expect and what they experience (Fuggle et al., 2013). Middle-childhood children's thought process becomes more competent, flexible and powerful as they become more adept at understanding and applying the concepts of decentring, reversibility and conservation (Craig, 1996; Piaget & Inhelder, 1958). Thus, the middle-childhood child's level of intelligence and the stage of cognitive development may influence the understanding and perception that he or she has of anxiety and the therapeutic process of CBT.

2.2.2 Vygotsky's socio-cultural cognitive theory

Lev Vygotsky (1896-1934) also viewed children as active constructors of their environment. Although Vygotsky was one of Piaget's contemporaries, he viewed Piaget's theory as having two main flaws: firstly, Piagetian theory neglected to take cultural and social influences into account when describing children's cognitive development (Louw & Louw, 2007b), and secondly, Piaget's theory did not clearly delineate to what degree instruction from others contribute to children's cognitive maturation (Fuggle et al., 2013). Consequently, he considered these two aspects as central to his theory, naming it the socio-cultural cognitive theory.

In differentiation to Piaget, Vygotsky placed much more emphasis on the role of culture and social interaction in the development of children's cognitions. Vygotsky implied that cultural and social interactions guide cognitive development. He stated that learning is culturally and socially mediated and that the support that adults provide as they guide children towards more sophisticated levels of knowledge and understanding is especially important (Fuggle et al., 2013; Vygotsky, 1986).

In order to contextualise how children learn and develop cognitively, Vygotsky (1978, 1986) coined a term, “the zone of proximal development” (ZPD). The ZPD refers to the difference between the lower level of performance a child may achieve when working alone, and the higher level of performance which may be reached when the child works under the guidance of a more skilled person (Fuggle et al., 2013). According to Vygotsky, working within a child’s ZPD – that is by giving her adult or peer assistance, allows her to respond to her environment in more competent ways and to achieve more than she might by herself (Louw & Louw, 2007b).

The ZPD’s upper and lower levels can play a role in how children cope with fear and anxiety. For example, an adult who is able to deal with their own fears effectively can guide a child through anxiety-provoking situations by providing appropriate comments and assistance. The child then learns to cope more effectively with the anxiety as opposed to being overwhelmed by it (Burkhardt, 2007). Thus, the ZPD can be viewed as a zone where children’s cognitive skills mature and are mastered with the assistance of a more skilled person.

Closely linked to the term ZPD is the term “scaffolding”. Scaffolding refers to temporary assistance provided by a more skilled person (as mentioned above) to a less-skilled person when learning a new task (Louw & Louw, 2007b). When a child is mastering a new task he or she may be given a great deal of support which is then systematically decreased as he or she becomes more adept at performing the new task. The adjustments that the more skilled person makes to his or her language, the material presented and the presentation of the new task are all elements which influence the nature of the scaffold (Fuggle et al., 2013). The more skilled person provides assistance just slightly above the child’s current competence, thus stimulating the child to reach a new level of cognitive development. The defining feature of scaffolding is giving help – but not more than is needed to promote learning (Louw & Louw, 2007b). Therefore, the ultimate goal of scaffolding is for the child to be able to perform the new skill independently and for him or her to be able to regulate his or her own performance (Fuggle et al., 2013).

From the above it can be seen that Vygotsky viewed the child’s development as being linked to their social experiences. Vygotsky thus considered development from a cultural perspective and stated that culture is transmitted from one generation to the next through formal and informal education (Fuggle et al., 2013). Burkhardt (2007) stated that Vygotsky’s theory could be very valuable when interpreting the cultural expressions of fear and anxiety, and linking to the cultural transmission of information the theory could also explain how fears and anxieties are passed on from parents to their children, namely through their interactions with one another.

Linking to the above, the concept of scaffolding has also been further extended to not only relate to one-to-one interactions, but to include the support and structure that is provided in group learning situations as well (as is the case in the present study) (Fuggle et al., 2013). Thus, in the case of the present study the scaffolding is provided by the CBT therapist (researcher), the therapist provides a lot of support in the beginning when the child is learning new anxiety management skills, but as the child becomes more adept in managing his or her anxiety the therapist provides less and less support. From the afore-mentioned it is clear that Vygotsky also differed with Piaget regarding the role of the therapist; he viewed the role of the more skilled person as being more central and didactic to the child’s cognitive development. He considered instruction as being central in guiding and extending the child’s understanding (Fuggle et al., 2013). Piaget on the other hand did not view instruction from others as integral to the promotion of cognitive development.

Louw and Louw (2007b) stated that children do not learn readily when they are constantly told what to do or when they are simply left to struggle through a problem by themselves. For this reason, scaffolding should be viewed as a valuable technique to use when teaching a child new skills. This is especially relevant to the present study, as the PAM programme’s main aim is to help children to understand the cognitive-behavioural model and develop “new” skills which they can use when faced with challenges and problems in the future. As the CBT therapist (researcher) will not always be with the child to tell them what to do, the researcher should provide the appropriate scaffolding during the 10 sessions of the PAM programme to enable children to learn the “new” anxiety-management skills and transfer them to their own lives.

Considering the two theories discussed above, Burkhardt (2007) noted that middle-childhood children’s cognitive capacities increase largely due to the fact that they attend school. However, differences between children’s cognitive maturation can occur as a result of the quality of the school, the school’s resources (i.e., training and availability of teachers and equipment – this is especially relevant when it comes to the provision of scaffolding) and the regularity with which the child attends. Children in the present study attended two special schools for children with visual impairments in the Western Cape Province (South Africa), however, one of the schools (School 2) was historically a White school (under the Bantu Education Act) (Union of South Africa, 1953) and this school has better infrastructure, facilities and a greater access to funding. These discrepancies may thus indirectly influence the opportunities for cognitive development of the children who attend the other school (School 1).

These discrepancies also seemed to play a role in the ease of implementation of the PAM programme (see Section 7.5 in Chapter 7).

2.3 Psycho-social developmental theories

2.3.1 Erikson's psychosocial developmental theory

Another theory which is very relevant to the development of middle-childhood children is Erik Erikson's (1902-1994) psychosocial developmental theory. Erikson (1963) put great emphasis on the cultural and social determinants of personality. He believed that children make an active contribution to their development through their efforts to adapt to their environment (Wait, 2005). Erikson (1963) postulated that fundamental developmental changes occur across the entire lifecycle, from infancy to old age, and he subsequently divided the human life cycle into eight distinct developmental stages. In each of these stages the individual faces a unique developmental task presented in the form of a challenge or crisis (the psychosocial crisis).

There are two resolutions to this crisis, one positive and one negative at opposite sides of a continuum. In order to resolve the crisis a person needs to reach a synthesis between these two opposing poles (Erikson, 1963; Wait, 2005). The psycho-social tasks which have to be resolved occur in a circumscribed manner, and Movement to the next developmental stage is dependent on the resolution of the crisis of the preceding stage (Wait, 2005). Thus, when a psychosocial crisis is resolved new skills are learnt and maturation occurs.

As mentioned in Chapter 1 (see Section 1.3.5) when discussing middle-childhood children, Erikson's (1963) fourth stage of development (industry versus inferiority) which stretches from around age 6 to 13 is most applicable to the present study. In terms of resolving their developmental crisis, middle-childhood children are striving to achieve a sense of industry while avoiding a sense of inferiority (Erikson, 1963). The main things that middle-childhood children are striving to grasp at this stage relate to the learning of basic skills and how to work with others (team-work) (Louw & Kail, 2007).

Depending on the child's ability to master these "new" skills, he or she may develop a sense of industry or inferiority (Erikson, 1963). If the psychosocial crisis is resolved towards industry a child will develop an eagerness to acquire new skills (Newman & Newman, 2009) and he or she will believe in his or her ability to perform meaningful work (Wait, 2005). Children who are able to convince themselves and others of their abilities develop confidence and have a relatively good self-concept (Siefert et al., 2000). If the psychosocial crisis is resolved negatively and the child is unable to master certain developmental tasks, a sense of inferiority may develop. Thus middle-childhood children evaluate themselves as either being industrious or inferior; they decide whether they are competent or incompetent, productive or useless, winners or losers. Children’s judgements do not necessarily depend on actual accomplishments, but on how others, especially peers, view their accomplishments (Berger, 2015).

In conjunction with the above, it is clear that middle-childhood children’s achievements are constantly being evaluated (by themselves, peers and others), and that different achievements are acknowledged differently in different settings (for example different schools put greater emphasis on different areas of learning, sports, academics) (Wait, 2005). This can lead to children being criticised openly and unfairly. It is thus important for children to learn to recognise and deal with feelings of failure; this will in turn lead to them developing a good locus of internal control. If negative feelings are ignored, constantly experiencing failure can lead to so-called “learned helplessness”; this may lead to children generating a self-concept that may cause them to adopt a pessimistic view regarding success in the future. This in turn can lead to these children developing anxieties relating to achievement as well as deeper feelings of disappointment if they do not meet their expectations (Wait, 2005). Echoing himself, Wait (2005) further stated that “this stage (middle-childhood), with its increased demands socially and educationally, can create anxiety for children who have difficulty coping with these demands. Anxiety, in turn, can negatively impact upon children’s personality development” (p. 129). To combat this anxiety, it is important that middle-childhood children discover that they will not be able to master every new skill they attempt to learn, and that each person has his or her own unique strengths and weaknesses. When a child makes this realisation, and successfully achieves a synthesis between the two poles of industry versus inferiority, competence is achieved (Bensch, 2010; Erikson, 1963).

When considering the afore-mentioned, it is clear that the synthesis of the psychosocial crisis at this stage plays an integral part in the development and maturation of the middle-childhood child. In order to facilitate this synthesis, the PAM programme addresses these factors (i.e., being different and being ok with having different strengths and difficulties; putting less emphasis on perfectionism; helping others with the abilities that you have; feeling good about yourself and knowing that you are good at some things and not so good at other things, we all have different abilities).

2.4 Learning (behavioural) theories

Various learning theories including classical and operant conditioning and Rachman’s (1977, 1991) theory of fear acquisition are relevant to the present study. These theories can be used to explain the aetiology and/or maintenance of anxiety, as these theories focus on the link between a child's behaviour and the environment.

2.4.1 Theories of conditioning (classical and operant)

The earliest and most basic learning theory is classical conditioning, which can be described as follows: a neutral conditioned stimulus (NS) is consistently presented together with an unconditioned unpleasant stimulus (UCS) leading to an unconditioned response (UCR). After several occurrences an association will form between the NS and the UCS, which now results in the NS alone (now called the conditioned stimulus (CS)) evoking a conditioned response (CR) (Watson & Rayner cited in Gosch, Flannery-Schroeder, Mauro, & Compton, 2006).

When viewed in terms of anxiety, a child could thus learn to produce a certain CR (anxiety response) on presentation of the CS (the object or situation that evokes anxiety) via an association between the NS and the UCS that originally produced an unconditioned anxiety response (Mostert, 2007).

Another form of conditioning, so called operant conditioning, was coined by Skinner (1904-1990). In contrast to classical conditioning which puts emphasis on the way that children respond to their environment; operant conditioning emphasises the way in which the environment influences children's responses. In terms of these responses, operant conditioning states that children operate in their environment to attract more rewarding reactions and to avoid punishment. Basically, if a child's behaviour is rewarded, it is more likely to be repeated, but if the behaviour is met with a negative reaction, it is less likely to re-occur (Louw & Kail, 2007).

Although the relative weight of these theories of conditioning in the aetiology and onset of anxiety has been debated, modern CBT therapists recognise that these two core principles (classical and operant conditioning) are responsible for generating many of the anxious symptoms that arise in response to a variety of stimuli in day-to-day life. However, in CBT the main focus is not on the role of classical and operant conditioning in anxiety acquisition, but on how these principles are used in treatment. CBT adapts these principles for use in recovery (Maunder, Ravitz, Fefergrad, & Richter, 2013).

These learning theories link up to the behaviour component in CBT. Behavioural treatment is based upon the premise that fear and anxiety are learnt responses (conditioned) that can thus be "unlearnt" (James, Soler, & Weatherall, 2007). This is especially evident in the adoption of avoidant behaviours which are "learnt" behaviours resulting from the association of a given stimulus with a fear reaction. Because avoidance is "learnt" it can thus be "unlearnt" using exposure techniques – which form an integral part in CBT treatment for childhood anxiety (Gosch et al., 2006).

2.4.2 Rachman’s three-pathway theory of fear acquisition

Stanley Rachman (1991, 1977) noted that conditioning alone was not sufficient to explain how fears and anxieties are acquired. He therefore revised and expanded the conditioning theories and built them into his three-pathway theory for fear acquisition and maintenance. Rachman stated that fears and anxieties can be acquired directly through conditioning (as described above), but also added two indirect fear pathways which included: modelling (i.e., vicarious or observational learning) and negative information transmission (i.e., exposure to negative information about the feared object or situation) (McLeod et al., 2013; Muris, Bodden, Merckelbach, Ollendick, & King, 2003; Muris, du Plessis, & Loxton, 2008).

According to Rachman’s second pathway (i.e., modelling), anxieties can be acquired by observing others react fearfully towards a given fear-provoking stimulus or situation (Graham & Gaffan, 1997). This pathway is supported by previous research which noted that people often state that they fear objects or situations which they have never personally encountered (Rachman, 1977). According to the principles of observational learning, a person can learn to produce a certain response by observing the response being performed by someone else. Once the behaviour has been observed, a process that requires attention, the behaviour is represented symbolically (either visually or verbally) and retained for later performance. The consequences of the models behaviour will determine whether that which was observed will be translated into modelled behaviour. When applying this pathway to the aetiology of anxiety, a child can learn to react fearfully or anxiously to a specific stimulus or situation by observing another person react with anxiety or fear to the same situation.

According to Rachman’s third pathway (i.e., negative information transmission), anxieties can also be acquired through the formation of an association between a phobic stimulus and potential danger as suggested through words or pictures (Graham & Gaffan, 1997). Rachman (1977) stated that “information-giving is an inherent part of child-rearing and is carried on by parents and peers in an almost unceasing fashion, particularly in the child's earliest years. It is probable that informational and instructional processes provide the basis for most of our commonly encountered fears of everyday life” (p. 384). Thus, the things that parents, teachers and peers say relating to anxiety-provoking situations can impact how children interpret these possible anxiety-provoking situations in their own lives.

Rachman's (1997) three pathways are not only applicable to the acquisition of anxiety, but also play an important role in the selection of appropriate treatment strategies. For example, fears and anxieties which were directly conditioned are thought to benefit best from treatments including: systematic desensitisation, flooding or other deconditioning procedures. Whilst fears and anxieties which were acquired through the indirect pathways of modelling and negative information may benefit most from positive modelling and cognitive restructuring (King, Gullone, & Ollendick, 1998). With regards to the latter, in the present study it is important for the researcher to keep the principles of observational learning in mind. In this way while delivering the PAM programme she should model appropriate anxiety-management behaviours. These adaptive behaviours should then be reinforced by participants through role-plays and verbal reinforcement from the researcher and other group members. It is also important for the researcher to remember that anxieties are acquired in different ways and are reinforced by different factors. This ties in with the afore-mentioned treatment strategies which all fall within the scope of CBT, showing once again that this modality is suitable for the treatment and prevention of a variety of childhood anxieties, even if these anxieties were acquired in different ways.

2.5 Disability theory

The field of disability studies is very broad, and discussing all aspects of disability theory falls outside of the scope of this dissertation. The researcher chose to focus on various aspects of disability theory that are relevant to children with visual impairments within the present study. Therefore, this section is aimed at providing a broad overview of how certain disability-related factors can impact upon and affect the lives of the study's target population – children with visual impairments.

At this point it is important to note that there is no particular "psychology of blindness" (Radnitz & Oronson, 2000). The absence or loss of vision can present in any individual with his or her own unique constellation of personality traits or abilities. However, individuals who are born blind (blind children) are faced with and have to deal with the societal misunderstandings, stereotypes and indifference common to all forms of disability. They have to overcome many challenges and prejudices which are not faced by those without disabilities (Radnitz & Oronson, 2000). In a 2013 fact sheet which was released by UNICEF, the following key elements were highlighted as being relevant to children with disabilities:

- Research data on children with disabilities is limited, and what evidence that does exist is based on a smaller set of studies than are available for other groups of children.

- A significant proportion of children with disabilities are denied access to basic services including education and health care.
- Children with disabilities are disproportionately vulnerable to violence, exploitation and abuse.
- The greatest barriers of inclusion to children with disabilities are stigma, prejudice, ignorance and lack of training and capacity building (UNICEF, 2013).

These are all factors which hold true for the participants in the present study as well.

The first factor which mentions that children with disabilities have been neglected in previous research is especially relevant to the present study. In the same way that there is no specific psychology of blindness, so too has the field of CBT failed to keep pace with the needs of vulnerable and special populations (King et al., 2005). As far as the researcher could identify, only one study describing the use of CBT in the rehabilitation of visually impaired adults could be found (Radnitz & Oronson, 2000). In this study which was conducted almost two decades ago, Radnitz and Oronson (2000) noted that there were no controlled group outcome studies of cognitive behavioural interventions for persons with visual impairment. This still seems to be the case, as the researcher was unable to find any relevant research addressing CBT for the treatment of anxiety in children who have visual impairments. Radnitz and Oronson (2000) attributed this lack of research with people who have visual impairments in part to: (a) the absence of standardized modifications of common procedures; (b) the lack of appropriate normative data; (c) limited number of clinicians with specialized training and (d) the social "invisibility" of persons with visual impairments. These afore-mentioned factors link to the various ways in which disability can be defined. Various models have been used to describe disability, the most common of these being the medical model and the social model. The social model is especially relevant to the present study. This model views disability not as a consequence of a person's disability or impairment, but as a result of the way society is organised. Thus, people are viewed as being disabled by society rather than by their bodies (WHO, 2011, p. 4). Therefore, the social model is focussed on the removal of barriers which restrict life choices for people with disabilities. Linking to this, the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) (UN, 2006) states that people have the right to participation, including the right to participate in research and to benefit from accessible interventions. It is these two rights which are addressed and met by the present study.

South Africa is one of the country's which has achieved significant change for people with disabilities (Barnes & Mercer, 2005). In South Africa mechanisms have been put in place to ensure an inclusive and equitable society, these mechanisms include the white paper on disability and the visionary document on disability: the integrated national disability strategy. People with disabilities are included in the South African society, socially, politically and in policy development with a human rights, social and development perspective (Nhlapo, Watermeyer, & Schneider, 2006; SAHRC, 2002). However, although the afore-mentioned shows that significant progress has been made, South Africans still have a long way to go in establishing a barrier-free and equitable society for people with disabilities (Philander, 2007).

2.6 Chapter summary

This chapter presented the theoretical framework which underpins the present study, and a number of relevant theories, which relate to anxiety in middle-childhood were outlined. Firstly, cognitive behavioural theory was outlined and a definition of CBT was provided. CBT was then discussed in terms of its theoretical underpinnings; its fundamental principles and components; and its child-friendly application. Thereafter, an overview of the major developmental theories applicable to middle-childhood children which included Piaget's (1972) theory of cognitive development, Vygotsky's (1978, 1986) socio-cultural cognitive theory, Erikson's (1963) psychosocial developmental theory and various learning (behavioural) theories was provided. The chapter concluded with a brief overview of disability theory and the relevance of certain disability factors to children with visual impairments.

Chapter 3 provides a review of the relevant literature pertaining to CBT and the treatment and prevention of childhood anxiety and visual impairment.

CHAPTER 3: LITERATURE REVIEW

As the present study focuses on the utilisation of a CBT-based intervention programme for the management of anxiety in South African children with visual impairments, the literature review will provide an overview of salient literature which is relevant to this topic. The chapter starts by providing relevant information to contextualise childhood anxiety. Thereafter, a broad overview of the programmes upon which the present anxiety intervention (PAM programme) is based is given. An overview of the empirical evidence for the use of CBT with middle-childhood children is provided, with reference to the use of CBT in both treatment and preventive studies. Attention is then given to CBT programmes and their adaptation for use in multi-cultural and special populations. The Chapter is concluded by an explanation of the unique contribution that the present study will make to the literature pertaining to the prevention of anxiety in South African children with visual impairments.

3.1 Contextualising childhood anxiety

As mentioned in the introduction to this study (Section 1.3.1 in Chapter 1) the terms “fear” and “anxiety” as well as “worry” are often used interchangeably in day-to-day language (Muris, 2007), however, it is important to distinguish these concepts from one another. Children experience fear and anxiety through the manifestation of cognitive, behavioural and physiological symptoms. These symptoms vary in frequency, intensity and duration (McLeod et al., 2013).

Fear is one of the four basic human emotions (McLeod et al., 2013). Fear is defined as a strong response to a real, objective threat or situation which is proximate or eminent (Muris, 2007). As such, fear is understood to be a biological, hard-wired response which activates behaviours (fight or flight responses) that serve to protect the child from danger and promote their survival. The fear response is accompanied by a diminished cognitive response, a subjective experience of distress (e.g., fear of dying) and a strong physiological response (e.g., a pounding heart). These responses aim to prepare the child to respond to the perceived threat, and provides them with a strong desire to remove themselves from the situation where the fear is eminent (McLeod et al., 2013).

Anxiety is viewed as a negative mood state (McLeod et al., 2013). Anxiety’s function is to prepare the child to face possible future threats. Anxiety is accompanied by a state of mild to moderate physiological arousal (e.g., the occurrence of headaches and stomach-aches), a narrowed cognitive focus towards the perceived threat, ruminations about possible future danger, and a general negative mood state. Thus anxiety is characterised by both cognitive (attentional biases) and physiological (autonomic arousal) symptoms. These symptoms increase and build up to a state of fear (McLeod et al., 2013). Therefore, whereas fear arises when a threat is certain and/or detected, anxiety may manifest without the presence of an actual (in anticipation of a possible) threat (Muris, 2007).

Worry is viewed as the cognitive component of anxiety, and according to Barlow (cited in McLeod et al., 2013) it can be defined as thoughts and beliefs which relate to possible problems that may occur in the future. Worry is primarily a cognitive phenomenon. Worry functions to prepare an individual to identify potential threats by focussing their attention upon certain potentially dangerous environmental stimuli. Thus, worry is made up of attentional and memory biases that cause some children to pay more attention to threatening stimuli (McLeod et al., 2013). Considering all three of these concepts, it is the mood state of anxiety that is most relevant to the present study. The RCADS-30 (Chorpita et al., 2005; Sandín et al., 2010) measures symptoms of anxiety; whilst the PSWQ-C (Chorpita et al., 1997) measures children's tendency to engage in excessive worry – these anxiety measures are discussed in Section 5.6.3.4.1 in Chapter 5).

Furthermore, as mentioned previously, anxiety in itself should not be viewed as a solely negative, unhealthy state. Treatment of anxiety from the cognitive-behavioural perspective assumes that anxiety is a normal emotion which manifests in different intensities (Albano & Kendall, 2002). In its adaptive or "normal" form anxiety is viewed as facilitative and helpful, as it can motivate a child to try harder at a pursuit in which he or she wants to do well and it can inhibit excessive risk-taking. Anxiety can serve a further protective function, by steering children away from stressful or negative experiences (e.g., reminding them to look left and right before crossing the street or to study hard before writing a test) (Albano & Kendall, 2002). Thus, experiencing a certain level of anxiety is deemed to be part of normal development for children, however, when anxiety is unreasonable in response to the proportion of the threat or when it occurs at a disproportionate intensity it becomes problematic (Ahlen et al., 2012; Dadds & Barrett, 2001). When this occurs, anxiety ceases to be adaptive as it starts to interfere with everyday functioning and activities (Bittner et al., 2007). When this is the case, and symptoms of anxiety persist and intensify to the extent that they start to impair a child's daily functioning – thereby impeding their quality of life and daily routines – an anxiety disorder may be diagnosed (American Psychological Association, 2013).

Currently the DSM-IV distinguishes between the following eight anxiety disorders which may occur in children and adolescents: (a) separation anxiety disorder (SAD), which is characterised by excessive anxiety concerning separation from the home or from significant attachment figures to a degree that is disproportionate with the child's developmental level; (b) generalised anxiety disorder (GAD), which is characterised by persistent and excessive anxiety and worry, accompanied by motor tension and hyper-vigilance; (c) social phobia, which is characterised by a marked fear of social or performance situations in which embarrassment may occur; (d) specific phobia, which is characterised by marked and persistent anxiety provoked by exposure to a specific feared object or situation, often leading to avoidance behaviour; (e) panic disorder, which is characterized by the presence of panic attacks, i.e., a discrete period of intense fear, accompanied by persistent concern about their recurrence or their consequences; (f) obsessive-compulsive disorder (OCD), which is characterized by the occurrence of obsessions, i.e., intrusive ideas, thoughts, images, or impulses that cause marked anxiety or distress, and compulsions, i.e., repetitive behaviours or mental acts which are aimed at neutralising anxiety; (g) acute stress disorder; and (h) post-traumatic stress disorder (PTSD) are both characterized by the re-experiencing of an extremely traumatic event accompanied by symptoms of increased arousal and by avoidance of stimuli associated with the trauma (American Psychiatric Association, 2000; Muris, Mayer, Bartelds, Tierney, & Bogie, 2001). The first four mentioned anxiety disorders (i.e., SAD, GAD, social phobia and specific phobia) occur most frequently, and often children experience comorbid anxiety and phobic disorders (King et al., 2005).

The researcher is aware that at the time of the present study, a fifth edition of the diagnostic and statistical manual of mental disorders (DSM-5) (American Psychiatric Association, 2013) exists, however, the present study’s measure of anxiety symptoms (The RCADS-30) (Chorpita et al., 2005; Sandín et al., 2010) is based on the previous version (4th edition of the DSM, DSM-IV) (American Psychiatric Association, 2000). Thus, the anxiety disorders mentioned above were defined according to this previous edition.

Along with its high prevalence, and the above-mentioned eight anxiety diagnoses, anxiety is also known to have various sequelae (secondary affects) and anxiety disorders are often comorbid with one another and other psychiatric disorders (Essau et al., 2012). Anxiety disorders frequently co-occur both within anxiety disorders (are homotypic) and with other mental disorders (are heterotypic) (Essau & Gabbidon, 2013).

When referring to homotypic co-occurrence, in their study of 104 children (aged 6-16) who were referred to a phobia outpatient treatment programme, Silverman and colleagues (Silverman, Kurtines, Ginsburg, Weems, Rabian et al., 1999) found that the majority (72%) of children had at least one comorbid anxiety diagnosis: 19% had an additional specific phobia, 16% had SAD and 14% had overanxious disorder (GAD) (Silverman, Kurtines, Ginsburg, Weems, Rabian et al., 1999). In terms of heterotypic co-occurrence, studies have consistently reported a strong overlap between anxiety and depression (e.g., Brady & Kendall, 1992; Essau, 2005) and children diagnosed with an anxiety disorder are believed to have up to 29 times the risk of experiencing symptoms of depression as well (Costello et al., 2003; Essau et al., 2012). Lewinsohn and colleagues (1997) found that anxiety disorders often co-occur with six of the nine other psychiatric disorders, the most common of these being (besides depression) substance use disorders, disruptive behaviour disorders (conduct disorder, oppositional defiant disorder) and attention deficit hyperactivity disorder (ADHD) (Essau & Gabbidon, 2013; Lewinsohn et al., 1997). Thus, anxiety's clinical picture can be quite complex due to comorbidity (King et al., 2005).

Furthermore, as is also evident from the above, anxiety in children and adolescents is common, and certain concerns and worries are part of normal every-day life (Muris, Meesters, Merckelbach, Sermon, & Zwakhalen, 1998; Stallard, 2010). However, the nature and prevalence of these worries and concerns varies between girls and boys and from one developmental stage to the next (McLoone et al., 2006), and they are shaped by sequential developmental challenges in cognitive, behavioural and social processes (Stallard, 2010; Weems & Stickle, 2005). In general anxiety symptoms tend to be more prevalent in girls than in boys and more prevalent in younger than older children (e.g., King et al., 2005).

In infancy anxiety is typically related to sudden loud noises, unexpected events and unfamiliar people. When entering middle-childhood (age 6) worries relating to the loss or separation from parents and specific fears such as a fear of the dark or specific animals occur. Towards the end of middle-childhood (ages 10-13) anxieties relating to personal injury, death, danger and natural disasters commonly emerge. When entering adolescence worries relate more to social comparisons and situations, with anxiety about failure, criticism and physical appearance being common (Stallard, 2010). It can be deduced that the age of onset of the various anxiety disorders roughly correspond to the ages at which the afore-mentioned expected/normal anxieties occur (Albano & Kendall, 2002). Thus, younger children will be more likely to report higher levels of SAD, whereas middle-childhood children most often report GAD, and social phobia occurs most often in adolescence (Albano & Kendall, 2002; McLoone et al., 2006). An understanding of how different symptoms of anxiety manifest across the various developmental stages is very important, as this enables the clinician to determine whether the expression of a particular anxiety symptom is congruent with the child's level of development or whether it might be a symptom that is interfering with functioning

(McLeod et al., 2013). Thus, an intense fear of separation from a caregiver may be considered typical in young children, but this is not considered typical in middle-childhood, making it problematic (McLeod et al., 2013).

In terms of gender, the prevalence of anxiety disorders also differs. Epidemiological studies show that girls are around one and a half to two times more likely to be diagnosed with an anxiety disorder compared to boys (McLoone et al., 2006). This was also the case for children in South Africa, where girls reported significantly more symptoms of anxiety than boys (Muris, Schmidt et al., 2002; Muris et al., 2006; Perold, 2001). Lewinsohn et al. (cited in Essau & Gabbidon, 2013) put forth three speculative factors which could contribute to these gender differences. First, they ascribed gender differences to possible pre-determined genetic and biological differences between girls and boys. Second, because anxiety and depression are often comorbid, they stated that the higher incidence of anxiety in girls may possibly be attributed to their general tendency to be ruminative about current and future events. Lastly, they ascribed gender differences to possible different gender experiences and the social roles of girls and boys (Essau & Gabbidon, 2013).

Culture is also a factor in the expression of anxiety. Muris and colleagues (Muris, Schmidt et al., 2002) found that South African children from Coloured and Black ethnic backgrounds displayed higher levels of anxiety when compared to children of White ethnicity. These findings were also replicated in subsequent South African studies (Burkhardt et al., 2003; Muris et al., 2006).

These afore-mentioned factors (especially the higher prevalence rates of anxiety symptomology amongst South African children) underline and strengthen the already strong case made in Chapter One that childhood anxiety in South African children needs to be addressed. To reiterate, promising in this regard is the amenability of childhood anxiety symptoms to brief psychosocial interventions such as CBT (Lowry-Webster et al., 2001; Silverman et al., 2008). As a result, the following section aims to provide a broad overview of the existing, well-researched, CBT programmes upon which the present anxiety intervention (PAM programme) is based. Thereafter, studies which utilised these various CBT-based programmes to treat and prevent anxiety in middle-childhood children are reviewed.

3.2 CBT-based manualised programmes/interventions for the treatment and prevention of childhood anxiety

Various manual-based treatments (which typically include workbooks for children and manuals for therapists) exist for the treatment and prevention of childhood anxiety. The first and oldest of these being Philip Kendall's Coping Cat Programme. This programme was developed at The Child and Adolescent Anxiety Disorders Clinic at Temple University in Philadelphia (USA) in the 1980s as an individual, manualised treatment for children with diagnosed anxiety disorders. The Coping Cat Programme (Kendall, Kane, Howard, & Siqueland, 1990) consists of an 85-page manual which outlines 16 (45-60 minute) sessions of CBT treatment for children aged 7-13 years, and a corresponding participant workbook. The manual provides treatment guidelines for the therapist, whereas the workbook contains activities for the child to complete. Coping Cat was chosen as the programme name as the programme's mascot was a cat and to convert the taunt that frightened children are "scaredy cats" or "fraidy cats" into a coping version. Kendall (cited in Sapatkin, 2008, para. 5) stated that "You start out as a scaredy cat or a fraidy cat and you become a coping cat".

The Coping Cat Programme aims to teach children to recognise signs of anxious arousal and to let these signs serve as cues for them to implement anxiety management skills to better cope with anxiety-provoking situations (Albano & Kendall, 2002). Children who participate in the programme learn to identify, regulate, and cope with their anxiety. The Coping Cat Programme has two sections: the first (sessions 1 to 8) focuses on psycho-education and the learning of skills to manage anxiety; whereas the second section (sessions 9 to 16) emphasises exposure to anxiety provoking situations.

The first eight training sessions introduce children to the basic cognitive concepts/skills of CBT, these include: (a) identifying bodily arousal/symptoms of anxiety; (b) learning to relax; (c) recognising and modifying anxious thoughts and negative self-talk; and (d) problem solving skills. These concepts/skills are presented to children as a toolset known as the F-E-A-R plan (Podell, Mychailyszyn, Edmunds, Puleo, & Kendall, 2010).

The F-E-A-R plan is basically a mnemonic which is intended to help children learn and remember the various skills they are taught to face their anxiety (Manassis, 2013). In the first step (Step F) children are taught to identify their anxious feelings and to recognise the physical sensations associated with anxiety by asking themselves, what am I feeling? And/or am I feeling frightened? Children use their own bodily reactions to recognise when they are experiencing anxiety. In the second step (Step E) children learn to identify beliefs that may contribute to their increasing anxious arousal by asking themselves, what am I expecting to happen? And/or expecting bad things to happen? Their thoughts are usually linked to being hurt or embarrassed. Children then progress to challenging unhelpful thoughts (or anxious self-talk) in step 3 (Step A) and they learn to use more helpful, coping self-talk. Children learn problem solving skills and are encouraged to identify alternative ways in which they can interact with their anxiety. They prompt themselves to identify these skills and strategies by asking, what attitudes and actions will help? After making a plan they implement the fourth step (Step R) results and rewards. In this step, children realistically evaluate their coping efforts and reward themselves for their efforts to cope with their anxiety (Thus, F = feeling frightened; E = expecting bad things to happen; A = attitudes and actions to help; and R = results and rewards) (Kendall, 1994). As is evident from the latter explanation, the anxiety management skills are taught in a sequence that enables children to build skill upon skill (Podell et al., 2010).

After learning the F-E-A-R plan during the programme's first eight sessions, the child embarks on the second phase of treatment – using the F-E-A-R plan during real anxiety-provoking situations. Children practice the skills they have learnt in both imaginal and in vivo exposures (the F-E-A-R plan helps them to remember the skills). Situations in these exposures are graded and varied from low stress (low anxiety) to high stress (high anxiety) (Kendall, 1994). The exposures are individually tailored to each child based on the child's specific anxieties. The last session (session 16) includes the presentation of a child-created commercial which gives the child a chance to show off the skills that have been learned through the Coping Cat Programme (Podell et al., 2010). The 16 sessions of the Coping Cat Programme are outlined in Table 1.

Table 1

An Overview of the Sequence and Content of the 16 Sessions of the Coping Cat Programme, Sourced from Podell et al. (2010)

Session no.	Purpose of session:
1	Build rapport; provide orientation and overview of the programme; encourage the child's participation and verbalisations during sessions; introduce tasks and rewards; play a "personal facts" game; have some fun!
2	Talk about treatment goals; identify different feelings and somatic responses to anxiety; normalise fear/anxiety; develop hierarchy of anxiety-provoking situations; play "feelings charades"; create a "feelings dictionary"; introduce the F-step of the FEAR plan – Feeling frightened?
3	Review distinguishing anxious feelings from other feelings; learn more about somatic responses to anxiety; identify individual somatic responses to anxiety.
4	Parent session: Provide information about treatment to the parent(s); give parents opportunity to discuss concerns; learn more about the situations in which the child becomes anxious; provide ways in which parents may be involved.
5	Introduce relaxation training; review recognition of somatic queues; make and decorate a relaxation tape; let child show skills to a parent.
6	Review relaxation training; introduce "E" step of the FEAR plan – Expecting bad things to happen?; help child generate less anxiety-provoking self-talk; use cartoons to identify self-talk.
7	Review anxious self-talk; reinforce changing anxious self-talk into coping self-talk; introduce cognitive strategies to manage anxiety; introduce problem solving and the "A" step of the FEAR plan – Actions and attitudes that can help.
8	Introduce self-evaluation and reward; introduce "R" step of the FEAR plan – Results and rewards; Review FEAR plan and make a wallet-size card of the FEAR mnemonic.
9	Parent session: Explain 2nd half of treatment; acknowledge that this portion of treatment may provoke greater anxiety; encourage parents to discuss concerns.
10	Practice the four-step (FEAR) plan under low anxiety-provoking conditions, both imaginal and in vivo.

Table 1 *continued*

Session no.	Purpose of session
11	Continue practicing skills for coping with anxiety in low-level imaginal and in vivo situations.
12	Practice skills for coping with anxiety in imaginal and in vivo scenarios that provoke moderate anxiety.
13	Practice skills for coping with anxiety in in vivo situations that produce moderate levels of anxiety.
14	Practice skills for coping with anxiety in imaginal and in vivo situations that produce high anxiety.
15	Practice skills for coping with anxiety in real situations that produce high levels of anxiety; continue planning commercial.
16	Continue skills for coping with anxiety in in vivo situations that produce high levels of anxiety; review and summarise the programme; make plans with parents to help the child maintain and generalise newly acquired skills; bring closure to the therapeutic relationship; tape the commercial; award the certificate.

More recently, the Coping Cat has also been applied in a computer-based format. There are six computer-guided and six therapist-guided sessions over 12 weeks using camp cope-a-lot (The Coping Cat CD-ROM) (Kendall, 2008). This programme is based on the manualised Coping Cat programme, and it is interactive and contains high quality graphics and content that is engaging for anxious children (Huberty, 2012). Another computer-based CBT programme is the BRAVE programme (March, Spence, & Donovan, 2009). Different to camp cope-a-lot, BRAVE is delivered through the internet and participants log into a website (www.brave-online.com) to access the program's 10 sessions. Children can complete sessions in their own homes, at their own pace and at a time that suits them. Both these programmes include a form of therapist support (Creswell, Waite & Cooper, 2014). Despite these computer-based programmes promising results, a review of this programme is beyond the scope of this study (See www.workbookpublishing.com for more information on camp-cope-a-lot).

Kendall's Coping Cat Programme was also transported to other countries. In 1991 at the School of Applied Psychology, Griffith University, Brisbane (Australia), Paula Barrett and her colleagues (Barrett, Dadds, & Rapee, 1991) adapted Kendall's Coping Cat Programme, and re-named it The Coping Koala programme. The programme was re-named to make it more familiar to Australian children and easier to comprehend. Different to the Coping Cat, the Coping Koala consists of only 12 sessions (as opposed to 16 sessions); the programme can be delivered in a group format (as opposed to being delivered individually); and an additional parent training and support component was added (Farrell & Barrett, 2007).

Similar to the Coping Cat, the Coping Koala specifically targets the child's anxiety by using exposure and cognitive restructuring strategies. The first four sessions are training sessions (in comparison to the first eight sessions in the Coping Cat) in which anxiety management skills are introduced. Skills are role-played by the therapist and practiced by the child (skills learnt include: (a) identifying positive and negative thoughts; (b) identifying feelings; (c) relaxation training; (d) practicing coping self-talk in anxiety provoking situations; (e) realistic self-evaluation; and (f) the development of self-reward strategies). In the Coping Koala's remaining eight sessions, these anxiety coping skills are practiced through graduated in vivo exposures (Barrett, Dadds, & Rapee, 1996).

In the Coping Koala Barrett also slightly modified Kendal's F-E-A-R plan to teach children to use physiological, cognitive, and behavioural coping strategies in increasingly threatening situations: F=feeling good by learning to relax; E=expecting good things to happen through positive self-talk; A=actions to take when confronted with fear stimuli; and R=rewarding oneself for efforts to overcome fear and worry.

Each child in the group is encouraged to apply the F-E-A-R plan exercises in idiosyncratic anxiety-provoking situations, thus the programme is tailored to each individual child within the group (Muris, Meesters, & van Melick, 2002). The Coping Cat was also transported to Canada by Scapillato and Mendlowitz (1993) and re-named the Coping bear – to better suit the Canadian context. In a later continued evolution of Kendall's Coping Cat Programme, Rapee and Lyneham (2006) developed the cool kids programme and van Starrenberg et al. (2013) developed the Dappere kat programme.

Rapee and Lyneham's (2006) Cool Kids programme is a less well-known Manualised CBT-intervention based on Kendall's (1994) Coping Cat and Barrett et al.'s (1996) Coping Koala programmes. Cool Kids is different to Coping Cat, Coping Koala and FRIENDS which have been implemented as universal programmes, as it (Cool Kids) is used as a selective or indicated programme administered to children who are selected to be at risk of, or currently indicating symptoms of anxiety (McLoone et al., 2006). The components of Cool Kids (Rapee & Lyneham, 2006) are very similar to the previously mentioned CBT programmes (including: psychoeducation; cognitive restructuring; child management strategies and graded exposure), however, Cool Kids also includes optional additional modules that address social skills training, teasing and assertiveness training (McLoone et al., 2006).

By further extending Kendall et al.'s (1990) Coping Cat, and her own 1991 Coping Koala, in 1998 Barrett and her colleagues presented the first version of the FRIENDS programme. As opposed to the Coping Cat and Coping Koala programmes (which are primarily treatment-based), FRIENDS is aimed at the prevention and early intervention of childhood anxiety disorders. FRIENDS is a CBT-based group intervention which is delivered over 10 sessions (as opposed to 16 sessions in the Coping Cat and 12 sessions in the Coping Koala/Coping Bear). There are also two booster sessions (delivered one and three months after completion of the programme) and four parent sessions. Currently FRIENDS has four parallel forms (a) Fun FRIENDS (for children aged 4-7 years); (b) FRIENDS for life (for children aged 8-11 years); (c) My friends (for children aged 12-15 years) and (d) Adult resilience (ages 16-18+) (The FRIENDS programmes, 2013). All four versions of FRIENDS overlap in content, however, the methods used to deliver the skills differ with each version of the programme using developmentally sensitive approaches (e.g., the fun FRIENDS and FRIENDS for life programmes utilise more play-based techniques such as puppetry, stories and colouring pictures, and My FRIENDS utilises more individual based learning, role-plays, group discussions and written activities) (Akiko Iizuka et al., 2013).

FRIENDS aims to teach children strategies that they can use to cope with anxiety and challenging situations in their everyday lives. These strategies are centred on the F-R-I-E-N-D-S plan which teaches children physiological, cognitive and behavioural coping strategies. The overall aim of the FRIENDS programme is for children to realise/learn that they have the ability to control their thoughts, emotions and to feel good (Akiko Iizuka et al., 2013).

F-R-I-E-N-D-S is once again used as a mnemonic to help children to remember and use the skills taught throughout the 10 sessions. Each letter of the word represents a different skill and each new skill builds upon skills which were presented previously (Akiko Iizuka et al., 2013). The overall content relating to the F-R-I-E-N-D-S mnemonic is outlined in Figure 3.

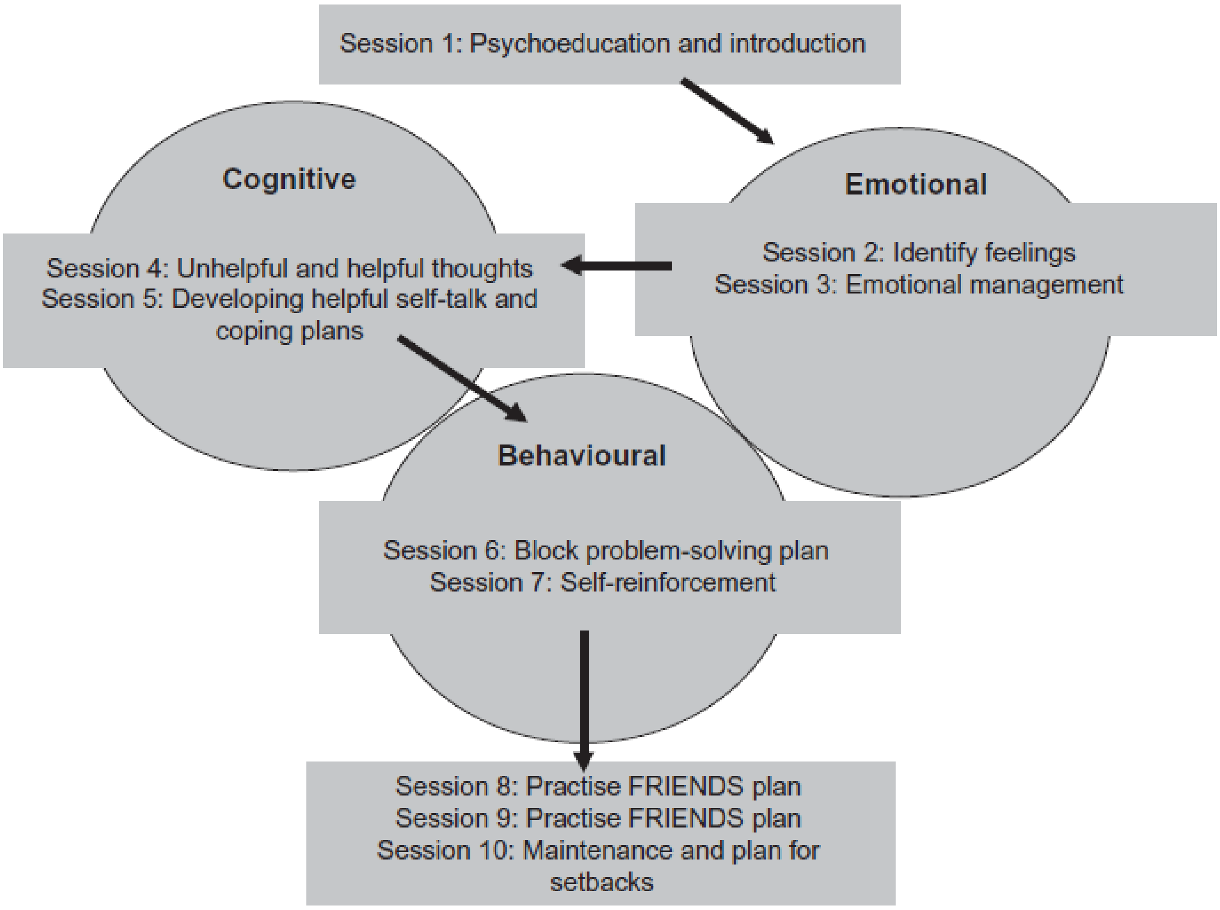


Figure 3. A graphic representation of the F-R-I-E-N-D-S mnemonic sourced from Stallard (2010).

Although the treatment manuals and programmes described above provide a structured session-by-session approach to manage childhood anxiety and give therapists solid guidelines to follow, various authors (Chu & Kendall, 2009; Kendall & Beidas, 2007; Podell et al., 2010) caution that therapists using these manualised approaches should implement them flexibly and creatively. The therapist must be mindful of the goals of each session and the individual characteristics of the child (or group) and adapt the treatment or programme to meet the needs of the particular child (or group). Therefore, CBT should not simply be viewed as a “toolbox” of techniques, but be seen as an approach which is grounded in a theoretical and empirical approach for understanding, assessing and treating childhood emotional disorders (Albano & Kendall, 2002).

3.3 CBT as a treatment for childhood anxiety

3.3.1 The pioneers of CBT treatment for childhood anxiety

Large-scale CBT with clinically anxious children began with the publication of a treatment manual and workbook entitled “Cognitive-Behavioural Therapy for Anxious Children”, also referred to as “The Coping Cat Programme” written by Kendall and colleagues (Kendall et al., 1990; Kendall, 1990) (The Coping Cat Programme is described in more detail in section 3.2 above).

The first published randomised clinical trial (RCT) which evaluated the efficacy of CBT, using The Coping Cat programme, was conducted by Kendall in 1994. In this study 47 clinically anxious children (aged 9-13) were randomly assigned to either a structured 16-session individual cognitive-behavioural treatment (ICBT) (n = 27) or a control condition (n = 20). Treatment was delivered by therapists (seven doctoral students) who were trained in CBT, and parental involvement was minimal. Results were favourable for ICBT, as at post-treatment 66% of children were diagnosis-free (i.e., no longer met diagnostic criteria for an anxiety disorder) compared to 5% of children in the WLC condition (Kendall, 1994). These clinically significant treatment gains were maintained at 1-year (Kendall, 1994) and 3.5-year follow-up (Kendall & Southam-Gerow, 1996).

In a second RCT, Kendall et al. (1997) replicated these findings. They once again assigned 94 clinically anxious children (aged 9-13) to either an ICBT condition (16-session Coping Cat) (n = 60) or a WLC condition (n = 34). Over 50% of children who received ICBT were free of their primary anxiety diagnosis at post-intervention, and for those children who continued to report symptoms, symptom severity was significantly reduced. Once again, clinically significant treatment gains were maintained at 1-year follow-up (Kendall et al., 1997).

Kendall and colleagues (Kendall, Safford, Flannery-Schroeder, & Webb, 2004) conducted a long term follow-up (7.4 years later) of 90% of the children (86 participants, now aged 15-22) included in the 1997 study. Follow-up results revealed evidence of the long-term maintenance of gains and some positive results relating to the sequelae (secondary effects) of anxiety (e.g., substance abuse). The authors concluded that interventions for child mental health problems appear to have an ameliorative effect not only on the targeted disorder, but also on the sequelae, as the successful treatment of child anxiety was linked to less substance use (e.g., alcohol, marijuana and other drugs at long term follow-up).

3.3.2 The inclusion of parents in CBT treatment for childhood anxiety

Building on Kendall's (and his colleagues) work (Kendall, 1994; Kendall & Southam-Gerow, 1996; Kendall et al., 1997; Kendall et al., 2004), it was thought that the addition of a familial (parental) component to child-focussed CBT would be beneficial. As Hudson and Kendall (2002) noted, there are many advantages associated with involving the family in therapy. Including parents in individual treatment for anxious children may enhance the effectiveness of ICBT, as there is the notion that parenting factors: (a) such as high parental control, parental anxiety, and parental reinforcement of avoidant coping strategies may contribute to the maintenance of anxiety symptoms; (b) may help facilitate the generalisation of learnt skills and treatment gains; and (c) have had favourable results in the treatment of other childhood disorders (Aunola & Nurmi, 2005; Barmish & Kendall, 2005; Barrett, Rapee, Dadds, & Ryan, 1996; Cobham, Dadds, & Spence, 1998; Shortt, Barrett, & Fox, 2001).

According to Podell et al. (2010) parental involvement in the treatment of child anxiety can vary. Parents can act as: (a) consultants (e.g., provide information); (b) collaborators (e.g., assist with the child's acquisition of coping skills) and/or; (c) co-clients (e.g., parents can learn skills to manage their own anxiety). Noting the afore-mentioned advantages and the various roles that parents can play, numerous studies which involved the family in CBT for the treatment of childhood anxiety were conducted.

First, Howard and Kendall (1996) evaluated the efficacy of an 18-session, family-based-CBT treatment (based on the Coping Cat Programme) with six clinically anxious children (aged 9-13). Results were promising, and four of the six children showed gains on all outcome measures and, except for one child, treatment gains reported at post-treatment were maintained at 4-month follow-up.

Barrett, Dadds and Rapee (1996) aimed to replicate Howard and Kendall's (1996) findings by conducting the first RCT involving ICBT and a family management component. In their study, Barrett et al. (1996) compared three treatment conditions: (a) a 12-session child-focused CBT programme (ICBT); (b) a 24-session programme that combined child-focused CBT with family management (ICBT+FAM); and (c) a WLC condition. The FAM component included training in three areas: child anxiety management (parents were taught skills to manage their Child's distress and avoidance); parental anxiety management (parents were taught skills to manage their own anxiety); and parental communication and problem solving skills. Participants including 79 clinically anxious children (aged 7-14) were randomly assigned to one of the three treatment conditions (ICBT, ICBT+FAM or WLC). Both the ICBT and ICBT+FAM conditions showed significantly better outcomes than the WLC condition.

However, the ICBT+FAM condition was most favourable with 84% of children diagnosis-free, compared with 57% of children in the ICBT only condition and only 26% in the WLC condition. These gains were especially significant for girls and younger children.

These treatment gains were maintained at both 6- and 12-month follow-up, with the ICBT+FAM condition continuing to show significantly better results than the ICBT only condition. At 12-month follow-up, 70% of children in the ICBT only condition and 95% of those in the ICBT+FAM condition were still diagnosis-free (Barrett & Sonderegger, 2005; Barrett et al., 1996). A long-term follow-up (5-7 years' post-treatment) was conducted with 52 of the children from the original study (now aged 14-22) and 87% of children were still diagnosis-free. However, interestingly, there were now no significant differences favouring ICBT+FAM over ICBT only (the two treatment groups were found equally effective) (Barrett, Duffy, Dadds, & Rapee, 2001).

Although Barrett et al.'s (1996) study reported positive results, Cobham et al. (1998) noted that the findings of this study were restricted by two design limitations. First, because the FAM intervention in Barrett et al.'s (1996) study comprised three components (i.e., child anxiety management; parental anxiety management; and parental communication and problem solving skills) it was not possible to determine exactly which of these components contributed to the favourable outcomes of the FAM component. Second, families were randomly assigned to the combined intervention (ICBT+FAM), as opposed to being assigned on the family's actual need for an additional family management component. Together these two limitations meant that Barrett et al.'s (1996) ICBT+FAM intervention was not as cost-effective as it might have seemed, and the FAM component itself might have been unnecessarily over-inclusive (i.e., including families who may not actually need or benefit from FAM intervention). Thus, the CBT+FAM intervention may have been given to families who might have done equally as well in the ICBT intervention alone (Cobham, 2003).

In an attempt to address these limitations, Cobham et al. (1998) firstly narrowed the focus of the FAM component from Barrett et al.'s (1996) study to include only one component of FAM (i.e., parental anxiety management). It was thought that if parents were trained to manage their own anxiety better, this would have a positive effect on their children's treatment outcomes (Shortt et al., 2001). As a result, Cobham et al. (1998) compared two interventions: (a) a 10-session Group-based CBT programme (GCBT); and (b) a 14-session programme that included GCBT for the child and parental anxiety management training for the parents. Both of these treatment options were delivered in a group format, and GCBT was based on Kendall's (1990) Coping Cat programme.

In response to the second limitation, that Barrett et al.’s (1996) study might have been overly-inclusive, parental anxiety was also examined as a predictor of treatment outcome. Thus, the group of 67 clinically anxious children (aged 7-14) was initially split according to whether or not one (or both) of their parents reported a high level of trait anxiety. This resulting in two groups, group 1: child-anxiety-only (*n* = 32) and group 2: child + parent anxiety (*n* = 35). This delineation can be linked to the identification of families who need (may benefit from) the additional parental anxiety management component (i.e., children who have anxious parents). Families within the two anxiety conditions were then randomly assigned to two treatment conditions (a) GCBT only or (b) GCBT + parental anxiety management.

Post-treatment results indicated a significant main effect for anxiety condition (i.e., child-anxiety-only vs. child + parent anxiety), but not for treatment condition (i.e., GCBT vs. GCBT+parental anxiety management). Of those children who received GCBT only, 82% of the child-anxiety-only group (group 1) were diagnosis-free at post-treatment, in comparison to 39% of the child + parent anxiety group (group 2); of those who received GCBT + parental anxiety management, 80% of the child-anxiety-only group (group 1) and 77% of the child + parent anxiety group (group 2) were diagnosis-free at post-treatment. Thus, it can be concluded that parental anxiety management training had an additional effect on reducing symptoms of anxiety, but only for children whose parents reported high levels of anxiety themselves (Barrett et al., 2001). These results support the notion put forth by Cobham et al. (1998) that the Barrett et al. (1996) study might have been over-inclusive, as the addition of a parental anxiety management component showed positive outcomes, but only for children who have anxious parents (Cobham et al., 1998; Cobham, 2003).

At 6-month follow-up a significant main effect for anxiety condition was still present, with 84% of the children with non-anxious parents still diagnosis-free compared to 57% of children with anxious parents. In addition, a significant interaction was noted between anxiety condition and treatment condition for those families in the GCBT only condition, 88% of the children with non-anxious parents and 44% of children with anxious parents were diagnosis-free. However, at 12-month follow-up the differential effects for the treatment conditions (GCBT and GCBT+ parental anxiety management) were no longer significant (Cobham et al., 1998).

Three years later, Cobham and her colleagues conducted a long-term follow-up study (reported in Cobham, Dadds, Spence, & McDermott, 2010) to assess the maintenance of treatment gains for children who took part in their 1998 study. Sixty of the original 67 children (now aged 10-17) who completed treatment in the Cobham et al. (1998) study were reassessed. Three years after treatment, 80% of all children were still free of any anxiety diagnosis (this regardless of treatment or anxiety condition). This finding supports the contention that CBT is a “probably efficacious” treatment for childhood anxiety disorders (e.g., Ollendick, King, & Chorpita, 2006) regardless of parental involvement or not.

Furthermore, as noted in the title of the follow-up article “Parental involvement in the treatment of childhood anxiety: A different story three years later” (Cobham et al., 2010), the follow-up data did not support the hypothesis that parental anxiety levels have an influence on successful treatment outcome, and the effects of the addition of a parental anxiety management component had also changed. Three years following treatment children who had one (or more) anxious parents at the time of treatment were just as likely as children whose parents were both-non-anxious to be diagnosis-free. The question as to whether it is helpful to add a parental anxiety management component to CBT treatment for children also has a different answer three-years later. Building on the long-term follow-up results, it seems that in terms of diagnostic results, regardless of parental anxiety status, children in the GCBT+parental anxiety management condition were more likely to be diagnosis-free compared to children in the GCBT only condition. Contrary to the original conclusion, where it was stated that the addition of a parental anxiety management component to CBT treatment was only beneficial for children who had anxious parents, it seems that this was no longer the case. All anxious children (regardless of their parent’s anxiety status) showed greater benefits from receiving the GCBT+parental anxiety management treatment (69% of children in the GCBT condition were diagnosis-free vs. 92% of children in the GCBT+parental anxiety management condition). Cobham et al. (2010) partly attributed the positive outcome for GCBT+parental anxiety management to the fact that children whose parents received the additional parental anxiety management training were better prepared to support and model effective anxiety management strategies for their children. Children in the GCBT condition (whose parents did not receive the additional parental anxiety management training) did not receive this same degree of parental support and were thus less likely to sustain gains over the long-term (Cobham et al., 2010).

Mendlowitz et al. (1999) also reported treatment-related reductions in children’s anxiety symptoms post-treatment in a study that included parents. In this study 62 clinically anxious children (aged 7-12) were assigned to one of three treatment conditions: (a) a GCBT only condition (*n* = 23); (b) a parent only condition (*n* = 21); or (c) child + parent condition (*n* = 18), with children who waited for more than two months for treatment acting as their own wait-list controls. Children in the GCBT only condition were delivered the Coping Bear programme (A Canadian version of Kendall’s Coping Cat Programme) (Scapillato &

Mendlowitz, 1993) and Parents were delivered 12-sessions from the “Keys to parenting your anxious child” workbook. This workbook is designed to help parents understand anxiety, learn how to deal more effectively with their own anxious child, and learn how to help their child deal with anxiety provoking situations (Mendlowitz et al., 1999). In addition to symptoms of anxiety, this study also assessed children’s coping strategies. Treatment gains were demonstrated across all three of the conditions with a decrease in symptoms of anxiety. However, in comparison to the other two conditions, the combined child-parent condition also showed the additional benefit of children reporting an increased use of more adaptive coping strategies. Thus, parental involvement did not have a noteworthy influence on the reduction of anxiety symptoms, but was found to be superior with regard to promotion of children’s active coping (Mendlowitz et al., 1999).

It was also thought that if parental cognitions were addressed in treatment this may strengthen the effects of ICBT. However, in a pilot study conducted by Nauta and colleagues (Nauta, Scholing, Emmelkamp, & Minderaa, 2001) this issue was addressed and there was no additional effect for a cognitively orientated parent training programme in the outcomes.

Two years later Nauta and colleagues (Nauta, Scholing, Emmelkamp, & Minderaa, 2003) proceeded along the pilot study’s trail to re-evaluate the effects of adding a cognitive parent training component to ICBT for anxious children. Nauta et al. (2003) state that the samples were completely different and various improvements were made: (a) a WLC condition was included; (b) the sample was much larger; (c) more established outcome measures were used; and (d) an additional clinical setting was included. Children included in the study were 79 clinically anxious children (aged 7-18) who were randomly assigned to one of three treatment conditions: (a) ICBT only (n =29); (b) ICBT with a cognitive parent training component (ICBT+CPT) (n = 30); or (c) a WLC condition (n=20). ICBT included a 12-session Dutch adaptation of the Coping Cat (adaptations included reduction of session numbers from 16 to 12; starting of exposures in session 4 rather than in session 9; teaching the skills parallel to the exposures rather than subsequent to them; and the addition of some extra workbook pages for adolescents). CPT for parents ran parallel with the child’s ICBT and comprised a short seven session intervention addressing: parents behaviour and their thoughts and feelings regarding their anxious child; psychoeducation on anxiety disorders in children; behavioural advice and pragmatic parenting skills; counselling in coping behaviour; and parental training in problem solving (Nauta et al., 2003).

Post-treatment results were described as “partly” positive, as treatment gains were only significant with regard to diagnostic status and parent report (Nauta et al., 2003). Differences between the treatment conditions and WLC condition failed to reach significance in child-reports. Despite child reports not reaching significance, post-treatment 54% of children in the ICBT and ICBT+PCT conditions were diagnosis-free in comparison to only 10% of children in the WLC condition. At 3-month follow-up 68% of children were diagnosis-free. Contrary to expectations, no significant outcome differences were found between the ICBT only and ICBT+CPT conditions. Thus, it can be concluded that children with anxiety disorders benefited from CBT, and they improved equally regardless of whether CPT was offered or not (Nauta et al., 2003).

Wood et al. (Wood, Piacentini, Southam-Gerow, Chu, & Sigman, 2006) included 40 children (aged 6-13) diagnosed with an anxiety disorder in either ICBT only or ICBT including a family component (ICBT+FAM). ICBT was based on Kendall’s (1990) Coping Cat Programme and ICBT+FAM was based on the Building Confidence programme an intervention developed specifically for this study. Wood et al. (2006) state that the Building Confidence programme goes beyond previous family-focussed CBT programmes in that it puts more emphasis on changing parental communication patterns which are hypothesised to maintain child anxiety, particularly intrusiveness and autonomy granting.

Post-treatment results suggested a greater decline in anxiety severity for children in the ICBT+FAM condition than for children in the ICBT only condition. In the ICBT condition 53% of children compared to 79% of children in the ICBT+FAM condition were diagnosis–free, this difference however was not statistically significant.

Wood et al. (Wood, McLeod, Piacentini, & Sigman, 2009) re-assessed 35 (92%) of the original 40 participants at 12-month follow-up and post-treatment results were still maintained. ICBT+FAM out-performed ICBT only on some diagnostic and parent report scales, but not on child-reports. Thus, this study offers tentative support for the long-term efficacy of an ICBT+FAM treatment relative to an ICBT only treatment.

Noting the positive outcomes of Wood et al.’s (2006) study and those of Barrett et al. (1996) where CBT, which included a family component, rendered more favourable outcomes than CBT alone (although Wood et al.’s (2006) were non-significant), Kendall et al. (Kendall, Hudson, Gosch, Flannery-Schroeder, & Suveg, 2008) noted that although these studies compared the two treatment conditions (CBT+FAM vs. CBT alone) they did not include an alternative family treatment to control for non-specific family treatment effects. As a result, Kendall et al. (2008) evaluated the relative efficacy of ICBT and ICBT+FAM in comparison to family-based education, support and attention (FESA). Kendall et al. (2008) hypothesised that ICBT and FCBT would produce significant change from pre- to post-treatment compared to

FESA. Subsequently children diagnosed with an anxiety disorder (*N* = 161, aged 7-14) were randomly assigned to ICBT (*n* = 55), FCBT (*n* = 56) or FESA (*n* = 50). All three of these treatments were manualised and included 16 weekly hour-long sessions. ICBT included the child alone in therapy, whereas FCBT and FESA included the child and parents in therapy. All three treatments included information and education about child anxiety, but only ICBT and FCBT taught anxiety management skills and included exposure tasks (Kendall et al., 2008).

Post-treatment results showed that the two CBT treatments (ICBT and FCBT) were comparable and that FCBT is not superior to ICBT and that including parents in the treatment of childhood anxiety is not essential for positive gains.

Bodden et al. (2008) also considered two variables including level of parental anxiety and children's age in relation to the efficacy of ICBT versus family-focussed CBT. The authors hypothesised that (a) CBT (regardless whether it be ICBT or family-focussed CBT) is more beneficial than a WLC condition; (b) family-focussed CBT is superior to ICBT, especially if parents are anxious themselves and; (c) younger children (aged 8 to 12) would benefit more from family-focussed CBT whereas older children (aged 13 to 17) would benefit more from ICBT. Because the study aimed to determine whether parental anxiety had an influence on which treatment (family-focussed CBT or ICBT) was superior the group was initially split according to whether one (or both) parents reported a high level of trait anxiety. This resulting in two groups, group 1: child-anxiety-only and group 2: child + parent anxiety. Within these two groups 128 clinically anxious children (aged 8-17) and their parents were randomly assigned to either (a) ICBT or (b) family-focussed CBT. Twenty-five children and their parents were assessed before and after a 2 to 3 month wait period.

In line with hypothesis 1, post-treatment effects indicated that none of the wait-listed children recovered from their anxiety disorders, while 41% of children who received treatment (either ICBT or family-focussed CBT) no longer met diagnostic criteria for an anxiety disorder and 71% of children were free of their primary diagnosis. In contrast to hypothesis 2, ICBT was superior to family-focussed CBT with 53% and 28% respectively being diagnosis free. However, at the three-month follow-up the superior effect of ICBT was no longer significant. With regards to hypothesis 3 younger children did have significantly better outcomes in comparison to older children; however, these outcomes were not linked to a specific treatment condition. In conclusion the authors noted that overall ICBT seems more beneficial then family-focussed CBT.

Thus, to summarise, as the results reported by the above studies in this section are so varied, it is difficult to reach an unequivocal answer as to whether the addition of a familial/parental component to CBT makes a difference or not (Breinholst, Esbjørn, Reinholdt-Dunne, & Stallard, 2012). Both CBT alone and CBT with family/parental involvement have received extensive empirical support, however, neither approach consistently outperformed the other at post-treatment (Wood, McLeod et al., 2009). Besides two of Barrett and colleagues' studies (Barrett et al., 1996; Barrett et al., 2001), most studies have either failed to report significant outcomes for the involvement of parents (e.g., Cobham et al., 1998; Nauta, Scholing, Emmelkamp, & Minderaa, 2001; Mendlowitz et al., 1999; Wood et al., 2006) or reported slightly more favourable outcomes for child-focussed treatments alone (e.g., Bodden et al., 2008; Kendall et al., 2008; Nauta et al., 2003). As findings supporting the inclusion of families/parents in CBT for anxiety in children are inconclusive, mainly showing that whether parents are included or not does not influence treatment outcomes, the anxiety intervention developed in the present study did not include a parental component. This was mainly due to the fact that logistically parents were not available to attend sessions (discussed in more detail in section 5.6.3.5.2 in Chapter 5).

3.3.3 Group-based Cognitive Behaviour Therapy (GCBT) for treating childhood anxiety

Until 1998 there had been no RCT's where CBT had been delivered in a group format. Noting the suggested advantages of group-based CBT (which may include: (a) universality (group members recognise common experiences); (b) group-members acting as increased sources of reinforcement; (c) a heightened sense of mastery (as the group solves problems together); (d) mutual support and feedback; (e) sharing resources within the group; (f) increased prompting and modelling of desirable behaviours by group members; (g) cost and time-effectiveness (as fewer therapist hours are required per patient); and (h) groups providing opportunities for multiple exposures to feared interpersonal situations, objects and/or situations (Barrett, 1998; Manassis et al., 2002)), Barrett (1998) conducted the first RCT which investigated the efficacy of GCBT for the treatment of childhood anxiety.

Barrett (1998) randomly assigned clinically anxious children (aged 7-14) to either a: (a) GCBT condition (receiving Barrett's Coping Koala programme) ($n = 23$); or (b) a WLC condition ($n = 20$). Post-treatment 75% of children in the GCBT condition were diagnosis-free, compared to only 25% of children in the WLC condition. These results were maintained at 1-year-follow-up (Barrett, 1998).

Following this, Silverman et al. (Silverman, Kurtines, Ginsburg, Weems, Lumpkin et al., 1999) aimed to replicate these findings, and conducted a second RCT where GCBT was compared to a WLC condition; 56 clinically anxious children (aged 6-16) were randomly assigned to one of these two conditions. In line with Barrett's (1998) findings, Silverman et al. (Silverman, Kurtines, Ginsburg, Weems, Lumpkin et al., 1999) found that at post-treatment 64% of children in the GCBT condition were diagnosis-free, compared to only 13% of children in the WLC condition. Follow-up assessments showed that treatment gains were still present well after treatment ended, as anxious symptoms continued to decrease in severity and degree from post-treatment to 3-month follow-up. Improvement levelled off at the 3-month follow-up, however, treatment gains were still maintained at six and 12 months (Silverman, Kurtines, Ginsburg, Weems, Lumpkin et al., 1999).

Flannery-Schroeder and Kendall (2000) went one step further, and preliminarily compared GCBT to ICBT; they hypothesised that as a result of the advantages associated with group-based treatments (mentioned above), GCBT would result in greater (or equal) treatment gains when compared to ICBT. Both treatment conditions were also expected to be more efficacious than a WLC condition. As a result, 37 clinically anxious children (aged 8-14) were randomly assigned to either: (a) ICBT (*n* = 13), (b) GCBT (*n* = 12), or (c) a WLC condition (*n* = 12). Treatment consisted of 18-weekly sessions of CBT (Coping Cat Programme) which were delivered either individually (ICBT) or in a group format (GCBT). Post-treatment results showed meaningful gains, with 73% of children who participated in ICBT diagnosis-free compared to 50% of children who participated in GCBT. When compared to the 9-week WLC condition (where only 8% of children were diagnosis-free post-treatment), both the ICBT and GCBT conditions were superior. Furthermore, when comparing GCBT to ICBT a non-significant difference was noted. This suggests that treatment gains in the GCBT and ICBT conditions were comparable, showing both treatments to be equally efficacious. However, the authors caution that this comparison of GCBT versus ICBT should be considered preliminary as a result of the small sample size. Treatment gains for both the ICBT and GCBT conditions were maintained at 3-month follow-up (Flannery-Schroeder & Kendall, 2000).

Manassis et al. (2002) again compared ICBT to GCBT, but in addition to comparing the efficacy of these two modalities, they further hypothesised that certain sub-groups of children (i.e., socially anxious, hyperactive and those with a specific phobia) would respond preferentially to one modality (either ICBT or GCBT). Clinically anxious children (*N* = 78, aged 8-12) were randomly assigned to either ICBT (*n* = 41) or GCBT (*n* = 37). The authors noted that it was important to gain insight as to which children respond favourably to which modality, as this would maximise the chances of treatment success for each child. As a result, there were three hypotheses pertaining to the different sub-groups of children (i.e., socially anxious, hyperactive and those with specific phobia). First, it was hypothesised that children with high levels of social anxiety would respond preferentially to GCBT. This was due to the notion that group treatment affords additional exposure to the feared stimulus (i.e., social situations) and repeated exposure to a feared stimulus is supposed to decrease anxiety (as a result of anxiety desensitisation) (Kendall, 1994). Second, it was also hypothesised that children who showed signs of hyperactivity would respond better to ICBT, as this modality allows for more individual attention (i.e., the therapist is able to redirect a restless, unfocussed child). Last, it was hypothesised that children who had specific phobias would respond better to ICBT, as this modality can be easily tailored to address specific fears.

Consistent with previous studies evaluating the efficacy of CBT for anxious children, mothers, children and clinicians reported statistically significant improvements in anxiety and functioning post-treatment. However, contrary to the hypotheses, outcomes for the two treatment modalities (ICBT vs GCBT) did not differ by anxiety diagnosis or by high or low hyperactivity level. The authors stated that a possible reason for the lack of interaction between the diagnosis and treatment modality is that treatment tailoring, which is needed to help children with specific phobia, occurred in the GCBT condition through parental involvement. The inclusion of parent groups in treatment provides the opportunity for parents to be coached in desensitisation procedures that can be implemented with their children between sessions. In addition, active therapists and relatively small group sizes (maximum eight children per group) may have still enabled the therapist to have sufficient capacity to treat inattentive children. Furthermore, contrary to expectation, children with social anxiety did not respond better to GCBT, thus, they did not show the expected benefits relating to desensitisation in group treatment, and responded preferentially to ICBT. The reassurance and social approval provided by a concerned adult (the therapist) may have advanced individual treatment gains in these children. The group situation may also have played a role, as it may have initially been overwhelming for these children, offsetting the advantages of desensitisation and making it hard to learn new skills (Manassis et al., 2002). However, overall, all symptom clusters improved with treatment. Thus, once again childhood anxiety appears to decrease with CBT regardless of whether it is delivered in an individual or group format.

Lumpkin and colleagues (Lumpkin, Silverman, Weems, Markham, & Kurtines, 2003) noted that GCBT studies until that point had mainly focussed on the efficacy of GCBT for the treatment of a restricted set of childhood anxiety disorders, e.g., Silverman et al. (1999) treated children with a primary diagnosis of overanxious disorder (GAD) and social phobia and Barrett (1998) and Flannery-Schroeder & Kendall (2000) treated children with a primary diagnosis of overanxious disorder (GAD), social phobia or SAD). As a result, these authors aimed to explore the efficacy of GCBT when treating a heterogeneous spectrum of anxiety disorders. Subsequently Lumpkin et al. (2003) placed no constraints on the types of anxiety disorders that could be included in their study: any type of childhood anxiety or phobia that children presented with at a childhood anxiety disorders specialty clinic was treated using GCBT.

Participants included 18 children (aged 6-16) who were delivered 12-sessions of GCBT. In terms of treatment differences, the content of exposures varied across children/disorders and particular adjunctive strategies were used (e.g., social skills training for children with social phobia; response prevention for children with OCD; and training to generate more probable less threatening outcomes for children with excessive worry in GAD). Post-treatment results were promising as 50% of children were diagnosis-free. This showing that GCBT can be successful in treating a variety of anxiety disorders without placing constraints on the type of disorder. However, the authors caution that these results are preliminary (Lumpkin et al., 2003).

The first RCT evaluating the efficacy of FRIENDS as a treatment for clinically anxious children was conducted by Shortt, Barrett, and Fox in 2001. Participants included 71 clinically anxious children (aged 6-10) who were assigned to FRIENDS (GCBT+FAM) (n = 54) or a WLC condition (n = 17). More than half of the children (69%) who participated in FRIENDS were diagnosis-free at post-treatment, compared to only 6% in the WLC condition. These treatment gains were maintained at 1-year follow-up (76% of children who received FRIENDS were still diagnosis-free) (Shortt et al., 2001).

Farrell, Barrett, and Claassens (2005) noted that all the studies evaluating FRIENDS to date were controlled research trials performed in a university setting under tight constraints. Thus, these results may not be representative of what really occurs in real-world community settings. FRIENDS had up till then garnered very positive results in RCT’s (used individually, in a group format or with or without parental involvement), and obviously the dissemination of a programme such as FRIENDS into the general community would provide great benefits to many children, families and mental health professionals who deal with and treat anxiety disorders. However, Farrell, Barrett, and Claassens (2005) stated that before these advantages could be realised, the FRIENDS programme should first be evaluated in community settings to provide evidence that it is as successful in the real-world. Subsequently, they (Farrell et al., 2005) aimed to do just this by evaluating the FRIENDS programme in a community setting.

Participants included 18 children (aged 5-12), 11 children met diagnostic criteria for an anxiety disorder, while the remaining seven children showed sub-clinical symptoms. Of the total sample 14 children received FRIENDS in a group, while the remaining four children were delivered FRIENDS individually. Children all received the FRIENDS programme at Pathways health and research centre, a community-based private psychology clinic.

Post-treatment, 73% of children who met diagnostic criteria for an anxiety disorder pre-treatment were diagnosis-free. None of the children who had sub-clinical symptoms pre-treatment moved into the clinical range post-treatment. Thus, results suggest that FRIENDS is an effective treatment for children with anxiety symptoms, and these findings provide empirical support that such interventions are equally effective when applied in a non-controlled community-based setting.

In summary, it is important to note, however, that whether ICBT or GCBT is a better treatment modality is a relatively under researched area and results to date are far from conclusive (Monga, Young, & Owens, 2009). Thus, from the above it seems that providing CBT in a group format seems to be equally efficacious to individual CBT in the majority of cases. This is advantageous as GCBT provides a cost-effective treatment for anxiety in large numbers of anxious children (Manassis, 2013). This is beneficial to the present study as the PAM programme was implemented in a group format.

3.3.4 Other forms of treatment versus CBT for childhood anxiety

The above-mentioned studies have shown that CBT (whether delivered individually, in a group or with or without parental involvement) was more effective than a WLC condition. Despite these favourable outcomes, Ollendick and King (1998) rightly stated “no studies have shown it [CBT] to be more effective (i.e., superior) than psychological placebo or another treatment” (p. 164).

Noting this statement, Muris, Meesters, and Van Melick (2002) conducted the first study where CBT was compared to another form of psychological treatment. Subsequently they (Muris, Meesters, & van Melick, 2002) assigned 30 highly anxious children (aged 9-12) to either: (a) a GCBT condition (Barrett’s (1994) Coping Koala Programme) (*n* = 10); (b) an emotional disclosure condition (*n* = 10); or (c) a no treatment control condition (*n* = 10). Children who took part in the emotional disclosure condition were invited to write about their fears and anxious experiences in a diary. At post-treatment children in the GCBT condition showed significant reductions in symptoms of anxiety when compared to children in the emotional disclosure and control conditions (Muris, Meesters, & Van Melick, 2002).

Two studies (Last, Hansen, & Franco, 1998 and Silverman, Kurtines, Ginsburg, Weems, Rabian et al., 1999) compared CBT with educational support, and both these studies found the two modalities (CBT vs. educational support) to be equally effective (i.e., there was no greater benefit for CBT when compared to educational support training). Both the educational support conditions provided support and psychoeducation pertaining to child anxiety, but neither of the conditions included exposure procedures or specific instruction in strategies to reduce anxiety (Kendall et al., 2008).

Very recently, Silk and colleagues (Silk et al., 2016) compared the effects of ICBT with child-centred therapy for the treatment of anxiety in children. They randomly assigned 133 anxious children (aged 9-14) to either ICBT (using Kendall's Coping Cat programme) (*n* = 90) or a child centred treatment (CCT) (*n* = 43). In contrast to ICBT, CCT emphasises core nonspecific therapeutic ingredients such as active listening, reflection, accurate empathy, and encouragement to talk about feelings, but does not include directive problem solving, psychoeducation about anxiety or coping skills, or exposure which are essential elements of ICBT. Post-treatment results indicated that both ICBT and CCT resulted in a significant reduction in anxious symptomatology for the majority of participants. However, recovery rates were higher for the ICBT group, with 62% of participants who received ICBT diagnosis-free post-treatment compared to 47% of those who received CCT. These positive gains were still evident at follow-up with participants treated with ICBT being nearly five times more likely to be in recovery one year after treatment than participants treated with CCT (Silk et al., 2016).

3.3.5 Summarising CBT's efficacy as a treatment for childhood anxiety

Following Kendall's pioneering work in 1994, a growing number of well-controlled treatment outcome studies which aimed to treat anxiety disorders in children have now been conducted (Hudson et al., 2009). The above-mentioned studies clearly indicate that anxiety disorders in children can be effectively treated using CBT-based interventions (whether delivered individually, in a group or with or without parental involvement) with results maintained at long-term follow-up. However, these interventions where children who are already experiencing symptoms of anxiety are treated may not be the most efficient means for reducing the incidence of childhood anxiety in the general population (Barrett & Turner, 2001; Dadds et al., 1997). As Tuma (1989) and Day and Roberts (1991) noted, of those in need of mental health services, less than 20% receive appropriate intervention. Children in need are not receiving the necessary care, waiting lists are long, and no-show rates and family dropouts sometimes exceed 50% (Weist, 1999). Furthermore, while treatment for anxiety is effective for approximately 50-60% of children, many children continue to experience considerable difficulties; some drop out of treatment prematurely and others experience recurrence of symptoms in the longer term (Allen, Creswell, & Murray, 2013; James, Soler, & Weatherall, 2005; Last et al., 1996). Considering these factors, anxiety interventions should ideally be provided before difficulties have progressed to the point where symptoms of anxiety have become engrained and difficult to treat (Dadds et al., 1997). Hence, prevention seems to be the most important future direction. The prevention of anxiety seeks to target large numbers over a short period of time; avoid the high level of subjective distress of children and their families; and reduce the great financial costs to communities at large. Given the evidence of such a strong case for preventing anxiety disorders in children, it is not surprising that, over the past few years, research has shifted to give greater focus to prevention.

3.4 CBT prevention programmes for childhood anxiety

Since the early 2000's research focus in the field of childhood anxiety and CBT has shifted to prevention and the construction of efficacious prevention programmes. This shift to prevention initiatives for children is particularly important and positive. First, children who experience mental disorders in their early years are more likely than others to be diagnosed with a mental disorder in adulthood, making childhood intervention critical. Second, many of the psychological resources which can offer protection against mental disorders are developed in childhood, making it easier to work with this population. Last, the experience of a mental disorder as a child may cost the individual the enjoyment of his or her childhood. This alone is a very good reason to consider preventive efforts for mental disorders at this life-stage (Schneider, Hastings, Guyer, Brendgen, & Cwinn, 2014b).

According to Mrazek and Haggerty (1994), prevention refers to interventions administered before diagnostic criteria for a clinical disorder are met. As discussed in Chapter 1 (see Section 1.3.2) prevention programmes are typically conceptualised as indicated (selecting participants based on sub-clinical or mild symptoms of disorder), selective (selecting participants based on risk factors for disorder) or universal (selecting whole populations regardless of risk status) (Manassis, 2013). As a result, the researcher grouped existing research on CBT-based preventive programmes for childhood anxiety into these three levels, and they are discussed as such below.

3.4.1 Indicated intervention/prevention studies

As noted above, indicated interventions target children who are at risk of developing a full-blown disorder based on the presence of sub-clinical or mild symptoms (Manassis, 2013). Most indicated prevention studies have been school-based, where children were selected for participation because they scored above a certain threshold on a measure of anxiety. Indicated preventions usually report greater reductions in symptoms (when compared to universal interventions) as resources are directly focussed towards children who are more likely to be in need. However, this approach faces various challenges which include: (a) choice of a suitable selection strategy; (b) recruitment of participants; and (c) implementing the intervention while avoiding stigmatisation (this may be especially challenging in the school setting) (Allen et al., 2013; Barrett & Pahl, 2006).

The first published RCT which examined the efficacy of an indicated prevention programme aimed at preventing childhood anxiety is the Queensland Early Intervention and Prevention of Anxiety Project (QEIPAP) conducted by Dadds et al. (1997). This study evaluated the potential of the Coping Koala programme (see section 3.2 for an overview of the Coping Koala) as an early intervention-prevention programme for childhood anxiety disorders (the Coping Koala had until then only been used as a treatment programme). The authors selected a group of children who were “at risk” of developing an anxiety disorder. They aimed to include a comprehensive sample of children, from those without disorders, but who showed anxious features, through to children who met diagnostic criteria for an anxiety disorder, but at a low level of severity.

Children were selected for participation on the basis of child-reported anxiety symptoms or teacher nomination. Four Queensland Schools were selected for the study. From the 1 786 children who were screened at these four schools, 128 children (aged 7-14) were selected to take part and were randomly allocated to either GCBT (based on the Coping Koala Programme) or a no-treatment monitoring condition. Results indicated that although both children in the GCBT condition ($N = 61$) and children in the no-treatment monitoring condition ($N= 67$) showed improvements at post-treatment, there was no significant difference between these two groups.

However, at 6-month follow-up, children in the GCBT condition continued to show improvement, whereas relapse was evident in the monitoring condition. Of those children in the monitoring condition who had symptoms of anxiety but no full disorder at pre-treatment ($n = 33$), 54% now met diagnostic criteria for an anxiety disorder compared with only 16% in the GCBT condition. This showing that the programme had a significant prevention effect. These 6-month follow-up results further showed that the programme was successful in reducing the rates of disorder in children with mild to moderate anxiety symptoms (at risk children), and the programme also prevented the onset/diagnosis of a full-blown anxiety disorder in children who reported sub-clinical levels of anxiety symptoms prior to treatment (Dadds et al., 1997).

The QEIPAP children were followed-up 12 and 24 months later (Dadds et al., 1999), and again after 6 years (Barrett et al., 2001). Group differences disappeared at 12 months, but emerged again at 24-month follow-up (Barrett & Turner, 2001; Dadds et al., 1999). Findings from the QEIPAP project indicated that childhood anxiety disorders and the number of children at risk who showed mild to moderate symptoms of anxiety can be successfully reduced using an indicated school-based CBT intervention (Barrett et al., 2005).

The QEIPAP study was later replicated by an independent research group in the Netherlands. Muris and colleagues (Muris & Mayer, 2000; Muris, Mayer et al., 2001) screened 425 children from four primary schools in the Southern part of the Netherlands. From this sample 36 children (aged 8-13) were invited to take part in an indicated prevention programme consisting of either ICBT (*n* = 17) or GCBT (*n* = 19) based on their elevated anxiety scores on the SCARED-R (Muris et al., 2001). Post-intervention results indicated a significant decline in anxiety scores for both intervention groups (ICBT and GCBT). Furthermore, the intervention successfully prevented 75% of children from developing an anxiety disorder (Akiko Iizuka et al., 2013; Barrett & Turner, 2004; Muris & Mayer, 2000; Muris, Mayer et al., 2001).

Mifsud and Rapee (2005) noted that no prevention studies up till that point had looked at early intervention for anxiety in socio-economically disadvantaged areas, despite the fact that these areas are at greatest need. As a result, they (Mifsud & Rapee, 2005) also replicated Dadds et al.'s (1997) indicated intervention study in nine socio-demographically disadvantaged schools in Australia. Participants (aged 9-10) were identified as experiencing early indications of anxiety based on their elevated scores on the Revised Children's Manifest Anxiety Scale (RCMAS) (Reynolds & Richmond, 1978). Following screening 91 participants were allocated to either an intervention group (*n* = 50) or a WLC group (*n* = 41). Children in the intervention group received eight sessions of CBT based on the Cool Kids programme: school version. Children who received Cool Kids demonstrated significantly greater reductions in anxiety post-intervention. This progress was replicated at 4-month follow-up. This data is consistent with previous studies (Dadds et al., 1997; Lowry-Webster et al., 2001) pointing to the efficacy of school-based programmes for the reduction of anxious symptomatology in socio-economically disadvantaged communities.

In order to evaluate whether the inclusion of parents in an indicated prevention leads to a significant improvement in anxiety outcomes, Bernstein et al. (Bernstein, Layne, Egan, & Tennison, 2005) assigned 61 children (aged 7-11) who met a diagnosis for (75%) or showed sub-threshold features (25%) of an anxiety disorder to one of three conditions: (a) FRIENDS (*n* = 17); (b) FRIENDS including a parental training component (*n* = 20); or (c) a WLC condition (*n* =24). Parents in the CBT+parent group received sessions on a separate but simultaneous basis to their children.

At post-intervention both CBT treatments demonstrated significant benefits over the WLC condition. The percentage of participants meeting diagnostic criteria in the child CBT plus parent training group decreased from 80% at baseline to 33% posttreatment, and the child-only CBT group decreased from 82% at baseline to 29% post-treatment, and no-treatment control decreased from 67% at baseline to 46% post-treatment. Groups did not differ significantly in terms of rates of anxiety disorders at follow-up; however, when the two intervention conditions were combined, significant reductions in anxiety severity and impairment were found at the 12-month follow-up for the combined CBT group versus the WLC condition.

Of the participants meeting DSM-IV diagnostic criteria at baseline (*n* = 42), 67% in the CBT plus parent training group, 79% in the child-only CBT group, and 38% in the no-treatment control group moved to sub-threshold status by post-intervention. These differences were not significant in terms of child-report. However, parent reports showed greater improvement for the CBT + parental training condition at follow-up. Because outcomes for the two treatment conditions (FRIENDS vs FRIENDS + parent training) differed according to the different outcome measures used (child vs parental report), the authors concluded that FRIENDS and FRIENDS + parental training are both effective treatment modalities for children with anxiety (Bernstein et al., 2005). The positive reductions in anxiety were maintained at 3-, 6- and 12-month follow-up (Bernstein, Bernat, Victor, & Layne, 2008).

These findings are in line with those cited above (in section 3.4) where studies comparing CBT treatment studies with or without parental involvement were inconclusive not favouring one treatment modality over the other.

More recently Liddle and Macmillan (2010) set out to evaluate the effectiveness of FRIENDS (see Section 3.2 for an overview of FRIENDS) in Scotland. The criterion for inclusion in their study was one of indicated prevention, where children were recommended by their teachers for inclusion in the programme on the basis of displaying symptoms of anxiety, low mood or low self-esteem – these symptoms did not necessarily meet criteria for diagnosis of a full-blown disorder. Identified participants included 58 children (aged 8-14) who attended four schools in Scotland. Participants were randomly assigned to either FRIENDS (*n*=27) or a WLC condition (*n*=31) at their respective schools. Results on the Spence Children's Anxiety Scale (SCAS) (Spence, 1998) immediately post-intervention indicated a significant reduction in anxiety scores and these decreases were still maintained at 4-month follow-up. Scores for low mood and self-esteem also showed positive gains. These results suggest that when FRIENDS is used as an indicated prevention programme in a school setting it can have a significant positive impact on the emotional well-being of children.

3.4.2 Selective intervention/prevention studies

To recap, selective interventions target children who are not yet displaying significant problems, but who are at a higher than average risk of developing a specific disorder, due to the presence of biological, social or psychological risk factors (Mrazek & Haggerty, 1994). Similar to indicated interventions, a major limitation of selective interventions is their selective design, where children have to undergo screening to identify the risk factors which increase their risk for developing an anxiety disorder or not. Children who are then identified as being at risk are exposed to a possible labelling or stigmatisation effect (Lock & Barrett, 2003). This “risk” for the development of anxiety is based on the identification of malleable risk or vulnerability factors, which may include (amongst others): the presence of parental anxiety; behavioural inhibition; high anxiety-sensitivity; and information-processing style (for a more-in-depth overview of these risk factors see Allen et al., 2013).

Despite the identification of these possible risk factors, to date selective CBT interventions for childhood anxiety in middle-childhood children have received limited attention (Manassis, 2013). However, each of the risk factors mentioned above has been used as a basis for identifying children at risk of anxiety disorders for inclusion in preventive interventions, and results have been encouraging (Allen et al., 2013).

However, most of the studies have focussed on selective prevention in pre-school children (Kennedy, Rapee, & Edwards, 2009; Rapee, Kennedy, Ingram, Edwards, & Sweeney, 2005, 2010) and adolescents (Balle & Tortella-Feliu, 2010), and as the target age-group of the present study is that of middle-childhood these studies were not reviewed (see Allen et al., 2013) for an overview of the excluded studies).

However, as the presence of parental anxiety has been identified as a risk factor for the possible development of childhood anxiety (Allen et al., 2013), Ginsberg’s (2009) study targeted middle-childhood children whose parents met diagnostic criteria for an anxiety disorder. The study included 40 children (aged 7-12) and their families who were randomly assigned to an 8-week CBT intervention (Coping and promoting strength programme (CAPS)) (n = 20) or a WLC condition (n = 20). The CAPS programme targets three children and three parent modifiable risk factors. Child risk factors included: (a) elevated anxiety symptoms and social avoidance; (b) maladaptive cognitions; and (c) deficits in coping. Parental risk factors included: (a) modelling of anxiety symptoms; (b) anxiety enhancing parental practices; and (c) criticism and family conflict. The sequence of the CBT intervention strategies was based on the transfer of control model (Silverman & Kurtines, 1996). Consistent with this model, the first two CAPS sessions were with parents alone, and the subsequent 4-6 sessions included all interested family members. Independent clinicians, parents and children completed various measures of anxiety at base-line, post, 6- and 12-month follow-up. At 12-month follow-up, 30% of children in the WLC condition had developed an anxiety disorder compared with none (0%) of children who received CAPS. Parent-report of child anxiety symptoms and clinician-based ratings of anxiety severity (not child self-report) also significantly decreased at 12-month follow-up for CAPS relative to the WLC condition. Specifically, according to parental report of child anxiety on the parent version of the SCARED-P (Birmaher et al., 1999) children's levels of anxiety symptoms dropped by approximately 40% for the CAPS group, but remained unchanged for children in the WLC group. In contrast to parent and clinician ratings, child-reports between the CAPS and WLC groups did not differ. The author concluded that these findings highlight the promise and potential for prevention programmes which aim to ameliorate anxiety and its associated effects in this high-risk population (Ginsburg, 2009).

In addition to reporting positive results in terms of prevention of childhood anxiety, preventive interventions can also play an important role in the expansion of the child anxiety literature, as they help to identify which factors need to be addressed to prevent anxiety in children (Allen et al., 2013). However, studies focussing on selective interventions for childhood anxiety are very limited and further research within this level of prevention is required.

3.4.3 Universal intervention/prevention studies

Universal prevention programmes have the potential to be enormously beneficial in the reduction of childhood anxiety, given the fact that anxiety is one of the most prevalent forms of psychopathology in childhood and adolescence (Barrett & Turner, 2004). Universal interventions are interventions delivered to whole populations of children regardless of their risk status (Mrazek & Haggerty, 1994). Because universal programmes target all children, those children who do require assistance to deal with anxiety problems, but who may never be referred to a mental health practitioner are also engaged in a programme of change (Barrett & Turner, 2004; Greenberg, Domitrovich, & Bumbarger, 2001). Thus, universal preventive approaches are the interventions most likely to reach children that have not yet been identified as needing help or those that have limited access to services (Allen et al., 2013). Unique to universal interventions is that they can have the dual function of significantly reducing current problems whilst simultaneously increasing children's resilience and ability to deal with possible problems that may arise in the future (Stallard et al., 2007). Universal interventions have most commonly been administered within school settings (Allen et al., 2013). By providing interventions in schools, difficulties with recruitment, screening and attrition are decreased; a broad range of children and adolescents with varying levels of risk for mental disorders are reached; stigmatisation is reduced; and psychosocial difficulties within the classroom are reduced – thus promoting learning and healthy development (Armbruster, Andrews, Couenhoven, & Blau, 1999; Barrett, Farrell, Ollendick, & Dadds, 2006; Kubiszyn, 1999; Lock & Barrett, 2003; Stallard et al., 2007). Additionally, implementing universal programmes in schools provides children with peer support. Being able to talk about anxiety while experiencing mutual support from friends may provide children with a sense of acceptance, a sense of belonging, and a decreased sense of isolation as their fears are normalised (Miller, Short, Garland, & Clark, 2010). The limitations incurred by indicated and selective interventions (i.e., possible labelling or stigmatisation and costly screenings) are also eliminated when programmes are delivered universally (Allen et al., 2013). Probably the most well-known universal school-based prevention programme for childhood anxiety is Barrett's FRIENDS programme (Stallard, Simpson, Anderson, & Goddard, 2008; Stallard et al., 2007; Urao et al., 2016).

In order to address and overcome some of the limitations inherent in indicated and selective interventions, Lowry-Webster et al. (2001) conducted one of the first large-scale projects where FRIENDS was implemented as a universal prevention programme in schools. They noted that even though Dadds et al.'s (1997) indicated intervention study (discussed above, see Section 3.7.1) reported positive outcomes when a CBT-based anxiety intervention (Coping Koala) was implemented in schools, there was one significant limitation. In the QEIPAP study the Coping Koala (see Section 3.2 for an overview of the Coping Koala) was delivered by clinical psychologists who had been specially trained. Thus, this study demonstrated the efficacy of the Coping Koala programme when delivered by a specialist team. This suggesting that the programme can only demonstrate efficacy under ideal staffing conditions. Lowry-Webster et al. (2001) consequently concluded that this method of prevention (using specially trained staff) is still a somewhat costly alternative for the management/treatment of childhood anxiety.

Subsequently, keeping the above-mentioned limitation in mind, Lowry-Webster et al. (2001) aimed to evaluate the effectiveness of the FRIENDS programme as a universal anxiety intervention delivered in a school setting by trained school teachers as part of the school curriculum. In this study schools as opposed to participants were selected as the unit of random assignment, and seven schools were assigned too one of two conditions, either (a) teacher-led FRIENDS (GCBT) (four schools were included and 432 children participated) or (b) a monitoring condition (three schools were included and 162 children participated). As this was a community sample (as opposed to a clinical sample) the study sought to examine the preventive effects of the FRIENDS programme on those children who were considered to be 'at high risk' for the development of an anxiety disorder. As such, children (*N* = 594) (aged 10-13) were identified as either being "healthy" or "at risk" for the development of anxiety problems. Children's risk status was determined by their scores on the SCAS (Spence, 1998) – if they scored above the clinical-cut-off they were classified to be "at risk".

Regardless of risk status, at post-intervention, all children reported significant reductions in anxiety. Positive changes relating to risk status were also noted, with 75% of the "at risk" children who had taken part in FRIENDS no longer at risk post-intervention, compared to55% of "at risk" children in the monitoring condition.

Lowry-Webster et al. (2003) assessed outcomes for this sample at 12-month follow-up, and post-intervention gains were still maintained. A prevention effect was also evident, with 91% of children in the FRIENDS condition falling within the "healthy" range (i.e., scoring below the clinical cut off on the SCAS (Spence, 1998) at post-intervention and 12-month follow-up), compared to 75% of children in the monitoring condition. Notably, a greater portion of children in the monitoring condition progressed to "at risk" or remained "at risk" compared to children in the FRIENDS condition (Lowry-Webster et al., 2003). Overall, these results suggest that FRIENDS – when implemented by teachers as a preventive intervention – is potentially effective in reducing symptoms of anxiety in children at risk for the development of a clinical anxiety disorder. In addition, FRIENDS was also found to have a positive reduction effect upon levels of depression in children in this study.

In a similar early study, Barrett and Turner (2001) also aimed to evaluate the effectiveness of FRIENDS as a universal intervention in a school setting when implemented by different group leaders (psychologists vs. teachers). They randomly assigned 489 children (aged 10-12) identified as either "healthy" or "at risk" to one of three conditions: (a) psychologist-led FRIENDS (*n* = 188); (b) teacher-led FRIENDS (*n* = 263); or (c) a usual care (continued with class as usual) monitoring condition (*n* = 137). Barrett and Turner (2001) trained teachers and psychologists in the implementation of the 12-session FRIENDS programme – they implemented the programme as part of the standard classroom curriculum.

Results at post-intervention showed that all children who received FRIENDS (regardless of intervention condition, psychologist-or-teacher-led) showed markedly fewer anxiety symptoms when compared to children in the monitoring condition who reported no significant change. Furthermore, because there were no differences between results obtained by children in teacher-led FRIENDS versus psychologist-led FRIENDS, Barrett and Turner (2001) preliminarily concluded that teachers are just as effective as psychologists when delivering FRIENDS. Additionally, a preventive effect was also evident, as at post-treatment a greater number of children in the two FRIENDS conditions who were originally classified as “at risk” had now moved into the “healthy” range. This was not the case for children in the monitoring condition (Barrett & Turner, 2001).

In another study Lock and Barrett (2003) carried out a longitudinal school-based investigation of universal prevention to assess the effectiveness of the FRIENDS programme when implemented with two distinct age groups of children. Participants included 737 children enrolled in either grade 6 (aged 9-10, *n* = 336) or grade 9 (aged 14-16, *n* = 401). Once again, schools as opposed to participants were randomly assigned to FRIENDS or a monitoring condition. Post-intervention results were in line with previous findings (Dadds et al., 1997; Dadds et al., 1999; Lowry-Webster et al., 2001; Lowry-Webster et al., 2003) as general reductions in anxiety symptoms across time regardless of intervention condition were noted. However, results were greater for children in the FRIENDS condition at both post-intervention and follow-up.

Furthermore, relating to age differences in anxiety reductions, prior to and after the delivery of FRIENDS children in grade 6 reported significantly higher levels of anxiety. However, at 12-month follow-up this was no longer the case, as the grade 6’s (when compared to the grade 9’s) reported greater reductions in anxiety. This led the authors to conclude that preventive intervention at an earlier age may be more advantageous than later intervention.

A large sample (669 of the original 737 participants) from Lock and Barrett’s (2003) study were followed-up at 24-months (children now in grade 8 and grade 11) and 36-months (children now in grade 9 and grade 12) (Barrett et al., 2006). Based on results from the original Lock and Barrett (2003) study, it was expected that there would be an intervention group x grade effect, with students who were in grade 6 at the time of the original study reporting more positive gains than children who were in grade 9. Results were consistent with the latter suggestion, and it appeared that students in grade 6 benefitted more from the intervention than students in grade 9 in terms of anxiety self-report. For students in grade 6 there were significant intervention group differences with those who received FRIENDS reporting significantly lower anxiety scores than those in the monitoring condition. No significant group differences were found for the grade 9 group. This finding strengthens Lock and Barrett's (2003) argument that intervening via preventive programmes in grade 6 may be an optimal time for reducing anxiety risk (Barrett et al., 2006). From this long-term follow-up study, it is evident that the prevention effects of the FRIENDS programme for children who received intervention in grade 6 are durable up to 3 years post-intervention, and thus intervening for the first time in high-school may be too late (Farrell & Barrett, 2007).

In a similar universal study to Lock and Barrett (2003), Barrett et al. (2005) noted that late childhood and early adolescence are especially critical periods relating to the onset and progress of anxiety disorders. Subsequently they also hypothesised that the developmental stage (timing) at which preventive interventions are delivered may have a vital influence on outcome effects. Subsequently, they compared the effects of FRIENDS at two developmental stages – compared intervention effects for primary school participants (grade 6) and high school participants (grade 9). Participants included 692 children enrolled in either grade 6 (*n* = 293, aged 9-10) or grade 9 (*n* = 399 children aged 14-16). Children in both grades 6 and 9 were randomly allocated to FRIENDS (GCBT) (*n* = 423) or a monitoring condition (*n* = 269). The grade 6 children came from the same sample of children who took part in Barrett and Turner's (2001) study. Two developmentally tailored versions of the FRIENDS programme were implemented: FRIENDS for children was delivered to children in grade 6 and FRIENDS for youth was delivered to children in grade 9. Children were further classified as either being at "low risk", "moderate risk" or "high risk" based on their score on the SCAS (Spence, 1998) at pre-intervention.

At post-intervention all participants reported reductions in anxiety symptoms across time regardless of intervention status (FRIENDS or monitoring condition). However, at 12-month follow-up reductions in symptoms of anxiety were significantly greater for children in the FRIENDS condition. These results once again supporting the evidence that CBT is effective in reducing anxiety symptoms in children.

Once again relating to the age at which children may benefit most from a preventive intervention for child anxiety, previous findings (Lock & Barrett, 2003) suggest that intervention at an earlier age (grade 6 children) may yield greater success. When Barrett et al. (2005) compared children from the two developmental levels (grade 6 vs. grade 9 children), as expected the grade 6 children reported greater changes in anxiety symptoms, suggesting once again that earlier preventive intervention in middle-childhood is potentially more advantageous than intervention at a later age (Barrett et al., 2005). Keeping the grade 6's age in mind, these findings together with those of Lock and Barrett (2003) suggest that the optimal time for preventing anxiety may be in middle-childhood. In addition, this study also reported reductions in depressive symptoms in children who received FRIENDS.

The above mentioned universal prevention studies were all conducted in Australia. Noting the promising results of FRIENDS and its endorsement as the only evidence-based prevention programme for childhood anxiety by the World Health Organization (2004), Stallard and his colleagues (Stallard et al., 2005; Stallard et al., 2007) set out to investigate the transportability of FRIENDS from Australia to the UK.

In their first study Stallard and colleagues (2005) delivered FRIENDS to 197 10-year-olds. FRIENDS was delivered by trained nurses in collaboration with class teachers. Post-intervention significant reductions in levels of anxiety were evident. When analysing “high-risk” children’s anxiety scores post-intervention, results indicated that 60% had significantly improved after receiving FRIENDS and no longer fell within the “high-risk” range.

Stallard et al. (2007) built upon their initial study with another universal intervention using FRIENDS. This study included 106 children (aged 9-10) from three schools in Bath and North East Somerset (UK). FRIENDS was delivered to whole classes of students as part of the curriculum for one school term. Three-months after completing FRIENDS, children reported significantly lower anxiety symptoms and significantly higher levels of self-esteem. Prior to the commencement of FRIENDS anxiety and self-esteem levels were recorded as stable. Children who benefitted the most from FRIENDS were those with the most severe emotional problems. These results once again suggesting that interventions offering support for psychological difficulties can be successfully embedded within the classroom context.

Stallard et al. (2008) re-assessed 63 of the participants (59% of the original sample) who took part in their 2007 study, and significant results obtained at post-intervention were maintained at 12-month follow-up. These results once again showing that FRIENDS has both an intervention and preventive effect. In terms of intervention effects 69% of participants who were classified as “high risk” pre-intervention transitioned to “low risk” at the 12-month follow-up. In terms of preventive effects, no child who was classified as “low risk” at pre-intervention had moved to “high risk” at 12-month follow-up. Whilst these results are promising, it is important to note that both the above-mentioned Stallard et al. (2005, 2007) studies were small, and neither included a WLC condition (Stallard, 2010).

In accordance with Stallard et al. (2007, 2008), Rose et al. (2009) wanted to assess the transportability of FRIENDS to another country (i.e., Canada). Two grade 4 classes of children (aged 8-9) took part in this study, one grade 4 class acted as the intervention group (*n* = 26) while the other class (*n* = 26) acted as the control group. Teachers delivered the FRIENDS programme to the grade 4's in the intervention group. Contrary to what was expected, post-intervention results indicated that as a total group (*N* = 52) all grade 6's reported reductions in anxiety scores regardless of group assignment, and changes were not significant for the intervention or control group. Although the authors did not obtain the desired outcome, the children did report lower levels of anxiety, and they concluded that FRIENDS can be realistically used as a universal prevention in a group-format to increase the awareness of anxiety as a significant health issue for children (Rose et al., 2009).

In a further Canadian study conducted by Miller and colleagues (Miller, Laye-Gindhu, Liu et al., 2011) 191 children from 17 Canadian schools were randomly assigned to FRIENDS or a story-reading attention control group. In the attention control group children were read an adventure story, Harry Potter, and they did not receive any therapeutic input. Children in the attention control group showed similar decreases in anxiety symptoms to children who received FRIENDS at 12-month follow-up. This prevention study is the first to include an attentional control condition, with findings highlighting the possibility that the reported effects of prevention programmes may be attributable to non-specific factors, such as teacher attention or the enjoyment of an activity as part of a larger group.

Most recently, once again Stallard and his colleagues (Stallard et al., 2012; Stallard, Skryabina et al., 2014; Stallard, Taylor et al., 2014; Stallard et al., 2015) undertook a very large RCT called the Preventing Anxiety in Children through Education in Schools (PACES) project. Paces aimed to examine whether FRIENDS (either delivered by school teachers or health professionals) is more effective than the usual school curriculum in reducing symptoms of anxiety and low mood in children. Additionally, the effectiveness of FRIENDS in maintaining good emotional health was also examined (i.e., preventing high levels of anxiety and low mood from developing). FRIENDS was delivered to children in grade 5 (aged 9-10) as part of the school curriculum. Schools were the unit of allocation, and 40 schools were assigned to one of three treatment conditions: (a) Treatment as usual (12 schools, *n* = 442); (b) health-led FRIENDS (14 Schools, *n* = 509); and (c) teacher-led FRIENDS (14 schools, *n* = 497).

Post-intervention results indicated that health-led FRIENDS resulted in greater reductions in anxiety than teacher-lead FRIENDS or treatment as usual (Stallard et al., 2012; Stallard, Skryabina et al., 2014; Stallard, Taylor et al., 2014). In contrast to the findings of Barrett and Turner (2001) (study discussed above), who found no significant outcome differences between psychologist-led FRIENDS and teacher-led FRIENDS, Stallard et al. (2015) found greater reductions in anxiety when FRIENDS was delivered by trained health professionals compared to teachers. Thus, they concluded that universally delivered anxiety prevention programmes can be effective when transported into schools. However, effectiveness depends on who delivers the programme (Stallard et al., 2015).

Allen et al. (2013) noted that universal programmes often produce small effects as many children at low risk will receive the intervention, therefore only minor improvements can be achieved. However, the major advantage of universal programmes is that even small effects achieved in large populations may result in the prevention of anxiety in substantial numbers of children. The lack of improvement in some universal trials indicates that further research is needed to guide implementation and to understand how their apparent success in the Australian school setting might be achieved in other countries.

3.4.4 Summarising CBT's efficacy as a preventative intervention for childhood anxiety

To summarise, the studies reviewed in sections 3.3 and 3.4 above included 20 treatment studies (Barrett, 1998; Barrett et al., 1996; Barrett et al., 2001; Cobham et al., 1998; Cobham et al., 2010; Flannery-Schroeder & Kendall, 2000; Howard & Kendall, 1996; Kendall, 1994; Kendall & Southam-Gerow, 1996; Kendall et al., 1997; Kendall et al., 2004; Kendall et al., 2008; Manassis et al., 2002; Mendlowitz et al., 1999; Nauta et al., 2001; Nauta et al., 2003; Silk et al., 2016; Silverman, Kurtines, Ginsburg, Weems, Lumpkin et al., 1999; Silverman, Kurtines, Ginsburg, Weems, Rabian et al., 1999; Wood et al., 2006; Wood, McLeod et al., 2009) and 28 prevention studies, of which 8 were indicated interventions (Barrett et al., 2001; Bernstein et al., 2005; Bernstein et al., 2008; Dadds et al., 1997; Dadds et al., 1999; Liddle & Macmillan, 2010; Mifsud & Rapee, 2005); 1 was a selective intervention (Ginsburg, 2009) and 19 were universal interventions (Barrett & Turner, 2001; Barrett et al., 2005; Barrett et al., 2006; Lock & Barrett, 2003; Lowry-Webster et al., 2001; Lowry-Webster et al., 2003; Miller, Laye-Gindhu, Bennett et al., 2011; Rose et al., 2009; Stallard et al., 2008; Stallard et al., 2014; Stallard et al., 2015; Stallard et al., 2014; Stallard et al., 2005; Stallard et al., 2007). The majority of prevention studies reviewed were therefore implemented at a universal level of delivery, this enhancing the evidence base for this particular form of CBT-based prevention. The above-mentioned results are especially encouraging, as one of the frequently reported disadvantages of universal interventions is that because of the relatively low dosage of treatment that children receive in a universal programme, children "at risk" of developing an anxiety disorder might not receive sufficient treatment exposure (duration or intensity) to alter their pathological developmental pathway (Greenberg et al., 2001). However, the positive trends noted in the above studies indicated that participants do indeed receive sufficient exposure to the intervention.

Furthermore, the researcher is aware that the studies reviewed this far represent a range of studies investigating CBT's use with children and young people experiencing anxiety; however, the number of studies reviewed above is by no means exhaustive. These studies do however contribute to the increasingly well-established evidence base for the efficacy of CBT for the treatment and prevention of childhood anxiety. The researcher is also aware that the studies reviewed put most emphasis on CBT's ability to reduce anxiety symptomatology, and it is clear that this is not the only aspect that is important in CBT interventions. Aspects including: effective elements of CBT, moderators and mediators of treatment, participant response factors and the addition of medications or not (CBT with or without concurrent use of a medication) are also important. However, an in-depth discussion of all these factors is beyond the scope of this dissertation. It should also further be noted that studies have evaluated the effectiveness of CBT-based programmes for the treatment and prevention of anxiety in adolescents/high school children (Barrett, Moore, & Sonderegger, 2000; Ginsburg & Drake, 2002; Hunt, Andrews, Crino, Erskine, & Sakashita, 2009; Sauter, Heyne, & Westenberg, 2009; Siqueland, Rynn, & Diamond, 2005) and early-childhood childhood/pre-school children (Dadds & Roth, 2008; Hirshfeld-Becker et al., 2010; Monga et al., 2009; Pahl & Barrett, 2007, 2010; Rapee et al., 2005; Ruocco, Gordon, & McLean, 2016). But because the present study focuses on middle-childhood children these studies were not included in this review of the literature.

3.5 Multi-culturalism and CBT for childhood anxiety

Very relevant to the present study is the adaptation of CBT-based programmes for diverse and multi-cultural contexts. Two research groups the first being Essau and colleagues and the second being Barrett and colleagues have conducted the majority of studies which evaluated the effectiveness of FRIENDS cross-culturally.

Noting the positive results that FRIENDS was garnering in English-speaking countries, Essau and colleagues (Conradt & Essau, 2003; Essau & Conradt, 2003; Essau, Conradt, & Ederer, 2004; Essau et al., 2012) conducted a number of studies in Germany.

First, Conradt and Essau (2003) examined the efficacy and feasibility of the FRIENDS programme when implemented universally with German primary-school children (aged 9-10). Pre-post-and-follow-up (6 and 12 month) intervention results indicated reductions in anxiety symptoms and corroborated the suitability of the programme as appraised by children, their parents and the programme trainers in Germany.

A year later Essau et al. (2004) conducted an additional social validity evaluation on the German version of FRIENDS. Because FRIENDS was developed in Australia and it makes use of Australian-based illustrations (such as kangaroos and koalas) the authors wanted to conduct a pilot study to establish the social acceptability of the German version of FRIENDS (Essau & Conradt, 2003). The study included 200 German primary school children (aged 9-12) and post-intervention results showed significant reductions in anxiety symptoms and high levels of satisfaction with the programme. The use of Australian animals was also highly accepted, the only animal that seemed to be problematic was the snake which is used during the relaxation activities, and the snake was subsequently replaced with a bear. The high levels of programme satisfaction were evident through high session attendance, completion of homework assignments and in positive appraisals of the relaxation components and the teaching of helpful thoughts. A significant correlation was found between treatment acceptability and participant's clinical outcome (Essau et al., 2004).

In a more recent study Essau et al. (2012) once again administered the German version of FRIENDS (Essau & Conradt, 2003) to 638 children (aged 9-12), with children assigned to FRIENDS (n = 302) or a control condition (n = 336). Schools were used as the unit of random assignment. Post-intervention children who participated in FRIENDS reported significant reductions in anxiety and depressive symptoms at 12-month follow-up when compared to children in the control group. Additionally, younger children (aged 9-10) displayed positive treatment gains immediately post-intervention, while older children (aged 11-12) only reported reductions in anxiety at 6-and-12-month follow-up. The authors concluded that results from this study show that the German version of FRIENDS is an efficacious intervention for reducing anxiety and depression amongst German school-aged children.

FRIENDS has also been evaluated with Mexican primary school-aged children, and the results showed positive outcomes for those receiving the programme, such as a reduction in depressive symptoms and risk, and an increase in proactive coping skills (Gallegos, Linan-Thompson, & Stark, 2010). Ahlen et al. (2012) evaluated a culturally adapted Swedish version of FRIENDS. Participants included 50 children (aged 8-10) who were delivered FRIENDS. At post-intervention only participants at increased risk for anxiety (as determined by the norm scores of the SCAS (Spence, 1998)) reported significant decreases in anxiety symptoms. Most recently Pereira and colleagues (Pereira, Marques, Russo, Barros, & Barrett, 2014) evaluated a Portuguese version of FRIENDS (Barrett, 2010, 2011) in Portuguese schools. 38 highly anxious children (aged 8-12 years) took part in the study. Post-intervention child reports showed a significant reduction in anxiety symptoms while parental reports were non-significant. The authors concluded that their study's results support the use of a Portuguese version of FRIENDS.

FRIENDS's effectiveness in preventing anxiety and building emotional resilience has also been evaluated amongst multi-cultural students in Australia. Barrett and colleagues (Barrett et al., 2000; Barrett, Sonderegger, & Sonderegger, 2001) noted that the experience of becoming a refugee or migrating to a foreign country/culture is increasingly gaining recognition as a risk factor for the development of psychopathology (including anxiety) in young people. As a result, they (Barrett et al., 2001; Barrett, Sonderegger, & Xenos, 2003) have undertaken various studies to assess the effectiveness of culturally adapted versions of FRIENDS when used with migrant/refugee children in Australia.

Barrett et al. (2001) in an attempt to gather empirical data on the cultural-adaptation experiences of young migrants to Australia, and to determine how therapeutic techniques can be culturally modified to better meet the needs of Australia's multicultural population, expanded upon their previous work (Barrett et al., 2000). In this expansion they (Barrett et al., 2001) specifically aimed to: (a) evaluate the efficacy of FRIENDS in reducing anxiety and building emotional resiliency in students of different school-age levels and diverse cultural groups; (b) examine the social validity of FRIENDS from the perspective of participants and mental health professionals; and (c) obtain information on how FRIENDS can best be modified for specific use with migrants from non-English-speaking backgrounds (NESB). Although Barrett's FRIENDS programme does not incorporate issues related to culture and migration, the authors were of the opinion that the programme would be flexible enough to address some of the anxiety concerns associated with migration, and therefore be perceived by participants and independent health professionals as a socially valid programme, achieving its intended goals.

A total of 204 children (aged 7-19) participated in this study. Former-Yugoslavian (*n* = 75), Chinese (*n* = 100), and mixed NESB students (*n* = 29) whose families migrated from Southeast Asia, the Pacific Islands, Europe, Africa and the Middle East to Australia took part. Participants were grouped according to ethnic origin and were allocated by school and their ability to speak English (or not) to either FRIENDS (*n* = 121) or a WLC (*n* = 83) condition.

Although participants could read and write basic English, group assessments were conducted verbally in English second language (ESL) classrooms, and both an English and native cultural language (Mandarin, Cantonese, and former Yugoslavian) interpretation of each question by a trained bilingual mental health professional was provided. Mixed-ethnic participants were administered the assessment package in English only.

Post-intervention there was a significant reduction in anxiety symptoms and increase in symptoms of self-esteem for children in the FRIENDS condition, while children in the WLC condition showed no significant change in severity of symptoms of anxiety and self-esteem from pre- to post-intervention. Results obtained are comparable with those obtained by Barrett and colleagues (Barrett et al., 2000) in their previous pilot of FRIENDS with former Yugoslavian refugees.

Post-intervention interviews with research facilitators and participants revealed that not all activities in the existing FRIENDS programme were entirely practical for use with NESB students. The number of activities which are to be worked through per session became difficult for NESB participants, as language and comprehension barriers caused delays (especially where writing was involved). As such, facilitators felt rushed to complete all activities within the allotted timeframe specified in group leader manuals. Many students also reported difficulty in completing written homework assignments, particularly those with only a basic grasp of English diction. Consequently, it was recommended that some activities be culturally enhanced through the creation of a NESB-sensitive FRIENDS supplement. Furthermore, some participants also commented that some FRIENDS activities could be not only more culturally relevant but also made more fun and exciting in ways to which they can better relate. Participants and group facilitators both stated that activities could be enhanced by incorporating music, art, and creative stories that are personally relevant to migrant children and youth. In summary, participants and facilitators identified components that are culturally relevant, and also activities that could be further enhanced through culturally sensitive modifications. This data made a valuable contribution to the development of a culturally sensitive supplement to the FRIENDS programme. This supplement included culturally modified activities, process issues and NESB group dynamic guidelines to accommodate for different beliefs, behaviours, and value systems (Barrett et al., 2001).

In a further attempt to expand upon, replicate and validate Barrett and colleagues' (Barrett et al., 2000; Barrett et al., 2001) previous work, Barrett et al. (2003) assigned 320 refugee children (former Yugoslavian *n* = 125, Chinese, *n* = 148, non-specific NESB *n* = 47) with ages ranging between 9 and 16 to either a FRIENDS or WLC condition. Once again, post-intervention all children reported a significant decrease in anxiety symptoms, while children in the WLC condition reported an increase in their anxiety symptoms from pre-to-post-intervention. The authors caution that even though these findings are very promising, however, the measures that were used to gather the pre-and-post-intervention data were developed and validated with western populations only. Considering that the expression of psychological symptoms may vary both in form and intensity between various cultural groups, findings should be interpreted with caution. However, the main findings from this study are in line with those noted in previous research (Barrett et al., 2000; Barrett et al., 2001) and offer support for FRIENDS as being effective in reducing the anxiety and stress that may accompany cross-cultural migration (Barrett et al., 2003).

Despite CBT's promising results and Not discounting the previous work with migrant children in Australia, it was noted that the studies mentioned above have all been conducted in Western Countries which have similar cultural values (Australia, Canada, Europe, Brittan and the United States) (Essau, Sakano, Ishikawa, & Sasagawa, 2004; Ishikawa et al., 2012).

This is concerning as research has shown that non-western countries (such as China and Japan) emphasise collectivistic as opposed to individualistic aspects of the self. Collectivistic cultures (interdependent self-construal) emphasise the maintenance of harmony within their group and tend to avoid arguments and conflicts. On the other hand, more individualistic cultures (mostly Western cultures) prefer assertiveness and tend to argue if necessary to get their ideas across or to get their way in social interactions. On the basis of these differences, it was thought that GCBT and ICBT would work differently in differing cultural groups.

As noted above (see Section 3.3.3), both GCBT and ICBT have been found equally effective when treating anxiety in children from more individualistic western countries.

Ishikawa et al. (2012) undertook an initial comparison between GCBT and ICBT for Japanese children diagnosed with an anxiety disorder. This was the first study to investigate the effectiveness of CBT for non-English speaking children in Asia. The final sample consisted of 33 children (aged 7-15) who met diagnostic criteria for an anxiety disorder. The study employed a quasi-experimental design as participants were assigned to either GCBT (n = 20) or ICBT (n = 13), but this was not done randomly. The children in both these conditions received eight sessions of the CBT programme for Japanese children and adolescents with anxiety disorders (Ishikawa, Shimotsu, & Sato, 2008). This programme was adapted from existing evidence-based CBT-based programmes (e.g., Barrett's Coping Koala and Kendall's Coping Cat Programmes).

Post-intervention more than half of the children 54% were free from their primary diagnosis, and these results were carried through to the 3-month follow-up with 61% of participants still diagnosis-free. Furthermore, in terms of diagnostic-free rates there were no significant differences between children who received ICBT vs GCBT at post-treatment or 3-

month follow-up. These results are in line with previous RCT's carried out in Western countries (e.g., Hudson et al., 2009; Kendall et al., 2008; Silverman, Kurtines, Ginsburg, Weems, Lumpkin et al., 1999). Furthermore, in line with the above literature (see Section 3.3.3) neither GCBT nor ICBT were found to be superior when treating anxiety disorders in Japanese children. The authors caution that because there was no WLC group in this study the results should be interpreted with caution.

3.6 South Africa and CBT for childhood anxiety

From the above it is clear that the majority of the empirical evidence shows that FRIENDS has positive benefits for children from culturally diverse populations studied internationally. However, whether these benefits extend to the multi-cultural context of South Africa is an area which has received very little attention. In a review of child and adolescent CBT in South Africa conducted by Rosenstein and Seedat (2011) it was stated that the evidence base for child and adolescent CBT in low to middle-income countries such as South Africa is almost non-existent. The researcher is in agreement with this statement, as she could find only one study which evaluated a CBT-based anxiety intervention (FRIENDS) within the South African context (Mostert & Loxton, 2008).

In their pilot study they (Mostert & Loxton, 2008) aimed to determine whether FRIENDS could effectively reduce anxiety symptoms in a sample of 46 12-year old Coloured South African children. The study employed a quasi-experimental design with one grade 6 class receiving FRIENDS (*n*=32) and another grade 6 class (in the same school) acting as the WLC group (*n*=34). Post-intervention results showed that directly after receiving the FRIENDS intervention children's anxiety scores as measured by the SCAS (Spence, 1998) did decrease from pre-to-post-intervention, however, this difference was not statistically significant. Thus, the intervention had little immediate effect, but after a period of time (4- and 6-month follow-up) effects became evident. The authors attributed the study's limited effectiveness to the small sample size. It was also argued that only once children became more accomplished at using their new skills for dealing with anxiety did they become effective in reducing their anxiety symptoms. The authors concluded that FRIENDS is a promising intervention for the prevention of anxiety amongst South African children from low socio-economic backgrounds.

Furthermore, because this study evaluated the Australian version of FRIENDS, the authors also stated that future South African studies should not ignore the unique challenges (e.g., economic hardships and high rates of violence) posed by the South African context to children who live and grow up in this country. Mostert and Loxton (2008) concluded by stating that future research should incorporate environmental aspects into an intervention programme which is relevant to the South African context.

3.7 CBT for childhood anxiety in special populations

In a review of cognitive-behavioural treatments for anxiety and specific phobias in children and adolescents King, Heyne, and Ollendick (2005) noted that despite the positive research gains which had been made in terms of CBT treatment for anxiety in the general population of children up till that point, developments had unfortunately failed to keep pace with special needs children (King et al., 2005). Even though this statement was made more than a decade ago, the research picture is still similar. This is concerning, as children who have disabilities often develop anxieties or phobias that can interfere with their integration in school or the community (King et al., 2005). Some small progress however has been made, and CBT has been adapted for use with children who have developmental and learning disabilities.

Over the past decade CBT's use with children who have autism spectrum disorders (ASD) has been increasing. Research first started by using single case studies (e.g., Reaven & Hepburn, 2003), moving on to include small group intervention studies (e.g., Sze & Wood, 2007) and finally increased focus was given to RCT's (e.g., Chalfant, Rapee, & Carroll, 2007; Kerns et al., 2016; Reaven, Blakeley-Smith, Culhane-Shelburne, & Hepburn, 2012; Sofronoff, Attwood, & Hinton, 2005; Sung et al., 2011; White, Ollendick, Scahill, Oswald, & Albano, 2009; Wood, Drahota et al., 2009). These studies demonstrated reductions in anxiety when implemented using modified techniques.

Each of the programmes which were used in these RCT studies was based in a cognitive-behavioural theoretical framework and each highlighted the need to modify elements of the programme to match the cognitive profile of a child with ASD (Attwood & Sofronoff, 2013). Some of these modifications included: using more concrete and visual strategies (e.g., video modelling for hard to teach concepts) to explain concepts; including the child's specific interest where possible; using anxiety-specific hierarchies (multiple-choice lists) that account for the cognitive profile of the child; drawing; and allowing the child to use creative outlets for expression (Moree & Davis, 2010). Because the adaptations which are necessary to make CBT accessible and suitable for children with ASD differ so widely from those that are required for children with visual impairments, an in-depth discussion of the afore-mentioned RCT's and their adaptation falls beyond the scope of this dissertation (for more information on how CBT can be adapted to treat anxiety in children with ASD see Moree & Davis (2010) for an overview).

When looking at CBT and its application to children with learning disabilities, in a recent background paper written for the Learning Disabilities Development Project motivating the adaptation of the FRIENDS programme for use with children who have learning disabilities, Rossiter and colleagues (Rossiter, Davies, Woodrow, Mackay, & Lewis, 2013) cited three studies where FRIENDS was used with children who had varying learning difficulties.

Thompson and Lonsdale (2008) delivered FRIENDS to children with literacy difficulties in a mainstream school. Post-intervention anxiety and behavioural difficulties decreased and they concluded that FRIENDS could be delivered successfully by a collaborative staff from the school and CAMHS (child and adolescent mental health services) with some adaptations to increase accessibility (Thompson & Lonsdale, 2008). Mullin (2010) implemented FRIENDS in two special schools. These special schools supported children with a variety of special educational needs (including: autism, Asperger's syndrome, ADHD, dyspraxia, and learning speech and language difficulties). Post-intervention results indicated reductions in anxiety and improvements on other measures of anger and disruptive behaviour. Rossiter, Andrews, and Tulloch (2011) found that children with severe learning difficulties could participate in a group similar to FRIENDS if the activities are simplified and other creative approaches are used.

Following the outcomes of these studies Rossiter et al. (2013) concluded that adapting an existing well-evidenced approach such as FRIENDS, has the potential to both improve the emotional wellbeing and reduce the emotional anxiety of children with learning disabilities. However, Rossiter and colleagues have not yet published the outcome results from their adaptation study, but according to the foundation for people with learning disabilities' website, a systematic evaluation of the adapted FRIENDS programme is still underway (Mullin, 2010). When adapting FRIENDS for use with children who have learning difficulties Rossiter et al. (cited by the Foundation for People with Learning Disabilities, 2013) stated that the following should be kept in mind when adapting CBT programmes for children with learning disabilities. Materials should be simplified and use high visual, low verbal content, together with multi-media to make the sessions more meaningful. The programme facilitator must find innovative ways to adapt the content and delivery of the programme to accommodate the specific needs of children who have learning disabilities (e.g., instead of reading out stories from the workbook the facilitators perform role-plays and act out stories, making them more visual).

From the above it is clear that over the past decade there has been a growing literature devoted to CBT interventions for anxiety in children with learning and developmental disabilities. However, despite these promising efforts to adapt CBT and make it accessible to these children, no studies which adapted CBT for children with physical disabilities (such as visual impairment) have been conducted. As far as the researcher could identify, there was one very recent study which "hinted" at a CBT programme for children with visual impairments (Urao et al., 2016). This study investigated the efficacy of the Turn Around programme, an audio based CBT treatment for childhood anxiety, and the authors mentioned briefly that Turn Around (because it is audio-based) may provide a viable treatment alternative for people with visual impairments (Urao et al., 2016). It is important to note that this study did not explore the effects of Turn Around with visually impaired children and that this study had not yet been published when the present study commenced (January 2014).

To date, only one study describing the use of CBT in the rehabilitation of visually impaired adults could be found (Radnitz & Oronson, 2000). In this study which was conducted almost two decades ago Radnitz and Oronson (2000) noted that there were no controlled group outcome studies of cognitive behavioural interventions for persons with visual impairment. This still seems to be the case, as the researcher was unable to find any relevant research addressing CBT for the treatment of anxiety in children who have visual impairments. Radnitz and Oronson (2000) attributed this lack of research with people who have visual impairments in part to: (a) the absence of standardized modifications of common procedures; (b) the lack of appropriate normative data; (c) limited number of clinicians with specialized training; and (d) the social "invisibility" of persons with visual impairments. From the above it is clear that research on cognitive-behavioural treatment outcome amongst people with visual impairments is lacking and sorely needed (Radnitz & Oronson, 2000).

3.8 Children with visual impairments and childhood anxiety

As is evident from the above, the target population in the present study, namely children with visual impairments, has not only been neglected in the CBT literature, but in fear and anxiety research as well. Internationally a total of six studies addressing this topic were noted (Hardy, 1968; King, Gullone, & Stafford, 1990; Matson, Manikam, Heinze, & Kapperman, 1986; Ollendick, Matson, & Helsel, 1985; Weimer & Kratochwill, 1991; Wilhelm, 1989). Overall results from these studies suggest that the fears expressed by visually impaired children compare favourably to the general population (King et al., 1990; Matson et al., 1986; Weimar & Kratochwill, 1991; Wilhelm, 1989), with girls and younger children expressing greater levels and higher numbers of fears in comparison to boys and older children. However, significant differences in fear contents were noted in some of the studies where children with visual impairments displayed greater fear relating to situations perceived to be physically dangerous, whilst their sighted peers were more concerned with fears relating to psychological harm. A suggestion that is given to explain this difference in fear contents relates directly to the physical limitations experienced by the visually impaired youths, as they have an inability to perceive danger at a distance (Ollendick et al.,1985; Weimer & Kratochwill, 1991; Wilhelm, 1989). Therefore, it can be noted that these physical fears are necessary for their protection.

As mentioned previously, it has further been postulated that children who have a physical disability are more prone to develop psychological difficulties than are their non-disabled counterparts (Gullone, 1996; Harvey & Greenway, 1984; Li & Morris, 2006; Weimer & Kratochwill, 1991; Wilhelm, 1989). Wenar (cited in Weimer and Kratochwill,1991) states that the reason for this higher prevalence of psychopathology can be traced back to difficulties experienced by children with visual impairments involving the mastering of certain developmental tasks, as well as the tendency for rejection or over protection by others. These results withstanding, it was concerning to note that the most recent international study was conducted more than two decades ago by Weimer and Kratochwill (1991) in Wisconsin (USA).

Identifying this gap in the literature, the researcher and colleagues (Visagie et al., 2013) conducted an exploratory (base-line) study to gain greater insight into the fear profiles of South African children with visual impairments. Contrary to what was expected, results indicated that the overall fear profiles of children with visual impairments and children with normal sight did not differ significantly. This similarity indicates that the two populations (children with and children without visual impairments) have similar needs. As the need for a suitable anxiety intervention programme was highlighted in the general South African population (children without visual impairments) (Burkhardt et al., 2003; Mostert & Loxton, 2008; Muris et al., 2006), the same can be said for this specific group; children with visual impairments also need a suitable and accessible anxiety intervention programme (Loxton, Visagie, & Ollendick, 2012; Visagie et al., 2013; Visagie, Loxton, & Silverman, 2015).

On closer evaluation of Visagie et al.’s (2013) study, the need for a suitable anxiety intervention programme was noted to be particularly prominent for a specific sub-group of children with visual impairments (i.e., children with severe visual impairment). In their 2012 paper Loxton et al. highlighted significant differences in fearfulness between three groups of visually impaired children who had varying levels of sight (i.e., partially sighted, severely visually impaired and totally blind). As described previously (see Section 1.3.4 in Chapter 1) these levels of vision can be viewed on a sliding scale (i.e., children who are partially sighted have the most vision; children with severe visual impairment have less vision, but they are not totally blind; and the totally blind children have no level of measureable vision). Children with severe visual impairment (i.e., children who have a degree of light perception and movement detection, but who cannot function optimally without assistance and cannot read print material) (WHO, 2000) were more fearful than the partially sighted and totally blind children. Children with severe visual impairment reported the highest number (*M* = 42.09, *SD* = 17.84) as well as level (*M* = 171.63, *SD* = 28.60) of fear. This reported number of fears was almost double the number reported by the children with normal sight (*M* = 24.66, *SD* = 13.12). Children with normal sight's level of fear was also lower (*M* = 146.15, *SD* = 25.33) as measured by the South African Fear Survey Schedule for Children (FSSC-SA) (Burkhardt, Loxton, Kagee, & Ollendick, 2012). Thus, from Loxton et al.'s (2012) results, children with severe visual impairment can be identified as a high-risk sub-group within the broader population of children with visual impairments for the possible development of later anxiety disorders.

A possible explanation for this sub-group's greater instance of fearfulness could relate to the fact that this group of children's visual difficulties are the most differentiated and difficult to understand. The totally blind children have no measureable vision; therefore, they need assistance in most unfamiliar situations. On the other hand, partially sighted children usually have enough sight to help themselves and move around independently. However, children with severe visual impairment are in the middle. This group's visual difficulties may be the most complex and most disabling. Although children with severe visual impairments have a degree of measurable vision, they may find it difficult to function independently in an unfamiliar environment. Therefore, the uncertainty when they are faced with new situations and possibilities may contribute directly to their higher fear reactivity (Bensch, 2010; Visagie et al., 2013; Visagie et al., 2015). Leading from this, it is essential for these children to have access to suitable intervention programmes focused on the development of appropriate coping strategies and problem solving skills to enable them to deal competently with anxiety symptoms when they arise (Visagie et al., 2015). The anxiety intervention programme (PAM programme) developed in the present study will be integral in this regard.

3.9 Chapter summary

This chapter reviewed salient literature pertaining to CBT, children with visual impairments and the treatment and prevention of childhood anxiety in middle-childhood. The review started by providing relevant information to contextualise childhood anxiety. Thereafter, a broad overview of the programmes upon which the present anxiety intervention (PAM programme) is based was given. Empirical evidence for the use of CBT with middle-childhood children was provided next, giving attention to both treatment and preventive studies. Attention was then given to CBT programmes and their adaptation for use in multi-cultural and special populations. The chapter concluded by providing an explanation as to the unique contribution that the present study will make to the literature pertaining to the prevention of anxiety in South African children with visual impairments.

From the studies reviewed it is clear that CBT is significantly more effective than no treatment in reducing symptoms of anxiety in children. No clear evidence indicates that one way of delivering CBT is more effective than another (e.g., in a group, individually, with or without parents). However, to sum up the evidence presented in this chapter, the researcher is in agreement with Akiko Iizuka et al. (2013) who stated that "an increasing body of evidence shows that CBT school-based interventions seeking to prevent childhood depression and anxiety have large potential to improve the lives and well-being of both participants and their families" (p. 540). The treatment and prevention studies reviewed above have provided evidence for the worth in developing, implementing and evaluating a CBT-based prevention programme for anxiety in South African middle-childhood children with visual impairments.

Chapter 4 provides an overview of the preparatory focus group study which was conducted prior to the development of this anxiety intervention programme (PAM programme).

CHAPTER 4: PREPARATORY FOCUS GROUP STUDY

The preparatory focus group study reported on in this chapter has also been described in two recent publications, an article by Visagie, Loxton, Stallard and Silverman (in press) and a conference presentation by Visagie and Loxton (2015). This preparatory focus group study was undertaken to assist in the development of the PAM programme which was used in the main outcome study. Due to the fact that information pertaining to anxiety in children with visual impairments was so limited, especially in South Africa, the focus group study was undertaken to gain more insight into anxiety from the perspective of children with visual impairments. This enabled the researcher to determine which issues and components needed to be considered and included when developing the PAM programme.

The aims, methodology, findings and implications pertaining to the focus group study are reported in this chapter.

4.1 Aims and objectives of the focus group study

From the literature presented thus far (Chapters 1 & 3) it is clear that as far as the researcher could ascertain, no CBT-based anxiety intervention programmes for the prevention/treatment of anxiety have been developed specifically for children with visual impairments. As a result, this preparatory focus group study aimed to explore the views and perceptions of visually impaired South African children in order to identify how traditional CBT-based anxiety intervention programmes can be adapted for use with this specific population.

More specifically, the focus group interviews aimed to obtain critical information about the following:

- The Format of the PAM programme's activities: Children with visual impairment's visual difficulties may limit their ability to access traditional CBT-based interventions, as most of the existing programmes (reviewed in Section 3.2 in Chapter 3) rely heavily on visual media (i.e., cartoons, colouring-in pictures and picture-based workbook activities) to convey information and concepts, and as such are not accessible for visually impaired children. As a result, the researcher wanted to explore different ways in which the learnings and activities of the PAM programme could be presented.
- The PAM programme's specific content: Children with visual impairments interact and perceive their environment in unique ways and as such, may experience different challenges than children without visual impairments. As noted, because research relating to anxiety experienced by children with visual impairments is limited, it was

important for the researcher to gain greater insight into the specific content of visually impaired children’s anxieties and worries.

- The CBT concepts central to the PAM programme: Another important first step in the development of the PAM programme was to gain insight into visually impaired children’s own understanding of CBT concepts, and how they perceive these concepts and deal with them in their everyday lives. The main tennet underlying CBT is that the way individuals think influences/determines feelings and behaviours. To explain this link to children, it is important that they understand the concepts of feelings and thoughts. Many of the existing CBT-based programmes explain these concepts to children in a pictorial manner such as by using drawings of facial expressions, emotions and cartoons with thought bubbles (Barrett & Ryan, 2004; Barrett, Dadds, & Holland, 1994; Barrett & Sonderegger, 2005; Barrett, 2005; Kendall et al., 1990; Kendall, 1990; Rapee & Lyneham, 2006; Silverman & Kurtines, 1996; Stallard, 2003; Van Starrenburg, 2013). The researcher was of the opinion that these pictorial techniques were not appropriate for all children with visual impairments, as some of them will be unable to see the pictures. Therefore, the researcher conducted the focus group interviews to ascertain to what extent children with visual impairments already have knowledge relating to the concepts feelings and thoughts and to determine the best ways in which to explain these concepts in the PAM programme.
- Children with visual impairments existing coping behaviours: It was also important for the researcher to gain an idea of children with visual impairment’s existing coping behaviours to guide the development of the PAM programme. By asking children about their existing coping strategies she was able to gain an idea of the problem solving strategies and coping skills children with visual impairments already possess and specific skills that would be helpful to include.
- The inclusion of exposures in the PAM programme: Lastly, most existing CBT-based interventions put heavy emphasis on graded exposure approaches, as these approaches are seen as a key ingredient in CBT-interventions for anxiety (Kendall & Headtke, cited in Reaven et al., 2012), but as a result of the children’s physical limitations (and various safety concerns) the researcher was concerned as to how these approaches would be incorporated. She wanted to determine whether strategies such as imaginal exposure would be effective and suitable for use with children with visual impairments in the PAM programme.

4.2 Method and procedures for the focus group study

4.2.1 Design

This preparatory focus group study was exploratory in nature and a qualitative approach including two focus group interviews was employed. Convenience sampling was used, and 16 assenting children with visual impairments from two special schools (School 1 and School 2) in the Western Cape, South Africa, took part. The advantage of using focus-group interviews is that they enable participants to respond in their own words, and researchers are able to ask questions as to the reason for participant responses which may have not been revealed if survey methods were used (Taylor et al., 2014).

4.2.2 Participants

The convenience sample consisted of 16 participants (N = 16). There were eight girls (n = 8) and eight boys (n = 8). Their ages ranged between 9 and 13 (M = 11.56; SD = 1.15). The degree of sight loss experienced by the children with visual impairments differed, with totally blind (n = 2; 12.5%), severely visually impaired (n = 3; 18.75%) and partially sighted (n = 11; 68.75%) children taking part. (These various visual categories are defined in Section 1.3.4 in Chapter 1). The demographic characteristics of the focus group sample are presented in Table 2. Written consent was obtained from participants and their parents before participation in the focus groups, and oral permission for the interviews to be audio-recorded was also sought. Participation was voluntary, and no children refused to take part.

Table 2

Demographic Characteristics of Participants (N = 16) who took Part in the Preparatory Focus Group Study

Characteristics		n	%
Gender	Boys	8	50
	Girls	8	50
Culture	Black	8	50
	Coloured	6	37.5
	White	2	12.5
Age	9	1	6.25
	10	1	6.25
	11	6	12.5
	12	4	37.5
	13	4	25
Grade	4	3	18.7
	5	4	25
	6	5	31.3
	7	4	25
Language of Schooling	Afrikaans	5	31.3
	English	11	68.7
Vision	Large print	12	75
	Braille user	4	25

4.2.3 Procedure

Two special schools for children with visual impairments were identified as the study sites (these schools are described in more detail in Sections 1.3.4 and 5.4). The same procedure which was followed to obtain ethical clearance and consent to conduct the focus group study was followed in the main outcome study; this procedure is described in more detail in section 5.6.1 of Chapter 5. After receiving written consent from the children's parents/guardians for their participation in the main outcome study the school psychologists at the two schools were asked to identify children who would be available to participate in a focus group interview on a specified day. School psychologists informed the children that the focus groups would be taking place and children attended the groups voluntarily.

One focus group was conducted at each school and children who gave their written consent were included based on their availability. At School 1 the parents/guardians of 48 children consented for their child to take part in the main outcome study and 11 children were available at the school on the specified day and time; at School 2 the parents/guardians of 11 children consented for their child to take part in the main outcome study and six children were available at the school on the specified day and time. The reason that such a limited number of children were able to take part in the focus group interviews at School 1 relates to the fact that almost half (*n* = 20) of the children whose parents gave their consent do not live in the hostel and make use of organised school/public transport to get home after school, therefore they were not available to take part in the focus group interviews as they were scheduled in the afternoon. The groups were scheduled in the afternoon after school so that they did not interfere with the children’s curricular activities.

Focus group interviews were scheduled for approximately 45 to 60 minutes; this is in line with the recommended time that school-aged children are said to be able to stay focussed on a group discussion (Kennedy, Kools, & Krueger, 2001). Both focus group interviews were conducted by the researcher (who is also a registered psychologist) with a group facilitator present. The focus group interviews were conducted at the two schools’ premises which are familiar to the children – in a classroom which was made available. Interviews were conducted in either English or Afrikaans (depending on the language of schooling at the particular school, English at School 1 and Afrikaans at School 2 and/or choice of the participants). The Researcher and the group facilitator are fluent speakers of both these languages.

As the researcher herself is also visually impaired, it was important to ensure that the size of groups was relatively small, as this was important to enable her to manage turn-taking within the group without using visual cues (Khadka, Ryan, Margrain, Woodhouse, & Davies, 2012). To offer assistance a group facilitator was also present during both of the focus group interviews and she assisted in identifying and reacting to visual cues which the researcher might have missed. The researcher has also conducted research with children who have visual impairments in the past, and she is aware that there are certain child-friendly procedures and considerations that should be kept in mind when conducting research with this population of children. For example, it was important for the researcher to: make the children feel welcome, introduce herself to children and explain to them in simple terms what they will be doing, to maintain a verbal tone of optimism and enthusiasm, to choose developmentally appropriate activities and vocabulary, and to engage children in conversation to put them at ease (see Visagie & Loxton, 2014, for a more in-depth discussion of child-friendly factors).

Before commencement of the focus group interviews, the researcher introduced herself and the group facilitator; she provided participants with a verbal explanation regarding the purpose and nature of the focus group interviews and the overall study; and she informed participants as to what their contribution would be. Participants were given the opportunity to ask questions. Written assent forms were given to each participant and read aloud by the group facilitator and then signed by each child. It was also explained to participants that participation in the focus group interview was voluntary and they could withdraw at any time. No participant opted to withdraw from the group.

As outside disclosure (confidentiality outside of the group) can possibly be problematic in focus group interviews (Dowling, 2014; Horner, 2000), participants were asked to agree not to share any private information shared during the group with people outside of the group. Children understood that “what is said in the group stays in the group”.

The focus group interview guide was semi-structured; it included a list of topics and possible questions to be discussed (see Table 3). However, the sequence of questions was varied and altered to take advantage of topics and assertions that arose naturally during the course of the focus group interview. The researcher also piloted/tested some of the activities which were envisaged for the PAM programme during the focus group. Examples of questions included in the focus group interview are provided in Table 3.

Table 3

Examples of Questions Included in the Preparatory Focus Group Study

Opening question*:* All of us feel worried or nervous from time to time, even grownups. Have any of you ever felt this way? Can you tell me about it, what happened to make you feel like this? /what things are difficult for you?

Key questions: Coping (existing way of coping)

- How did you handle it when you were feeling worried or nervous?
- What were some things that you did to make yourself feel better?
- What made you feel worse or did not work for you?
- There are other kids, who also have these types of feelings. What are some things that you think may be difficult for other kids like you, other kids who can’t see so well/What is difficult for children with visual impairments?
- What are some things that kids like you can do to help them feel better? /handle their worries?
- What kinds of things do you do to feel good if you have had a bad day? /what kinds of things do you like to do? /What things make you feel good?

Key questions: Feelings and thoughts

Part of what I am thinking about doing in my programme is teaching children about different feelings and different thoughts; do you think this is a good idea?

Feelings:

- Do you know what feelings are/what the word “feelings” means?
- If you had to explain what feelings are to your friend, what would you tell him/her?
- What are some feelings that people can have?
- What are some times and places where people will have these feelings?
- What can happen to make a person feel (include feelings that children mentioned)?
- How do we know how other people are feeling?
- What do you do when you are feeling, happy, sad, scared, excited!

Thoughts:

- Do you know what thoughts are/what the word thoughts means?
- If you had to explain what thoughts are to your friend what would you tell him/her?

Closing question: *If you were going to have a programme like this at your school, what would you like to learn from the programme? What do you think could help you?*

4.2.4 Data analysis

Each participant was assigned a code and the two focus group discussions were transcribed verbatim from the digital recordings by the researcher. These transcripts were thematically analysed by the researcher following Braun and Clark's (2006) guidelines for content analyses. These guidelines comprised: (a) becoming familiar with the data; (b) generating initial codes; (c) searching for themes; (d) reviewing themes; and (e) defining and naming themes (Braun & Clarke, 2006; Taylor et al., 2014) (a broader overview of the process of thematic content analyses is provided in Section 5.6.4.2 in Chapter 5). Data was manually coded and divided into sub-groups. The emerging themes were determined through categorising, indexing and considering quotations from children with visual impairments. These emerging themes were finalised and constitute the headings in the findings of the study which are presented and discussed in sections 4.3 and 4.4 below. In order to ensure trustworthiness, the researcher discussed the readings and interpretation of the findings with one of her supervisors (Prof HS Loxton), and emerging themes were cross-checked by two independent researchers, who are familiar with the field of childhood anxiety research.

4.3 Findings from the focus group data

The following three themes emerged from the focus group data:

- Difficulties encountered by children with visual impairments
- Existing coping behaviours
- Insights into concepts central to CBT (namely feelings and thoughts)

Within each of these overarching themes, various sub-themes were also noted. The three themes with their sub-themes are presented graphically in Figure 4 below. Each of these themes along with their implications for the development and adaptation of the PAM programme will be presented and discussed in section 4.3.1, 4.3.2 and 4.3.3.

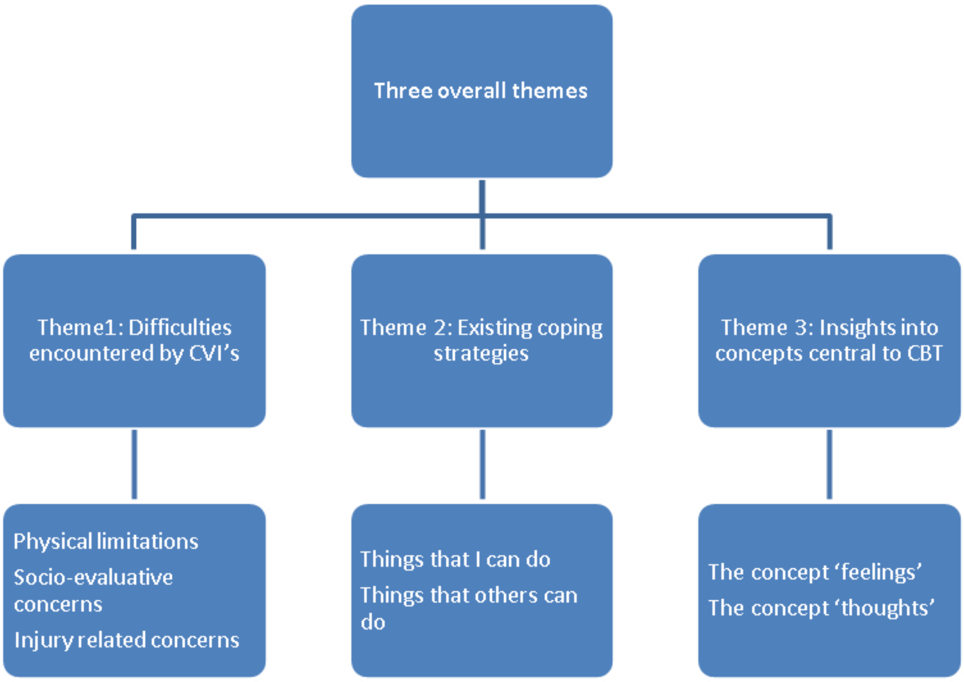


Figure 4. Graphic representation of the three main themes and sub-themes which emerged from the preparatory focus group study.

4.3.1 Difficulties encountered by children with visual impairments

As it was important for the researcher to gain insight into the things that are difficult and worrying for children with visual impairments, participants were asked directly what children with visual impairments specifically worry about and what things may be difficult for them. Three sub-themes including: (a) *physical limitations*; (b) *socio-evaluative concerns*; and (c) *injury related concerns* emerged.

4.3.1.1 Physical limitations

Not being able to play certain games or partake in certain activities as a direct consequence of their visual impairment was a difficulty reported by participants. Watching TV is also an activity that most children enjoy, and not being able to follow what is happening on the TV, and not being able to ask others for explanations, or asking others for an explanation but being ignored was a factor that was identified in both of the focus groups as being difficult/frustrating.

4.3.1.2 Socio-evaluative concerns

Children with visual impairments also reported difficulties which related to socio-evaluative situations including: teasing or questioning by others about their disability; and worries about how their disability affects their physical appearance.

4.3.1.3 Injury related concerns

Children with visual impairments also noted that it was difficult for them when they bump into other objects/people because they did not know that the objects/people were there or if their vision was limited due to changes in their surrounding conditions e.g., it was dark or things had been moved.

Verbatim examples of participant responses pertaining to Theme 1 (Difficulties experienced by children with visual impairments) under the three sub-themes are provided in Table 4.

Table 4

Verbatim Responses Pertaining to Theme 1 (Difficulties Encountered by Children with Visual Impairments) which emerged from the Preparatory Focus Group Study

What things are difficult for you (or other children with visual impairments)?	
Sub-theme:	Response example:
Physical limitations	"Playing with other children…. other children who can see better than me…they are playing with a ball...that small round ball…and I can't see it, but I want to play it, but I can't see it…but I can't see it."
Socio-evaluative concerns	"They (other children) ask you constantly why are you blind? What did you do to make you blind? What makes your eyes look so white? I don't like it when people say my eyes are white…"
Injury-related concerns	"For me it is difficult to see at night…because I am night blind, I have genetic RP (eye-condition)"

4.3.2 Existing coping behaviours

It was also necessary for the researcher to gain an idea of children's existing coping behaviours to guide the development of the PAM programme. As a result, participants were asked what they do when they feel worried or nervous and what they could do to feel better. They were also asked what other visually impaired children can/should do when they are feeling worried or nervous. Participant responses were divided into two sub-themes: (a) *things that I can do*; and (b) *things that others can do* (examples of participants' verbatim responses are provided in Table 5).

Table 5

Verbatim Responses Relating to Theme 2 (existing coping behaviours) which Emerged from the Preparatory Focus Group Study

What do you do when you feel worried or nervous? /
What can other children with visual impairments do when they feel worried or nervous?

Sub-theme:	Response examples:
Things that I can do	"I sometimes count, or I listen to music, or I just walk away. Or I sing a song or something."
Things that others can do	"Talk to a friend, they can talk to friends or family."

4.3.3 Insights into concepts central to CBT

A further important step in the development of the PAM programme was to gain insight into participants' existing/their own understanding of the concepts "feelings" and "thoughts", and how they perceive these concepts and deal with them in their everyday lives. Participants were asked if they knew what feelings (or thoughts) were/What the word feelings (or thoughts) means. Responses are presented in two subthemes: (a) *the concept feelings*; and (b) *the concept thoughts*.

4.3.3.1 Feelings as a concept

Although "feelings" is an abstract concept, most participants had good insight into this concept. When asked if they could name a few feelings, they did so with ease, with each participant naming at least one feeling, with the majority stating that feelings are important. Children mentioned a number of feelings, and they included the four basic feelings (scared, angry, sad and happy).

One of the participants [boy, 13] when discussing feelings mentioned that he sometimes feels like kicking someone when they make him cross. With some prompting he was able to realise that kicking is not a feeling, but that anger is the underlying feeling – the thing that he wants to do is kick (the behaviour) someone when he is feeling angry: *"Ok, but you can feel like you want to kick someone".* (Interviewer: *Ok, so let's think when you feel like you want to kick someone what is the feeling?*) (Interviewer: *anger, angry so that is the feeling, and the kicking is the thing you want to….?*) group says "*do*!" [boy, 13].

4.3.3.2 Thoughts as a concept

As anticipated, thoughts seemed a bit more challenging for children to define, and the researcher had to help a bit with prompting and making suggestions as to what thoughts could possibly be. At first participants were asked, “Do you know what thoughts are/what the word thoughts means?” and answers were very vague. “When you think uhhhhh something...” [boy, 11], “it is something that you thought” [boy, age 13]; “Thoughts are when someone tells you something and you tell them you will go and think about it” [girl, age 12]; “so maybe when someone tells you something and you thought it is the truth, then it comes again and it is not the truth you thought it was the truth” [boy, age 11]; “Everything that happens in your head…brainstorm or whatever” [girl, age 12]; “something you think about” [boy, age 11]. However, with a bit of further help and prompting from the interviewer the children came to the following conclusions: “thoughts are in your brain” [boy, age 11], “they are something that you hear, like a voice” [boy, age 13]; “all your brain stories” [boy, age 11]; “only I can hear it” [boy, age 13].

When asked to explain the concept of thoughts to their friend, answers were more clear, and children were able to articulate the concept more easily. One participant [boy, age 11] was able to take things one step further and start with the process of linking his thoughts and feelings. This is very promising and can be seen in the excerpt below:

“Maybe sometimes you think...your friend says he is going to come and fetch you because you don’t have a TV, then you think he is going to come and fetch you. You think he is going to come and then he doesn’t come, it was a lie”. (Interviewer: “that’s bad, and then how do you feel then if he doesn’t come?”); “Then I cry like a baby” (Interviewer: so when you cry like a baby, how do you feel?); Group says “sad” [boy, 11] (further examples of verbatim participant responses relating to Theme 3 (Concepts central to CBT are provided in Table 6).

Table 6

Verbatim Responses Relating to Theme 3 (Insights into concepts central to CBT) which Emerged from the Preparatory Focus Group Study

Do you know what feelings (or thoughts) are? /
What the word feelings (or thoughts) means?

Sub-themes:	Response example:
The concept "feelings"	"It is how you feel when something happens, like when you do something or take something that is wrong, then you are going to feel angry or guilty, and feel all of those things…or if you maybe hear a joke, then you will feel happy and joyful."
The concept "thoughts"	"Everything that happens in your head…brainstorm or whatever."

4.4 Discussion and implications of the focus group findings

The main aim of this focus group study was to explore the views and perceptions of visually impaired South African children in order to identify how traditional CBT-based anxiety intervention programmes can be adapted for use with this specific population. The preparatory focus group study provided insight into the nature of worries, methods of coping and the perception of feelings, thoughts and behaviours in children with visual impairments. This provided the researcher with valuable information which she could use during the development and adaptation of the PAM programme. The researcher is of the opinion that overall, children with visual impairments were able to conceptualise the elements of CBT and they were enthusiastic about the implementation of an anxiety intervention programme at their school. Keeping this in mind the researcher developed a tailored anxiety intervention programme for children with visual impairments and subsequently called it the PAM programme. During the development and implementation of the Pam programme the researcher considered certain factors and implications which arose from the focus group interviews, these factors and implications are discussed below.

4.4.1 Difficulties encountered by children with visual impairments

As research relating to anxiety experienced by children with visual impairments is limited, it was important for the researcher to gain greater insight into the specific things that children with visual impairments worry about. The focus group interviews proved very helpful in this regard. The researcher was able to gain more insight into the specific things that children with visual impairments find to be difficult/challenging. As anticipated, all participants agreed that anxiety and worry is something that they have all experienced before. One participant even remarked that this happens to her a lot [girl, 12]. Children were also able to contextualise some difficulties that they perceived as being especially relevant to children with visual impairments. Their responses were classified into three sub-themes (i.e., physical limitations, socio-evaluative concerns and injury related concerns).

4.4.1.1 Physical limitations

The general anxiety literature states that at about age 9 or 10 (during middle-childhood), worries turn to performance and social concerns. Fears of taking tests, giving oral reports, and of school performance in general arise. Children might also express concern relating to non-academic activities, such as their performance on the sport's field, competence in dance or music class, or any out-of-school activity (Last, 2006). The latter statement was especially true for children with visual impairments, as when participants were asked what visually impaired children specifically worry about, the reported difficulties firstly related to physical limitations (including: not being able to play certain games or partake in certain activities as a direct consequence of their disability).

Socially, middle-childhood is also a time when children start to value abilities that other people admire, such as throwing and catching a small ball, being good at sports or reading well (this is in line with Erikson's view of industry vs. inferiority) (Erikson, 1993) (Erikson's psychosocial developmental theory is discussed in more detail in Section 2.3.1 in Chapter 2). Children in the present study noted that their visual impairment makes it difficult for them to partake in some activities (e.g., ball games, watching TV) which they would have liked to do. Interestingly, in contrast to the general anxiety literature, children with visual impairments did not report worries which related to academic or school performance.

4.4.1.2 Socio-evaluative concerns

During middle-childhood children also become aware of their physical appearance and of how others – especially their peers – perceive them (Last et al., 1996). Middle-childhood children want to be liked and accepted by their peers; and it is very important to fit in. The downside is that anyone who does not conform may get noticed – a child with freckles, a child whose parents are divorced, or a child who has a disability. The latter statement was especially true for children with visual impairments in the present study, as they reported difficulties which related to socio-evaluative situations including: teasing or questioning by others about their disability; and worries about how their disability affects their physical appearance. Children with visual impairments stated that they did not like it when other children asked them about their disability (e.g., why their eyes looked a certain way or when others called them names). This observation is especially noteworthy as it could possibly lead to children experiencing social anxiety.

In the general fear/anxiety literature socio-evaluative concerns (fear of social rejection and social anxiety) are usually more prominent in adolescence (Elbedour, Shulman, & Kedem, 1997; Gullone & King, 1997; Michiel Westenberg, Drewes, Goedhart, Siebelink, & Treffers, 2004; Ollendick et al., 1985) as socio-cognitive maturation entails a rise in self-consciousness and self-awareness. Most of the programmes which were used as a foundation for the development of the PAM programme put a lot of emphasis on school-related anxieties (such as taking a test or speaking in front of your class). These are not necessarily the things that children with visual impairments reported (although they are still important).

4.4.1.3 Injury-related concerns

To a lesser extent, children with visual impairments' responses also related to worries of getting injured/hurting themselves. This is in line with that which was noted in previous fear and anxiety research involving children with visual impairments where it was noted that visually impaired children reported higher levels of fear relating to situations where the potential for physical harm was present (Bensch, 2010; Ollendick et al., 1985; Weimer & Kratochwill, 1991). Children noted that it was difficult for them when they bump into other people or objects because they did not know that it was there or their vision was limited due to changes in their surrounding conditions, e.g., dark, wind.

The above-mentioned three sub-themes each highlight a different aspect relating to the difficulties which children with visual impairments experience. Leading from this it was concluded that the following points should be kept in mind when developing/implementing the PAM programme:

- Children with visual impairments reported concerns relating to physical limitations which included not being able to play certain games or partake in certain activities as a direct consequence of their visual impairment. Because the attainment of a sense of industry vs inferiority (Erikson, 1963) is so important to children in middle-childhood, it was important that the PAM programme also addressed issues related to this (i.e., being different and being ok with having different strengths and difficulties; putting less emphasis on perfectionism; helping others with the abilities that you have; feeling good about yourself and knowing that you are good at some things and not so good at other things, we all have different abilities) (these aspects were addressed in session 1 of the PAM programme).

- Middle-childhood children with visual impairments reported more socio-evaluative concerns than expected; these concerns are usually more prominent in adolescence (after age 13). Thus, the PAM programme puts extra emphasis on social-related issues.
- Children with visual impairments also reported injury related concerns. Because these concerns are real for children with visual impairments (as a direct result of their physical limitation); it was important that the PAM programme encourages children with visual impairments to ask for help when things become difficult, not only relating to physical difficulties, but to emotional difficulties as well (this aspect was addressed in session 9 of the PAM programme).

4.4.2 Existing coping behaviours

In the present study coping strategies can be understood as the specific ways in which children with visual impairments cope with stressors and difficult situations; that is, how do they usually cope/what do they do when face with a problem? (Ayers, Sandier, West, & Roosa, 1996; Jemtå, Dahl, Nordahl, & Fugl-Meyer, 2007). It was important for the researcher to have an idea of children’s existing coping behaviours to guide the development of the PAM programme.

A primary control, secondary control and relinquished control model of coping in response to stressful situations was postulated by Band and Weisz (1988) to be appropriate for describing coping behaviours in young children. According to these authors primary coping strategies involve attempts to change stressful situations and include direct problem solving (changing the environment). Secondary coping strategies involve attempts such as seeking social and spiritual support to adjust to current stressful circumstances (changing the self to adapt to the environment), and relinquished coping strategies involve no attempt to change the stressful situation or to adapt to it. The majority of coping behaviours that children with visual impairments in the present study reported were classified as secondary coping strategies (Band & Weisz, 1988), and related to seeking social support (e.g., talking to friends or parents, praying or going to church) or doing something to distract themselves from the problem at hand (e.g., sleeping, drawing, singing or listening to the radio). Children with visual impairments also reported relinquished coping strategies (e.g., doing nothing, walking away or ignoring the person who caused the problem).

The above-mentioned coping strategies highlight the fact that children with visual impairments do employ various ways of coping, however, these coping strategies may not be the most helpful when it comes to coping with anxiety. Leading from this the following points were kept in mind when developing/implementing the PAM programme:

- Many of the existing CBT-based interventions employ both primary and secondary models of coping, e.g., Kendall's (1990) Coping Cat and Barrett's (2005) FRIENDS programmes. These programmes encourage children to ask themselves what they can do about a situation that makes them feel anxious or scared (e.g., actions that I can take); this approach seems to be most successful.
- During the focus group interviews participants did not report any coping behaviours which included attempts to change stressful/anxiety provoking situations by means of direct problem solving (i.e., primary coping strategies). It was therefore important for the PAM programme to encourage children to use more active coping strategies (e.g., focus was given to teaching children relaxation skills and steps that they can take when faced with a problem, these aspects were addressed in sessions 4 and 7 of the PAM programme).

4.4.3 Insights into concepts central to CBT

As mentioned above, an important first step in the development of the PAM programme was to gain insight into visually impaired children's existing/their own understanding of the concepts feelings and thoughts, and how they perceive these concepts and deal with them in their everyday lives. The main tennet underlying CBT is that the way we think influences and determines the way we feel and behave. To explain this link to children, it is important that they actually understand what the concepts feelings and thoughts mean. As mentioned above, many of the existing CBT-based programmes explain these concepts to children in a pictorial manor (by using drawings of facial expressions, emoticons and cartoons with thought bubbles) (Barrett & Ryan, 2004; Barrett et al., 1994; Barrett & Sonderegger, 2005; Barrett, 2005; Kendall et al., 1990; Kendall, 1990; Rapee & Lyneham, 2006; Silverman & Kurtines, 1996; Stallard, 2003; Van Starrenburg, 2013). The researcher was of the opinion that these pictorial techniques were not appropriate for all children with visual impairments, as some of them will be unable to see the pictures. Therefore, the researcher had to come up with alternative ways of explaining these concepts to children with visual impairments. The focus groups were integral in this regard, as they provided an overview of what children with visual impairments already know about the concepts thoughts and feelings and could thus help determine to what length/depth these concepts needed to be covered during the PAM programme.

4.4.3.1 Feelings as a concept

Being able to accurately report one’s internal emotional states during CBT is dependent on the ability to recognise different feelings and emotions and accurately label and discriminate between these feelings and emotions (Ellis, 1979; Lickel, MacLean Jr, Blakeley-Smith, & Hepburn, 2012; Willner, 2005). Overall children with visual impairments did not seem to have a problem with the concept “feelings”, they had quite a good idea of what feelings are and they could identify a number of feelings. This heightened awareness of feelings might be linked to the fact that this is a topic that is covered in the children’s school work (the subject life skills – grade 6). One participant (boy, 12) stated that they learn about feelings in life orientation classes, they know what they are.

4.4.3.2 Thoughts as a concept

As anticipated, the concept “thoughts” was more challenging than the concept “feelings” for participants to understand. During the focus group the interviewer had to assist by making suggestions and prompts as to what “thoughts” could be.

After questioning participants about feelings and thoughts and considering their responses the following aspects were kept in mind when developing and implementing the PAM programme:

- Overall children with visual impairments had a good idea relating to the concept “feelings”. The majority of children were able to accurately label and discriminate between different feelings. However, when asked how they know how others are feeling (what things tell us how others are feeling?) Only partially sighted and severely visually impaired children gave responses. Their responses related to body language and facial expressions and hinted at factors such as tone of voice and intonation. The totally blind children did not give any answers relating to this question; because they cannot see others body language this may be a challenging aspect relating to teaching children with visual impairments about the expression of feelings. The researcher kept this in mind during the implementation of the PAM programme, she made sure to put extra emphasis on the various verbal aspects relating to the expression of feelings (i.e., tone of voice, intonation, the words that the person uses and the things that the person does) (these aspects were addressed in session 2 of the PAM programme).

- As the concept “thoughts” was more challenging to understand, the researcher kept this in mind during the implementation of the PAM programme, and she made sure to put extra emphasis on the concept “thoughts”. She made sure that the examples which were used to explain these concepts were relevant to the visually impaired child’s context and easy to understand. She made sure that the participants understood the difference between “feelings” and “thoughts” before moving on with the next steps of the programme (these aspects are addressed in session 3 of the PAM programme).
- From the focus groups it was evident that older children (aged 12-13) were able to answer the questions relating to “feelings” and “thoughts” more easily, while the younger children (aged 9-11) seemed unsure, or did not give an answer. The researcher was aware of this during the implementation of the PAM programme, and she double-checked that the younger children in her group were indeed able to grasp these concepts, and she spent more time on explaining these concepts where necessary.

To conclude, from the information gleaned by the preparatory focus group study it is evident that children with visual impairments face various difficulties, and in the majority of cases these difficulties link directly to their visual impairment. However, despite these idiosyncratic difficulties, overall findings were quite comparable with findings noted in the general literature, in line with their sighted counterparts, middle-childhood children with visual impairments were able to conceptualise the elements of CBT. This was very promising for the development of the “new” PAM programme. The focus groups also showed that children were able to engage with the researcher in a group format and they seemed very excited about the possibility of an anxiety management programme being delivered at their schools. At first glance when looking at the implications which were drawn from the focus group findings it may seem that these factors are straight-forward and that they do not differ from factors which are relevant when implementing CBT-based interventions with “normal” populations of children. However, even if this seems to be the case, because the population of children with visual impairments has been neglected in previous research, the researcher did not know where to start, and even information which may seem self-explanatory is positive as it showed the researcher that visually impaired children are not as marginalised as may have initially seemed.

For this reason, the researcher concluded that existing CBT-based anxiety interventions (e.g., Kendall's (1990) Coping Cat, Barrett's (2005) FRIENDS programme and van Starrenburg's (2013) Dappere Kat program) were suitable foundations to build the PAM programme upon. These existing programmes were adapted and modified to take the above- mentioned factors into account while simultaneously keeping the visually impaired child's abilities and unique visual world in mind. More information pertaining to the development of the PAM programme is provided in Section 5.6.2 in Chapter 5.

4.5 Chapter summary

This chapter provided an overview of the preparatory focus group study which was conducted as part of the development of the PAM programme. Due to the fact that information pertaining to anxiety in children with visual impairments was so limited, especially in South Africa, the focus group study was undertaken to gain more insight into anxiety from the perspective of children with visual impairments themselves. The chapter commenced by outlining the aims and objectives of the focus group study, thereafter the methods and procedures which were used were described. The three themes (i.e., (a) difficulties encountered by children with visual impairments; (b) existing coping behaviours; and (c) insights into concepts central to CBT (namely feelings and thoughts)) which emerged from the focus group data were then presented and discussed. The chapter concluded by outlining the implications which were gleaned from the findings and which the researcher should keep in mind during the development and implementation of the PAM programme.

Chapter 5 provides an overview of the methods used to obtain and analyse the data rendered by the present study.

CHAPTER 5: RESEARCH METHODOLOGY

The research procedure described in this chapter has also been described in a recent protocol publication (see Visagie et al., 2015). The chapter provides an overview of the methods used to obtain and analyse the data rendered by the present study. The chapter starts by providing a brief introduction, which reiterates the study’s primary and secondary aims. The research design is then outlined. Inclusion criteria, participants and the two study contexts are described. Thereafter a description of how the sample was randomised is provided. The four stages of the research are then discussed (Phase 1: obtaining ethical clearance; Phase 2: developing the programme; Phase 3: implementing the programme and administering the measures; and Phase 4: evaluating the programme and analysing the data). The chapter concludes by discussing ethical considerations relevant to the present study.

5.1 Introduction

To reiterate and to provide clarity, the purpose of the present study was to investigate the effectiveness of a specifically tailored anxiety intervention programme (now called the PAM programme) in reducing anxiety symptomology in South African children with visual impairments. This study was motivated by the identified need for an accessible anxiety intervention for children with visual impairments (Loxton et al., 2012; Visagie et al., 2013; Visagie et al., 2015), the lack of research in this area, and the absence of existing tailored anxiety intervention programmes for children with visual impairments.

Thus, the primary aim of the present study was to develop, implement and evaluate a specifically tailored anxiety intervention programme (The PAM programme) to use with South African children with visual impairments. This aim unfolded in the following three steps:

- Step 1 = develop an accessible anxiety intervention programme which can be used with South African children with visual impairments (programme development phase).
- Step 2 = implement (pilot) this anxiety intervention programme successfully (programme implementation phase).
- Step 3 = evaluate the effectiveness of this anxiety intervention programme in maintaining emotional health (i.e., preventing an increase in symptoms of anxiety as measured on the RCADS-30 (Chorpita et al., 2005; Sandín et al., 2010) and PSWQ-C (Chorpita et al., 1997) (programme evaluation phase).

The secondary aim in the present study was to record qualitative process information relating to the way children with visual impairments experienced/evaluated the anxiety intervention programme. This qualitative information will add to the literature pertaining to the acceptability and feasibility of the PAM programme.

5.2 Research design

As is evident from the above aims, the present study employed a mixed method approach as both quantitative and qualitative data was gathered. The research was primarily quantitative, and an experimental research design was used to evaluate the outcomes of the PAM programme. Babbie and Mouton (2001) refer to social research which is directed at determining the value or effectiveness of a given programme as a programme evaluation. Therefore, the present study can be classified as a programme evaluation with the intended goal of evaluating the effectiveness of the PAM programme. According to Potter (1999), programme evaluation aims to acquire knowledge about social programmes whether it is: (a) acquiring knowledge about the need for the given programme; (b) planning the given programme; (c) monitoring the implementation of the programme; or (d) assessing whether the outcomes of the programme were met. The present study addressed all four of these aspects. The preparatory focus group interviews aimed to acquire knowledge about the need for the PAM programme (see Chapter 4), and after the need was established, a specifically tailored programme was developed, implemented and then its outcomes were evaluated. The study ultimately explored whether or not participation in the PAM programme was related to a reduction in symptoms of anxiety for South African children with visual impairments.

However, according to Graziano and Raulin (2004), programme evaluation is not a unique research design in and of itself, but rather a modification of common research designs that best fit the restrictions of the given situation, while still ensuring as high constraint as possible over the research. As a result, experimental research designs are often used for the purposes of programme evaluation (Graziano & Raulin, 2004; Potter, 1999). This was also the case in the present study, and for the present programme evaluation an experimental design, in the form of a randomised wait-list control group design with pre-, post- and follow-up intervention measures, was used. The control group (from here on referred to as the delayed intervention group (DIG)) was added as it would have been unethical to withhold treatment from the children who were in the control group. The addition of a DIG helped control for the possible confounding effects of maturation, history, and regression to the mean (Graziano & Raulin, 2004).

The quantitative research design can be represented as follows:

R	IIG T1	X	IIG T2		IIG T3	IIG T4
R	DIG T1		DIG T2	X	DIG T3	DIG T4

R = Randomisation
X = intervention
IIG = Immediate intervention group
DIG = Delayed intervention group

In addition, a qualitative component was used to evaluate and record key aspects relating to the way children with visual impairments experienced and evaluated the PAM programme. It was expected that this qualitative information would add to the literature pertaining to the acceptability and feasibility of the PAM programme (see Section 5.6.4.2 below for more information on the qualitative programme evaluation).

The reason for using a mixed methods approach was two-fold. Firstly, to evaluate whether the PAM programme reached its intended outcomes (by means of statistical quantitative analysis), and secondly, to record key aspects as to what transpired during the ten sessions of the programme. The qualitative components were included in the research to ensure fidelity and to provide as many pointers as possible to aid in the understanding of an under-researched problem – anxiety experienced by children with visual impairments.

5.3 Inclusion criteria

The criterion for inclusion in the study was one of universal prevention, where children were delivered the PAM programme regardless of their anxiety status (see Section 1.3.3 in Chapter 1 for a description of universal prevention). Secondly, participants who were included had to be in grades 4 to 7 (age between 9 and 14) and be able to read and write (Braille or print). The reason for this being that the questionnaires used are self-report surveys and participants had to read the questions and complete them themselves. Furthermore, with the exception of visual impairment, participants included in the study should have no other disability.

5.4 Participants and study contexts

All children who attended grades 4 to 7 at the two special schools (*N* = 83) were invited to participate in the PAM programme. All children for whom written parental consent was granted (*N* = 59) initially enrolled to participate in the study, however, after enrolment three participants withdrew from the study (*n* =3); and one participant moved to a different school (*n* = 1). The remaining 55 participants were followed over a course of eight months.

Following enrolment in the study, the 55 participants were randomly assigned to either an immediate intervention group (IIG) or a delayed intervention group (DIG) at their respective schools (see Section 5.5 below for more information on the division of the sample). The IIG refers to the group of children who were first delivered the PAM programme, while the Dig refers to the group of children who were delivered the PAM programme after wait-list.

A total of 29 children were enrolled in the IIG (13 girls and 16 boys), whilst 26 children (13 girls and 13 boys) were enrolled in the DIG. However, at the time of final data analysis only the data of 52 participants (*N*=52) (28 (53.85%) were boys, 24 (46.15%) were girls) with a mean age of 11.46 (*SD* = 1.4) could be used. This was due to participants where one measurement (T1, T2 or T3) was missing being excluded from data analysis (*N* = 3, 2 participants in the IIG and 1 participant in the DIG). Hence the final sample consisted of an IIG including 27 participants (15 boys, 12 girls) with a mean age of 11.44 (*SD* = 1.47); and a DIG including 25 participants (13 boys, 12 girls) with a mean age of 11.58 (*SD* = 1.35).

Table 7 depicts the demographic characteristics of the final (statistical) sample of participants (*N*= 52) who were included in data analysis.

Table 7

Demographic Characteristics of the Total (statistical) Sample (N = 52) of Participants who were Included in Data Analysis

	Total sample *N* (%)	Immediate intervention group (IIG)	Delayed intervention group (DIG)
	52 (100%)	27 (51.9%)	25 (48.1%)
Gender:			
Girls	24 (46.2%)	12 (44.4%)	12 (48.0%)
Boys	28 (53.8%)	15 (55.6%)	13 (52.0%)
Grade:			
4	11 (21.2%)	6 (22.2%)	5 (20.0%)
5	15 (28.8%)	6 (22.2%)	9 (36.0%)
6	18 (34.6%)	9 (33.4%)	9 (36.0%)
7	8 (15.4%)	6 (22.2%)	2 (8.0%)
Age:			
9	5 (9.6%)	2 (7.4%)	3 (12.0%)
10	8 (15.4%)	6 (22.2%)	2 (8.0%)
11	17 (32.7%)	8 (29.7%)	9 (36.0%)
12	6 (11.5%)	2 (7.4%)	4 (16.0%)
13	12 (23.1%)	7 (25.9%)	5 (20.0%)
14	4 (7.7%)	2 (7.4%)	2 (8.0%)
Culture:			
Black	26 (50.0%)	14 (51.9)	12 (48.0%)
Coloured	21 (40.4%)	10 (37.0%)	11 (44.0%)
White	4 (7.7%)	2 (7.4%)	2 (8.0%)
Asian	1 (1.9%)	1 (3.7%)	0 (0.0%)
Visual Impairment (Vision):			
Totally Blind	5 (9.6%)	3 (11.1%)	2 (8.0%)
Severely Visually Impaired	12 (23.1%)	6 (22.2%)	6 (24.0%)
Partially Sighted	34 (65.4%)	18 (66.7%)	16 (64.0%)
Missing	1 (1.9%)	0 (0.0%)	1 (4.0%)

Table 7 *continued*

	Total sample N (%)	Immediate intervention group (IIG)	Delayed intervention group (DIG)
	Living Circumstance:		
Dayscholar	24 (46.2%)	15 (55.6%)	9 (36.0%)
Hostel child	28 (53.8%)	12 (44.4%)	16 (64.0%)

All participants (*N* = 52) included in this study were learners who attended grades 4 to 7 at two special schools for children with visual impairments (School 1 and School 2). These are the only two schools which cater for children with visual impairments in the Western Cape Province of South Africa – the province where the present study was undertaken.

Although both of the above-mentioned schools cater for learners with visual impairments, Philander (2007) – who also conducted research at these two schools – noted that a marked socio-economic difference exists between the two schools. As mentioned in Chapter One (see Section 1.3.6), after-effects of apartheid and its policies have caused severe social disparities amongst various racial groups and this is especially evident at School 1. This school was historically a Black school under the Bantu or Black Education Act (Act no. 47, 1953) (Union of South Africa, 1953), and still today children who attend this school are mostly from disadvantaged communities with a black population of 46% (Philander, 2007). Today the school's demographics are still similar, and according to the school psychologist at this school, approximately 85-90% of children who attend this school live below the breadline with their parents unemployed receiving disability grants, and the majority of children receiving government child grants (personal communication, J Philander, 4 December 2014) (see section 1.3.6 in chapter 1 for a more-in-depth discussion of these conditions).

However, Philander's (2007) observation where he stated that "a large proportion of participants from the (school's name removed) (School 2) are from advantaged white communities" (p. 90) is no longer relevant. According to the school psychologist at School 2, approximately 70% of learners at this school are Black or Coloured, and an estimated 55% of children live in poverty and receive government child grants (personal communication, M Meiring, 2 October 2015). However, because School 2 was historically a White school (under the Bantu education act) (Union of South Africa, 1953) this school has better infrastructure, facilities and a greater access to funding.

The reason for selecting children with visual impairments for this study relates to the fact that they continue to be an under-researched population in general, and in the anxiety literature in particular. Moreover, living in a low-income, urban and violent community (which is the case for the majority of children who took part) may put these youths at an increased risk for developing an anxiety disorder (Burkhardt et al., 2003; Muris et al., 2006).

5.5 Randomisation procedure

Randomisation was applied within schools with an IIG and DIG within each school. Participants were assigned to either the IIG or the DIG at their respective schools. For the statistical analysis the IIGs from School 1 and School 2 were combined to form one large IIG, and the DIGs from School 1 and School 2 were combined to form one large DIG (see a graphic representation of the division of the sample in Figure 5).

For logistical purposes the departmental head at School 1 suggested that the 19 children (*n* = 19) who live at home (dayscholars) and the 22 children who live in the hostel (*n* = 22) (hostel children) be seen separately. Dayscholars were delivered the PAM programme during school time and the hostel children were delivered the programme in the afternoon after school. It was too difficult to find enough time during the school day to see all children. Thus the hostel children were randomly assigned to either an IIG or a DIG, and the dayscholars were randomly assigned to either an IIG or a DIG. For this reason, at School 1 there were two groups in the IIG (one dayscholar group (*n* = 12) and one hostel children group (*n* = 11)) and two groups in the DIG (one dayscholar group (*n* = 7) and one hostel children group (*n* = 11). Thus, there were a total of four groups at School 1. This was only the case at School 1, as once again there were many more children who took part in the PAM programme at this school in comparison to School 2 (41 children at School 1, compared to 11 children at School 2).

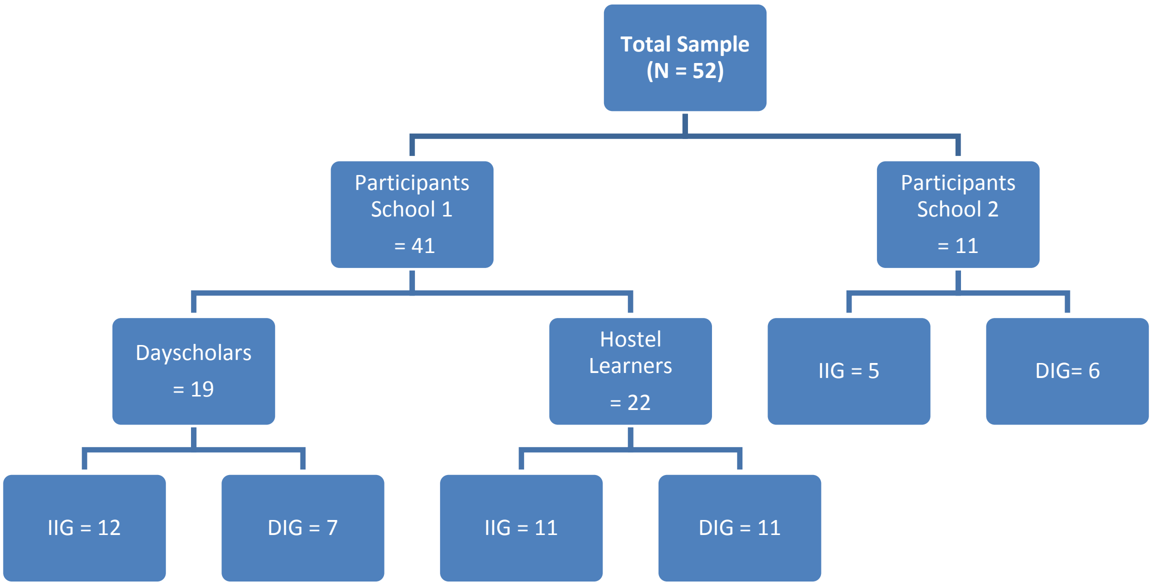


Figure 5. Graphic representation of the division of the statistical sample (*N* = 52).

The programme was first delivered to the three groups in the IIG from May through July 2014 and a total of 27 (*n* = 27) participants were included. Thereafter the programme was delivered to the three groups in the DIG from August through October 2014 and a total of 25 participants (*n* = 25) were included. Group sizes at the two schools ranged from 5 to 13 participants. These imbalances in group sizes can be attributed to the fact that School 2 has far fewer learners enrolled than School 1 (60 children attending grades 4 to 7 at School 1, compared to 23 children attending grades 4 to 7 at School 2).

5.6 Research procedure

The study was conducted in four phases:

- Phase 1: Obtaining permission and ethical clearance.
- Phase 2: Developing the PAM programme.
- Phase 3: Implementing the PAM Programme and administering the measures.
- Phase 4: Evaluating the PAM Programme and analysing the data (including a statistical quantitative evaluation of the outcome data and a qualitative evaluation of the intervention process).

5.6.1 Phase 1: Obtaining permission and ethical clearance

During the first phase of the research, the school principals and school psychologists at the two schools (School 1 and School 2) included in the study (see Section 5.4 above for a description of the study sites) were telephoned and informed about the study. They expressed great interest and verbally agreed to participate. Permission was obtained from the Western Cape Education Department in South Africa (REFERENCE: 20130507-10635) to conduct research at these two schools (Appendices A & B). Ethical approval from Stellenbosch university's Research Ethics Committee: Human Research [(Humaniora) (HS888/2013) (Institutional Review Board Number: IRB0005239)] to conduct the study was also obtained (Appendix C). Thereafter, the researcher visited both of the schools and met with the principals, departmental heads and school psychologists to provide them with additional information pertaining to the study (i.e., the envisaged research plan, duration of the study and how the school and learners would be involved (Appendix D). Both of the schools which were approached, provided their full support and commitment to the study. Help from the school psychologists and the heads of department (primary school) at both schools was enlisted to contact children's parents (guardians) and to help co-ordinate the logistics of the study.

Parents (guardians) were informed of the study via a letter that explained the study's purpose, procedure and aims and objectives (Appendices E & F). Parents (guardians) were asked to return a signed consent form (Appendices E & F) if they agreed for their child to participate in the study. At School 1 the parents/guardians of 48 children consented for their child to take part; at School 2 the parents/guardians of 11 children consented for their child to take part. Identified participants were also provided with information about the study and they were required to give written assent (Appendices G & H) before they were delivered the PAM programme. Thus, dual parent-child consent/assent was required for inclusion.

5.6.2 Phase 2: Development of the programme

In the second phase of the study, the researcher developed the PAM programme over a period of 6 months. The final programme consisted of 10 sessions. During the implementation phase of the programme two sessions were delivered weekly to participants over a period of five weeks, and each session lasted approximately 45 minutes.

5.6.2.1 Theoretical foundation

The child-friendly PAM programme was based on the principles of cognitive behaviour theory (more information on this theory can be found in Section 2.1 in Chapter 2). CBT-based interventions employ both cognitive (e.g., positive self-talk) and behavioural (e.g., relaxation) techniques to modify cognitions, behaviour and affect (Kendall 1993; Nevid, Rathus & Green 2000; Silverman & Kurtines 1996). Thus, CBT-based interventions aim to teach children to identify their maladaptive (unhelpful) thoughts and to replace these thoughts with more helpful ones (Mash & Wolf, 2015). The eight key concepts of CBT, as described by Barrett and Turner (2001), include:

- identifying feelings and thoughts;
- recognition of the link between feelings and thoughts;
- relaxation strategies;
- cognitive restructuring;
- attention training;
- problem solving;
- self-reward; and
- relapse prevention.

These were incorporated to form the PAM programme's theoretical base (these concepts are discussed in more detail in Section 2.1.2 in Chapter 2). The programme's core theme relates to the enhancement and/or development of skills or competencies which children can employ when confronted with difficult situations, whether they relate to fears or worries, daily hassles (e.g., struggling with a difficult homework assignment), or stressful and aversive life events (e.g., moving to a different school or facing family conflict) (Barrett & Turner, 2001).

5.6.2.2 Process of adaptation

A focus-group study (presented separately in Chapter 4) and a thorough literature search were conducted as the first step in developing the PAM programme. As mentioned previously, in addition to incorporating the eight key concepts of CBT, the PAM programme lent and built on ideas and concepts adapted from already existing CBT-based approaches and programmes (e.g., Kendall's Coping Cat Programme, 1990; Barrett's Coping Koala Programme, 1995; Barrett's FRIENDS Programme, 2004, 2005 and van Starrenburg's Dappere Kat programme, 2013). The rationale for using the aforementioned CBT programmes as a foundation for the PAM programme is that they provided a comprehensive curriculum with examples and are based on tested theory and good structure.

These positive aspects notwithstanding, none of these programmes (as is, in their original form) were suitable/accessible for children with visual impairments, as these programmes rely heavily on visual content (i.e., cartoons, colouring in pictures, workbooks and other visual-based activities) to teach children. Therefore, the challenge when developing the PAM programme was not only to translate the aforementioned eight CBT concepts into a child-friendly and age-appropriate programme aimed at managing anxiety symptoms, but also to present the programme in a format that is accessible and appealing to children with visual impairments. As an alternative to reading and colouring in pictures (which is the norm in most of the programmes to date) the PAM programme made use of tactile media, role-plays, games, songs, narratives and other creative techniques as alternative forms of engagement. The PAM programme further differs from other interventions as it was designed considering the needs of South African children with visual impairments and took into account their visual abilities and socio-cultural context. The approach of the PAM programme was different from the programmes on which it was based, partly because South African languages (both English and Afrikaans) were used, and because the programme did not make use of a workbook, but incorporated the use of an Acronym (F-I-N-E, F = feeling scared? I = inner thoughts, N = new helpful thoughts and plans and E = evaluate and reward) and a soft toy dog (tactile dog) with a collar and charms around its neck. Each charm represented a different skill which was learnt (see Table 9). The PAM metaphor, soft toy dog and collar with charms is presented in Section 5.6.2.4.

As mentioned previously (see Section 1.1 in Chapter 1), Barrett's (2004, 2005) FRIENDS programme is a well-researched programme identified by the World Health Organization to be an effective evidence-based intervention/prevention programme for the management of anxiety in children (World Health Organization, 2004). In previous research the FRIENDS programme had a significant and positive effect on lowering anxious and depressive symptoms, increasing self-esteem and teaching positive coping skills (see Briesch et al., 2010 for an overview). Subsequently, the ten sessions of Barrett's (2004, 2005) FRIENDS programme were used as the foundation for the PAM programme. These 10 sessions incorporate child-friendly activities designed to teach children coping skills and problem solving strategies that can assist them in dealing more effectively with anxiety symptoms, thereby preventing the onset of a full-blown anxiety disorder (Barrett, 2004).

Based on the initial focus group (see Chapter 4), an extensive literature review and the researcher's knowledge on working with children who have visual impairments, some activities/components of the FRIENDS programme (Barrett, 2004) and the Dappere Kat (Van Starrenberg, 2013) were adapted and new activities were added to create the PAM programme.

Thus, programme materials were adapted considering the specific needs of children with visual impairments. Programme materials were transcribed in Braille or large print and tangible objects (e.g., balls, charms, soft toy dog, spaghetti) and enabling communication styles were used.

In order to incorporate the suggestion by Mostert and Loxton (2008), which stated that the intervention should be more contextually sensitive, the researcher encouraged participants in the present study to come up with their own examples of possible anxiety-provoking situations and discussed these within the group as they arose. In order to facilitate the discussion, the researcher did initially provide age-appropriate examples of possible situations, however, in her opinion the examples which were provided were applicable to all middle-childhood children regardless of the culture or social context.

5.6.2.3 Curriculum/session content of the PAM programme

As mentioned above, the curriculum of the PAM programme was informed by cognitive behavioural theory; the principles of cognitive behaviour therapy; existing CBT-based intervention programmes; the literature on CBT and the preparatory focus group study (as discussed in Chapter Four). Activities in the PAM programme were aimed at teaching children with visual impairments practical skills to help them identify their feelings; to learn to relax; to identify unhelpful thoughts and replace them with more helpful thoughts; and how to face and overcome daily problems and challenges (Barrett, Lowry-Webster, & Turner 1999; Stallard et al., 2007). The CBT approach consists of three components: cognitive, physiological and behavioural. In line with other CBT-based interventions for anxiety the content of the PAM programme’s activities was structured such to deal with these three main components:

- Cognitive component: in the cognitive domain of CBT, children learn to engage in positive self-talk (identify and change inner thoughts (addressed in PAM session 5 and 6)) and how to reward themselves for partial successes (addressed in PAM session 7).
- Physiological component: In the physiological domain of CBT, children learn to recognise the physiological changes during anxiety; where the relaxation techniques that are taught help children relax when they are feeling anxious (addressed in PAM session 4).

- Behavioural component: In the behavioural domain, children are taught practical coping strategies and problem solving skills (addressed in PAM session 6); whilst exposure (imaginal and in vivo) guides children to face, instead of avoid, their anxiety provoking situations (addressed in session 6 and quick tasks).

Each PAM session started with a new topic as planned, but key aspects of the previous session were reviewed and discussed as necessary. The first session of the PAM Programme started with activities that promoted group cohesion and team work (session 1). In sessions 2 and 3 psychoeducation regarding emotions and thoughts was provided and in session 4 bodily reactions to anxiety were addressed and relaxation exercises were introduced. Group participants were encouraged to practice these relaxation exercises throughout the duration of the programme. The next step (session 5) related to recognizing inner thoughts and the promotion of positive thinking. Session 6 introduced the concept of cognitive restructuring and participants were taught problem solving skills. Self-evaluation and reinforcement were introduced in session 7. Session 8 and 9 allowed for group participants to repeat and practice the new skills they learned, and session 10 covered relapse prevention and there was a party to celebrate the completion of the programme. At the end of each session participants were given a homework assignment (called a quick task) in order to consolidate and revise the session content; finished quick tasks were returned at the next session. Quick tasks were explained to participants as “fun ways to practice the new skills you learnt during the PAM sessions when you are at home. Quick tasks give you the chance to be creative and think up your own ideas”. Quick tasks increased in complexity as the programme progressed. For example, after session 1 participants were encouraged to try to think of and write down a happy, positive time that they shared with their family or friends. After session 3 participants were asked to write down one positive and one negative thing that happened to them during the week, they also had to report the feelings and thoughts that they experienced in these situations. After session 7 participants were encourage to practice making plans at home, they had to try and think of a problem that they were faced with and then write down this problem and also some possible options that they could use to try and solve their problem. While after session 8 participants were provided with a problem by the researcher and they had to use the four steps of PAM’s F-I-N-E plan which they had learnt to solve this problem. After session 9 this was taken one step further, and participants were encouraged to take a problem from their own lives and then use the four steps of PAM’s F-I-N-E plan to face this problem. Topics addressed during each of the 10 sessions of the PAM programme are summarised in Table 8.

Table 8

Summary of Topics which were Addressed during the 10 Sessions of the PAM Programme

S	Session title:	Session goals:	Session Activities:
1	Introduction, building rapport and information about the programme.	- Building rapport between the participants and group leader. - Providing information about the programme. - Implementing the group guidelines.	- Activity: Get-to-know each other games. Participants introduce themselves to each other and the group leader. - Introduce participants to the programme and PAM (the tangible soft toy dog). - Normalise emotional state of anxiety during childhood. - Establish group guidelines in the form of a group contract.
2	Identifying different feelings (emotions)	- Teach participants to identify different feelings.	- Activity: The name game. Re-introduce participants and group leader. - Identifying feelings. - Psychoeducation – Participants are introduced to concept feelings (i.e., four basic feelings, make an inventory of feelings, how do feelings look? how do feelings sound?). - Activity: Robo dog. Large group activity to help participants realise how important feelings are.
3	Identifying thoughts and their relationship to feelings.	- Teach participants to distinguish thoughts from feelings.	- Activity: Let’s think! Individual activity aimed at introducing participants to the concept thoughts. - Psychoeducation – What are thoughts? Group leader explains the concept of thoughts to participants.

Table 8 *continued*

3		- Introduce participants to the idea that it is how we think that determines the way we feel and the things that we do.	- Activity: Now let's add feelings! Large group activity where participants are introduced to the relationship between thoughts and feelings, and the difference between helpful and unhelpful thoughts. - In the large group participants practice identifying helpful and unhelpful feelings and thoughts. - Matching thoughts and feelings card game. Further emphasis is placed on the connection between thoughts and feelings, small groups match cards with thoughts to the appropriate feeling. - Activity: Programming your control centre. Individual activity where participants are encouraged to share a situation from their own lives and identify the thoughts, feelings and behaviours that they noticed during this situation.
4	First step in PAM's F-I-N-E plan (F = Feeling scared?)	- Introduce step F (Feeling scared?). Participants practice relaxation games (i.e., deep breathing and progressive muscle relaxation).	- Activity: Stop and freeze. Participants are introduced to concept of relaxed and tense muscles. - Introduce PAM's F-I-N-E plan, explain the mnemonic and ideas behind the PAM programme. - Explain step F (F = Feeling scared?). Activity: What is my body telling me. In pairs participants interview one another relating to what happens to their bodies when they feel anxious.

Table 8 *continued*

4			- Activity: Relaxation games. Large group activity where participants are introduced to and practice relaxation techniques (i.e., breathing and muscle relaxation). - Activity: How do relaxation games help me? Large group activity where participants discuss when it can be helpful to use relaxation techniques.
5	Second step in PAM's F-I-N-E plan (I = inner thoughts)	- Review Step F (first step) of PAM's F-I-N-E plan). - When revising step F, emphasise the importance of engaging in enjoyable activities when feeling worried, stressed or upset. - Introduce step I of PAM's F-I-N-E plan (step 2 stands for I = Inner thoughts). - Help participants understand the concept inner thoughts (self-talk).	- Activity: Visualisation. Participants are introduced to relaxation technique of visualisation. - Activity: Feeling good. Large group activity where participants are encouraged to think of things that they can do to make them feel good. - Recap step F (F = feeling scared). - Explain step I (I = inner thoughts). - Activity: What am I thinking? Large group activity where participants are introduced to the concept inner thoughts (self-talk). - Activity: Always think twice. Large group activity where participants are encouraged to generate alternative helpful thoughts for an unhelpful thought which the group leader presents. - Participants practice generating helpful thoughts.

Table 8 *continued*

5		- Teach participants that there are many different ways to think about the same situation – some thoughts are more helpful then others.	
6	Third step in PAM's F-I-N-E plan (N = New helpful thoughts and plans).	- Review Step F (first step) and re-introduce Step I (second step) of PAM's F-I-N-E plan. - When re-introducing Step I - Build upon the content covered in Session 5 by encouraging participants to change unhelpful thoughts into more helpful thoughts, in other words change their inner thoughts or self-talk. - Introduce step N of PAM's F-I-N-E plan, namely Step 3: N = New helpful thoughts and plans.	- Activity: What makes you happy? Participants are encouraged to think of positive things in their lives. - Recap step F and step I (F = feeling scared? I = inner thoughts). - Activity: Let's practice using helpful thoughts! Participants use imaginal exposure to practice that which they have learnt from the PAM programme so far. - Activity: Let's change our thoughts! Participants challenge unhelpful thoughts and replace them with more helpful thoughts. - Explain step N (N = new helpful thoughts and plans).

Table 8 *continued*

6		- Introduce participants to coping and problem solving skills.	
7	Fourth step in PAM's F-I-N-E plan (E = Evaluate and reward yourself!).	- Briefly review Step F (first step) and step I (second step) of PAM's F-I-N-E plan. - re-introduce step N (third step) of PAM's F-I-N-E plan. - When re-introducing step N, focus is given to the attainment of problem solving skills (steps that I can take to solve my problems). - Introduce step E of PAM's F-I-N-E plan (step 4: E = Evaluate and reward yourself).	- Activity: Let's laugh! Re-enforces the concept that it is good to learn to laugh at your mistakes. - Recap Steps F, I, and N (F = feeling scared, I = inner thoughts, and N = new helpful thoughts and plans). - Activity: Let's explore plans. Small group activity where participants revise that which they have already learnt to do when they are having a problem and they are encouraged to think of additional ways to cope. - Activity: Let's make a plan (black shoe game)! Small group activity where participants are introduced to the steps that they can take to solve a problem. - Explain step E (E = Evaluate and reward yourself).

Table 8 *continued*

8	Review all four steps of PAM's F-I-N-E plan.	- Briefly review Step F (first step), Step I (second step) and Step N (third step) of PAM's F-I-N-E plan. - Re-introduce step E (fourth step) of PAM's F-I-N-E plan. When reintroducing step E, focus is given to the fact that we should reward ourselves for trying our best - learn to reward yourself according to your achievements. - Review all four steps of PAM's F-I-N-E plan again.	- Activity: My hero! Individual activity where participants think of someone who they admire and come up with things that this person would do when faced with a problem. - Recap Steps F, I, N, and E. - Activity: Let's reward ourselves! Individual activity where participants are encouraged to think of ways that they can reward themselves for trying their best. - Ideas are discussed in the large group. - Activity: My own positive statement! Individual activity where participants are encouraged to generate their own affirmative helpful statement. - Participants are encouraged to view their rewards in terms of partial success and not to stick to rigid standards of perfectionism. - Activity: Let's make the positive stick! Participants are encouraged to see the positive in a situation as well – not only the negative (attention training).
9	Review and practice PAM'S F-I-N-E plan again	- introduce participants to the idea that there are already people in our lives whom we can ask for help and we can also help each other.	- Recap steps F, I, N, and E again. - Activity: Let's take hands. Large group activity where Participants are encouraged to think of people who they can ask for support and help when faced with a difficult situation.

Table 8 *continued*

9		- For participants to repeat and make their own the four steps of PAM's F-I-N-E plan.	- Activity: Let's advertise the PAM programme. Small group activity where participants are encouraged to come up with an advertisement to advertise the PAM programme to other children. Fun way to review all the elements of the programme.
10	Review skills learned, relapse prevention and party!	- Teach participants to maintain the skills they learnt. - Teach participants to plan for setbacks. - Help participants establish steps to maintain coping strategies learned (relapse prevention). - Congratulate participants for their participation and hard work!	- Activity: Let's prepare for future challenges (relapse prevention). Large group activity where participants are encouraged to come up with possible challenges that they could face in the future, group leader helps them to brainstorm things that they could do in these different situations. - Activity: Let's think of ways to remember what we have learnt. Large group activity where participants are encouraged to think of different ways in which they can remember the skills that they've learnt in the PAM programme. - Activity: The PAM quiz. Group divides into teams and revises the Content of the PAM programme by taking part in a quiz. - Session closure and party!

5.6.2.4 The PAM metaphor

As mentioned above, the researcher had to incorporate and use “different” ways to engage children with visual impairments in the PAM programme. Most existing CBT-based programmes make use of materials which are not accessible to all children who have visual impairments. As a result, the researcher had to devise alternative ways to engage children with visual impairments. She did this by making use of a tangible toy dog named PAM.

At the start of the PAM programme (in session 1) participants were introduced to PAM. PAM was represented as a tangible soft-toy dog which children could hold and feel (see a photo of PAM in Figure 6). The researcher introduced PAM to the children as follows:

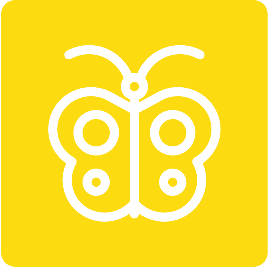
“PAM is a guide-dog so she helps people who can’t see find their way – she is also going to be the one to help you find your way through the programme. PAM’s name is very special because each letter has a special meaning: P = positive, A = and, M = Motivating! So, PAM wants to teach you to be positive and keep you motivated to take part in the programme!”

Each child received a soft toy dog representing PAM; the dog had a collar around its neck to which symbolic charms were attached throughout the programme’s 10 sessions. The charms were used to remind children of significant steps and skills which they were taught during the 10 sessions of the PAM programme. The eight charms and their meanings are represented in Table 9.

Figure 6. Photograph of the soft tangible PAM dog with collar and the eight charms which was given to each participant at the start of the PAM programme.

Table 9

Symbolisation and Meanings of the 8 Charms which were Used During the PAM Programme

Charm/symbol	Meaning	Presented in session
	The heart charm reminds participants that feelings come from our hearts as opposed to thoughts that come from our heads.	2
	The hat charm reminds participants that thoughts come from our heads as opposed to feelings that come from our hearts.	3
	The butterfly charm reminds participants of their bodily reactions to anxiety, i.e., the butterflies in our stomachs.	4

Charm/symbol	Meaning	Presented in session
	The noodle charm reminds participants to relax, that our bodies can get hard (tense) like a hard noodle, but when we use our relaxation games (deep breathing, progressive muscle relaxation and visualisation) our bodies can get soft (like a cooked noodle) and feel relaxed.	4
	The music note charm reminds children to do things that make them feel good (e.g., listen to music, sing a song or play a game) when they are feeling worried or stressed.	5
	The shoe charm reminds children that they can take/use steps to face their problems 1. What is the problem? 2. What are the options that I can think of to solve my problem? 3. Choose the best option. This charm thus represents an element of exposure.	7

Charm/symbol	Meaning	Presented in session
☆	The star charm reminds children to reward themselves for trying their best!	8
🖐	The hand charm reminds children to take hands and help each other, and also to reach out for somebody else’s hand when they need help!	9

5.6.3 Phase 3: Implementation of the programme and administration of the measures

All assenting children in the IIG and DIG (N = 52) were delivered 10 sessions of the PAM programme. Each session lasted approximately 45minutes. Each participant attended two sessions per week for five weeks. In accordance with times agreed upon with the two schools, the researcher conducted six sessions a week. Two sessions (Monday at 07:30 and Wednesday at 14:30) were conducted at School 2, and four sessions (Monday at 14:00 (dayscholars) and 15:00 (hostel children), Tuesday at 15:00 (hostel children) and Wednesday at 10:30 (dayscholars)) were conducted at School 1. More children from School 1 participated in the intervention (41 children from School 1 and 11 children from School 2), thus, it was necessary to divide the groups to include approximately 10 participants per group. Subsequently groups at School 1 consisted of 7 to 12 participants (see Figure 5 above for a graphic representation of the division of the sample).

Children in the IIG were delivered the PAM programme before the children in the DIG. The anxiety symptoms of all participants (N = 52) were assessed on four occasions during the study. The time line in Table 10 describes the assessments on the four different occasions for both the IIG and DIG.

Table 10

Timeline of the Four Assessments (T1, T2, T3 and T4) for the IIG and DIG

April 2014	Initial assessment of all children, IIG and DIG (T1)	Assessments were done immediately before delivering the PAM Programme to the IIG (T1) (Base-line)
May-June 2014	Children in the IIG were delivered the PAM programme (5 weeks)	-
July 2014	Re-assessment of all children, IIG and DIG (T2)	Assessments were done immediately after delivering the PAM Programme to the IIG – and before delivering the PAM Programme to the DIG (T2)
August-September 2014	Children in the DIG were delivered the PAM programme (5 weeks)	-
October 2014	Re-assessment of all children, IIG and DIG (T3)	Assessments were done immediately after delivering the PAM Programme to the DIG (T3)
December 2014	Final assessment of all children, IIG and DIG (T4) (6-months after the children in the IIG were delivered the PAM programme and 3-months after the children in the DIG were delivered the PAM programme)	Assessments were done at follow-up, 6-months after delivering the programme to the IIG – and 3-months after delivering the programme to the DIG (T4)

Note: Due to time constraints of conducting all assessments within one academic year, there was no 6-month follow-up for the DIG, and no wait period for the IIG.

5.6.3.1 Group leader (Researcher)

The 10 sessions of the PAM programme were delivered by the researcher with a research facilitator present (more information relating to the research facilitators is given in Section 5.6.3.2) in either English or Afrikaans depending on the children’s language of schooling/or choice. The researcher is a registered counselling psychologist with ample experience and knowledge relating to developmental psychology and CBT. The researcher was blind to all assessment measures.

The researcher decided to deliver the intervention herself as this would give her the opportunity to personally experience the issues and concerns of participants, and enable her to ensure that the programme plan and quality was not compromised. Furthermore, Stallard (2010) noted that delivery of a CBT programme requires familiarity with the basic CBT-model, an understanding of how each programme session relates to the model; and an ability to adapt the specific programme tasks to match children’s specific abilities and interests. These were all things that the researcher was able to do. However, the fact that the researcher delivered the intervention herself may raise some methodological concerns relating to her influence over the process as: (a) the group leader, the one who delivered the intervention; and (b) the researcher, the one who is conducting the study (though she did not personally collect any of the pre-test, post-test and follow-up data).

Despite these concerns, there are two main reasons why the researcher delivered the intervention herself. The first reason is that as far as was known there were no other qualified psychologists available who are visually impaired and who are attuned to the social and cultural context of the participants. The only other two psychologists in the Western Cape who could perhaps assist and who have the experience and expertise to work with children with visual impairments were employed as the school psychologists at the two study sites, and they would have faced some of the multiple role issues as well (i.e., being already familiar to the participants, seen as a person of authority at the school). Despite this the psychologists were not available to deliver the programme anyway. The second reason was that this was a PhD study and the researcher did not have the resources to train up and pay another qualified psychologist to deliver the programme.

Though the researcher’s involvement has the “potential” to influence the study’s outcome, the benefits outweigh the concerns, as there was a huge benefit from a process point of view, as the researcher herself developed the programme and thus had personal experience relating to the intervention process. The researcher has also conducted research with children who have visual impairments in the past, and she has a great awareness of child-friendly procedures and considerations that should be kept in mind when conducting research with children who have visual impairments (see Visagie & Loxton, 2014, for an overview).

5.6.3.2 Research facilitators

Three research facilitators (one with master’s level training and two with honours level training in psychology and having completed a cognitive behavioural theory module) were recruited to assist with the research. The research facilitators assisted with the administration of the questionnaires at pre-, post- and follow-up, and at least one research facilitator was present during testing and each session of the PAM programme (the number of research facilitators present depended on the size and composition of the group).

As the research involved conducting six sessions a week the research facilitators rotated their attendance as they were available. It was difficult to find one person who would be able to commit to attending all six sessions a week for the full eight months duration of the study. Research facilitators were still busy with their studies and had to attend class, complete their own work and write tests. Research facilitators assisted the researcher by facilitating smaller groups within the larger PAM group; observing and monitoring research procedures; collecting and capturing pre-post-and-follow-up data; and with logistical duties (e.g., driving and administration). In addition, as the researcher herself is also visually impaired, the research facilitator’s also assisted her in identifying and reacting to none-verbal (visual cues) feedback which she might have missed.

5.6.3.3 Delivering the measures

Questionnaires were made available in two different input modes relating to individual participant’s specific needs and degree of visual impairment. Questionnaires were put in a large print format (A3, n = 40), and for participants who could not read print the questionnaires were delivered orally (n = 12).

The modes of response were adapted to suit the individual participant’s communication needs. Participants who used large print copies (A3) of the questionnaires indicated their answers in the spaces provided, and for participants using braille as their mode of instruction the questionnaires were delivered orally where one of the research facilitators read the questions aloud and participants provided their answers in braille on braille answer sheets. Children completed the questionnaires at their school with the help of the research facilitators.

In previous studies (King et al., 1990; Matson et al., 1986; Ollendick et al., 1985; Visagie et al., 2013; Visagie & Loxton, 2014; Wilhelm, 1989) where the fears and anxieties of visually impaired children were assessed using self-report measures (e.g., The Revised Fear Survey Schedule for Children, FSSC-R (Ollendick, 1983); The South African Fear Survey Schedule for Children, FSSC-SA (Burkhardt et al., 2012); and the Revised Children's Manifest Anxiety Scale, RCMAS (Reynolds & Richmond, 1978)) similar adaptations were made with great success. Guidelines put forth by Visagie and Loxton (2014) as to the child-friendly assessment and the accommodations needed for children with visual impairments to complete self-report surveys were implemented and followed throughout the process of data collection.

5.6.3.4 Measures used

This study employed two participant outcome measures (RCADS-30 (Chorpita et al., 2005; Sandín et al., 2010) and PSWQ-C (Chorpita et al., 1997), both these questionnaires are available for download from: www.childfirst.ucla.edu/Resources); one teacher outcome measure (SDQ (Goodman, 1997)); and three qualitative outcome measures compiled by the researcher (Qualitative Form 1: Qualitative evaluation of the PAM Programme form, Appendices K & L, Qualitative Form 2: My PAM dog form, Appendices M and N, and Qualitative form 3: research facilitator observation form, Appendix O).

5.6.3.4.1 Participant outcome measures

5.6.3.4.1.1 Biographical questionnaire

All participants (*N* = 52) completed a biographical questionnaire compiled by the researcher (Appendices I & J). This questionnaire was only administered to all participants at the start of the first data gathering session (T1). Information pertaining to the eye conditions and level of vision of participants was obtained from the school psychologists at the respective schools.

5.6.3.4.1.2 Revised Child Anxiety and Depression 30-item Scale (RCADS-30)

The primary outcome measure in the study related to changes in levels of symptoms of anxiety and depression on the Revised Child Anxiety and Depression 30-Item Scale (RCADS-30) (Chorpita et al., 2005; Sandín et al., 2010) (this questionnaire is available from: www.childfirst.ucla.edu/Resources). The 30 items of the RCADS assess symptoms across six domains of anxiety and depression in children (aged 6 to 18), including: social phobia, separation anxiety, obsessive compulsive disorder, panic disorder, generalised anxiety disorder and major depressive disorder. The RCADS-30 is a recent modification of the SCAS (Spence, 1998) which was revised so that the six RCADS-30 sub-scales correspond more closely to diagnostic criteria published in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (The DSM-IV) (American Psychiatric Association, 2000). Items on the RCADS-30 are rated on a 4-point Likert-scale (Stallard et al., 2014). Psychometric properties of the RCADS-30 are good; the six RCADS-30 scales showed adequate internal consistency and test-retest stability (Muris, Meesters, & Schouten, 2002; Sandín et al., 2010; Stallard et al., 2014). In the present study an alfa coefficient of .84 was noted for the RCADS-30, this is good, as usually an alfa value of .70 or above is thought to reflect good internal consistency (Field, 2005).

The RCADS-30 is freely available on the internet for download, and permission to translate the questionnaire into Afrikaans was obtained from the authors. Translations were done by a registered clinical psychologist who is fluent in both English and Afrikaans in accordance with the Brislin (1980) back-translation method.

5.6.3.4.1.3 Penn State worry questionnaire for children (PSWQ-C)

The Penn State worry questionnaire for children (PSWQ-C) (Chorpita et al., 1997) (this questionnaire is available from: www.childfirst.ucla.edu/Resources) is an 11-item questionnaire which assesses the tendency of children (aged 7 to 17) to engage in excessive generalised and uncontrolled worry. Respondents are asked how often each item applies to them by indicating answer options on a 4-point Likert scale. Chorpita et al. (1997) found the PSWQ-C to have favourable psychometric properties, reporting good internal consistency (A = .88) and test-retest reliability (R = .92) (over a one-week interval). The original scale consists of 14-items. However, the 11-item version used in the present study showed improved psychometric properties when used with children aged 8 to 12 (Muris, Meesters, & Gobel, 2001; Stallard et al., 2014). In the present study the 11-item version of the PSWQ-C was also found to have good psychometric properties rendering an alfa coefficient of .75.

The PSWQ-C is freely available on the internet for download, and permission was obtained from the authors to translate the questionnaire into Afrikaans. Once again translations were done in accordance with the Brislin (1980) back-translation method.

5.6.3.4.2 Teacher outcomes

5.6.3.4.2.1 Strengths and difficulties questionnaire (SDQ)

An additional outcome related to emotional and behavioural difficulties experienced by group participants. The Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997) is a widely used, brief behavioural screening questionnaire aimed at detecting behavioural and emotional difficulties in youth (aged 3 to 16) (Mostert 2007). The SDQ consists of 25 items which can be divided into 5 sub-scales of 5 items each. Four sub-scales comprise the most important domains of child psychopathology, including: emotional symptoms; conduct problems; hyperactivity/inattention; and peer relationship problems. Scores on these sub-scales add up to a total difficulties score. The remaining sub-scale (pro-social behaviour) measures the child's strengths in social interactions (Goodman, 1997). Items are scored on a 3-point Likert scale (Goodman, Ford, Simmons, Gatward, & Meltzer, 2003). Class teachers in the present study were asked to complete the informant version of the SDQ on two occasions for each participant, before and directly after implementation of the PAM programme. The informant version of the SDQ assesses the teacher's perception of whether a child has a problem or not. Focus is given to chronicity, distress, social impairment and burden. The SDQ has been found to have favourable psychometric properties and the questionnaire was deemed to have good construct validity as it was found to have substantial correlations with other indices of psychopathology (Goodman, Meltzer, & Bailey, 1998; Goodman, Renfrew, & Mullick, 2000; Goodman et al., 2003).

However, in the present study the researcher had difficulties in getting teachers to complete the SDQ. Despite numerous attempts to enlist teacher participation at School 1, the researcher was unable to obtain teacher responses on the SDQ at T2. Thus, due to a poor response rate SDQ data could not be used in the present study.

The above three measures (RCADS-30 (Chorpita et al., 2005; Sandín et al., 2010); PSWQ-C (Chorpita et al., 1997); and SDQ (Goodman, 1997)) were selected for use in the present study as these measures were also used in the most recent anxiety prevention studies by Stallard and his colleagues (Stallard et al., 2012; Stallard, Skryabina et al., 2014; Stallard, Taylor et al., 2014; Stallard et al., 2015) and for this reason the researcher chose to use them in the present study as well. In this way she would be provided with up-to-date anxiety data to compare outcomes, however, at the conclusion of the present study, quantitative data from these Stallard et al. studies had not yet been published.

5.6.3.4.3 Qualitative outcomes

The final outcome measures related to the qualitative evaluation of the PAM programme. According to Barrett and Turner (2001), when implementing a programme it is not only important to determine whether a programme works, but also whether participants consider the programme to be beneficial and worthwhile. For this reason, after completion of the 10 sessions of the PAM programme, participants were asked to complete two short questionnaires compiled by the researcher (Qualitative Form 1: Qualitative evaluation of the PAM programme form (Appendices K and L) and Qualitative Form 2: My PAM dog form (Appendices M and N)).

Questions on The qualitative evaluation of the PAM programme form provided an opportunity for participants to give qualitative feedback relating to their experience of and satisfaction with the PAM programme. Information provided by participants on the My PAM dog form provided the researcher with more insight relating to how participants experienced/accepted the PAM metaphor and tangible PAM dog. Research facilitators were also asked to complete a qualitative session observation form (Qualitative form 3: Research facilitator observation form, Appendix O) after each session. All three of these qualitative forms were compiled by the researcher.

5.6.3.5 Delivering the programme

5.6.3.5.1 Testing time 1 (T1)

The study commenced by determining the anxiety status of all participants (*N* = 52) in both the IIG and DIG. Children were asked to complete three measures, the first being a biographical questionnaire which was only completed at T1 (Appendices I & J) as well as the RCADS-30 and the PSWQ-C (these measures are described in more detail in Section 5.5.6.3.4.1). As mentioned above, the study was conducted at two special schools. At both these schools, different input and response modes relating to the children's degree of visual impairment were provided. Children who used large print as their medium of instruction (*n* = 40) at both School 1 and School 2 received enlarged versions (A3 size) of the Biographical questionnaire, RCADS-30 and PSWQ-C. Children who used braille as their medium of instruction (*n* = 12) at both School 1 and School 2 answered the questionnaires on a Braille answer sheet where the item numbers were written next to each response. Some of the children who used the large print (A3) questionnaires were provided with rulers to help them keep straight lines (their place), as in previous studies where visually impaired children completed self-report questionnaires (Visagie et al., 2013; Visagie & Loxton, 2014), it was noted that children with visual impairments sometimes found it difficult to keep their place on the questionnaires.

To keep group sizes manageable, hostel children and dayscholars at School 1 were assessed separately. Dayscholars (*n* = 19) completed the questionnaires during school time in an empty classroom. Hostel children (*n* = 22) completed the questionnaires on the same day after school in the school's staff room. This was somewhat problematic as there were not enough chairs and tables for the children to use (see Section 8.3.2 in Chapter 8 which outlines some of the challenges which were encountered during the research). When the researcher enquired about the availability of an alternative venue to assess the hostel children, she was informed that there was no other venue as the school (classrooms) were locked after hours and there was no one to lock up the school after assessments were completed. Therefore, the researcher had to make do with what was on hand, and the hostel children sat on the carpet in the staff room and completed the questionnaires.

Different to School 1 where English was the language of instruction, at School 2 there were both English (*n* = 2) and Afrikaans (*n* = 9) children (as both these languages are used for instruction at this school (dual medium school)). Children were able to answer the questionnaires in the language of their choice, and two children opted to answer their questionnaires in English. As a result, two research facilitators were present, and one research facilitator read the English version of the questionnaires aloud to the English children (*n* = 2) and they indicated their responses on braille answer sheets (both used braille). The other research facilitator read the Afrikaans version of the questionnaires aloud to the Afrikaans children (*n* = 9) and they indicated their responses in the answer spaces provided (3 used braille and 6 used large print). The English and Afrikaans children completed the questionnaires simultaneously during school time in an empty classroom provided by the school.

In all cases of administration, research facilitators read the questionnaire items aloud and made a concerted effort to ensure that participants understood the instructions, that they understood the questionnaire items, and were fully aware of the response alternatives available to them. Participants were assured that there were no right or wrong answers and they were encouraged to put up their hand and ask for assistance if they were having a problem. Anonymity and confidentiality were explained in a child-friendly manor, and participants were instructed to fill in the questionnaires independently and truthfully.

At both schools (School 1 and School 2) at T1, the questionnaires took quite long to complete as participants took some time to get used to the question format and how to answer the questions. It took an average of 70 minutes to complete all questionnaires. However, at T2, T3 and T4 assessments were completed more quickly (an average of 45 minutes) as participants were familiar with the procedure for completing the questionnaires.

5.6.3.5.2 Delivery of the PAM programme to the immediate intervention group (IIG)

The delivery of the PAM programme to the IIG proceeded as follows. Firstly, a suitable time for conducting the sessions that would not infringe on children's curricular activities was negotiated and arranged in collaboration with the school psychologist and heads of department (primary school) at the two schools. At School 1, children who live at home (dayscholars) use arranged school transport to go home after school every day, and because of this the school suggested that the dayscholars and hostel children be accommodated in two different time slots (see Section 5.5 above). To conduct the intervention with the dayscholars at School 1 the researcher was allocated two periods during school time one 45-minute Life Skills period on a Monday at 14:00 and one 45-minute assembly period on a Wednesday at 10:30. Two 45 minute sessions were allocated on a Monday and Tuesday afternoon after school at 15:00 for the hostel children. Accordingly, two sessions per week were conducted with each of the two groups of children (dayscholars and hostel children) in the IIG (*n*=22) at School 1. At School 2, one 45-minute assembly period during school hours on a Monday at 07:30 and one after school session on a Wednesday at 14:30 was allocated to conduct the PAM programme. Thus, children in the IIG (*n*=5) at School 2 also received two sessions of the PAM programme per week.

Overall session attendance was good: however, at School 1 absenteeism and clashing of some children’s class schedules was problematic (A systematic review of participation rates is provided in table 11 below). At the beginning of each new session, the previous session was thoroughly reviewed to refresh participants' memory and to compensate for those who did not attend the previous session. To ensure that the researcher adhered to the manual, at least one research facilitator was present during all 10 sessions of the PAM programme. Research facilitators completed a session evaluation form at the end of each session (Appendix O).

Initially the researcher had planned to schedule an information session with participant’s parents; however, logistical difficulties prevented this from being realised. More specifically, the researcher consulted the school psychologists at both of the schools and enquired about hosting information sessions for the parents, but the school psychologists indicated that it would be difficult to recruit parents for an information session, as learners who go home every day travel home by transport provided by the school or use public transport. Therefore, their parents have little or no contact with the school, and children who live in the hostel’s parents live far away and would be unable to attend an information session. The school psychologist at School 2 did however suggest that written feedback in the form of a letter be provided to parents as to the study’s findings after completion of the research (personal communication, M. Meiring, 19 February 2014). Thus, parents were unable to attend an information session owing to long working hours, living far away and difficulties with transportation. Therefore, it was decided not to include parental sessions as part of the study.

5.6.3.5.3 Testing time 2 (T2)

Once the delivery of the PAM programme was completed with the IIG, the anxiety status of all participants (*N* = 52) (IIG and DIG) was reassessed one week after participants in the IIG completed session 10. Once again each participant completed the RCADS-30 and the PSWQ-C. Once again dayscholars (*n* = 19) and hostel children (*n* = 22) at School 1 completed the questionnaires separately. Dayscholars completed the questionnaires during school time in an empty classroom. As during T1, it was problematic for the hostel children to complete the questionnaires in the room (staff room) which was initially provided due to frequent interruptions and a shortage of chairs. The researcher managed to negotiate an alternative venue and the hostel children were able to complete the questionnaires in the study hall where there are chairs and desks for children to complete their homework.

As with T1, all participants at School 2 (*n* = 11) once again completed the questionnaires simultaneously in an empty classroom provided by the school. Additionally, participants who had already completed the PAM programme (IIG, *n* = 27) were also asked to complete two qualitative forms (Qualitative Form 1: Qualitative evaluation of the PAM programme, Appendices K and L and Qualitative Form 2: My PAM dog form, Appendices M and N). The remaining 25 participants who still had to complete the PAM programme completed these forms at T3.

The same research facilitators who were present during T1 were present during this testing procedure (T2). As with T1, the research facilitator read the questionnaires aloud and children indicated their answer choices in the spaces provided (both braille and large print). Participants were instructed to fill in the questionnaires independently and truthfully, anonymity and confidentiality were once more explained, and participants were reminded that there were no right or wrong answers. Children were reminded to put up their hand and ask for help if they needed it.

5.6.3.5.4 Delivery of the PAM programme to the delayed intervention group (DIG)

For the DIG the intervention proceeded in a similar way than for the IIG. In this regard it is important to state that a concerted effort was made to ensure that both the IIG and the DIG were exposed to the same experimental conditions by, for example, ensuring that the intervention was implemented by the same person (the researcher) for both groups and that the same research facilitators, who were present with the IIG were also present with the DIG. Sessions for the DIG were conducted in the same time slots as for the IIG (see Section 5.6.3.5.2 above) and the same content was covered.

As was the case for the IIG, attendance of sessions for the DIG was also somewhat problematic at School 1 (A systematic review of participation rates is provided in Table 11). As a result, at the beginning of each new session the previous session was thoroughly reviewed to refresh participants' memory and to compensate for those children who did not attend the previous session. Once again, during all sessions a research facilitator was present to ensure the researcher adhered to the instructions in the manual. Once again research facilitators completed a session evaluation form after each session (Appendix O).

Table 11

Systematic Overview of Participation Rates for Group and School.

Group:	Group size (n):	Attended all 10 sessions	Attended more than 5 sessions	Attended less than 5 sessions
School 1: IIG (hostel)	11	9 (81.82%)	2 (18.18%)	0 (0.00%)
School 1: IIG (Dayscholars)	12	8 (66.67%)	4 (33.33%)	0 (0.00%)
School 1: DIG (hostel)	11	3 (27.27%)	8 (72.73%)	0 (0.00%)
School 1: DIG (Dayscholars)	7	1 (14.29%)	5 (71.42%)	1 (14.29%)
School 2: IIG	5	4 (80.00%)	1 (20.00%)	0 (0.00%)
School 2: DIG	6	3 (50.00%)	3 (50.00%)	0 (0.00%)

Note: IIG = Immediate intervention group; DIG = Delayed intervention group

5.6.3.5.5 Testing time 3 (T3)

Once the delivery of the PAM programme was completed with the DIG, the anxiety status of all participants (*N* = 52) (IIG and DIG) was reassessed one week after children in the DIG completed session 10 using the RCADS-30 and PSWQ-C. Once again dayscholars and hostel children at School 1 were assessed separately, the dayscholars (*n* = 19) were assessed during the period allocated during school time in an empty classroom provided by the school, and the hostel children (*n* = 22) were assessed on the same day during the timeslot allocated in the afternoon. During the previous testing time (T2) hostel children at School 1 who made use of the large print (A3) questionnaires reported that they struggled to hear the research facilitator reading the questionnaires as the children who used braille's braille machines (a typewriter like machine that children use to write braille) were very noisy and this was distracting for them. Thus, the researcher organised for the braille and large print questionnaires to be administered separately. As a result, two research facilitators were present, and the hostel children at School 1 who completed the questionnaires in braille (*n* = 7) were assessed by one of the research facilitators in the school's staff room and the hostel children who used large print (A3) (*n* = 15) were assessed by the other research facilitator at the same time in the study hall.

As with T1 and T2, all participants at School 2 (*n* = 11) once again completed the questionnaires simultaneously in an empty classroom provided by the school. Additionally, the remaining participants who now completed the PAM programme (DIG, *n* = 25) were also asked to complete the two qualitative forms (Qualitative Form 1: Qualitative evaluation of the PAM programme, Appendices K and L and Qualitative Form 2: My PAM dog form, Appendices M & N).

The same research facilitators who were present during T1 and T 2 were present during this testing procedure. As with T1 and T2, the research facilitators read the questionnaires aloud and children indicated their answer choices in the spaces provided. Participants were instructed to fill in the questionnaires independently and truthfully, anonymity and confidentiality were once more explained, and participants were reminded that there were no right or wrong answers. Participants were reminded to put up their hand and ask for help if they needed it.

5.6.3.5.6 Testing time 4 (T4)

Following completion of data collection, all the large print (A3) questionnaires (*n* = 40) were scored by an independent data capturer. The questionnaires were externally moderated and all discrepancies were corrected by the researcher. Braille questionnaires (*n* = 12) were scored separately by another independent data capturer who could read braille. Once again these questionnaires were externally moderated, and any discrepancies were corrected by the researcher.

Three months after completing the delivery of the PAM programme with the DIG, the anxiety status of all participants (*N* = 45) (IIG and DIG) was reassessed using the RCADS-30 and the PSWQ-C. On the day of testing six participants from School 1 and one participant from School 2 were absent from school. Once again dayscholars and hostel children at School 1 were assessed separately, the dayscholars (*n* = 16) were assessed during the period allocated during school time in an empty classroom provided by the school, and the hostel children (*n* = 19) were assessed on the same day during the time allocated in the afternoon. As was the case for T3, for the hostel children the braille and large print questionnaires were administered separately. As a result, two research facilitators were present, and the hostel children at School 1 who completed the questionnaires in braille (n = 5) were assessed by one of the research facilitators in the school’s staff room and the hostel children who used large print (A3) (*n* = 14) were assessed by the other research facilitator at the same time in the study hall.

As with T1, T2 and T3, all participants at School 2 (*n* = 10) once again completed the questionnaires simultaneously in an empty classroom provided by the school.

The same research facilitators who were present during T1, T 2 and T3 were present during this testing procedure. As with T1, T2 and T3, the research facilitators read the questionnaires aloud and participants indicated their answer choices in the spaces provided. Participants were instructed to fill in the questionnaires independently and truthfully, anonymity and confidentiality was once more explained, and participants were reminded that there were no right or wrong answers. Participants were reminded to put up their hand and ask for help if they needed it.

5.6.4 Phase 4: Evaluation of the programme and analysis of the data

The programme evaluation (quantitative statistical analysis component) is the main study, and the success of the PAM programme is dependent on the results of this outcome study. However, because this was the first study to implement the PAM programme, the researcher also deemed it important to look at the qualitative data which was gathered during the 10 sessions of the PAM programme (qualitative content analysis component), as there may be factors which may be worth exploring which can be useful for future research.

The evaluation phase of the research comprised both a quantitative and qualitative component (more information as to the qualitative component is given in Section 5.6.4.2). For the quantitative statistical analysis, 52 assenting children completed a short biographical questionnaire (only at T1) and the RCADS-30 and PSWQ-C at pre- (T1), post- (T2) and follow-up (T3 and T4) intervention (the questionnaires are described in more detail in section 5.6.4.3.1 above).

5.6.4.1 Quantitative statistical analysis (quantitative programme evaluation)

As described above (see Section 5.5), all assenting children from School 1 and School 2 (N = 52) were randomly assigned to 1 of 2 groups at their respective school (an IIG or a DIG). During data analysis, The IIG groups from School 1 and School 2 were combined to form one large IIG (n = 27) while the DIG groups from School 1 and School 2 were combined to form one large DIG (n = 25). This was done to ensure that both groups were comparable in terms of size and demographics. It was felt that if the two schools were simply compared to one another this could compromise the programme outcomes as the two schools differ quite widely in terms of their social contexts (see Section 5.4).

All questionnaires were scored and the researcher prepared an excel data file for analysis. MR. Henry Steel, a statistician in the department of psychology, University of Stellenbosch, assisted the researcher with the analysis of some of the data. The Statistical

Package for the Social Sciences (SPSS for Windows version 23.0) (IBM, 2015) was used to calculate descriptive and non-parametric statistics. The quantitative data enabled the researcher to measure:

- The stability of the measures when untreated over time (The DIG acting as a wait-list control group using T1 and T2 comparisons);
- Impact of the PAM programme immediately after completion (using immediate pre- and post- data from both groups – IIG (T1 and T2); and DIG (T2 and T3)); and
- The maintenance of the effects of the PAM programme over time following intervention (IIG using T2, T3 (3 months) and T4 (6 months) comparisons and DIG using T3 and T4 (3 months) comparisons).

The researcher tested the following six hypotheses during the quantitative evaluation phase of the study (four hypotheses pertain to between-group effects and two hypotheses pertain to within group effects):

Between-group effects:

- Firstly, it was hypothesised that there would be no significant differences between the scores obtained by the IIG and DIG on the anxiety measures (RCADS-30 and PSWQ-C) at T1.
- Secondly, anxiety scores obtained by the IIG on the anxiety measures (RCADS-30 and PSWQ-C) will be significantly lower than the anxiety scores obtained by the DIG on the anxiety measures (RCADS-30 and PSWQ-C) at T2.
- Thirdly, there will be no significant differences in the anxiety scores of the IIG and DIG on the anxiety measures (RCADS-30 and PSWQ-C) at T3.
- Fourthly, results obtained on the anxiety measures (RCADS-30 and PSWQ-C) at post-intervention (T3) will be retained at 3 (DIG) and 6-month (IIG) follow-up (T4).

Within group effects:

- Firstly, within the IIG there will be a significant reduction in anxiety scores on the anxiety measures (RCADS-30 and PSWQ-C) from T1 to T2.
- Secondly, within the DIG there will be a significant reduction in anxiety scores on the anxiety measures (RCADS-30 and PSWQ-C) from T2 to T3.

5.6.4.2 Qualitative content analysis (qualitative programme evaluation)

The qualitative process evaluation of the present study tracked the process of what occurred during 10 sessions across six groups (a total of 60 sessions) of the PAM programme and also noted the interventions used in some detail. After completing the ten sessions of the PAM programme all participants (N = 52) were asked to complete two short questionnaires which were compiled by the researcher (Qualitative Form 1: Qualitative evaluation of the PAM programme form, Appendices K & L; Qualitative Form 2: My PAM dog form, Appendices M & N). In addition, the research facilitators also completed a session evaluation form after each session (Qualitative form 3: Research facilitator observation form, Appendix O). To prepare this qualitative data for analysis, a data capturer typed the responses on the three questionnaires verbatim into excel spreadsheets. The researcher also kept a detailed record (in the form of process notes) of all sessions (Results obtained from the qualitative data are provided in Chapter Seven).

Data obtained from these three qualitative measures was analysed by means of thematic content analysis. According to Elo and Kyngäs (2008) content analysis can be understood as a “method of analysing written, verbal or visual communication messages” (p. 107). As a research method thematic content analysis is defined as a “method for identifying, analysing, and reporting patterns (themes) within data” (p. 6).

As briefly mentioned above (see section 4.2.4 in Chapter Four), There are five steps in the process of content analysis which were used in the preparatory focus group study, these steps were followed during this second stage of qualitative analysis (Qualitative programme evaluation) as well (Braun & Clarke, 2006; Taylor et al., 2014):

1. *Becoming familiar with the data.* Because the researcher herself did not collect the qualitative data (research facilitators administered the two qualitative questionnaires, Qualitative Form 1: Qualitative evaluation of the PAM programme form, Appendices K and L and Qualitative Form 2: My PAM dog form, Appendices M and N) it was necessary for her to immerse herself in the data. This involved reading the entire data set a couple of times, by doing this she was able to start to generate an idea of possible patterns within the data. At this stage it was very important for the researcher to become familiar with all aspects of the data.
2. *Generating initial codes.* During this step the researcher generated initial codes from the data by identifying a feature of the data that was interesting to her and represented the most basic segment of the raw data which could be distinguished to

make sense by itself. At this stage codes which best described the different segments were written next to each.

3. *Searching for themes.* This step re-focussed the analysis at the broader level of themes rather than codes. The researcher sorted all the identified codes into potential themes and collated the relevant data extracts (identified in step 2) under these identified themes. At this stage codes were considered according to the ways that they may or may not fit together to create an overarching theme.
4. *Reviewing themes.* During this step the various themes which were identified in step 3 were revised and some themes were discarded while others were collapsed together to provide a better fit. In this step the researcher re-read all the collated extracts and decided whether they formed a coherent pattern or not. At this stage extracts were moved around within different themes and themes were re-worked to find a home for the various extracts.

Defining and naming themes. In this step the researcher defined and organised the themes which are presented in the final analysis. Themes were defined and extracts from the data were presented to add to the richness of the data (Braun & Clarke, 2006). It is with this final step that the data started to form a story. In order to ensure trustworthiness, the researcher discussed the readings and interpretation of the qualitative findings with one of her supervisors (Prof HS Loxton), and emerging themes were cross-checked by two independent researchers, who are familiar with the field of childhood anxiety research.

The qualitative components mentioned above were included in the research to enable the researcher to record qualitative process information relating to the way children with visual impairments experienced and evaluated the PAM programme and the PAM metaphor and tangible PAM soft toy dog. This qualitative information would add to the literature pertaining to the acceptability and feasibility of the PAM programme (the concepts acceptability and feasibility are described in more detail in Section 7.1 in Chapter 7). The qualitative data also contributed to the programme’s fidelity and aimed to provide as many pointers as possible to aid in the understanding of an under-researched problem – anxiety experienced by children with visual impairments.

Hartley and Muhit (2003) state that the inclusion of a qualitative component in research can help bridge the gap between scientific study and clinical practice, and may assist in gaining a better understanding of the phenomena under investigation. They further argue that qualitative methodology is needed to collect culture and disability specific data which may not be easily obtained through quantitative methods, as the low prevalence rates of some disabilities make it very difficult to draw statistically significant conclusions from quantitative data (Philander 2007). Hartley and Muhit (2003) further emphasise that qualitative sources of data provide an opportunity not only to listen, but also to include the voices of vulnerable populations in programme planning. They stated this as follows: “it (qualitative data) educates quantitative researchers about the people and their perceptions, beliefs and practices” (p. 103).

5.7 Ethical considerations

Keeping the aim of the present study in mind, namely to investigate the effectiveness of the PAM programme in reducing anxiety symptomology in South African children with visual impairments, this study was conducted with the well-being and best interests of all 52 participants kept in highest regard. The ethical guidelines and principles put forth in the International Declaration of Helsinki, the South African guidelines for good clinical practice and the Medical Research Council’s (MRC) ethical guidelines for research were adhered to during all phases of the research. According to Strydom (2005), it is important to pay attention to ethical aspects including: informed consent/assent of participants; confidentiality of results; privacy of participants; voluntary withdrawal; competence of the researcher; ethical reporting of results; and debriefing of participants.

Written permission to conduct the study was obtained from the Research Ethics Committee: Human Research (Humanities) (Appendix C), the WCED (Appendices A and B) and the principals of the identified schools.

In accordance with the informed consent process, participants as well as their parents or guardians and teachers were informed relating to the nature and objectives of the study before its commencement. Written consent from the parents/guardians as well as assent from the participants was obtained. Furthermore, all children were briefed on the nature and objectives of the study before its commencement, and only consenting children took part. Parents also consented to the researcher taking photos and recording the sessions on a video recorder. Participant information was kept confidential and private as it was stored securely and only the researcher and her supervisor had access to it. The voluntary withdrawal process was also explained to participants before the commencement of the study, and as a result 3 participants (n = 3) withdrew after giving their initial consent.

The three research facilitators also made an important contribution to the present study. They served as independent observers and in this way could report objectively on the research process and act as non-subjective observers during data collection. Furthermore, with regards to competence of the researcher, all sessions were conducted by the researcher herself, who is a qualified counselling psychologist and PhD psychology student. This involvement enabled her to facilitate and monitor the research process. This and the aforementioned sensitivity of the research facilitators ensured that participants were closely monitored for any signs of distress or discomfort. The study was supervised by a registered counselling psychologist who was available for consultation during all phases of the study, which meant that if any signs of psychological distress or discomfort were noted in participants, they could be referred for counselling. With all these measures in place, there were no complications relating to psychological distress.

At the start of this dissertation the researcher states that this work is her own and after the completion of the study a copy of the dissertation will be made available to each of the schools.

5.8 Chapter summary

This chapter provided an overview of the methods used to obtain and analyse the data which were gathered during the present study. The chapter started with a brief introduction, which reiterated and clarified the study's primary and secondary aims. Thereafter the research design was outlined. Inclusion criteria, participants and the two study contexts were then described, and an overview of the participant's (*N* = 52) demographic characteristics was depicted in Table 7. This was followed by a description of how the sample was randomised. The four stages of the research were then discussed (Phase 1: obtaining ethical clearance; Phase 2: developing the programme; Phase 3: implementing the programme and administering the measures; and Phase 4: evaluating the programme and analysing the data). The chapter concluded with the discussion of ethical considerations relevant to the present study.

Chapter 6 presents and discusses the quantitative results obtained by the administration of the RCADS-30 and PSWQ-C.

CHAPTER 6: QUANTITATIVE PROGRAMME EVALUATION, RESULTS AND DISCUSSION

This chapter presents the quantitative results of the present study. The chapter starts off by providing a brief introduction which re-defines the statistical sample and re-states the study's timeline, a description of how missing data was dealt with is also provided. A descriptive analysis is then presented to provide a broad overview of the trend of the data. Thereafter the main analysis in relation to the testing of the six hypotheses is presented. Analyses pertaining to the influence of possible predictor variables (age, gender and vision) on anxiety symptoms is then given. The chapter concludes by discussing and synthesising the quantitative results which were obtained.

6.1 Introduction to the quantitative study (statistical data analyses)

As mentioned in Chapter 5 (see Section 5.4), 55 children participated in the present study, however the data of 3 participants had to be excluded due to missing questionnaire data (either data for T1, T2, or T3 was missing). The elimination of the missing questionnaires resulted in a statistical sample consisting of 52 participants (24 girls, 28 boys, *M* age = 11.4), of whom 27 participants were in the IIG (12 girls, 15 boys), and 25 participants were in the DIG (12 girls, 13 boys) (the demographic characteristics of the statistical sample are depicted in Table 7 in Chapter 5). Thus, for subsequent analysis, only the data from the statistical sample ($N = 52$) will be reported.

Not all questionnaire data for the statistical sample ($N = 52$) was 100% complete. This was due to children failing to provide an answer for random items across the two questionnaires (RCADS-30 or PSWQ-C). Because these missing values can pose a problem, a missing values analysis was computed. The purpose of a missing values analysis is to address several concerns caused by incomplete data. If cases with missing values are systematically different from cases without missing values, the results can be misleading. Also, missing data may reduce the precision of calculated statistics because there is less information to work with. Another concern is that the assumptions behind many statistical procedures are based on complete cases. To address these concerns, Little's chi-square statistic for testing whether values in the present study were missing completely at random (MCAR) was used. The null hypothesis that the data are missing completely at random was supported. As a result, the expectation-maximization (EM) method was used to impute the missing values. This method for estimation of missing values gives consistent and unbiased estimates when the data are missing completely at random (MCAR).

The EM method assumes a distribution for the partially missing data and bases inferences on the likelihood under that distribution. Each iteration consists of an E step and an M step. The E step finds the conditional expectation of the missing data, given the observed values and current estimates of the parameters. These expectations are then substituted for the missing data. In the M step, maximum likelihood estimates of the parameters are computed as though the missing data had been filled in (IBM, 2015). Thus, the questionnaire items which were missing for the participants in the statistical sample (*N* = 52) were dealt with in this way, and are reported as such.

To re-emphasise, and for purposes of clarity, the following timeline is provided to describe the four assessment times when data was gathered from the 52 participants.

Time 1 (T1):

- Pre-intervention assessment for the IIG
- Pre-waitlist assessment for the DIG

Time 2 (T2):

- Immediate post-intervention assessment for the IIG
- Post-waitlist assessment for the DIG

Time 3 (T3):

- 3-month follow-up intervention assessment for the IIG
- Immediate post-intervention assessment for the DIG

Time 4 (T4):

- 3-month follow-up assessment for the IIG
- 6-Month follow-up assessment for the DIG

A series of repeated measures analyses of variance (repeated measures ANOVA's) were conducted to compare reports of anxiety within the IIG and DIG across time (T1, pre-intervention IIG and pre-waitlist DIG; T2, post-intervention IIG: pre-waitlist DIG; T3, 3-month follow-up IIG: post-intervention DIG; and T4, 6-month follow-up IIG: 3-month follow-up DIG) and differences between the IIG and DIG at each of the four times of testing were explored using one-way analysis of variance (ANOVA). These between-group and within-group effects are reported in Section 6.3.

6.2 Descriptive data analysis

6.2.1 Scores on the Revised Child Anxiety and Depression 30-item Scale (RCADS-30)

As mentioned in Chapter 5 (see Section 5.6.3.4.1.2), the RCADS-30 is a 30-item questionnaire which measures symptoms of anxiety and depression across six factors (Factor 1 = Major depression, Factor 2 = panic disorder, Factor 3 = social anxiety, Factor 4 = separation anxiety disorder, Factor 5 = generalised anxiety disorder and Factor 6 = obsessive-compulsive disorder). Items are rated on a 4-point Likert-scale (Never = 0, often = 1, sometimes = 2, and always = 3). Items are summed to yield a total RCADS-30 score between 0 and 90. Table 12 below presents the means and standard deviations for the IIG (*n* = 27) and DIG (*n* = 25) on the RCADS-30 from T1 to T4.

Table 12

Means and Standard Deviations for the Total Score on the RCADS-30 for the IIG (n = 27) and DIG (n = 25) from T1 to T4

	IIG (*n* = 27)		DIG (*n* = 25)	
	Mean	SD	Mean	SD
T1	27.77	11.31	34.52	13.76
T2	29.45	13.94	31.75	8.84
T3	26.99	16.64	29.43	11.93
	IIG (*n* = 23)		DIG (*n* = 22)	
	Mean	SD	Mean	SD
T4	27.91	15.16	29.41	12.75

Note: IIG = Immediate intervention group; DIG = Delayed intervention group; RCADS-30 = Revised Child Anxiety and Depression Scale 30; T4 = follow-up and there were only 45 participants – IIG (*n* = 23) and DIG (*n* = 22).

To determine whether there were any significant differences in mean scores from T1 to T4, Overall 2 (groups) x 4 (time points) ANOVAs were performed on the total scores of the RCADS-30, for the IIG (*n* = 23) and DIG (*n* = 22) separately. The multivariate main effects for time were not significant for both the IIG and DIG, with $F(3, 20) = 0.481$, $p = .699$ (IIG) and $F(3, 19) = 1.202$, $p = .336$ (DIG) respectively Note: as there were only 45 participants at T4 (6-month follow-up IIG: 3-month follow-up DIG), results for differences in mean scores on the

RCADS-30 from T1 to T4 are reported for the 23 participants in the IIG and the 22 participants in the DIG).

These non-significant results are not surprising, as when considering the mean scores for the IIG and DIG on the RCADS-30 From T1 to T4, it is evident from Table 12 above that participants in both groups (IIG and DIG) reported low scores at T1 (Pre-intervention IIG and pre-waitlist DIG) and these scores remained low through T4 (6-month follow-up IIG: 3-month follow-up DIG). Thus, even though scores for the two groups were variable between each time of testing, the overall mean score within each group virtually remained unchanged from T1 to T4. This indicates that little change in the participants RCADS-30 scores occurred across time. However, note that mean scores for the IIG remained slightly lower when compared to the DIG from T1 to T4.

Multivariate repeated measures ANOVA’s were also performed on the subscale scores of the RCADS-30, for the IIG (*n* = 23) and DIG (*n* = 22) separately, to determine if there were significant changes from T1 (pre-intervention) to T4 (6-month follow-up IIG: 3-month follow-up DIG). The multivariate main effects for time were not significant for both the IIG and DIG, with $F(5, 18) = 1.478$, $p = .353$ (IIG) and $F(4, 18) = 0.848$, $p = .647$ (DIG) respectively.

It is important to note that all RCADS-30 total mean scores are below the clinical cut off for a total score of 49 or above. When the cut-off value for clinical significance on the RCADS-30 (i.e., a total score of 49 or greater) (personal communication, P. Stallard, 23 March 2015) was considered, it was noted that four participants (all four from the DIG) of the 52 participants scored above this cut-off at T1. Yet, at T3 only one participant of the initial four who had scored above the cut-off value at T1 still fell within the range of clinical significance (it is important to note that the RCADS-30 is simply a self-report questionnaire and not a diagnostic tool).

6.2.2 Scores on the Penn-State Worry Questionnaire for Children (PSWQ-C)

Again as mentioned in Chapter Five (see Section 5.6.3.4.1.3) the PSWQ-C is an 11-item questionnaire which measures the tendency of children to engage in excessive, generalized, and uncontrolled worry (Chorpita et al., 1997; Muris, Meesters et al., 2001). Items are scored on a 4-point Likert scale (never true = 0, sometimes true = 1, mostly true = 2, and always true = 3). Items are summed to yield a total PSWQ-C score between 0 and 33, with higher scores indicating a greater tendency to worry.

Just as for the RCADS-30, the means and standard deviations for the PSWQ-C for the IIG (*n* = 27) and DIG (*n* = 25) were determined for T1 (pre-intervention IIG and pre-waitlist

DIG) to T4 (6-month follow-up IIG: 3-month follow-up DIG). These descriptive statistics are depicted in Table 13.

Table 13

Means and Standard Deviations for the Total Score on the PSWQ-C for the IIG (n = 27) and DIG (n = 25) from T1 to T4

	IIG (*n* = 27)		DIG (*n* = 25)	
	Mean	SD	Mean	SD
T1	12.84	5.95	15.32	5.91
T2	11.31	5.97	14.33	6.31
T3	11.29	6.44	12.64	4.79
	IIG (*n* = 23)		DIG (*n* = 22)	
	Mean	SD	Mean	SD
T4	11.04	7.02	12.41	7.25

Note: IIG = Immediate intervention group; DIG = Delayed intervention group; PSWQ-C = Penn State Worry Questionnaire for Children; T4 = follow-up and there were only 45 participants – IIG (*n* = 23) and DIG (*n* = 22).

To determine whether there were any significant differences in mean scores from T1 to T4, overall 2 (groups) x 4 (time points) ANOVAs were also performed on the total scores of the PSWQ-C, for the IIG (*n* = 23) and DIG (*n* = 22) separately. Once again the multivariate main effects for time were not significant for both the IIG and DIG, with *F*(3, 20) = 1.538, *p* = .235 (IIG) and *F*(3, 19) = 1.408, *p* = .271 (DIG) respectively (Note: as there were only 45 participants at T4 (6-month follow-up IIG: 3-month follow-up DIG), results for differences in mean scores on the PSWQ-C from T1 to T4 are reported for the 23 participants in the IIG and the 22 participants in the DIG).

From Table 13 it is evident that the means scores of participants in both the IIG and DIG slightly lowered from T1 (pre-intervention IIG and pre-waitlist DIG) to T4 (6-month follow-up IIG: 3-month follow-up DIG).

6.3 Main data analyses

In accordance with the two sets of hypotheses (within-group differences and between-group differences) the data were explored in two ways for the main data analysis. The between-group differences (effects) were explored using one-way analysis of variance (ANOVA) and the within group effects were explored using a repeated measures analyses of variance (repeated measures ANOVA).

6.3.1 Between-group effects

The following four between-group hypotheses were tested during the evaluation phase of the present study:

- Firstly, it was hypothesised that there would be no significant differences between the scores obtained by the IIG and DIG on the anxiety measures (RCADS-30 and PSWQ-C) at T1.
- Secondly, anxiety scores obtained by the IIG on the anxiety measures (RCADS-30 and PSWQ-C) would be significantly lower than the anxiety scores obtained by the DIG on the anxiety measures (RCADS-30 and PSWQ-C) at T2.
- Thirdly, there would be no significant differences in the anxiety scores of the IIG and DIG on the anxiety measures (RCADS-30 and PSWQ-C) at T3.
- Fourthly, results obtained on the anxiety measures (RCADS-30 and PSWQ-C) at post-intervention (T3) would be retained at 3 (DIG) and 6-months, (IIG) follow-up (T4).

These four hypotheses were explored using ANOVA's, and the results were as follows. At T1 (pre-intervention IIG and pre-waitlist DIG), as expected, results of the one-way ANOVA's indicated that there were no significant differences between total scores for the IIG ($n = 27$) or DIG ($n = 25$) on either the RCADS-30 with: $F(1, 50) = 3.782$, $p = .057$., or the PSWQ-C with: $F(1, 50) = 2.266$, $p = .139$. Therefore, at the commencement of the study, in line with Hypothesis 1, there were no significant differences between scores obtained on any of the anxiety measures (RCADS-30 or PSWQ-C) by the IIG ($n = 27$) or DIG ($n = 25$) at T1 (pre-intervention IIG and pre-waitlist DIG).

Results of the ANOVA at T2 (post-intervention IIG: post-waitlist DIG) indicated that there was no significant difference between total scores obtained by the IIG (n = 27) or DIG ($n = 25$) on either the RCADS-30 with: $F(1, 50) = 0.496$, $p = .485$., or the PSWQ-C with: $F(1, 50) = 3.149$, $p = .082$. Therefore, contrary to hypothesis 2, there were no significant differences between scores obtained on any of the anxiety measures (RCADS-30 or PSWQ-C) by the IIG ($n = 27$) or DIG ($n = 25$) at T2 (post-intervention IIG: post-waitlist DIG).

Once again, results of the ANOVA at T3 (3-month follow-up IIG: post-intervention DIG) indicated that there was no significant difference between total scores obtained by the IIG (n = 27) or DIG (n = 25) on the RCADS-30 with: $F(1, 50) = 0.365$, $p = .548$., or the PSWQ-C with: $F(1, 50) = 0.732$, $p = .396$. These results are in line with hypothesis 3, as it was expected that there would be no significant differences between scores obtained on any of the anxiety measures (RCADS-30 or PSWQ-C) by the IIG (n = 27) or DIG (n = 25) at T3 (3-month follow-up IIG: post-intervention DIG).

At follow-up (T4) 45 of the original 52 participants still remained in the study (23 in the IIG and 22 in the DIG). Results of the ANOVA at T4 (6-month follow-up IIG: 3-month follow-up DIG) indicated that there was no significant difference between total scores obtained by the IIG (n = 23) or DIG (n = 22) on either the RCADS-30 with: $F(1, 43) = 0.128$, $p = .722$., or the PSWQ-C with: $F(1, 43) = 0.416$, $p = .522$. These results are in line with hypothesis 4, as it was expected that there would be no significant differences between scores obtained on any of the anxiety measures (RCADS-30 or PSWQ-C) by the IIG (n = 23) or DIG (n = 22) at T4 (6-month follow-up IIG: 3-month follow-up DIG).

6.3.2 Within-group effects

The following two within-group hypotheses were tested during the evaluation phase of the present study:

- Firstly, within the IIG there would be a significant reduction in anxiety scores as measured by the anxiety measures (RCADS-30 and PSWQ-C) from T1 to T2.
- Secondly, within the DIG there would be a significant reduction in anxiety scores as measured by the anxiety measures (RCADS-30 and PSWQ-C) from T2 to T3.

In order to test the above-mentioned two hypotheses, and to determine whether there were significant changes from pre-post-follow-up (T1-T4) for the two groups (IIG and DIG), Multivariate repeated measures ANOVA's were performed on the total scores of the RCADS-30 and PSWQ-C for the IIG (n = 23) and DIG (n = 22) separately.

Contrary to what was expected, results of the multivariate main effects for time were not significant for both the IIG and DIG on either the RCADS-30 with: $F(3, 20) = 0.481$, $p = .699$ (IIG) and $F(3, 19) = 1.202$, $p = .336$ (DIG) or the PSWQ-C with: $F(3, 20) = 1.538$, $p = .235$(IIG) and $F(3, 19) = 1.408$, $p = .271$ (DIG). Thus, even though data on the two anxiety measures (RCADS-30 and PSWQ-C) varied slightly across time, this variability was not significant for the IIG (*n* =23) or DIG (*n* = 22). Take note, because there were only 45 participants who completed assessments at follow-up (T4), within-group effects were calculated using only the sample of 45 participants.

6.4 Predictors for change of anxiety symptoms

As various other factors such as age, gender and level of visual impairment (vision) have also been noted to influence the reporting of anxiety, the researcher was interested in assessing the impact of the PAM programme when these three variables were taken into account. Comparisons were made between total and sub-scale scores on the RCADS-30 and the total scores on the PSWQ-C from T1 (pre-intervention) to T3 (post-intervention), as at T3 all 52 participants had been delivered the PAM programme.

6.4.1 Age

At the commencement of the present study the mean age of the statistical sample (*N* = 52) was 11.46 (*SD* = 1.45) years. Children who attend grades 4 to 7 are usually aged between 9 and 13 years, thus, the average age of participants in the present study was in line with general educational norms regarding age. However, there were four participants who had already turned 14 in grade 7, thus falling outside of the present study's inclusion criteria (see Section 5.3 in Chapter 5). However, after consultation with her research supervisor, the researcher decided to still include these participants in the present study, as one could argue that it would be unethical to exclude them from participation if their classmates were allowed to take part.

Because previous research (Barrett et al., 2005; Lock & Barrett, 2003) noted that early intervention in middle-childhood is potentially more advantageous than when intervention occurs at a later age, two sub-groups of middle-childhood were distinguished in the present study. Participants were grouped together from ages 9-11 (younger participants) (*n* = 30) and from ages 12-14 (older participants) (*n* = 22). It was expected that younger participants (ages 9-11) would benefit more from the PAM programme as this age-group of children falls exactly within the developmental phase of middle-childhood which stretches from age 6 to 12, whereas the older participants (ages 12-14) are entering the stage of early adolescence. Tables 14, 15 and 16 present the means and standard deviations for the older (*n* = 30) and younger (*n* = 22) participants on the total and sub-scale scores on the RCADS-30 and PSWQ-C at T1 and T3.

Table 14

Means and Standard Deviations for the Younger (n = 30) and Older (n = 22) Participants RCADS-30 Total Scores at T1 and T3

	Younger participants 9-11 years (*n* = 30)		Older participants 12-14 years (*n* = 22)	
	Mean	SD	Mean	SD
T1	32.68	13.32	28.75	12.05
T3	24.85	13.96	32.68	14.25

Note: RCADS-30 = Revised Child Anxiety and Depression Scale

Table 15

Means and Standard Deviations for the Younger (n = 30) and Older (n = 22) Participants PSWQ-C Total Scores at T1 and T3

	Younger participants 9-11 years (*n* = 30)		Older participants 12-14 years (*n* = 22)	
	Mean	SD	Mean	SD
T1	13.41	6.21	14.89	5.74
T3	11.06	5.14	13.13	6.30

Note: PSWQ-C = Penn State Worry Questionnaire for Children

Table 16

Means and Standard Deviations for the Younger (n = 30) and Older (n = 22) Participants on the 6 Factors of the RCADS-30 at T1 and T3

	Younger participants 9-11 years (*n* = 30)		Older participants 12-14 years (*n* = 22)	
	Mean	SD	Mean	SD
		T1		
Factor 1: MD	4.90	2.19	4.21	2.28
Factor 2: PD	3.61	3.41	3.48	2.36
Factor 3: SA	5.20	3.01	6.64	4.40
Factor 4: SAD	6.53	3.78	4.57	2.96
Factor 5: GAD	5.33	2.67	4.08	2.31
Factor 6: OCD	7.11	3.06	5.77	3.19
		T3		
Factor 1: MD	3.21	2.63	4.37	2.34
Factor 2: PD	3.02	2.64	4.55	3.46
Factor 3: SA	4.13	2.87	6.57	3.51
Factor 4: SAD	5.49	3.58	5.39	3.66
Factor 5: GAD	4.30	2.37	4.57	2.69
Factor 6: OCD	4.70	3.26	7.23	3.70

Note: MD = Major depression; PD = Panic disorder; SA = Social anxiety; SAD = Separation anxiety disorder; GAD = Generalised anxiety disorder; OCD = Obsessive compulsive disorder

As mentioned above, in order to determine which variables acted as possible predictors of change from pre-to-post intervention (T1-T3), repeated-measures ANOVA's were performed on the total scores of the RCADS-30 and PSWQ-C, for younger (*n* = 30) and older (n = 22) participants separately. Results indicated that there was a significant interaction between time and age on the RCADS-30. The main effect for time was significant for younger participants (n = 30), but not significant for older participants (*n* = 22), with *F*(1, 29) = 11.771, *p* = .002 (younger) and *F*(1, 21) = 2.429, *p* = .134 (older) respectively. Thus, in line with what was expected, for the younger participants the mean score at T3 (*M*=24.85) was significantly (*p* = .002) lower than the mean score at T1 (*M* = 32.68) (see Table 14).

A repeated measures ANOVA was also performed on the total score of the PSWQ-C, for younger (*n* = 30) and older (*n* = 22) participants separately, to determine if there was a significant change from T1 toT3. The main effect for time was not significant for the younger or older participants, with *F*(1, 29) = 4.097, *p* = .052 (older) and *F*(1, 21) = 0.981, *p* = .333 (older) respectively (see Table 15).

Multivariate repeated measures ANOVA's were also performed on the subscale scores of the RCADS-30, for younger (*n* = 30) and older (*n* = 22) participants separately, to determine if there were significant changes from T1 (pre-intervention) toT3 (post-intervention).

The multivariate main effect for time was significant for the younger participants, but not significant for the older participants, with *F*(6, 24) = 2.976, *p* = .026 (younger) and *F*(6, 16) = 0.647, *p* = .692 (older) respectively.

Post hoc comparisons with Bonferroni adjustments indicated that for the younger participants the mean score on Factor 1: Major depression at T3 (*M* = 3.21) was significantly (*p* = .001) lower than at T1 (*M* = 4.90), and the mean score on Factor 6: obsessive compulsive disorder at T3 (*M* = 4.70) was significantly (*p* = .003) lower than at T1 (*M* = 7.11). Thus, mean anxiety scores on both Factors 1 and 6 were significantly lower for the younger participants (aged 9-11) at T3 than at T1 (see Table 16).

6.4.2 Gender

Of the 52 participants included in the statistical sample (*N* =52), 28 (53.85%) were boys and 24 (46.15%) were girls. This showing that the gender distribution of the statistical sample was almost equal. Because trends in the general anxiety literature show that girls report more symptoms of anxiety then boys (McLoone et al., 2006; Muris, Schmidt et al., 2002; Muris et al., 2006; Perold, 2001) it was expected that girls in the present study might benefit more from the PAM programme than boys. Tables 16 and 17 below present the means and standard deviations for the boys (*n* = 28) and girls (*n* = 24) on the RCADS-30 and PSWQ-C respectively at T1 and T3.

Table 17

Means and Standard Deviations for the Boys (n = 28) and Girls (n = 24) RCADS-30 Total Scores at T1 and T3

	Boys (*n* = 28)		Girls (*n* = 24)	
	Mean	SD	Mean	SD
T1	27.49	11.13	35.14	13.66
T3	25.56	14.86	31.19	13.70

Note: RCADS-30 = Revised Child Anxiety and Depression Scale

Table 18

Means and Standard Deviations for the Boys (n = 28) and Girls (n = 24) PSWQ-C Total Scores at T1 and T3

	Boys (*n* = 28)		Girls (*n* = 24)	
	Mean	SD	Mean	SD
T1	12.55	6.40	15.77	5.11
T3	12.16	6.29	11.67	5.03

Note: PSWQ-C = Penn State Worry Questionnaire

As was the case for age, anxiety scores on the RCADS-30 and PSWQ-C for boys (*n* = 28) and girls (*n* = 24) were also compared to determine whether there was a significant effect for gender regarding anxiety symptoms from T1 to T3.

Repeated measures ANOVA's were performed on the total score of the RCADS-30, for boys (*n* = 28) and girls (*n* = 24) separately, to determine if there were significant changes from T1 (pre-intervention) to T3 (post-intervention). In contrast to what was expected, the main effect for time was not significant for both boys and girls, with $F(1, 27) = 0.495$, $p = .488$ (boys) and $F(1, 23) = 2.447$, $p = .131$ (girls) respectively (see Table 17).

A repeated measures ANOVA was also performed on the total score of the PSWQ-C, for boys (*n* = 28) and girls (*n* = 24) separately, to determine if there was a significant change from T1 (pre-intervention) to T3 (post-intervention). In line with what was expected, the main effect for time was significant for girls but not for boys, with $F(1, 23) = 13.411$, $p = .001$ (girls) and $F(1, 27) = 0.063$, $p = .804$ (boys). Thus, for girls the mean score at T3 (M= 11.67) was significantly ($p = .001$) lower than the mean score at T1 ($M = 15.77$) (see Table 18).

Multivariate repeated measures ANOVA's were also performed on the subscale scores of the RCADS-30, for boys (*n* = 28) and girls (*n* = 24) separately, to determine if there were significant changes from T1 (pre-intervention) to T3 (post-intervention). The multivariate main effects for time were not significant for both boys and girls, with *F*(6, 22) = 1.195, *p* = .346 (boys) and *F*(6, 18) = 0.575, *p* = .746 (girls) respectively.

6.4.3 Vision

Participants in the present study were divided into three visual sub-groups based on their degree of visual impairment. These three levels of visual impairment were distinguished according to defining criteria of the WHO (World Health Organization, 2000) (see Section 1.3.4 in Chapter 1 for a description of these three visual levels). Of the 52 participants included in the statistical sample (*N* = 52) 5 participants were classified as totally blind (*n* = 5, 9.62%), 12 were classified as severely visually impaired (*n* = 12, 23.08%), 34 were classified as partially sighted (*n* = 34, 65.38%) and the visual data for one participant was missing (*n* = 1, 1.92%).

In previous research conducted by Loxton et al. (2012) and Visagie et al. (2013) it was noted that there was a specific sub-group of children with visual impairments (i.e., children with severe visual impairment) who might benefit more from an anxiety intervention such as the PAM programme (these two studies are discussed in Section 3.8 in Chapter 3). For this reason, the researcher sought to determine whether this sub-group of children (children with severe visual impairment) might have benefited more from the PAM programme. However, after data collection it was noted that the numbers of participants in the totally blind (*n* = 5) and severely visually impaired (*n* = 12) groups were too small for further statistical analysis. As a result, these two groups (totally blind and severely visually impaired) were combined for analysis and are referred to as the legally blind group (*n* = 17). Tables 18, 19 and 20 below present the means and standard deviations for the legally blind (*n* = 17) and partially sighted (*n* = 34) groups on total and sub-scale scores on the RCADS-30 and PSWQ-C respectively at T1 and T3.

Table 19

Means and Standard Deviations for the Legally Blind (n = 17) and Partially Sighted (n = 34) Groups RCADS-30 Total Scores at T1 and T3

	Legally blind group (*n* = 17)		Partially sighted group (*n* = 34)	
	Mean	SD	Mean	SD
T1	31.41	12.21	30.58	13.37
T3	24.22	12.20	30.07	15.49

Note: RCADS-30 = Revised Child Anxiety and Depression Scale; vision information for 1 participant was missing

Table 20

Means and Standard Deviations for the Legally Blind (n = 17) and Partially Sighted (n = 34) Groups PSWQ-C Total Scores at T1 and T3

	Legally Blind group (*n* = 17)		Partially sighted group (*n* = 34)	
	Mean	SD	Mean	SD
T1	13.06	5.94	14.57	6.14
T3	10.47	5.74	12.55	5.67

Note: PSWQ-C = Penn State Worry Questionnaire for Children; vision information for 1 participant was missing

Table 21

Means and Standard Deviations for the Legally Blind (n = 17) and Partially Sighted (n = 34) Groups on the 6 Factors of the RCADS-30 at T1 and T3

	Legally blind group (*n* = 17)		Partially sighted group (*n* = 34)	
	Mean	SD	Mean	SD
		T1		
Factor 1: MD	4.75	2.09	4.53	2.35
Factor 2: PD	3.05	2.60	3.83	3.21
Factor 3: SA	5.11	3.23	6.12	3.96
Factor 4: SAD	6.04	2.84	5.40	3.87
Factor 5: GAD	5.66	2.88	4.27	2.29
Factor 6: OCD	6.79	3.35	6.38	3.14
		T3		
Factor 1: MD	3.25	1.82	4.01	2.83
Factor 2: PD	2.65	2.57	4.19	3.26
Factor 3: SA	4.35	2.67	5.54	3.66
Factor 4: SAD	5.74	2.62	5.31	4.05
Factor 5: GAD	4.36	2.39	4.43	2.61
Factor 6: OCD	3.88	3.12	6.59	3.57

Note: vision information for 1 participant was missing; MD = Major depression; PD = Panic disorder; SA = Social anxiety; SAD = Separation anxiety disorder; GAD = Generalised anxiety disorder; OCD = Obsessive compulsive disorder

As was the case for age and gender, anxiety scores on the RCADS-30 and PSWQ-C for the legally blind (*n* = 17) and partially sighted (*n* = 34) groups were also compared to determine whether there was a significant effect for vision regarding anxiety symptoms from T1 to T3.

Repeated measures ANOVA’s were performed on the total score of the RCADS-30, for the legally blind (*n* = 17) and partially sighted (*n* = 34) groups separately, to determine if there were significant changes from T1 (pre-intervention) to T3 (post-intervention). In line with what was expected, results indicated that there was a significant interaction between time and vision on the RCADS-30. The main effect for time was significant for the legally blind group (*n* =

17), but not significant for the partially sighted group (*n* = 34), with *F*(1, 16) = 7.845, *p* = .013 (legally blind) and *F*(1, 33) = 0.034, *p* = .855 (partially sighted) respectively. Thus, for the legally blind group the mean score at T3 (*M*= 24.22) was significantly (*p* = .013) lower than the mean score at T1 (*M* = 31.41) (see Table 19).

A repeated measures ANOVA was also performed on the total score of the PSWQ-C, for the legally blind (*n* = 17) and partially sighted (*n* = 34) groups separately, to determine if there was a significant change from T1 toT3. The main effect for time was not significant for the legally blind or partially sighted groups, with *F*(1, 16) = 3.345, *p* = .086 (legally blind) and *F*(1, 33) = 2.235, *p* = .144 (partially sighted) respectively (see Table 20).

Multivariate repeated measures ANOVA's were also performed on the subscale scores of the RCADS-30, for the legally blind (*n* = 17) and partially sighted (*n* = 34) groups separately, to determine if there were significant changes from T1 (pre-intervention) toT3 (post-intervention).

The multivariate main effect for time was significant for the legally blind group, but not significant for the partially sighted group, with *F*(6, 11) = 4.55, *p* = .048 (legally blind) and *F*(6, 28) = 0.506, *p* = .799 (partially sighted) respectively.

Post hoc comparisons with Bonferroni adjustments indicated that for the legally blind group the mean score on Factor 1: Major depression at T3 (*M* = 3.24) was significantly (*p* = .016) lower than at T1 (*M* = 4.74), and the mean score on Factor 6: obsessive compulsive disorder at T3 (*M* = 3.88) was significantly (*p* = .014) lower than at T1 (*M* = 6.79). Thus, mean anxiety scores on both Factors 1 and 6 were significantly lower for the legally blind group at T3 than at T1 (see Table 21).

6.5 Discussion of the quantitative results

In the sections below the quantitative results presented above will be discussed and their implications will be presented.

6.5.1 Discussing the between-group effects

Results at T1 (pre-intervention IIG and pre-waitlist DIG) revealed that there were no significant differences between the IIG (*n* = 27) and DIG (*n* = 25) on any of the anxiety measures (RCADS-30 or PSWQ-C) (see Tables 11 & 12).

With regards to anxiety scores on the RCADS-30, the IIG (*M* =27.77, *SD* = 11.31) reported a lower mean anxiety score when compared to the DIG (*M* = 34.52, *SD* = 13.76). The same can be said for anxiety scores on the PSWQ-C, as the IIG (*M* = 12.84, *SD* = 5.95) also reported a lower mean anxiety score when compared to the DIG (*M* = 15.32, *SD* = 5.91) at T1. However, these differences in mean anxiety scores were found to be non-significant. These non-significant findings are in accordance with hypothesis 1 and what was expected at T1 (pre-intervention IIG and pre-waitlist DIG), it was expected that the two groups would report similar anxiety scores as neither of the groups (IIG nor DIG) had yet been delivered the PAM programme.

Again results at T2 (post-intervention IIG: post-waitlist DIG) revealed that there were no significant differences between the IIG (*n* = 27) and DIG (*n* = 25) on any of the anxiety measures (RCADS-30 or PSWQ-C) (see Tables 11 & 12).

With regards to anxiety scores on the RCADS-30, the IIG (*M* = 29.45, *SD* = 13.94) reported a slightly lower mean anxiety score when compared to the DIG (*M* = 31.75, *SD* = 8.84) at T2. Scores on the PSWQ-C showed a similar trend, with the IIG (*M* = 11.31, *SD* = 5.97) reporting a lower mean anxiety score when compared to the DIG (*M* = 14.33, *SD* = 6.31). Although these findings are in line with what was expected at T2: that as a result of receiving the PAM programme the IIG would report lower anxiety scores when compared to the DIG, these differences in anxiety scores between the IIG and DIG were found to be non-significant. These findings were in contrast to hypothesis 2 and what was expected at T2, as it was expected that there would be a significant difference between the two group’s anxiety scores as the IIG had now been delivered the PAM programme. It was expected that the IIG would score significantly lower than the DIG on the RCADS-30 and PSWQ-C.

These findings which noted no significant differences between the IIG and DIG at T2 are in contrast with previous studies where intervention group participants (compared to WLC group participants) reported significant reductions in anxiety scores immediately after receiving an anxiety intervention (FRIENDS) (Barrett & Turner, 2001; Lowry-Webster et al., 2001; Shortt et al., 2001). Thus, findings at T2 are contrary to hypothesis 2, as the self-reported anxiety scores of the IIG were not significantly lower than the self-reported anxiety scores of the DIG. Therefore, at T2 (post-intervention IIG: post-waitlist DIG) results suggest that the PAM programme did not have a statistically significant effect on the IIG’s self-reported anxiety scores.

Results at T3 (3-month follow-up IIG: post-intervention DIG) once again revealed that there were no significant differences between the IIG (*n* = 27) and DIG (*n* = 25) on any of the anxiety measures (RCADS-30 or PSWQ-C) (see Tables 11 & 12).

With regards to anxiety scores on the RCADS-30, the IIG (*M* = 26.99, *SD* = 16.64) once again reported a slightly lower mean anxiety score when compared to the DIG (*M* =

29.43, *SD* = 11.93). When looking at anxiety scores on the PSWQ-C, the IIG again reported a slightly lower mean anxiety score (*M* = 11.29, *SD* = 6.44) when compared to the DIG (*M* = 12.64, *SD* = 4.79). Although there were slight differences between anxiety scores for the IIG and DIG on the RCADS-30 and PSWQ-C at T3, these differences were non-significant. These findings are in accordance with hypothesis 3 and what was expected at T3, as it was hypothesised that there would be no significant difference between the anxiety scores for the IIG and DIG at T3. However, because the findings are in line with the hypothesis, this does not mean that they are correct, these findings need to be interpreted keeping the results obtained at T2 (post-intervention IIG: pre-intervention DIG) in mind. Because there was no significant difference between the IIG and DIG at T2, and anxiety scores on the RCADS-30 and PSWQ-C remained virtually unchanged from pre-to-post-intervention (T1 to T3) these results should be interpreted with caution.

At follow-up 45 of the original 52 participants still remained in the study. Results at T4 (6-month follow-up IIG: 3-month follow-up DIG) once again revealed that there were no significant differences between the IIG (*n* = 23) and DIG (*n* = 22) on any of the anxiety measures (RCADS-30 or PSWQ-C) (see Tables 11 & 12).

With regards to anxiety scores on the RCADS-30, the IIG (*M* = 27.91, *SD* = 15.16) once again reported a slightly lower mean anxiety score when compared to the DIG (*M* = 29.41, *SD* = 12.75). Just as with the previous three times of assessment, at T4 the IIG (*M* = 11.04, *SD* = 7.02) once again reported a slightly lower mean anxiety score on the PSWQ-C when compared to the DIG (*M* = 12.41, *SD* = 7.25).

Theoretically these findings are in line with hypothesis 4 and what was expected at T4 (6-month follow-up IIG: 3-month follow-up DIG) as both groups (IIG and DIG) had completed the PAM programme at T3, and it was expected that results obtained on the RCADS-30 and PSWQ-C at T3 would be maintained (remain constant) at follow-up (T4). However, these findings should be put in perspective: even though, as predicted, there was no difference between the anxiety scores reported by the IIG and DIG at T4, these findings need to be viewed in context with the findings noted at T2 and T3. At the previous two times of testing (T2 and T3) no significant differences were found between the IIG and DIG. Thus, findings at T4 do not imply that the non-significance of anxiety scores between the two groups can be attributed to the effects of the PAM programme. Possible factors for the non-significance of these between-group effects are presented in Section 6.5.4.

Although differences in anxiety scores on the RCADS-30 and PSWQ-C between the IIG and DIG were non-significant at all four times of testing, it is interesting to note that across all four times of testing mean anxiety scores as reported by the IIG on the two anxiety measures (RCADS-30 and PSWQ-C) were lower for this group throughout. One possible explanation for this occurrence could relate to the fact that at the commencement of the programme there were four participants who reported elevated anxiety scores on the RCADS-30 which fell within the clinical range, and all four of these participants were in the DIG.

6.5.2 Discussing the within-group effects

Anxiety scores obtained on the two outcome measures (RCADS-30 and PSWQ-C) yielded non-significant results across all four time-points (T1-T4) for both the IIG and DIG. In other words, there were no significant within-group effects for the anxiety data obtained from the RCADS-30 and PSWQ-C. Scores obtained on these two anxiety measures (RCADS-30 and PSWQ-C) varied only slightly from T1 to T4 for the IIG and DIG respectively.

Thus, in contrast with hypothesis 5 (first within-group's hypothesis) there was no significant decline in anxiety scores as measured by the RCADS-30 and PSWQ-C from T1 to T2 for the IIG. Opposite to what was expected, there was actually a slight increase in mean anxiety scores as reported by the IIG on the RCADS-30 from t1 (*M* = 27.77, *SD* = 11.31) to T2 (*M* = 29.45, *SD* = 13.94). One possible explanation for this increase could relate to the fact that exposure to the PAM programme increased participants' anxiety awareness, thus leading to them being able to identify and thus report more symptoms of anxiety after receiving the intervention (this possibility is discussed in more detail in Section 6.5.4). It is important to note however that anxiety scores for the IIG did not continue to increase, but decreased again at T3 (*M* = 26.99, *SD* = 16.64).

Also contrary to hypothesis 6 (the second within-groups hypothesis) there was no significant decline in anxiety scores as measured by the RCADS-30 and PSWQ-C from T2 to T3 for the DIG. There was a very slight decline in mean anxiety scores as measured on the RCADS-30 for the DIG from T2 (*M* = 31.75, *SD* = 8.84) to T3 (*M* = 29.43, *SD* = 11.93), although this decline was non-significant. In regard to this finding, it is possible that the small number of participants (*n* = 22) in the DIG, which reduces statistical power according to Graziano and Raulin (2004), contributed to the lowering in mean anxiety scores within the DIG from T2 to T3 being found non-significant.

Thus, it can be concluded that according to the general trend of the data scores remained relatively unchanged from T1 to T4 for both the IIG and the DIG, showing that the PAM programme did not lead to a lowering in self-reported anxiety scores as was expected.

Possible factors for the non-significance of the within-group effects are presented in Section 6.5.4.

Considering the above results, data relating to the main analyses (between-and-within-group effects) can be summarised as follows. Anxiety scores on the RCADS-30 and PSWQ-C yielded non-significant findings across all four times of testing (i.e., neither significant between-group nor within-group effects were noted for the IIG or DIG on any of the anxiety measures (RCADS-30 or PSWQ-C)). However, (although not reported above), interestingly when taking the statistical sample as a whole (*N* = 52) into account, there was a significant decline in the total anxiety score on the PSWQ-C from T1 to T3 with *F*(1, 51) = 4.436, *p* = .040. Thus, the total score on the PSWQ at Time 3 for the total sample (*N* = 52) was significantly lower than at Time 1. Thus it would seem that even though programme effects were not evident between or within groups on the main outcome measure (RCADS-30) that the programme might have had an overall effect on reducing participants' anxiety as reported on the PSWQ-C. Possible factors which could have contributed to the non-significance of outcome data are discussed in Section 6.5.4.

6.5.3 Discussion of predictor effects

As mentioned above, various factors such as age, gender and level of visual impairment (vision) have also been noted to influence the reporting of anxiety. For this reason, the impact of the PAM programme when these three variables were taken into account was explored. Results from these explorations are discussed below.

6.5.3.1 Discussing age as a predictor variable

As mentioned previously in Chapter 3, anxiety symptoms are more prevalent in younger than older children (King et al., 2005) and the types of anxiety which are reported vary from one developmental stage to the next (see Section 3.1 in Chapter 3) (Stallard, 2010). Leading from this the present study set out to determine whether younger (aged 9-11) and older (aged 12-14) participants reported any significant reductions in anxiety symptoms after being delivered the PAM programme.

Post-intervention (T3) results on the RCADS-30 indicated a significant reduction in total anxiety scores from T1 (*M* = 32.68, *SD* = 13.32) to T3 (*M* = 24.85, *SD* = 13.96) for the younger participants. This indicating that anxiety symptoms as reported on the RCADS-30 were significantly lower for younger participants at T3 (post-intervention) when compared to T1 (pre-intervention). In contrast, total mean anxiety scores for older participants on the

RCADS-30 increased slightly from T1 (*M* = 28.75, *SD* = 12.05) to T3 (*M* = 32.68, *SD* = 14.25), however this increase was non-significant (see Table 14). Furthermore, there were no significant differences in total anxiety scores on the PSWQ-C for the younger and older participants from T1 (pre-intervention) to T3 (post-intervention) (see Table 15).

These positive findings for the younger participants on the RCADS-30 are in line with what was expected, as previous studies (Barrett et al., 2005; Lock & Barrett, 2003) noted that early intervention in middle-childhood is potentially more advantageous then when intervention occurs at a later age. Linking to this, Essau et al. (2012) noted that the younger children (aged 9-10 years) who took part in their study displayed positive treatment gains immediately post-intervention, while older children (aged 11-12 years) only reported reductions in anxiety at 6-and-12-month follow-up. Thus, with ensuing time results for the older participants in the present study may still become significant.

Although the assessment of depression was not the main aim of the present study, it was also interesting to note that the PAM programme had a significant effect on the reduction of depressive symptoms (RCADS-30, factor 1) and OCD (RCADS-30, factor 6) for younger participants. Reductions in depression were also noted in previous studies where the FRIENDS programme was found to have a significant effect on depressive symptoms (Barrett & Turner, 2001; Barrett et al., 2005; Essau et al., 2012; Liddle & Macmillan, 2010; Lowry-Webster et al., 2001; Lowry-Webster et al., 2003). However, these studies did not make a distinction as to whether these reductions in depression were applicable to different age-groups of children. This withstanding, results relating to the reduction of depressive symptoms in the present study are very promising as anxiety and depression are often co-morbid with one another (Brady & Kendall, 1992; Essau, 2005).

One possible explanation for the PAM programme displaying more positive results in younger participants may relate to qualitative findings which were reported by the research facilitators On the qualitative session evaluation forms (Qualitative form 3: research facilitator observation form, Appendix O). Research facilitators remarked that some of the PAM programme’s content may be pitched at a younger level, thus causing older participants to become bored and lose concentration (see Section 7.3.3 in Chapter 7). Therefore, the possibility exists that because they did not find the programme’s content engaging enough older participants did not pay as close attention to the skills which they were taught in the PAM programme, and subsequently did not apply these skills to anxiety provoking situations in their own lives. This in turn leading to their reported anxiety symptoms remaining unchanged.

Another possible explanation may relate to session attendance. Slightly more (90%) of the younger participants attended 7 or more PAM programme sessions compared to 81.8% of the older participants who attended seven or more sessions. Thus, it may be that because younger participants attended more PAM sessions they may have benefited more from the programme's content. This possibly contributing to younger participants reporting lower anxiety scores on the RCADS-30 post-intervention (T3).

6.5.3.2 Discussing gender as a predictor variable

Gender is another factor which is said to influence children's reporting of anxiety symptoms. Epidemiological studies show that girls are around one and a half to two times more likely to be diagnosed with an anxiety disorder compared to boys (McLoone et al., 2006). This was also the case for children in previous South African studies, where girls reported significantly more symptoms of anxiety than boys (Muris, Schmidt et al., 2002; Muris et al., 2006; Perold, 2001). Leading from this, the present study set out to determine whether boys and girls reported any significant differences in the reduction of anxiety symptoms after being delivered the PAM programme.

Post-intervention (T3) results indicated that there was no significant difference in mean anxiety scores for boys or girls as reported on the RCADS-30 from T1 (pre-intervention) to T3 (post-intervention) (see Table 17). However, when looking at total mean anxiety scores on the PSWQ-C, post-intervention results indicated a significant decrease in mean anxiety scores as reported by the girls from T1 (*M* = 15.77, *SD* = 5.11) to T3 (*M* = 11.67, *SD* = 5.03) (see Table 18). This indicating that PSWQ-C total scores were significantly lower for girls at T3 (post-intervention) when compared to T1 (pre-intervention).

These positive findings for girls on the PSWQ-C are interesting, as the PSWQ-C measures the tendency for children to engage in excessive, generalised and uncontrolled worry (Chorpita et al., 1997), and literature indicates that girls tend to report more worries than boys. Results at T1 on the PSWQ-C supported this notion as girls (*M* = 15.77, *SD* = 5.11) reported higher anxiety scores when compared to boys (*M* = 12.55, *SD* = 6.40). Findings are in line with the factors put forth by Lewinsohn et al. (cited in Essau & Gabbidon, 2013) who stated that the higher incidence of anxiety in girls may possibly be attributed to their general tendency to be ruminative (worry) about current and future events (Essau & Gabbidon, 2013). Thus, because girls reported more worries to start off with (T1 scores on the PSWQ-C) they may have benefited more from the PAM programme in this respect as they had more to gain/learn in terms of managing their worries than boys.

6.5.3.3 Discussing vision as a predictor variable

Loxton et al. (2012) and Visagie et al. (2013) also noted that level of vision could be a possible predictor when it comes to reporting anxiety and fear. In their 2012 paper, Loxton et al. highlighted significant differences in fearfulness between three groups of visually impaired children who had varying levels of sight (i.e., partially sighted, severely visually impaired and totally blind). It was noted that children with severe visual impairment were more fearful than the partially sighted and totally blind children, and they reported the highest number (M = 42.09, SD = 17.84) as well as level (M = 171.63, SD = 28.60) of fear (fear was measured on the FSSC-SA) (Burkhardt et al., 2012). Leading from this, the present study set out to determine whether these visual groups totally blind (n = 5), severely visually impaired (n = 12) and partially sighted (n = 34) reported any significant reductions in anxiety symptoms after being delivered the PAM programme.

Following data collection, it was noted that the numbers of participants in these three visual sub-groups were too small for statistical analysis, therefore the two smaller groups (totally blind (n = 5) and severely visually impaired (n = 12)) were combined to form the legally blind group (n = 17) and subsequently compared to the partially sighted group (n = 34).

Post-intervention (T3) results on the RCADS-30 indicated a significant reduction in total anxiety scores from T1 (M = 31.41, SD = 12.21) to T3 (M = 24.22, SD = 12.20) for the legally blind group. This indicating that anxiety symptoms as reported on the RCADS-30 were significantly lower for the legally blind group (totally blind and severely visually impaired participants) at T3 (post-intervention) compared to T1 (pre-intervention). In contrast, total mean anxiety scores for the partially sighted group on the RCADS-30 remained constant from T1 (M = 30.58, SD = 13.37) to T3 (M =30.07, SD = 15.49) (see Table 19). Furthermore, there were no significant differences in total anxiety scores on the PSWQ-C for the legally blind and partially sighted groups from T1 (pre-intervention) to T3 (post-intervention) (see Table 20).

These results are very positive as the researcher had hoped that the PAM programme would be especially helpful to children with severe visual impairments (who were now in the legally blind group), as this group of children was identified as a high-risk sub-group within the broader population of children with visual impairments for the possible development of later anxiety disorders (see Section 3.8 in Chapter 3 for an overview of possible explanations for this higher fear reactivity).

Although not the primary aim of the present study, it was also interesting to note that the PAM programme had a significant effect on the reduction of symptoms of depression

(RCADS-30, factor 1) and OCD (RCADS-30, factor 6) for participants in the legally blind group.

Summarising the results relating to the above predictor variables and their influence on programme outcomes, it appears that the PAM programme was especially beneficial for girls, younger participants (aged 9-11) and severely visually impaired and totally blind children in the legally blind group. Results relating to the legally blind group are particularly noteworthy, as children with severe visual impairments (who were now in the legally blind group) had been identified as a high-risk sub-group within the broader population of children with visual impairments for the possible development of future anxiety disorders (Loxton et al., 2012; Visagie et al., 2013; Visagie et al., 2015).

6.5.4 Synthesising the quantitative results

The purpose of the quantitative programme evaluation was to evaluate the effectiveness of the PAM programme on participant reported symptoms of anxiety before and after receiving the intervention. While results are contrary to what was predicted by the six hypotheses, several explanations may be relevant regarding the non-significance of results.

Firstly, the present study's small sample size cannot be ignored. Graziano and Raulin (2004) state that small sample sizes result in reduced statistical power. Therefore, it is possible that statistically significant results between the IIG and DIG did exist; however, these results could not be statistically supported.

The second explanation relates to the present study's placement along the prevention continuum (being a universal intervention); all participants (*N* = 52) anxiety scores on the RCADS-30, with the exception of four participants, were in the "normal" range at T1. Thus, the groups could not be expected to differ substantially before and after the implementation of the PAM programme, as the participants who took part were not very anxious to start off with. This finding is in line with that reported in previous studies where CBT-based anxiety intervention programmes (e.g., FRIENDS) were implemented universally (Rose et al., 2009).

Thus, because participants were not reporting elevated anxiety symptoms to start off with, they could not be expected to differ substantially before and after receiving the PAM programme (which is a universal anxiety intervention). Rose et al. (2009) who also found non-significant results stated that one must then consider the financial and time implications of offering a programme to a whole group of children if the majority of children are not anxious.

This is an ongoing debate regarding universal programme intervention, and also one which the researcher took note of. When designing the study, the researcher was fully aware of the possible small sample size (and small effect size), as “unfortunately” the population of children with visual impairments is a small one. The present study included all visually impaired children who attend all special schools within the geographical area of the Western Cape Province. The researcher was also aware of the fact that the effect sizes for universal interventions are smaller than for selective or indicated interventions, and that the effect sizes for prevention as opposed to treatment studies are also smaller. Despite these facts the researcher still decided to go ahead with the present study. In a previous South African, universal intervention study (where an even smaller sample was used, $n = 46$) significant differences for anxiety scores pre-, post- and follow-up intervention, were noted (Mostert & Loxton, 2008). This may have also been the case for the present study. Furthermore, the population of children with visual impairments is one which has been neglected in previous anxiety research (see Gullone, 1996, for an overview). Thus, the researcher felt that it would be better to do something then do nothing, even if effect sizes are small. According to a public health approach even small effects can be meaningful, as decreasing the distribution of symptoms in the population by even a small amount may often correspond to a reduction in the occurrence of overall cases of disorder (Andrews, Szabo, & Burns, 2002; Mychailyszyn, Brodman, Read, & Kendall, 2012). However, in anticipation for small effect sizes (as a result of the small sample and universal intervention) the researcher included quite a bit of qualitative data in the research as well (qualitative findings are presented and discussed in Chapter 7). This qualitative data provided the researcher with information as to the process of programme delivery (i.e., feasibility) and the children’s personal perceptions of the programme (i.e., acceptability). This inclusion of additional qualitative measures was in line with the recommendation that future studies go beyond paper and pencil questionnaires (quantitative measures) to determine whether interventions are leading to change and whether they are actually having an effect in children's lives (Chambless & Hollon, 1998; Mychailyszyn et al., 2012).

In the third instance two self-report questionnaires (RCADS-30 and PSWQ-C) were used to gather the anxiety data in the present study. Although self-report questionnaires are widely used in previous studies which evaluated anxiety interventions, this form of data collection is not without its limitations. Kendal and Chansky (cited in Ronan, 1996) stated that anxious children often tend to report socially desirable answers on self-report measures. This then resulting in the under-reporting of anxiety symptoms. Thus, the possibility of participants “faking good” in the present study cannot be ignored.

Another explanation could relate to the use of multiple-informants for data collection. Previous studies have noted non-significant results post-intervention on self-reports, however, when looking at other measures of anxiety (e.g., diagnostic interviews and parent or teacher reports) intervention effects were significant (Bernstein et al., 2005; Bernstein et al., 2008; Ginsburg, 2009; Nauta et al., 2003; Urao et al., 2016; Wood, McLeod et al., 2009). This may have also been the case in the present study, but because teachers failed to return SDQ questionnaires and the participants' parents were unable to participate additional sources to assess intervention outcomes were not available.

A further explanation pertaining to the non-significance of post-intervention results could relate to the fact that participants may have also failed to acknowledge anxiety prior to treatment and developed their ability to do so through the anxiety intervention, thus negating self-reported improvement (Nauta et al., 2003). Children's own anxiety standards may have changed between the pre-intervention assessment and post-intervention assessment periods. For example, in answering the item "I feel scared if I have to sleep on my own" (item 16 on the RCADS-30), if participants answered "often" before the programme, there is the possibility that they gave the same answer "often" even if they started to sleep alone after receiving the programme. This is a further limitation of questionnaire-based studies; researchers are not able to ask follow-up questions to gain more insight. Therefore, it may be useful to conduct interview-based evaluations concurrent to anxiety questionnaires in the future (Urao et al., 2016).

The PAM programme was based on previous CBT-based programmes which made use of CBT content to treat anxiety disorders which had subsequently been converted to use for prevention purposes. There is a possibility that some children did not fully understand the session content and were thus not able to use their acquired skills since each session was conducted in a group format without detailed attention being given to each individual child's level of understanding. Thus, there is a possibility that even though participants received the PAM programme that they did not incorporate the skills which they were taught into their own lives. For this reason, it may be helpful for future studies to evaluate the level of CBT understanding and achievement for each participant more carefully (Urao et al., 2016).

Lastly, it may also be that significant effects may present with ensuing time as children become more adept at using their newly learnt anxiety management skills (Mostert & Loxton, 2008). For this reason, the researcher conducted a one-year follow-up study; however, results from this study are not yet available.

Keeping the above-mentioned factors in mind, perhaps the most confident statement which can be made regarding the quantitative results is that the PAM programme holds promise for preventing the development of anxiety symptoms in children with visual impairments when the programme is delivered universally. Although there was no significant decrease in anxiety symptoms as reported by the RCADS-30, there were also no children who scored below the clinical cut-off at pre-intervention (T1) who moved into the clinical range at post-intervention (T4). Thus, in terms of preventive effects it may be cautiously concluded that the PAM programme can help increase awareness of anxiety as a significant health issue for children (Rose et al., 2009) and that the PAM programme has the potential to strengthen the resilience of children who are not highly symptomatic.

6.6 Chapter summary

This chapter reported results relating to the quantitative evaluation of the present study. The chapter commenced with a brief introduction, which re-defined the statistical sample and re-stated the study’s timeline. A description of how the missing data was dealt with was also provided. Thereafter, a descriptive analysis which provided a broad overview of the trend of the data was given. The main analysis in relation to the testing of the six hypotheses was then presented. Thereafter analyses pertaining to the influence of possible predictor variables (age, gender and vision) on anxiety symptoms was provided. The chapter concluded by discussing and synthesising the quantitative results which were obtained.

Despite not seeing statistically significant effects as captured by the primary outcome measure (RCADS-30), the researcher was still keen to know about practical programme implementation and the programme’s meaningfulness to participants. As a result, participants in the present study also participated in a qualitative review of the PAM programme, the results of which are presented in Chapter 7.

CHAPTER 7: QUALITATIVE PROGRAMME EVALUATION, FINDINGS AND DISCUSSION

This chapter provides an analysis of the qualitative data which was gathered during the intervention and reports on the acceptability and feasibility of the PAM programme. The chapter starts off by providing a definition of the terms acceptability and feasibility. Thereafter, background in order to contextualise the qualitative programme evaluation is provided. Qualitative data gathered from the 52 participants and 3 research facilitators supporting the PAM programme's acceptability and feasibility is then presented, and the chapter concludes by discussing these findings.

7.1 Defining acceptability and feasibility

Acceptability refers to how the recipients of (or those delivering) a specific intervention (in the case of the present study the PAM programme) perceive and react to it (Bowen et al., 2009). Thus, acceptability data which was noted by the participants ($N = 52$) and research facilitators ($N = 3$) in the present study provided the researcher with information as to which aspects of the PAM programme work and which aspects need to be changed or modified. Acceptability data refers mainly to the programme's content and perceived delivery.

Feasibility refers to the extent to which an intervention can be used effectively within a specific context (in the case of the present study the two special schools) (Comer & Kendall, 2013). Feasibility data enables researchers to assess whether a study's ideas and findings can be shaped to be relevant and sustainable. This type of research can indicate what (if anything?) in a study's method or protocol needs modification (Bowen et al., 2009) and what aspects seem to work. Thus, feasibility data gathered from the present study provided the researcher with information pertaining to the programme's practical implementation.

7.2 Contextualising the qualitative programme evaluation

When setting up the evaluation of a "new" programme it is not always possible to anticipate which specific measures will best capture the changes brought about by the programme. In the case of the present study it was hypothesised that there would be a significant change in child-reported anxiety symptoms as measured by the RCADS-30 and PSWQ-C from pre-to-post-intervention, this however was not the case. Despite not seeing statistically significant intervention effects on the quantitative anxiety measures, the researcher was still interested in assessing four qualitative elements:

- Firstly, the researcher wanted to find out what the participants themselves thought of the PAM programme and what elements (if any) of the programme they liked and found to be most helpful.
- Secondly, as the present study was the first to employ the PAM metaphor, the researcher wanted to find out from participants themselves how they experienced /perceived the PAM metaphor.
- Thirdly, the researcher wanted to find out more about the acceptability of the PAM programme's content and delivery from the perspective of the research facilitators.
- Lastly, the researcher also wanted to examine the feasibility of delivering the PAM programme within the two special schools.

Relating to the first three aspects, according to Barrett and Turner (2001), when implementing a programme it is not only important to determine whether a programme works, but also whether the participants considered the programme to be beneficial and worthwhile (i.e., do the participants consider the programme to be acceptable). For this reason, after completion of the ten sessions of the PAM programme, all participants (*N* = 52) were asked to complete two short questionnaires compiled by the researcher (Qualitative Form 1: Qualitative evaluation of the PAM programme form (Appendices K & L) and Qualitative Form 2: My PAM dog form (Appendices M & N). In order to gain further insight into the acceptability of the PAM programme's content and method of delivery the three research assistants were also asked to complete a session evaluation form (Qualitative form 3: Research facilitator observation form, Appendix O) after each session. Results obtained from these three qualitative measures are reported and discussed in Section 7.2.

In relation to the fourth aspect (i.e., the PAM programme's feasibility), in order for programme's to be meaningful they need to achieve good recruitment, retention and attendance rates, the methodology needs to be acceptable and practical, and assessments/outcomes need to be accessible and easily completed (Stallard & Buck, 2013). Results relating to these three aspects are reported in Section 7.3.

7.3 Acceptability of the PAM programme

As mentioned above, acceptability refers to how the recipients of an intervention perceive and react to it (Bowen et al., 2009). In an attempt to assess these perceptions and reactions, the present study included three qualitative questionnaires. Two of these questionnaires were completed by the 52 participants (Qualitative Form 1: Qualitative evaluation of the PAM programme, Appendices K and L and Qualitative Form 2: My PAM dog form, Appendices M and N). The three research facilitators completed the third qualitative measure (Qualitative Form 3: research facilitator observation form, Appendix O).

Questions on the first qualitative form, the qualitative evaluation of the PAM programme form (Appendices K & L) provided an opportunity for participants to give qualitative feedback relating to their experience of and satisfaction with the PAM programme. Information provided by participants on the second qualitative form, the My PAM dog form (Appendices M & N) provided the researcher with more insight relating to how participants experienced and accepted the PAM metaphor and tangible PAM soft toy dog. Information provided by the research facilitators on the third form, Research facilitator observation form (Appendix O) provided the researcher with feedback relating to the acceptability of the PAM programme's content and delivery from the perspective of the research facilitators.

7.3.1 Responses on Form 1: Qualitative evaluation of the PAM programme form

On the first questionnaire (Qualitative evaluation of the PAM programme form, Appendices K & L), participants were asked three open-ended questions pertaining to how they experienced the overall PAM programme, these questions included:

- What did you like most about the PAM programme?
- What did you learn from the PAM programme?
- Do you think anything about the PAM programme should be changed? If you said yes, what should be changed?

Overall participants' responses to the PAM programme were very positive, with the majority of participants (*n* = 40, 76.9%) being able to name something that they enjoyed about the PAM programme. Most participants (*n* = 10) reported that they liked the whole PAM programme and everything about it (e.g., "*I liked every section we had here in the PAM programme*" [girl, 12]). Furthermore, participants' responses also related to liking the ways in which the researcher and facilitators interacted with them (e.g., *"I liked the way Lisa teach me and I've learnt a lot from the PAM programme"* [girl, 12]); enjoying the activities, stories and games that they took part in (e.g., "*I liked the times when we played games and when we got our charms"* [girl, 11]); enjoying to learn about their own feelings and thoughts (e.g., "*I enjoyed myself and what I liked the most was talking about our thoughts"* [boy, 13]); enjoying to learn how to make plans (e.g., "*I liked the learning about the F-I-N-E plan"* [boy, 11]);

liking their PAM toy dogs and the charms (e.g., *I like "the doll"* [girl, 9]); and participants also reported enjoying to learn about relaxation and how to implement relaxation skills (e.g., "*Well I liked everything, but I liked the day that we got our CD's and when we practiced with them most* (referring to the progressive muscle relaxation CD's that they were given)" [girl, 12]). Table 22 represents the responses of the 52 participants.

The researcher is aware of the fact that enquiring about the likeability of a programme may be a function of demand characteristics (Cooley et al., 2004), and kept this in mind when interpreting participant feedback. However, the researcher noted that the participants frequently expressed their enthusiasm for the programme, not only on the post-intervention qualitative evaluation, but also in their spontaneous descriptions of their experiences throughout the programme's implementation and in their disappointment when they heard that the programme was close to conclusion (e.g., in session 9 one of the participants asked if they couldn't start the PAM programme from session 1 again, another participant had said that 2014 was the best year ever because of the PAM programme and another participant said that the last five weeks (referring to the duration of the PAM programme had been the best weeks of her life.

Table 22

All Participants (N = 52) Responses Relating to What they Liked most about the PAM Programme

What did you like most about the PAM programme?		
Respondents *n* (%)	Liked:	Response examples:
10 (19.2%)	The whole PAM programme, couldn't name one specific aspect	"I liked every section we had here in the PAM programme" [girl, 12] "I liked everything, the whole programme" [girl, 11] "I like the knowledge that it give me" [girl, 13]
7 (13.5%)	The games, activities and stories	"I liked the times when we played games and when we got our charms" [girl, 11] "I liked when we did the advert, it was nice and fun" [girl, 13] "The black shoe game" [boy, 9] "I loved when we did the adverts and thoughts and had the party" [girl, 11] "I liked the games we played, I enjoyed myself" [boy, 13] "I did like when PAM go to school (referring to a particular story in the programme)" [boy, 13] I liked "to play with my dog and listen to the story" [girl, 14]
7 (13.5%)	The soft PAM toy dog and the charms	I like "the doll" [girl, 9] I liked "the guide dog" [boy, 11]

Table 22 *continued*

Respondents *n* (%)	Liked:	Response examples:
6 (11.5%)	Learning and talking about feelings (emotions) and thoughts	"I enjoyed myself and what I liked the most was talking about our thoughts" [boy, 13] "What I like about the PAM programme is that it helps people with your thoughts" [girl, 10] I liked "when we think of our own positive and negative thoughts" [boy, 13] I liked "talking about feelings…" [boy, 10)
4 (7.7%)	Interactions with the researcher and research facilitators	I liked "the fact that we had such nice teachers" [girl, 10] "I liked when they (the researcher and facilitators) were learning me" [girl, 9] "I liked the way Lisa teach me and I've learnt a lot from the PAM programme" [girl, 12]
3 (5.8%)	The FINE plan and learning how to make plans	I liked "when we learnt about the FINE plan" [boy, 11] "I liked the learning about the F-I-N-E plan" [boy, 11]

Table 22 *continued*

Respondents *n* (%)	Liked:	Response examples:
2 (3.8%)	The relaxation techniques and how to use them	I liked “when we go to our favourite place (referring to visualisation)” [girl, 11] “Well I liked everything, but I liked the day that we got our CD’s and when we practiced with them most (referring to the progressive muscle relaxation CD’s that they were given)” [girl, 12]
1 (1.9%)	Interactions with each other and learning from one another	“To be honest with each other” [girl, 14]
12 (23.1%)	Answers were missing/illegible	-

It also seems as if the PAM programme was helpful, as once more the majority of participants (*n* = 40, 76.9%) were able to name at least one thing which the PAM programme had taught them. Responses related to learning about their feelings and thoughts (e.g., I learnt about "feeling scared and what to do when you feel scared" [boy, 10], I learnt "to listen to your thoughts" [girl, 14]); learning about relaxation and how to implement relaxation techniques (e.g., I learnt "about how to relax and what to do when you feel scared" [girl, 13]); learning about PAM's F-I-N-E plan and how to solve their problems (e.g., I learnt "inner thoughts, feeling scared, new helpful thoughts and plans, evaluate and reward" [girl, 9]); learning from the charms (e.g., "I learnt about the charms" [boy, 10]); and some of the participants stated that the PAM programme had taught them a moral lesson (e.g., "I learnt that it is important to help someone, that you must help one another" [girl, 10]). Table 23 below represents the responses of the 52 participants.

Table 23

All Participants (N = 52) Responses Relating to What they Learnt from the PAM Programme

What did you learn from the PAM programme?		
Respondents *n* (%)	Learnt:	Response examples:
8 (15.4%)	About Feelings (emotions)	"I learnt about feelings and emotions" [girl, 13] I learnt about "feeling scared and what to do when you feel scared" [boy, 10] I learnt "how to control my feelings" [boy, 11] "I learnt how where my feelings come from" [girl, 10] I learnt "how to feel good" [boy, 12]
7 (13.5%)	About relaxation and how to implement relaxation techniques	I learnt that "you can breathe in and out to feel better, think of your favourite place" [girl, 11] I learnt "to breathe in and out when you are having a bad time" [boy, 11] I learnt "to take a breath in situations, to make plans and to think of positive things" [girl, 11] I learnt "about how to relax and what to do when you feel scared" [girl, 13]
7 (13.5%)	How to implement the FINE plan and solve problems	"I learn from the Pam programme about the FINE plan…." [boy, 13] I learnt "inner thoughts, feeling scared, new helpful thoughts and plans, evaluate and reward" [girl, 9] I learnt "what I must do when I am in a problem" [girl, 13] "I've learnt how you can solve your problem and how you can change your problem" [girl, 12] "I learnt how to solve every problem…" [girl, 11]

Table 23 *continued*

Respondents *n* (%)	Leant:	Response examples:
7 (13.5%)	From the whole PAM programme, couldn’t name one specific aspect	“I have learnt a lot of stuff from Pam programme” [boy, 12] I learnt “good stuff” [boy, 13]
5 (9.6%)	A moral lesson	“I learnt that it is important to help someone, that you must help one another” [girl, 10] I learnt “that everyone is important in life” [boy, 13] “I learnt about helping people” [boy, 13] I learnt that “you must be kind” [girl, 11] “I learnt manners” [girl, 9]
5 (9.6%)	About thoughts	I learnt “to listen to your thoughts” [girl, 14] I learnt “lots of things, like we have lots of thoughts every day…” [girl, 12] I learnt “that there is always a good thought for any situation” [boy, 13] I learnt “that you always think of something in a different situation” [boy, 11]
1 (1.9%)	About the charms and their symbolism	“I learnt about the charms” [boy, 10]
12 (23.1%)	Answers were missing/illegible	-

Relating to the question of whether anything about the PAM programme should be changed, of the 44 participants who answered the question (the answers of eight participants were missing), 36 (81.8%) participants stated that nothing should be changed. The remaining eight participants answered “yes”, something should be changed; relating to this two participants stated that the other participants attitude towards the teachers and each other should be changed (e.g., “*listen to the teachers*” [girl, 11], “*the respect that the children give to the other people in the programme*” [girl, 10]); one participant stated that his own attitude could be changed (e.g., “*my friendliness and anger*” [boy, 12]); another participant stated that the group names could be changed (e.g., “*the group names can also change*” [boy, 13]); and one more participant stated that the programme’s delivery time should be changed (e.g., “*some Wednesdays afternoons when we write assessments*” [boy, 12]). The remaining three participants also said “yes”, but they did not elaborate on which aspects should be changed. From participant statements it is clear that the aspects which they identified for change relate more to practical aspects and dynamics within the group and their own personal feelings as opposed to the actual programme content and mode of delivery. Some of these aspects were also noted during the feasibility assessment (i.e., behaviour and respect within the group) and are subsequently addressed in Section 7.3.3.

7.3.2 Responses on Form 2: My PAM dog form

As mentioned previously, CBT is recognised as an empirically supported, well-established, efficacious intervention modality for the treatment and management of childhood anxiety and depression (Briesch et al., 2010; Cartwright-Hatton et al., 2006; Cartwright-Hatton et al., 2004). However, sometimes the concepts of CBT, which can be somewhat abstract, are difficult for children to grasp and remember. Metaphors are increasingly viewed as positive, child-friendly therapeutic tools, which can help make these often seemingly illusive CBT-concepts more concrete. The use of metaphors in CBT have numerous advantages: (a) metaphors foster developmental sensitivity, and they can help children to recall and remember information; (b) metaphors add fun and increase engagement in treatment; (c) metaphors teach concepts in a more engaging way; (d) metaphors help make the strange world of therapy more comfortable; and (e) metaphors can be helpful to facilitate collaboration (Friedberg & Wilt, 2010).

Metaphors including coping cats (Kendall et al., 1990), koalas (Barrett et al., 1991), and mice (Friedberg, Friedberg, & Friedberg, 2001) have been used effectively in existing CBT interventions (Friedberg & Wilt, 2010). This being the case, these metaphors are usually pictorial and thus inaccessible to children with visual impairments. It is for this reason that the researcher aimed to construct a tangible metaphor (in the form of a soft toy dog named PAM) for children with visual impairments to use. PAM was presented to participants as a guide dog, who would help and "guide" them through the programme (the PAM metaphor is described in more detail in Section 5.6.2.4 in Chapter 5). Relating to the choice of this metaphor, Friedberg and Wilt (2010) stated that "the more personally salient an image is for children, the more likely they will remember and use it (p. 123)". The researcher kept this statement in mind, and as guide dogs are relevant features in the lives of children with visual impairments it was thought that this would be an appropriate metaphor to use in the present study. The following comment made by a 12-year old female participant expresses the combined advantages and motivation for the use of metaphors in CBT nicely "*he makes me happy and every time I see him I think of all the fun things we did here* (in the PAM programme) *then I say all the things loud over in my head*".

As the present study was the first to employ the PAM metaphor, the researcher thought it important to ask participants themselves how they experienced and related to the PAM metaphor. Participants were asked two open-ended questions pertaining to the PAM metaphor, namely:

- What did you like most about your dog; and
- What did you learn from your dog?

It seems as if participants "liked" the PAM dog and charms as the majority of them (n = 37, 71.3%) could identify something about their PAM dog which they liked. Very positive is that the majority of participants (*n* = 12) reported liking the dogs collar and charms the most (e.g., "*I liked the collar and the charms*" [girl, 12]). This is positive as the collar and the charms represent the programme's main element, and aim to help children remember the skills that they were taught during the 10 sessions of the PAM programme. Participants also reported liking their dogs appearance (e.g., I liked "*his soft body and those yellow eyes*" [girl, 9]); liking something that they had learnt from their dog (e.g., "*when we have learnt of our feeling and thoughts*" [boy, 12]); liking the way the dog made them feel (e.g., "*the way that he makes me so happy and that I got him from four special people* (names the researcher and facilitators)" [girl, 12]); and also liking something that they did with their dog (e.g., "*That he did play with me. Every day it was so nice*" [girl, 11]). Table 24 summarises the responses of the 52 participants.

Table 24

All Participants (N = 52) Responses Relating to What they Liked about their PAM Dogs

What did you like most about your dog?

Respondents *n* (%)	Liked:	Response examples:
12 (23.1%)	the collar and charms	"I liked the collar and the charms" [girl, 12] "the charms make me think back" [boy, 12] "the butterfly and the helping hand" [girl, 11] "It had lots of charms" [girl, 14] "The heart of the dog" [boy, 11]
9 (17.3%)	the dog's appearance	"It looks funny and cute" [girl, 11] "I liked the white fur" [boy, 13] "his soft body and those yellow eyes" [girl, 9]
6 (11.5%)	everything about their dog	"I liked everything about it" [boy, 10]
5 (9.6%)	something that they learnt from the dog	"when we have learnt of our feeling and thoughts" [boy, 12] "If you go to your favourite place" [girl, 11] "About the things that it reminds me" [girl, 13]
3 (5.8%)	the way the dog made them feel	"he always cheers me up" [girl, 11] "the way that he makes me so happy and that I got him from four special people (names the researcher and facilitators)" [girl, 12]
2 (3.8%)	something that they did with the dog	"That he did play with me. Every day it was so nice" [girl, 11] "to play with it (the PAM dog)" [girl, 14]
15 (28.8%)	Answers were missing or illegible	-

From participant responses it seemed that the PAM dog was somewhat helpful and facilitative in the learning process as 35 (67.3%) participants were able to name at least one thing which their PAM dog had taught them. The majority of participants (*n* =10) stated that they had learnt a lesson from their dog (e.g., "*I learnt from my dog to be brave like him*" [boy, 13]). Participants also stated that their dog had taught them about feelings and thoughts (e.g., "*I learnt about inner thoughts and lots more*" [girl, 11]); that they had learnt various skills from the charms on the dog's collar (e.g., "*I learnt from the charms around the neck*" [girl, 12]); and that their dog taught them about relaxation and how not to worry or stress (e.g., "*I learnt that we can relax if we are feeling scared or worried*" [girl, 11]). The responses of all 52 participants are presented in Table 25.

Table 25

All Participants (N = 52) Responses Relating to What they Learnt from their PAM Dogs

What did you learn from your dog?		
Respondents *n* (%)	Learnt about:	Response examples:
10 (19.2%)	a lesson from their dog	"that you must take care of something" [boy, 13] "to be good to other people" [girl, 9] "I learnt I must take care of my dog" [girl, 11] "I learnt from my dog to be brave like him" [boy, 13]
9 (17.4%)	Feelings (emotions and thoughts)	I learnt "to feel good" [boy, 12] I learnt about "new helpful inner thoughts, evaluate and reward" [girl, 9] "I learnt about inner thoughts and lots more" [girl, 11] I learnt about "Feelings, emotions, inner thoughts, feeling nervous and black shoes" [girl, 13]

Table 25 *continued*

Respondents *n* (%)	Learnt about:	Response examples:
7 (13.5%)	The charms and their symbolism	"I learnt from the charms around the neck" [girl, 12] "All the charms make me think of other things" [girl, 11] "The different charms they made me feel very happy" [girl, 12]
5 (9.6%)	Relaxation and how not to worry or stress	"I learnt that we can relax if we are feeling scared or worried" [girl, 11] "a lot, to not stress quickly and to breathe" [boy, 12] "how to stretch and to think of plans" [boy, 9] "If you are sad you can go to your favourite place (referring to visualization)" [girl, 11]
4 (7.7%)	About the whole PAM programme	"he makes me happy and every time I see him I think of all the fun things we did here then I say all the things loud over in my head" [girl, 12] "reminds me of the PAM programme" [girl, 13]
17 (32.7%)	Answers were missing/illegible	-

7.3.3 Responses on Form 3: Research facilitator observation form

After each session the research facilitators were asked to complete a qualitative session evaluation form (compiled by the researcher) (Qualitative Form 3: The research facilitator observation form, Appendix O). Three research facilitators were recruited to assist in the present study, and at least one research facilitator was present during testing and each session of the PAM programme (the number of research facilitators present depended on the size and composition of the group). Between the three research facilitators, a total of 82 research facilitator observation forms were completed. Questions on the research facilitator observation form related to the session content and delivery and included:

- In your opinion, what aspect relating to the content of the session/delivery of the session stood out the most?
- In your opinion, what aspect relating to the content of the session/delivery of the session can be improved on?
- In your opinion what part/aspect of the session did the participants enjoy the most?
- There was also a space for research facilitators to provide any additional comments.

Overall research facilitators responded positively to the PAM programme and they had minimal responses relating to aspects of the programme's content which could be changed. However, research facilitators did note that the programme should include more practical/physical activity-based exercises. They noted that where physical activities (e.g., exercises where participants had to use their bodies to do something) were included, participants seemed to engage and grasp programme content more readily:

"Potentially need to introduce more hands on games to hold (participants) concentration" [completed at School 2, after session 1].

"Need (to include) more practical components – children are very restless" [School 1, session 3].

"Giving them more hands on activities – like when they had to stand on one foot (referring to think twice activity in session 5) stood out" [School 1, session 5].

"The group tends to be quite lazy and unwilling to participate - so it helped giving them physical activities to partake in" [School 1, session 9].

Relating to the last statement, research facilitators mentioned specific practical activities from the sessions (e.g., Matching thoughts and feelings card game, session 3; what is my body telling me?, session 4; Always think twice!, session 5; Let's make a plan! (black shoe game), session 7) which they noted that participants particularly enjoyed, this is evident from the statements below:

"Very good explanation of problem solving. The black shoe game is very good for them to understand that there is steps they can take to solve their problems" [School 1, session 7].

"They enjoyed 'black shoe, Black shoe' got them to participate more and add more of their own thoughts" [School 1, session 7].

"Black shoe game – very good to explain to them they should think of plans if they have a problem, and then to choose the best plan" [School 2, session 7].

Furthermore, relating to programme materials one of the research facilitators noted that the text size on one of the games should be enlarged (matching thoughts and feelings card game, session 3), the research facilitator stated:

"Need bigger writing on the cards" [School 1, session 3].

Linking to the size of the writing on the cards one of the other research facilitators noted that some of the children struggle to read (presumably because the writing is too small), and this leads to them missing out on participating fully in the activity, she noted:

"Relating to the card game not all children can read equally fast and therefore not everybody had the chance to match the cards. Maybe the game can be a bit more organized so that everybody has an opportunity to participate and match cards" [School 2, session 3].

With regards to the size of the text on the cards, the researcher did use the font size which was recommended by the school for the materials and questionnaires, however, it seems as if this font size may not be "big" enough for all participants. The cards also included the statements in braille.

Furthermore, it seemed that research facilitators liked the programmes content, but remarked that some of the content may be pitched at a younger level, thus causing older (grade 7) participants to become bored and lose concentration.

"Need more activities – older kids got a bit bored" [School 1, session 3].

"Relating activities to the elder learners in the group (grade 7s); they can be reluctant to participate in the activities" [School 1, session 4].

These remarks may have also been revealed in the statistical data as outcome data on the RCADS-30 revealed that younger participants (aged 9-11) may have benefitted more from the PAM programme (see Sections 6.3.1 and 6.5.3.1 in Chapter 6). Further relating to the session content, one research facilitator also noted that the session content should be decreased:

"The content can be minimized because all of the sessions can usually not be completed due to the disruptiveness of the children" [School 1, session 4].

Linking to the previous statement, just as reported in previous studies (Stallard & Buck, 2013) disruptive student behaviour and keeping control of the group was a major negative issue which research facilitators reported. This was especially problematic when student's disruptive behaviour interfered with the progression of the session:

"The learners being disruptive is what made the session progress at a slower pace than it should" [School 1, session 9].

This disruptive behaviour was especially problematic at School 1. Groups became especially difficult to manage when some participants became disengaged and displayed unacceptable behaviour (e.g., swearing and teasing other participants). This distracted / inhibited other participants from taking part freely in the programme. This disruptive behaviour was evident at School 1 from the first session:

“Getting some of the learners to behave themselves and not make rude comments during the session” [School 1, session 1].

“Those that swear in the group are disruptive and should be spoken to aside the session because their behaviour disrupts the entire session” [School 1, session 4].

Research facilitators also noted that participants talking and interrupting one another and the researcher was problematic. This was the case at both School 1 and School 2:

“Getting the learners to speak one at a time” [School 1, session 5].

“All the learners paying attention to what one person says and not talking when another person talks” [School 1, session 7].

“All the learners still need to learn to keep quiet when someone else talks” [School 1, session 8].

“Children don’t wait their turn to talk resulting in some individuals never getting a chance to contribute to discussions. Reinforcing the rules (group guidelines) (i.e., one speaker at a time) might help with this”) [School 1, session 6].

“Reinforcing the rules in the contract, to keep children from all talking at the same time. Stick to time frame so that children don’t get distracted when the session is too long” [School 1, session 8].

“Getting each learner to keep quiet when others are talking, as well as when Lisa talks” [School 1, session 9].

Even though excessive talking was cited as being problematic at both School 1 and School 2, at School 1 the talking related more to children talking amongst one another and interruptions (as can be seen from the statements above) whereas the talking at School 2 seemed to relate to children loosing track of the conversation as they want to talk and share to much with the researcher and research facilitators, in this way taking up to much time and not affording everyone in the group a turn to share their stories:

“Avoid small talk unrelated to content during the session to ensure the time limit is adhered to” [School 2, session 8].

“Encouraging all the learners to say one story and move on as if one learner says a lot of stories it takes the session out of time” [School 2, session 6].

“They (participants) talk a lot during the session about things unrelated to the content” [School 2, session 8].

"Kids very keen to discuss own stories but makes them lose concentration" [School 2, session 5].

Moving between the larger group and smaller group activities was also sometimes difficult; this was only the case at School 1 as group sizes at this school were much larger than at School 2. Research facilitators reported that the smaller groups were easier to manage and that the participants seemed to engage more easily when the group was split into smaller groups:

"Group not really willing to share about their experiences and participate in group discussions. Might be because the group is too big - breaking in to smaller groups might help" [School 1, session 6].

"They (participants) got a bit distracted near the end might have been good to divide them into smaller groups for the game to make sure they fully understood it" [School 1, session 5].

"They need to work in smaller groups otherwise they get unruly" [School 1, session 8].

"Smaller groups made it more manageable and the children could each get a chance to be heard" [School 1, session 7].

"Smaller groups worked better" [School 1, session1].

Although most of the above mentioned factors relate to challenges which the research facilitators noted during implementation of the sessions, they also noted that the participants enjoyed the PAM programme and that it seemed that they did indeed learn something new.

"They (participants) were very eager to participate in group discussions and share their thoughts on emotions and feelings. Gave careful consideration of their answers and seem to really understand the concept feelings" [School 1, session 2].

"Session went very well. They very quickly grasped the concepts explained and they all co-operated with the group leader" [School 2, session 3].

"They (participants) really make an effort to remember what they learned in previous sessions and do a good job at applying it to later sessions" [School 1, session 5].

"Children's effort to memorize all steps in the plan. Presenting them with the charm to help them remember is an excellent and fun way for them to learn this" [School 1, session 6].

"They (participants) are very good at linking the content of all sessions together and know how they can apply it when they have a problem" [School 2, session 9].

"Children performed very well when they had to name what they have learned during the programme. They remembered a lot from the material covered in previous sessions" [School 2, session 10].

"The group really seems to have bonded and they all said they would be there to help one another" [School 2, session 9].

"They (participants) remembered content of previous sessions well. They did a good job of thinking of ways to reward themselves" [School 1, session 8].

"When they needed to remember what F.I.N.E stood for – all did very well" [School 1, session 8].

"They remember a lot of the previous sessions – this was clear when they performed their advertisement" [School 1, session 9].

"The fact that the learners remembered how to use helpful thoughts in their daily lives as they each explained situations when they did so" [School 2, session 6].

7.4 Feasibility of the PAM programme

As mentioned above, in order for programmes to be meaningful they need to achieve good recruitment, retention and attendance rates; the methodology needs to be acceptable and practical; and assessments/outcomes need to be accessible and easily completed (Stallard & Buck, 2013). As a result, the following sections will address these three aspects as they relate to the PAM programme.

7.4.1 Recruitment, retention and attendance

In terms of eligibility there were 83 children attending grades 4 to 7 at the two identified special schools (School 1 and School 2) who met inclusion criteria for the present study (see section 5.3 in Chapter Five for an overview of inclusion criteria). The consent process appeared acceptable, with dual parent and child consent to take part in the PAM programme being obtained for 59 (71.1%) participants. Base-line (T1) assessments were completed by 55 of the consenting children, of whom 53 completed assessments at T2, 54 completed assessments at T3, and 45 completed the final follow-up assessment at T4. Follow-up retention rates were very good with 34 (82.9 %) participants at School 1 and 10 (90.9 %) participants at School 2 completing all four assessments. Attrition of students at T4 can be attributed to absenteeism on the day of testing (*n* = 4), and grade 7 children moving from the primary to high school and not being available for follow-up assessment (*n* = 4).

Overall session attendance was good, with approximately half (*n* = 28) of the participants attending all 10 PAM sessions, and 45 participants (81.1 %) attending seven or more sessions (a systematic overview of session attendance rates by school and group is provided in Table 11 in Chapter 5). Most absences occurred as a result of children missing school on that particular day. Towards the end of the school year, absences became more frequent as it was noted that teachers tended to keep children out of sessions which were conducted during school time as they needed to use the extra lessons to catch up on extra work and assessments (this was especially the case with the delayed intervention group of dayscholars at School 1). In order to compensate for content which was missed, each new PAM programme session started with an overview of the content which was covered in the previous session.

Twenty-three small homework assignments (quick tasks) and bonus activities were assigned during the course of the programme. Homework completion ranged from completing only two to completing all 23 tasks, with a mean of 13.35 (*SD* = 6.26) tasks being completed (An overview and examples of some of these quick homework assignments is provided in Section 5.6.2.3 in Chapter 5).

7.4.2 Programme delivery

The PAM programme was delivered to six groups of students across the two special schools. At School 1 there were four groups: two IIG's (one for the dayscholars and one for the hostel children) and two DIG's (one for the dayscholars and one for the hostel children). While at School 2 there was one IIG and one DIG (more information pertaining to the randomisation and composition of the sample is provided in Sections 5.4 and 5.5 in Chapter 5). All ten sessions of the PAM programme were delivered, with both the IIGs (dayscholars and hostel children) at School 1 receiving one catch-up/recap session of the PAM programme. These catch-up sessions were delivered as a result of two sessions (session 3 for the IIG of hostel children at School 1 and session 4 for the IIG of dayscholars at School 1) being cut short. Session 3 for the hostel children was cut short as a result of disciplinary issues and session 4 for the dayscholars was cut short as a result of time constraints.

Sessions were also unexpectedly moved/re-scheduled owing to circumstances outside of the researcher's control. One session was re-scheduled due to a concert practice (DIG of dayscholars at School 1, session 2), another session was re-scheduled due to a taxi strike (DIG of dayscholars at School 1, session 2), a further session was re-scheduled as a result of a public holiday (IIG of hostel children at School 1, session 10) and 6 sessions were re-scheduled due to early school closures or assessments and exams (IIG of dayscholars at School 1, sessions 5-10).

A total of 52 (83.9%) sessions were delivered as intended by the researcher with at least two research facilitators present at School 1 and one research facilitator present at School 2 (the number of research facilitators differed according to the group sizes, groups at School 2 were small), with the remaining 10 sessions being delivered by the researcher at School 1 with only one research facilitator present. Absenteeism of research facilitators occurred as a result of transport difficulties, illness, classes that they had to attend and tests and exams. Despite all the above-mentioned unexpected logistical problems, with careful organisation, patience and flexibility the researcher was still able to deliver all 10 sessions of the PAM programme to all six groups of participants.

7.5 Discussion of the qualitative findings

7.5.1 Discussing the PAM programme's acceptability

The PAM programme appeared to be acceptable to participants and research facilitators. Overall participants in the present study reported positive results relating to the likeability of the PAM programme, with the majority (76.9%) being able to name something that they enjoyed about the PAM programme. Furthermore, it also seems as if the PAM programme was helpful, as once more the majority of participants (76.9%) were able to name at least one thing which the PAM programme had taught them. In relation to whether anything about the PAM programme should be changed, again the majority of participants (81.8%) stated that nothing should be changed. There were eight participants who did identify aspects for change, however, their responses did not relate to the programme content or its mode of delivery, but focussed on practical and personal dynamics which they noted within the group (e.g., they stated that children should show more respect towards one another and the researcher and facilitators and that the group names and perhaps the programme's delivery time can be moved). These positive results are very beneficial for future studies, as favourable programme evaluations may assist in promoting high participation and completion rates and may also contribute to the destigmitisation of anxiety interventions (Cooley et al., 2004). If participants talk fondly about the PAM programme and they are enthusiastic this may encourage other children with whom they come in contact to want to take part in the PAM programme as well. Effects such as these were evident from informal interactions during delivery of the programme to the IIG, where participants who were going to receive the programme as part of the DIG came to ask the researcher when it would be their turn for the programme, they couldn't wait!

As mentioned previously, because the present study was the first to employ the PAM metaphor, the researcher thought it important to ask participants themselves how they experienced and perceived this metaphor. Qualitative responses on the My PAM dog form (Appendices M & N) indicated that participants interacted with their PAM dog and the PAM metaphor in various ways. Very positive is that when asked, "what they liked most about their

PAM dog"; the majority of participants reported to like the dog's collar and charms the most. This is promising as the collar and charms represent the main element of the programme. The eight charms aim to help children remember the anxiety management skills which they were taught during the 10 sessions of the PAM programme (see Section 5.6.2.3 in Chapter 5 for an overview of the eight charms and their symbolism). These findings are in line with the literature which states that the use of metaphors in CBT are advantageous and helpful (see Section 7.3.2) (Friedberg & Wilt, 2010). It seems that using the PAM metaphor in the present study was helpful, as it enabled children to remember and recall various skills which they learnt during the PAM programme. This sentiment was also reflected by the research facilitators as when asked which aspect of a session stood out for them one facilitator noted: "*Children's effort to memorize all steps in the plan. Presenting them with the charm to help them remember is an excellent and fun way for them to learn this*" [School 1, session 6]. The PAM metaphor could also be helpful for use with other populations (i.e., children who are illiterate, or those who have learning disabilities) as children are not required to read any material to benefit from the metaphors use.

When referring to acceptability of the PAM programme from the perspective of research facilitators, it was noted that session content could possibly be decreased; that activities should be more physical and practical to increase participant participation; and that content should be revised to make it more appealing to the older (grade 7) participants, as it was noted that these participants sometimes became bored and disengaged from the sessions.

Additionally, as was also noted in previous feasibility evaluations (Stallard & Buck, 2013), the ability of the researcher and research facilitators to manage disruptive student behaviour came to light as a salient issue during the implementation of the PAM programme. It was not always possible to attain additional support from school staff, as they were not able to be present during the implementation of the programme sessions. However, the researcher did report disciplinary issues to the relevant staff at the school and they assured her that these issues would be addressed.

Furthermore, when group sizes were larger (as was the case at School 1) it was quite difficult for the researcher to engage with all children and it also seemed that participants became distracted and talked amongst each other during the session. At School 2 where group sizes were smaller (maximum 6 participants) interactions were much more contained. The researcher did try to anticipate and prepare for this by providing extra research facilitators for the larger groups, however, it still seems that the smaller groups (maximum 6 participants) work better and are more manageable. These challenges are not unique to the present study, as previous researchers have noted similar challenges when implementing universal prevention programmes in school settings (Cooley et al., 2004; Rose et al., 2009; Stallard & Buck, 2013).

In light of these qualitative findings it is essential that session content and activities be modified to ensure that the PAM programme is engaging for participants, that materials are appealing and that the content covered is relevant to all groups of participants. Group sizes should also be kept as small as possible (maximum six participants). Greater emphasis also needs to be placed on attaining the support of school personnel to ensure that sessions are delivered smoothly and that guidelines are in place to deal with disruptive behaviour within the group.

7.5.2 Discussing the PAM programme's feasibility

It appears that the PAM programme is feasible for implementation at the two special schools by a therapist who is trained in CBT intervention. Relating to elements of recruitment, retention and attendance of the PAM programme; it seems that responses to recruitment efforts were positive and that the consent process was both acceptable and practical, with 71.1% of parents granting consent for their child to take part in the PAM programme. Retention rates were also good, with 81.2% of participants who completed T1 assessments also completing assessments at T4. This decline in numbers can partly be attributed to students who transferred from primary to high school, making it difficult to access students. Of the eight participants who did not complete assessments at T4, four had moved to high school and the other four were absent on the day of testing.

Although session attendance was good, with attendance data indicating that 81.1% of participants attended seven or more of the PAM sessions, attendance can be improved, and participant absences should be addressed more seriously when conducting similar programmes in the future. In the future researchers (group leaders) and research facilitators should identify frequently absent students and work closely with classroom teachers, parents and administrators to monitor and improve their attendance in school. In addition, consistent and clear communication between researchers and class teachers (not just the school psychologists) might be necessary to ensure that attendance at sessions is supported by teachers as well (e.g., attendance of the sessions should not be contingent on whether a learner has completed his or her school work or not). Greater involvement of teachers may also hold the added advantage of teachers being able to assist learners to generalise learnt skills to the classroom. Future research should involve meeting with teachers to discuss their possible involvement in the intervention programme. In a study which assessed the feasibility of delivering a mindfulness-based programme to reduce stress in youth, Mendelson et al. (2010) suggested that another strategy to increase teacher involvement could include the provision of a manual to teachers which outlines the intervention and outlines simple suggestions for strategies which they can use to promote the use of learnt skills in the classroom.

In relation to the use of the two anxiety measures (outcome data on the RCADS-30 and PSWQ-C) it was noted that missing data was mostly reported for students at School 1. This could possibly be attributed to the fact that group sizes during assessment were larger at this school and, as noted in Chapter 5 (see Section 5.6.3.5.), assessments at School 1 were also more complicated and difficult for the researcher and research facilitators to organise and manage as factors beyond the researchers control (e.g., obtaining a suitable testing venue, availability of chairs and desks and disruptions from other students who were not part of the programme) occurred. Possible solutions to address this issue might be the provision of additional research facilitators to provide additional assistance to make sure that participants complete all measures correctly or splitting larger groups so that smaller groups complete the assessments on different occasions. At School 2 where the groups were much smaller and more contained missing data was not problematic. However, despite these challenges, in relation to the primary outcome measure (RCADS-30), overall there were few missing data suggesting that this measure is acceptable to use to assess anxiety symptoms in children with visual impairments.

In terms of programme delivery, the researcher was able to deliver all 10 sessions of the PAM programme to all six groups of participants; however, this process of delivery was not without its challenges. The researcher found implementation of the PAM programme at School 1 to be more challenging when compared to School 2. At School 1 unforeseen factors such as school activities, a taxi strike and scheduled tests and early school closures meant that some sessions had to be cancelled and re-scheduled. At School 2 all ten sessions were delivered as planned. Furthermore, challenges relating to managing disruptive participant behaviour and ensuring that all content was covered during the allotted time were also present. Considering these factors, it seems that it would be more feasible to implement the Pam programme in a school, such as School 2, where good infrastructure, discipline, organisation and routine is available. The variability of these factors (which was often the case at School 1) made it more challenging and difficult for the researcher to implement the PAM programme within this context. Therefore, when conducting programmes such as this in similar contexts, help of school personnel may need to be enlisted to address these issues more effectively. The afore-mentioned factors echo the notion that challenges encountered in real world circumstances (such as in the present study) differ from challenges encountered when programmes are delivered in clinical, controlled research settings (Miller et al., 2010).

Linking to these challenges, because it seemed that implementation of the PAM programme at School 2 progressed more smoothly than at School 1, the researcher conducted an additional statistical analysis to determine whether there were significant differences relating to the programme outcomes on the anxiety measures (RCADS-30 & PSWQ-C) between the two schools. It was noted that this was not the case, and the multivariate main effects for time were not significant for School 1 and School 2 on the RCADS-30 with $F(6, 5) = 0.464$, $p = .812$ (School 1) and $F(6, 35) = 1.630$, $p = .168$ (School 2) or the PSWQ-C with: F (1, 10) = 3.154, $p = .106$ (School 1) and $F(1, 40) = 2.288$, $p = .138$ (School 2). Thus, although the researcher felt that there were challenges relating to the delivery of the PAM programme at the two schools, these challenges did not affect the outcome data.

Linking to the above and relating to programme delivery in real-world settings, as noted in the literature, schools offer a convenient location for the delivery and evaluation of CBT-based anxiety prevention programmes such as the PAM programme. However, even if this is the case, previous researchers (Stallard & Buck, 2013) noted that little attention has been paid to the feasibility of delivering these types of interventions within school settings. One previous South African study which evaluated the FRIENDS programme has been conducted within schools; however, this pilot study did not report any feasibility data. Mostert and Loxton (2007) did however note that FRIENDS is a promising intervention to use with South African children (Mostert & Loxton, 2008). They further noted that the participants who took part in their study did perceive the intervention to be child-friendly and enjoyable. They stated that this was evident from participant's enthusiastic participation and their positive informal feedback relating to the intervention (Mostert, 2007). Thus, the present study makes an important contribution to the under-researched area of acceptability and feasibility of delivering intervention programmes within the South African context.

In conclusion, to the researcher's knowledge, this study was the first randomised control trial of a school-based universal CBT-based anxiety intervention for children who have visual impairments. Although the study did not achieve the expected statistical intervention effects, it was noted that participants and research facilitators found the programme to be acceptable. The programme also achieved high rates of recruitment and reasonable retention and it seemed that outcome measures and session delivery was also favourable. However, because contextual challenges cannot be avoided when conducting research in real-world settings such as schools; future researchers should be mindful that some research settings will present as more challenging than others. In this regard researchers should:

- make a concerted effort to enlist as much support and co-operation as possible from school personnel;
- familiarise themselves with the school's code of conduct and disciplinary policy;
- have a plan in place to deal with disruptive and chaotic occurrences;
- communicate the importance of the intervention programme with school staff in an open manner before commencement of the research; and
- highlight the importance of being able to deliver these interventions in a structured and timely manner, in this way maximising intervention outcomes and reducing unnecessary stress on the part of the researcher and participants.

Further research which considers these suggestions and incorporates the necessary changes to the programme content is now required to re-evaluate the effectiveness of a modified and up-dated version of the PAM programme for managing anxiety in children with visual impairments. The researcher is of the opinion that the present study has made an important contribution showing that it is feasible to implement anxiety intervention programmes (such as the PAM programme) within South African special schools for children with visual impairments. However, when doing so various socio-contextual factors should be kept in mind and the necessary organisational support should be enlisted.

7.6 Chapter summary

This chapter aimed to provide an overview of the qualitative programme evaluation which was carried out in the present study. The chapter commenced by providing a definition of the terms acceptability and feasibility, thereafter, background in order to contextualise the qualitative programme evaluation was provided. Data supporting the PAM programme's acceptability and feasibility was then presented. The chapter concluded with a discussion of the findings relating to acceptability and feasibility and relevant literature, viewpoints and suggestions for future studies were incorporated to expand upon these findings. In conclusion, taken together, qualitative findings suggest that the PAM programme: (a) is attractive and acceptable to participants and research facilitators, and (b) is feasible to implement in schools for children with visual impairments given that the necessary supports are in place.

Chapter 8 concludes the study and outlines the main quantitative and qualitative findings. A critical review of the study is also provided; with focus given to limitations, challenges, aspects which added value, ethical considerations and recommendations for future research.

CHAPTER 8: CONCLUSION, LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

The motivation for the present study stemmed from the need to provide children with visual impairments with an accessible anxiety intervention programme. This was done by addressing the following aims:

- Primary aim: develop, implement and evaluate a specifically tailored anxiety intervention programme (The PAM programme) to use with South African children with visual impairments. This aim unfolded in the following three steps:
  - Step 1 = develop an accessible anxiety intervention programme which can be used with South African children with visual impairments (programme development phase).
  - Step 2 = implement (pilot) this anxiety intervention programme successfully (programme implementation phase).
  - Step 3 = evaluate the effectiveness of this anxiety intervention programme in maintaining emotional health (i.e., preventing an increase in symptoms of anxiety as measured on the RCADS-30 (Chorpita et al., 2005; Sandín et al., 2010) and PSWQ-C (Chorpita et al., 1997)) (programme evaluation phase).
- Secondary aim: record qualitative process information relating to the way children with visual impairments experienced /evaluated the anxiety intervention programme. In this way obtaining acceptability and feasibility data for the PAM programme.

On these grounds, this chapter summarises the main quantitative and qualitative findings of the present study. The study is then critically reviewed; with focus given to limitations, challenges, aspects which added value, ethical considerations and recommendations for future research. The chapter concludes by highlighting the contributions made by the present study.

8.1 Summarising findings relating to the quantitative programme evaluation

The present study was carried out as an initial attempt to implement and evaluate a specifically tailored CBT-based programme (The PAM programme) which targeted anxiety symptoms in children with visual impairments. In contrast to what was expected, initial statistical results indicated that the PAM programme did not bring about a significant reduction in symptoms of anxiety within the population of children with visual impairments. More specifically, anxiety scores on the RCADS-30 and PSWQ-C yielded non-significant outcomes throughout, as neither significant between-group nor within-group effects were noted for the IIG (*n* = 27) or DIG (*n* = 25) at any of the four times of testing (T1-T4). However, despite these results, promising is that when taking the statistical sample as a whole (*N* = 52) into account, there was a significant decline in the total anxiety score on the PSWQ-C from pre-intervention (T1) to post-intervention (T3). Thus it would seem that even though hypothesised programme effects were not evident between or within groups on the main outcome measure (RCADS-30), the PAM programme had an overall effect on reducing all participants' (*N* = 52) anxiety as reported on the PSWQ-C at post-intervention (T3). This finding holds promise, as it shows that the PAM programme did have an overall effect on anxiety, however, factors such as the selection of outcome measures and the size of the sample and sub-groups (IIG and DIG) may have influenced statistical outcomes. Thus, further research in this regard is merited.

Furthermore, when considering the impact of the three moderator variables (age, gender and vision), it appears that the PAM programme was especially beneficial for girls, younger participants (aged 9-11) and severely visually impaired and totally blind children in the legally blind group. Results relating to the legally blind group are particularly noteworthy, as children with severe visual impairments (who were now in the legally blind group) had previously been identified as a high-risk sub-group within the broader population of children with visual impairments for the possible development of future anxiety disorders (Loxton et al., 2012; Visagie et al., 2013; Visagie et al., 2015).

Furthermore, although the researcher did not obtain the desired outcome in terms of intervention effects, in terms of preventive effects, no participant who reported sub-clinical symptoms of anxiety at T1 (Pre-intervention IIG and DIG) had moved to within the clinical range at T4 (3-month follow-up IIG: 6-month follow-up DIG). Thus, although this was not statistically determined, it seems that exposure to the PAM programme prevented an increase in anxiety symptoms.

Considering these quantitative findings, it is important to remember that the present study was the first of its kind to develop, implement and evaluate the effects of a specifically tailored CBT-based anxiety intervention programme for children with visual impairments. Very little is known about this topic, therefore results should be interpreted with caution.

8.2 Summarising findings relating to the qualitative programme evaluation (accessibility and feasibility)

The aim of the qualitative programme evaluation was to determine whether participants and research facilitators deemed the PAM programme to be acceptable and whether the implementation of the programme was feasible within the two special schools.

In terms of acceptability, both participants (*N* = 52) and research facilitators (*n* = 3) reported positive results. Overall participants seemed to like the PAM programme as the majority (76.9%) named something that they enjoyed about the PAM programme. Participants reported liking:

- interacting with the researcher and facilitators;
- the PAM programme's activities, stories and games;
- their PAM toy dogs and the charms; and
- learning about feelings and thoughts and how to make plans and implement relaxation techniques.

Furthermore, it also seems as if the PAM programme was helpful, as once more the majority of participants (76.9%) were able to name at least one thing which the PAM programme had taught them. Participants reported learning:

- about their feelings and thoughts;
- relaxation techniques;
- about PAM's F-I-N-E plan and how to solve their problems;
- lessons from the charms; and
- a moral lesson.

In relation to whether anything about the PAM programme should be changed, it seems that participants were satisfied with the programme as is, as most of the participants (81.8%) stated that nothing should be changed. Furthermore, qualitative responses relating to the acceptability of the PAM metaphor indicated that participants interacted with their PAM dog and the PAM metaphor in various ways. Very positive is that when asked, "what they liked most about their PAM dog"; a number of participants (23.3%) reported to like the dog's collar and charms the most. This is promising as the collar and charms represent the main element of the programme.

When referring to acceptability of the PAM programme from the perspective of research facilitators, overall they responded positively towards the programme, however they noted that:

- session content could possibly be decreased;
- activities should be more physical and practical to increase participant participation;
- content should be revised to make it more appealing to the older (grade 7) participants;
- group sizes should be kept small; and
- disciplinary issues should be addressed more effectively

In terms of feasibility it appears that the PAM programme is suitable for implementation at the two special schools by a researcher (group leader) who is trained in CBT intervention. The recruitment and consent process was both acceptable and practical, with dual parent and child consent to take part in the PAM programme being obtained for 59 of a possible 83 (71.1%) participants. Retention rates were also good, with 81.2% of participants who completed T1 assessments also completing assessments at T4.

Although the researcher was able to deliver all ten sessions of the PAM programme to all six groups of participants, it appeared that implementation of the PAM programme at School 1 was more challenging than at School 2. Factors at School 1 which posed challenges included: unforeseen time-table changes and school activities, a taxi strike, early school closures, larger group sizes, more disruptive behaviour within the groups, poor school attendance, lack of infrastructure/resources (e.g., chairs, desks and a constant suitable venue) and a very busy and somewhat chaotic environment. Considering these factors, it seems that it was more feasible to implement the Pam programme in a school, such as School 2, where good infrastructure, discipline, organisation and routine was available. However, ideal conditions may not always be obtained, and the afore-mentioned factors confirm the notion that challenges encountered in real world circumstances differ from challenges encountered when programmes are delivered in clinical, controlled research settings (Miller et al., 2010), and schools cannot be excluded from receiving psychological interventions simply because some contexts may present as more challenging than others. Thus, the researcher is of the opinion that with good planning, organisation, contextual sensitivity and by enlisting the support of all school personnel the PAM programme can be delivered successfully in South African special schools for children with visual impairments.

8.3 Critical review of the present study

As a first South African universal prevention study of its kind in the literature, it is essential that the issues which were encountered throughout the research process are emphasised. It is important to consider the limitations and challenges of the present study and how future research might address them (Barrett et al., 2005). As a result, the sections below provide a critical review relating to these aspects.

8.3.1 Limitations and recommendations for future research

No study is without its limitations; as such the limitations of the present study are discussed below. In line with these limitations, recommendations for future research are also provided.

- The present study's small sample size was its primary limitation. The data of only 52 participants could be used for statistical analyses. Therefore, when interpreting the study's results, it is necessary to take into account the limitation of lack of statistical power due to small sample size (Graziano & Raulin, 2004). It is therefore possible that reduced statistical power contributed to some of the non-significant findings in the present study. It is particularly important to have a larger sample size when working with a normal (as opposed to a clinical) population where only a few individuals will be "at risk" or meet diagnostic criteria for an anxiety disorder. Thus, it would be desirable for future studies to include larger sample sizes to ensure better power and to allow for more reliable sub-group analyses (Gladstone & Beardslee, 2009; Neil & Christensen, 2009).
- Additionally, the study's small sample size can also be attributed to logistical and geographical constraints. South Africa is a large country and schools for children with visual impairments are widely dispersed, which limited the researcher's capacity to travel to various schools on a week-to-week basis.
- A further limitation was that participant self-reports of anxiety symptomatology were the sole source of quantitative data in the present study. Despite the fact that this method has been used previously, and represents sound methodology for assessing a large group of children in a relatively short time period, the question of degree of accuracy of children's self-report measures has been widely documented (Barrett et al., 2005). The use of self-report measures as the sole source for assessing childhood anxiety may pose the problem of under-reporting of anxiety symptoms (Kendall & Chansky cited in Ronan, 1996). This was evident in previous studies where significant intervention effects were absent in child self-reports, and only noted on parental, teacher or clinician reports (Urao et al., 2016). In an attempt to address this limitation, the researcher did attempt to include multiple-informant data by asking teachers to

complete the informant version of the SDQ. However, poor response rate and tardy returns from teachers meant that post-intervention data was not available for the SDQ and it could not be used in the present study. As self-report measures have its limitations, future studies should advocate for the use of more comprehensive and objective methods (e.g., behavioural and psychophysiological measures) and incorporate information from multiple sources (Essau et al., 2012; Miller et al., 2010).

- Linking to the afore-mentioned limitation, the present study used outcome data relating to reductions in anxiety symptomatology alone to determine the PAM programme's intervention effects. However, when investigating the effect of a positive coping programme (such as the PAM programme) with normative samples, anxiety questionnaires alone may not be appropriate as children's anxiety symptoms could already be within the normal range and may result in "floor effects". Thus, future research should consider the additional construction and use of a questionnaire aimed at assessing positive coping with regard to the skills taught by the intervention. Additionally, a measure such as the FSSC-SA (Burkhardt et al., 2012) may have provided additional insight into participants anxiety profiles as this measure taps children's fears.
- Furthermore, the study did not include an independent measure of treatment adherence. Research facilitators did complete measures relating to the session content and session delivery, but because they were facilitators in the groups themselves and not simply independent observers this may have affected their objectivity when evaluating the PAM programme. It is essential for future studies to include an independent measure of programme adherence.
- Participants in the present study were recruited by means of a convenience sample. This could have led to possible selection bias, as there is a chance that not all children with visual impairments in the Western Cape area were represented in the sample of the present study. As parental consent was required for participation, this might have biased the sample to include more highly motivated students or those with more engaged parents who provided signed consent forms in a timely manner. For this reason, results should be generalised with caution (Mendelson et al., 2010). Future studies could consider an alternative means of sampling, for example, stratified random sampling, which will enable researchers to make broader generalisations with regards to future results.

- Additionally, the exclusion of parental sessions owing to constraints within the research setting was a further possible limitation. Although previous research findings as to whether parents are included in CBT or not are unequivocal, mainly showing that whether parents are included in CBT or not has no influence on intervention outcomes (see Section 3.3.2 in Chapter 3 for an overview), there is still the possibility that the exclusion of parental sessions could have reduced intervention effects and outcomes. Omission of the parent component may have influenced the maintenance and generalisability of participants' learnt skills, as without parental involvement these skills are not likely to be reinforced in the participants' home environments (Cooley et al., 2004). Factors including living far away from the school, long working hours and transportation difficulties were cited as reasons which hindered parental involvement. Thus, whether parental involvement enhances intervention effects or not, future research should advocate for the inclusion of parents wherever possible.
- Similarly, situational and time constraints also did not allow for the inclusion of a post-intervention booster session; this too may be a possible limitation. Nelson and Tusaie (2011) noted that it is important to include a booster or check-up session one month after CBT-treatment has been terminated to refresh participant's memories and recap learnt skills. Supporting this notion, Gearing et al. (Gearing, Schwalbe, Lee, & Hoagwood, 2013) found that CBT-based interventions which include booster sessions at post-test and follow-up report larger effect sizes and more sustainable outcomes over the long-term. Booster sessions help children to maintain learnt skills and positively reinforce these skills over time (Gearing et al., 2013). Noting these positive results, Future studies should thus advocate for the inclusion of booster sessions to improve the sustainability of programme outcomes over the long-term.
- Although many of the existing CBT-based anxiety interventions recommend that one session be delivered to participants each week (e.g., Barrett, 2004, 2005; Kendall, 1990; Van Starrenberg, 2013), once again, owing to situational and time constraints in the present study, participants received two sessions of the PAM programme per week. Therefore, it is possible that timing of the sessions could have influenced programme outcomes, as participants had less time to absorb and integrate the new skills that they learnt and they also had less time to complete their homework assignments (quick tasks) (Cooley et al., 2004).

- One further limitation may relate to the fact that the programme was delivered orally due to the children's visual impairments which influenced their ability to read and write normal print. The disadvantages were that writing can serve as another form of reinforcement of the CBT concepts and the participants did not have a written record of their responses if they wanted to review them at a later point (Cooley et al., 2004). However, on completion of the programme, children were given their PAM dogs with the eight charms on a collar around its neck which served as a tangible reminder of the skills that they were taught during the PAM programme.
- Lastly, for the qualitative evaluation of the programme, participants and research facilitators completed open-ended questions on questionnaires; this approach was somewhat limiting as the researcher was not able to ask more in-depth follow-up questions. In this regard the researcher found that participant and research facilitator responses on the three qualitative measures were very short and cryptic. It may thus be more valuable for future studies which are aimed at assessing the acceptability and feasibility of a programme to gather qualitative data via face-to-face or focus group interviews.

8.3.2 Aspects which were found to be challenging

Just as all studies encounter limitations, so too do challenges occur. Various authors (e.g., Giesen, Searle, & Sawyer, 2007; Miller, Laye-Gindhu, Bennett et al., 2011; P. Stallard, 2013) have noted that although schools provide natural and convenient settings for the delivery of preventive programmes, there are various challenges which often present themselves. This was also true in the present study. The researcher encountered challenges during all phases of the present study, during the consent process as well as during development, implementation and evaluation of the programme. Thus challenges presented themselves across all phases of the study and are discussed as such below:

- Overall the present study was highly demanding regarding time and logistics, as it required continuous negotiations to accommodate all the parties concerned, such as the Western Cape Education Department, the personnel at the two schools, the research supervisor and research facilitators. This was especially notable during the data collection phase which lasted from approximately February to December 2014.
- During the first phase of the research, gaining parental consent for children to participate was somewhat challenging. Because the majority of children who attend the

two special schools live in hostel facilities at the school they do not see their parents every day, this making it difficult to get consent documents to parents and have them sign and return them. Thus, the consent process had to be carefully planned and co-ordinated with school personnel and the consent documents had to be sent out at a particular time (over a home-weekend) when children went home to their parents. At School 2 this seemed to be somewhat problematic as return rates of consent documents were quite low, with less than half (47.8%, 11 out of a possible 23) of the eligible children obtaining consent from their parents to participate. At School 1, return rates were much higher, with 48 out of a possible 60 children (72.3%) of the eligible children obtaining parental consent to take part in the PAM programme. Parents may have been concerned with factors such as stigmatisation and labelling, and because parents live so far away from the schools they were also not able to attend an information session where the researcher could personally provide them with more information regarding the aforementioned factors and the study in general.

- Because the Pam programme was the first of its kind, the researcher also encountered some challenges during its development. Existing accessible CBT material was lacking, therefore the researcher had to “adapt” available existing materials for use with children who have visual impairments. The researcher made the programme accessible and appealing to children with visual impairments by making use of tactile media, accessible games, stories and role-plays. The researcher had to source programme materials (e.g., soft PAM toy dogs and charms) and put them together herself. This process required a lot of innovation on the part of the researcher and it was very time-consuming as materials were not readily available.
- During implementation of the PAM programme the researcher delivered two programme sessions to participants per week for five weeks. The programme was delivered simultaneously to participants at both School 1 and School 2; this meant that the researcher delivered a total of six sessions per week. This was very demanding in terms of logistics, organisation and time (e.g., travel distance and time between the university and two schools was extensive (School 1 was approximately 25 kilometres from the university and School 2 was approximately 85 kilometres away from the university, resulting in approximately one hours’ travel time to School 1 for each session and approximately three hours’ travel time to School 2 for each session)).

- Additionally, time constraints for delivering PAM sessions during school periods also presented a challenge. Participants took a few minutes to arrive for the session and to get settled in after the bell rang; this lead to precious time being wasted. School periods were 50 minutes long and the researcher was under immense pressure to cover all session content in the allotted time.
- Furthermore, as mentioned in Chapter 7 (see Sections 7.3.3 & 7.5.2) maintaining discipline and order in some of the groups was also challenging, this was especially the case at School 1. It was not possible for the researcher to attain additional support from school staff, as they were not able to be present during the implementation of the programme sessions. However, the researcher did report disciplinary issues to the relevant staff at the school and they assured her that these issues would be addressed.
- It was also challenging to organise for suitable circumstances for assessment. As mentioned previously (see Section 5.6.3.5 in Chapter 5) at School 1 there was a shortage of chairs (resulting in some of the children having to sit on the floor to complete their assessments) and there were a lot of disruptions. It was difficult to gain access to a suitable testing venue after school hours, as for security reasons the school is locked up in the afternoon. However, with some negotiation and careful planning the researcher was able to organise that the hostel children complete their assessments in an alternative venue.
- Making sure that all children had the necessary assessment materials in their preferred medium and language (i.e., English or Afrikaans in large print or braille) involved a lot of time and planning on the part of the researcher. Different to other intervention studies where the questionnaire booklets are simply typed up, printed, copied and distributed to participants with a pencil for completion, assessment measures in the present study had to be delivered in various formats. As a result, the researcher had to make accommodations relating to timing and scheduling of assessments (Visagie et al., 2014). As participants were administered the questionnaires in either large-print or braille, each group of children had to be assessed separately, this leading to a total of five groups being assessed at each of the four assessment opportunities. Additionally, the researcher had to make sure that the seven participants at School 1 who used braille had their braille machines handy to complete the assessments in braille. It was important to remember to organise this before the afternoon assessments (in the case of the hostel children) started as the rules at School 1 state that children need to obtain

permission to take their braille machines out of their classrooms after school. As mentioned in Section 5.6.3.5 in Chapter 5, for security purposes the school building is locked in the afternoon after school and if participants forget to bring their braille machines they are not able to access them after school.

- The return of completed informant versions of the SDQ from teachers was also problematic. At School 1 teachers were very tardy in their returns of the completed questionnaires and as a result post-intervention data on these measures was not obtained. For this reason, the SDQ data was not suitable/available to use in the present study.

Despite the above-mentioned challenges, with flexibility, good organisation and patience the researcher was still able to administer all ten sessions of the PAM programme to the six groups of children over the course of the 2015 school year.

8.3.3 Aspects that added value

Although the present study incurred some limitations and challenges, aspects that added value most certainly existed:

- Firstly, as far as the researcher could ascertain, the present study is the first of its kind to develop, implement and evaluate a specifically tailored CBT-based anxiety intervention programme for children with visual impairments. Thus, this research had a novel methodology and it filled an important gap in the literature by developing and promoting critically needed, specifically tailored anxiety intervention strategies for children with visual impairments.
- Secondly, as mentioned in Chapter 2 (see Section 2.5), societal barriers and attitudes have led to children with disabilities being excluded from previous research. The present study addressed this shortcoming by enabling children with visual impairments to exercise their right to take part in research and receive intervention.
- Thirdly, the present study employed random assignment to groups (IIG or DIG), in this way aiming to make results more comparable.
- Although the fact that the programme was delivered orally was noted as a possible limitation above, at the same time this aspect also added value. The advantages of continuous verbal interaction between the researcher and participants (as opposed to children reading in their workbooks) was that the children could be more interactive in

the group process and the researcher was also able to check with participants as to whether they understood the programme content and tasks (Cooley et al., 2004).

- Furthermore, the delivery of bi-weekly sessions was noted as a possible limitation above. However, this could have simultaneously been advantageous due to the high dosage of programme content and the close proximity of sessions which might have also helped children stay more invested in the programme. This was evident in the low-attrition and high session attendance rates (see Section 7.4.1 in Chapter 7).
- Furthermore, the present study was the first to administer the anxiety measures (RCADS-30 and PSWQ-C) in the South African context and to children with visual impairments. Both these instruments proved relatively easy to administer to children with visual impairments and both instruments obtained acceptable reliability data, thus making them suitable instruments to use with this population. Additionally, these instruments also provided valuable information pertaining to childhood anxiety from the perspective of children with visual impairments themselves. The instruments were also easy, inexpensive and convenient to administer and could be scored objectively, decreasing the influence of possible assessor bias.

8.3.4 Ethical implications

The present study's ethical approach was approved by the Stellenbosch University Research Ethics Committee: Human Research [(Humaniora) (HS888/2013) (Institutional Review Board Number: IRB0005239)]. To ensure that no child was denied treatment the present study employed a randomised wait-list control group design and participants in the DIG were provided the intervention programme after it had been delivered to the IIG.

8.4 Concluding remarks

Despite the quantitative evaluation of the PAM programme not delivering the expected outcomes, continued research in the area of prevention for this population should be promoted. As stated by Miller et al. (2010), this method of intervention (i.e., prevention) overcomes many of the barriers which are associated with anxiety treatment for children who have already been diagnosed with an anxiety disorder. Issues such as high costs, long waiting lists and the risk of developing additional health issues can be overcome. Furthermore, children who may have gone undetected due to low-level anxiety symptoms are also granted the opportunity to acquire anxiety management skills when programmes are implemented universally (Miller et al., 2010). It seems that the latter statement is applicable to the present study, as despite participants reporting low anxiety scores on the primary outcome measure (RCADS-30) initially (see Section 6.2.1 in Chapter 6), generally it seemed that participants still perceived the PAM programme to be enjoyable and helpful, as was evident from the programme’s qualitative evaluation.

Therefore, to conclude, in answering the research question posed at the start of this dissertation (i.e., Can an anxiety intervention programme specifically tailored for use with children with visual impairments within the South African context be helpful in managing symptoms of anxiety in this specific population?), the researcher is of the opinion that the answer to this question is a modest, Yes! Although the PAM programme did not report significant reductions in symptoms of anxiety on the main outcome measure (RCADS-30), it did succeed in preventing the onset of any “new” anxiety disorders, as none of the children who reported symptoms which fell below the clinical cut-off pre-intervention had moved into the clinical range post-intervention. The researcher is of the opinion that with the necessary organisational support and contextual sensitivity the PAM programme can realistically be used in a group-based format as a universal protocol to increase resilience and foster awareness of anxiety as a significant mental health issue in children with visual impairments. This population is one which has been neglected in previous research, and regardless of whether the programme produced significant statistical results or not, the results which were obtained provided us with a further glimpse into these children’s emotional worlds and layed down the foundation upon which future intervention programmes can be built.

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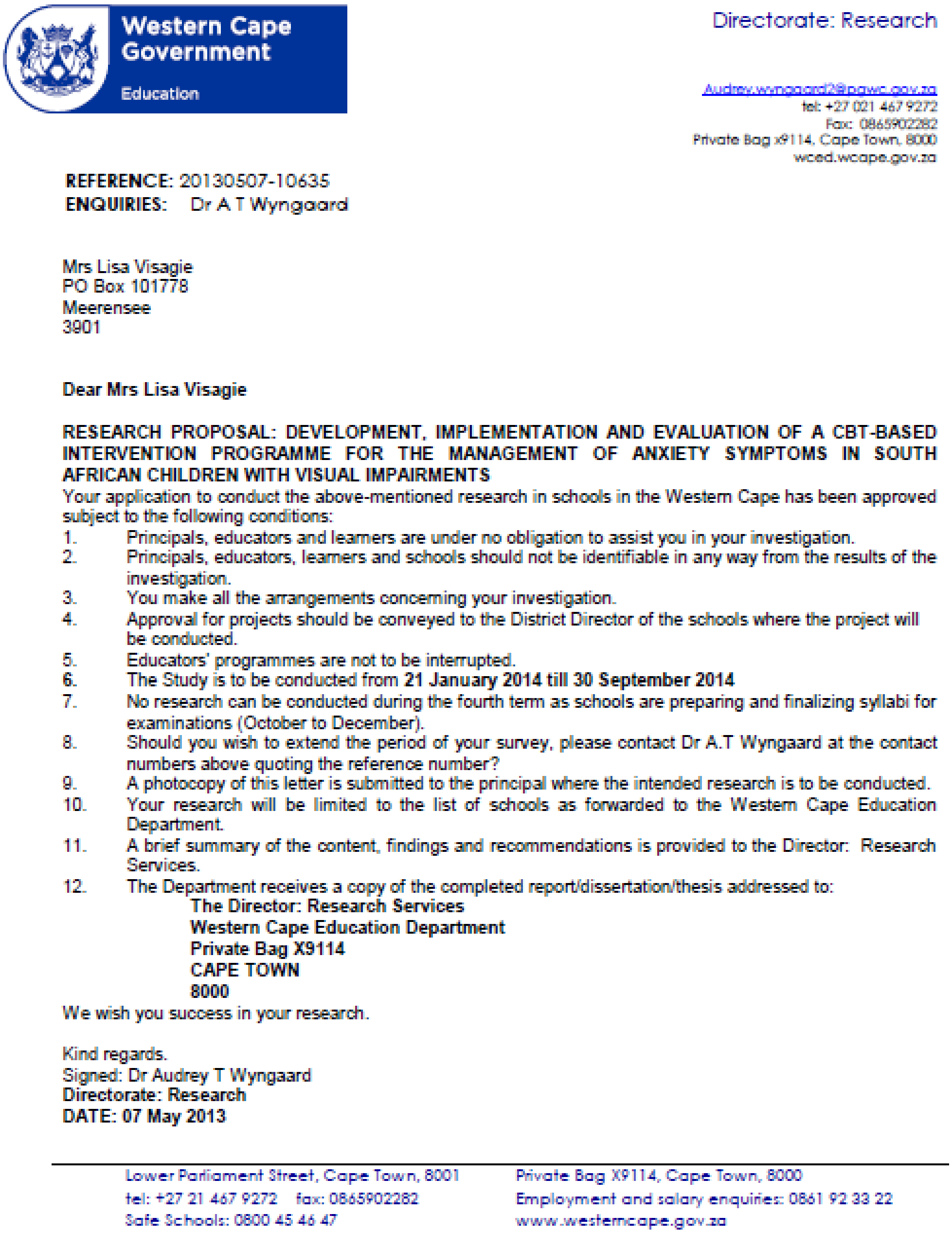
APPENDICES

Appendix A: Western Cape Education Department (WCED): Permission letter to conduct study – 2014



Western Cape Government
Education

Directorate: Research

Audrey.wyngaard2@pgwc.gov.za
tel: +27 021 467 9272
Fax: 0865902282
Private Bag x9114, Cape Town, 8000
wced.wcape.gov.za

REFERENCE: 20130507-10635
ENQUIRIES: Dr A T Wyngaard

Mrs Lisa Visagie
PO Box 101778
Meerensee
3901

Dear Mrs Lisa Visagie

RESEARCH PROPOSAL: DEVELOPMENT, IMPLEMENTATION AND EVALUATION OF A CBT-BASED INTERVENTION PROGRAMME FOR THE MANAGEMENT OF ANXIETY SYMPTOMS IN SOUTH AFRICAN CHILDREN WITH VISUAL IMPAIRMENTS

Your application to conduct the above-mentioned research in schools in the Western Cape has been approved subject to the following conditions:

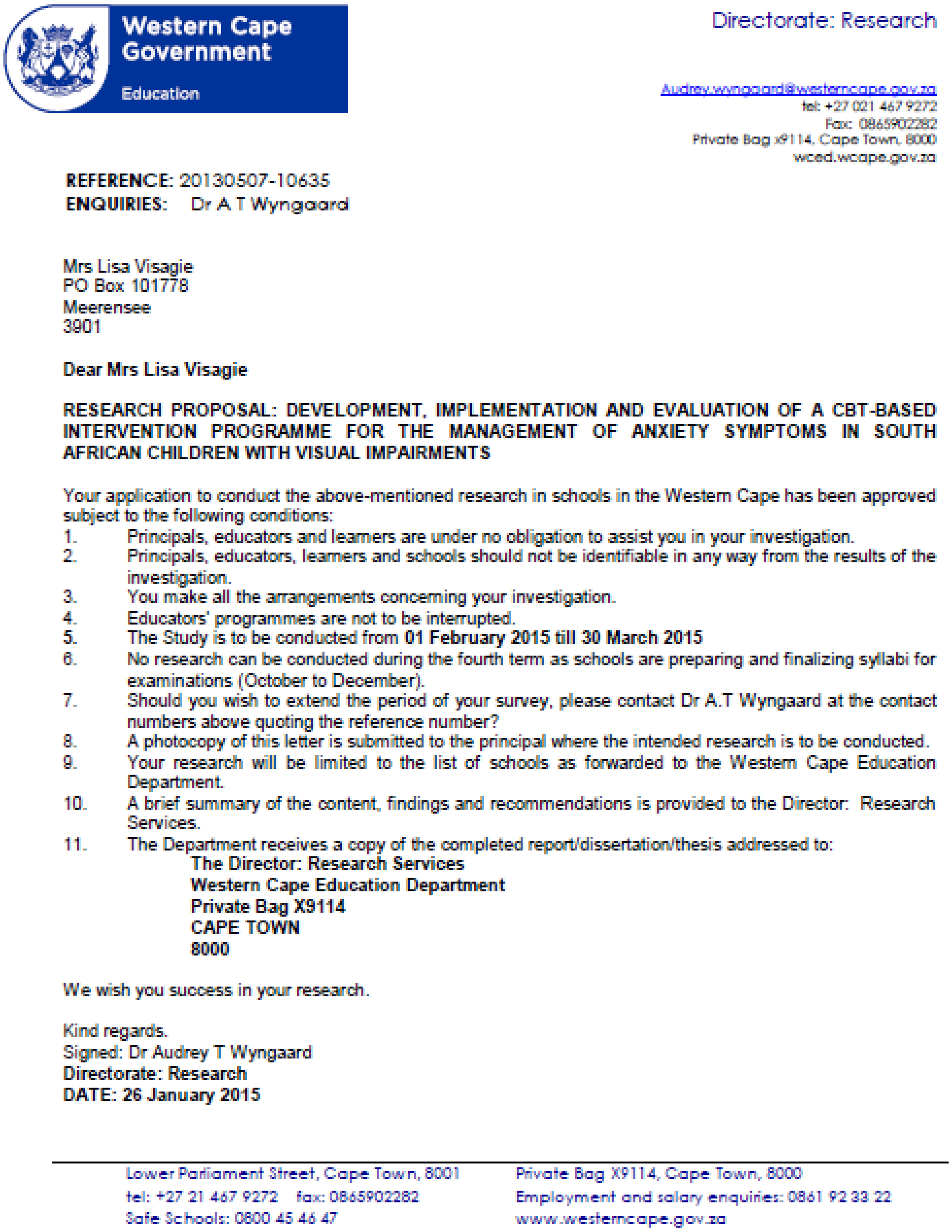
1. Principals, educators and learners are under no obligation to assist you in your investigation.
2. Principals, educators, learners and schools should not be identifiable in any way from the results of the investigation.
3. You make all the arrangements concerning your investigation.
4. Approval for projects should be conveyed to the District Director of the schools where the project will be conducted.
5. Educators' programmes are not to be interrupted.
6. The Study is to be conducted from **21 January 2014 till 30 September 2014**
7. No research can be conducted during the fourth term as schools are preparing and finalizing syllabi for examinations (October to December).
8. Should you wish to extend the period of your survey, please contact Dr A.T Wyngaard at the contact numbers above quoting the reference number?
9. A photocopy of this letter is submitted to the principal where the intended research is to be conducted.
10. Your research will be limited to the list of schools as forwarded to the Western Cape Education Department.
11. A brief summary of the content, findings and recommendations is provided to the Director: Research Services.
12. The Department receives a copy of the completed report/dissertation/thesis addressed to:

The Director: Research Services
Western Cape Education Department
Private Bag X9114
CAPE TOWN
8000

We wish you success in your research.

Kind regards.
Signed: Dr Audrey T Wyngaard
Directorate: Research
DATE: 07 May 2013

Appendix B: Western Cape Education Department (WCED): Permission letter to conduct study – 2015



Western Cape Government
Education

Directorate: Research

Audrey.wyngaard@westerncape.gov.za
tel: +27 021 467 9272
Fax: 0865902282
Private Bag x9114, Cape Town, 8000
wced.wcape.gov.za

REFERENCE: 20130507-10635
ENQUIRIES: Dr A T Wyngaard

Mrs Lisa Visagie
PO Box 101778
Meerensee
3901

Dear Mrs Lisa Visagie

RESEARCH PROPOSAL: DEVELOPMENT, IMPLEMENTATION AND EVALUATION OF A CBT-BASED INTERVENTION PROGRAMME FOR THE MANAGEMENT OF ANXIETY SYMPTOMS IN SOUTH AFRICAN CHILDREN WITH VISUAL IMPAIRMENTS

Your application to conduct the above-mentioned research in schools in the Western Cape has been approved subject to the following conditions:

1. Principals, educators and learners are under no obligation to assist you in your investigation.
2. Principals, educators, learners and schools should not be identifiable in any way from the results of the investigation.
3. You make all the arrangements concerning your investigation.
4. Educators' programmes are not to be interrupted.
5. The Study is to be conducted from **01 February 2015 till 30 March 2015**
6. No research can be conducted during the fourth term as schools are preparing and finalizing syllabi for examinations (October to December).
7. Should you wish to extend the period of your survey, please contact Dr A.T Wyngaard at the contact numbers above quoting the reference number?
8. A photocopy of this letter is submitted to the principal where the intended research is to be conducted.
9. Your research will be limited to the list of schools as forwarded to the Western Cape Education Department.
10. A brief summary of the content, findings and recommendations is provided to the Director: Research Services.
11. The Department receives a copy of the completed report/dissertation/thesis addressed to:

The Director: Research Services
Western Cape Education Department
Private Bag X9114
CAPE TOWN
8000

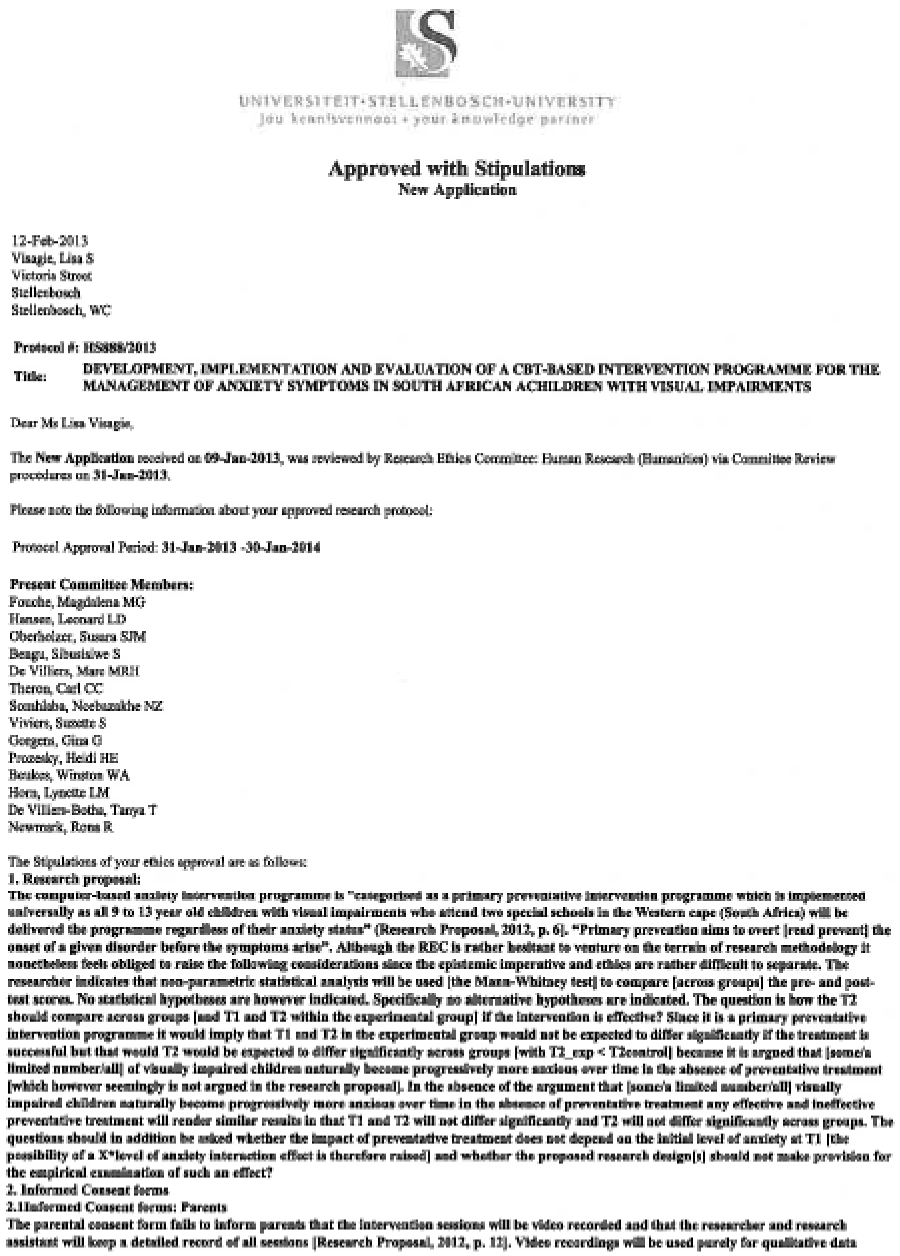
We wish you success in your research.

Kind regards.
Signed: Dr Audrey T Wyngaard
Directorate: Research
DATE: 26 January 2015

Lower Parliament Street, Cape Town, 8001
tel: +27 21 467 9272 fax: 0865902282
Safe Schools: 0800 45 46 47

Private Bag X9114, Cape Town, 8000
Employment and salary enquiries: 0861 92 33 22
www.westerncape.gov.za

Appendix C: Stellenbosch UniversityResearch Ethics Committee (REC): Permission Letter



UNIVERSITEIT·STELLENBOSCH·UNIVERSITY
jou kennisvennoot • your knowledge partner

Approved with Stipulations
New Application

12-Feb-2013
Visagie, Lisa S
Victoria Street
Stellenbosch
Stellenbosch, WC

Protocol #: HS888/2013

Title: **DEVELOPMENT, IMPLEMENTATION AND EVALUATION OF A CBT-BASED INTERVENTION PROGRAMME FOR THE MANAGEMENT OF ANXIETY SYMPTOMS IN SOUTH AFRICAN ACHILDREN WITH VISUAL IMPAIRMENTS**

Dear Ms Lisa Visagie,

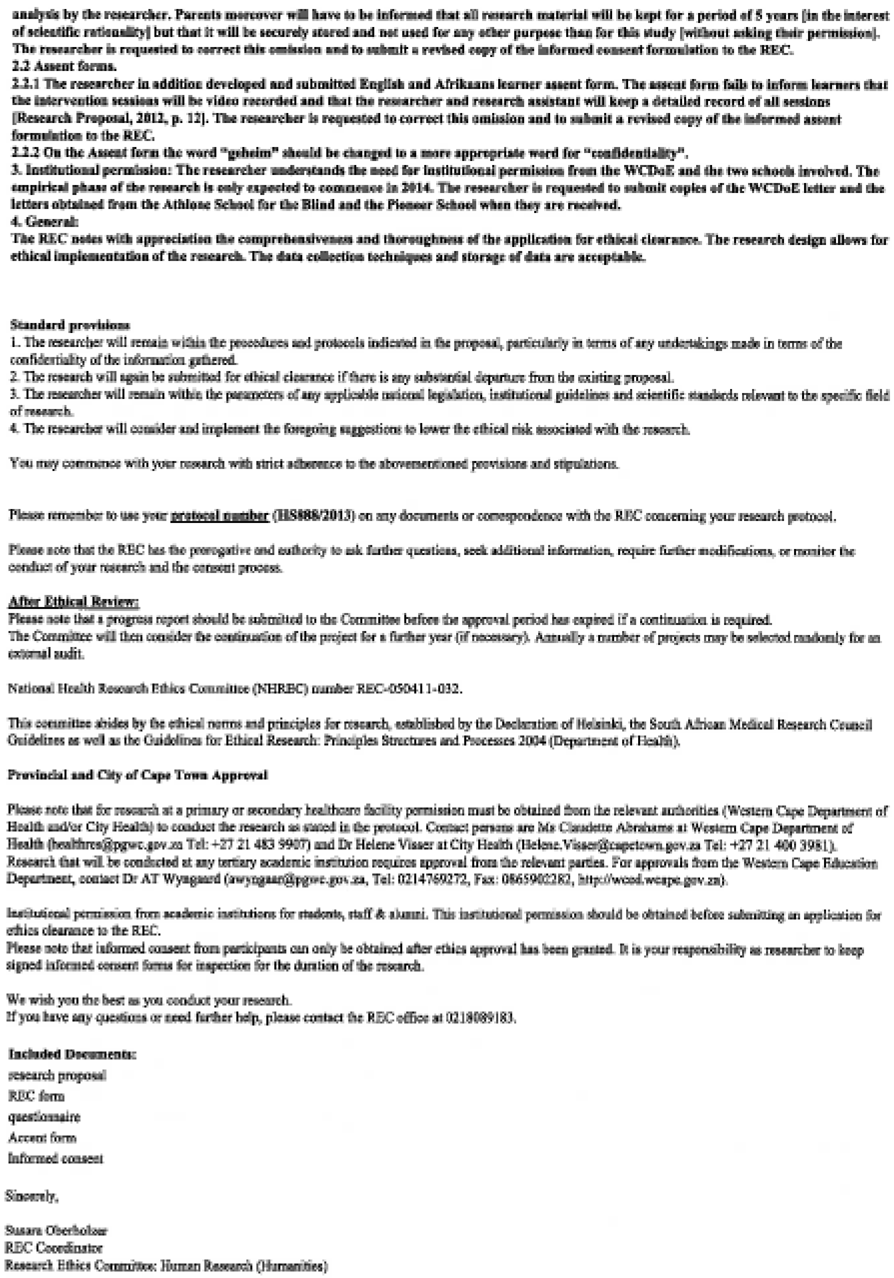
The **New Application** received on **09-Jan-2013**, was reviewed by Research Ethics Committee: Human Research (Humanities) via Committee Review procedures on **31-Jan-2013**.

Please note the following information about your approved research protocol:

Protocol Approval Period: **31-Jan-2013 -30-Jan-2014**

Present Committee Members:
Fouche, Magdalena MG
Hansen, Leonard LD
Oberholzer, Susara SJM
Bengu, Sibusisiwe S
De Villiers, Marc MRH
Theron, Carl CC
Somhlaba, Ncebazakhe NZ
Viviers, Suzette S
Gorgens, Gina G
Prozesky, Heidi HE
Beukes, Winston WA
Horn, Lynette LM
De Villiers-Botha, Tanya T
Newmark, Rona R

The Stipulations of your ethics approval are as follows:
1. Research proposal:
The computer-based anxiety intervention programme is "categorised as a primary preventative intervention programme which is implemented universally as all 9 to 13 year old children with visual impairments who attend two special schools in the Western cape (South Africa) will be delivered the programme regardless of their anxiety status" (Research Proposal, 2012, p. 6]. "Primary prevention aims to overt [read prevent] the onset of a given disorder before the symptoms arise". Although the REC is rather hesitant to venture on the terrain of research methodology it nonetheless feels obliged to raise the following considerations since the epistemic imperative and ethics are rather difficult to separate. The researcher indicates that non-parametric statistical analysis will be used [the Mann-Whitney test] to compare [across groups] the pre- and post-test scores. No statistical hypotheses are however indicated. Specifically no alternative hypotheses are indicated. The question is how the T2 should compare across groups [and T1 and T2 within the experimental group] if the intervention is effective? Since it is a primary preventative intervention programme it would imply that T1 and T2 in the experimental group would not be expected to differ significantly if the treatment is successful but that would T2 would be expected to differ significantly across groups [with T2_exp < T2control] because it is argued that [some/a limited number/all] of visually impaired children naturally become progressively more anxious over time in the absence of preventative treatment [which however seemingly is not argued in the research proposal]. In the absence of the argument that [some/a limited number/all] visually impaired children naturally become progressively more anxious over time in the absence of preventative treatment any effective and ineffective preventative treatment will render similar results in that T1 and T2 will not differ significantly and T2 will not differ significantly across groups. The questions should in addition be asked whether the impact of preventative treatment does not depend on the initial level of anxiety at T1 [the possibility of a X*level of anxiety interaction effect is therefore raised] and whether the proposed research design[s] should not make provision for the empirical examination of such an effect?
2. Informed Consent forms
2.1Informed Consent forms: Parents
The parental consent form fails to inform parents that the intervention sessions will be video recorded and that the researcher and research assistant will keep a detailed record of all sessions [Research Proposal, 2012, p. 12]. Video recordings will be used purely for qualitative data



analysis by the researcher. Parents moreover will have to be informed that all research material will be kept for a period of 5 years [in the interest of scientific rationality] but that it will be securely stored and not used for any other purpose than for this study [without asking their permission]. The researcher is requested to correct this omission and to submit a revised copy of the informed consent formulation to the REC.
2.2 Assent forms.
2.2.1 The researcher in addition developed and submitted English and Afrikaans learner assent form. The assent form fails to inform learners that the intervention sessions will be video recorded and that the researcher and research assistant will keep a detailed record of all sesions [Research Proposal, 2012, p. 12]. The researcher is requested to correct this omision and to submit a revised copy of the informed assent formulation to the REC.
2.2.2 On the Assent form the word "geheim" should be changed to a more appropriate word for "confidentiality".
3. Institutional permission: The researcher understands the need for institutional permission from the WCDoE and the two schools involved. The empirical phase of the research is only expected to commence in 2014. The researcher is requested to submit copies of the WCDoE letter and the letters obtained from the Athlone School for the Blind and the Pioneer School when they are received.
4. General:
The REC notes with appreciation the comprehensiveness and thoroughness of the application for ethical clearance. The research design allows for ethical implementation of the research. The data collection techniques and storage of data are acceptable.

Standard provisions
1. The researcher will remain within the procedures and protocols indicated in the proposal, particularly in terms of any undertakings made in terms of the confidentiality of the information gathered.
2. The research will again be submitted for ethical clearance if there is any substantial departure from the existing proposal.
3. The researcher will remain within the parameters of any applicable national legislation, institutional guidelines and scientific standards relevant to the specific field of research.
4. The researcher will consider and implement the foregoing suggestions to lower the ethical risk associated with the research.

You may commence with your research with strict adherence to the abovementioned provisions and stipulations.

Please remember to use your **protocol number** (HS888/2013) on any documents or correspondence with the REC concerning your research protocol.

Please note that the REC has the prerogative and authority to ask further questions, seek additional information, require further modifications, or monitor the conduct of your research and the consent process.

After Ethical Review:
Please note that a progress report should be submitted to the Committee before the approval period has expired if a continuation is required.
The Committee will then consider the continuation of the project for a further year (if necessary). Annually a number of projects may be selected randomly for an external audit.

National Health Research Ethics Committee (NHREC) number REC-050411-032.

This committee abides by the ethical norms and principles for research, established by the Declaration of Helsinki, the South African Medical Research Council Guidelines as well as the Guidelines for Ethical Research: Principles Structures and Processes 2004 (Department of Health).

Provincial and City of Cape Town Approval

Please note that for research at a primary or secondary healthcare facility permission must be obtained from the relevant authorities (Western Cape Department of Health and/or City Health) to conduct the research as stated in the protocol. Contact persons are Ms Claudette Abrahams at Western Cape Department of Health (healthres@pgwc.gov.za Tel: +27 21 483 9907) and Dr Helene Visser at City Health (Helene.Visser@capetown.gov.za Tel: +27 21 400 3981).
Research that will be conducted at any tertiary academic institution requires approval from the relevant parties. For approvals from the Western Cape Education Department, contact Dr AT Wyngaard (awyngaar@pgwc.gov.za, Tel: 0214769272, Fax: 0865902282, http://wced.wcape.gov.za).

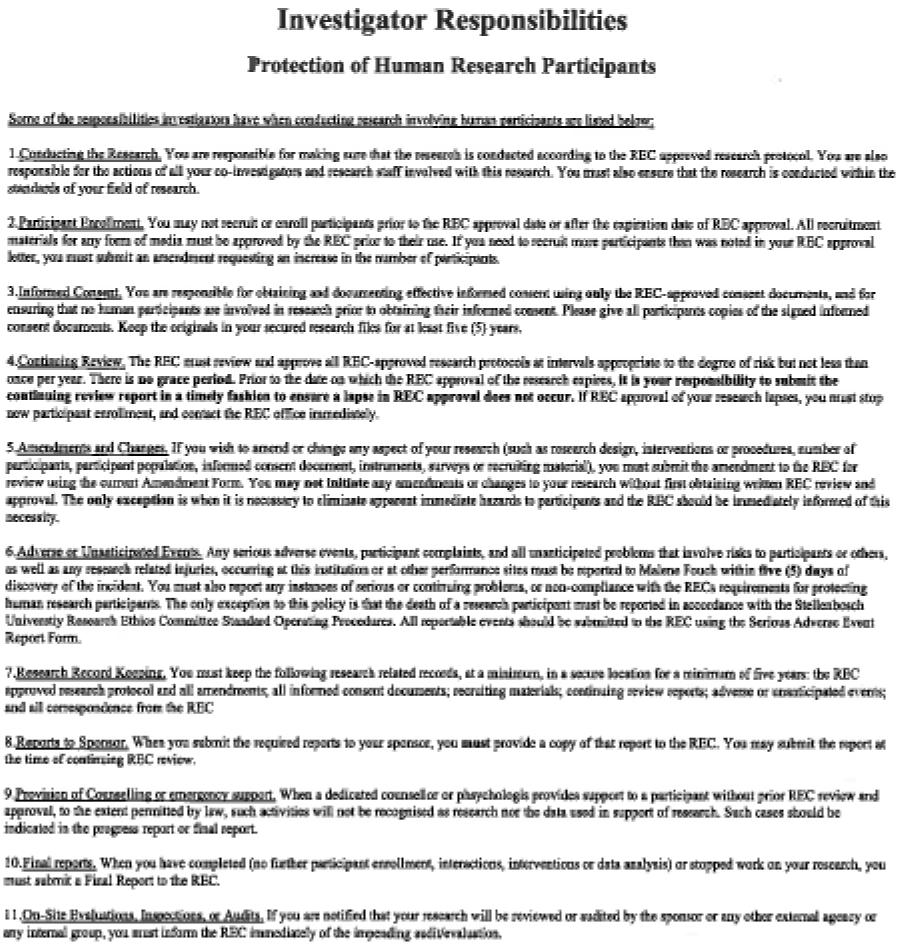
Institutional permission from academic institutions for students, staff & alumni. This institutional permission should be obtained before submitting an application for ethics clearance to the REC.
Please note that informed consent from participants can only be obtained after ethics approval has been granted. It is your responsibility as researcher to keep signed informed consent forms for inspection for the duration of the research.

We wish you the best as you conduct your research.
If you have any questions or need further help, please contact the REC office at 0218089183.

Included Documents:
research proposal
REC form
questionnaire
Accent form
Informed consent

Sincerely,

Susara Oberholzer
REC Coordinator
Research Ethics Committee: Human Research (Humanities)



Investigator Responsibilities

Protection of Human Research Participants

Some of the responsibilities investigators have when conducting research involving human participants are listed below:

1.Conducting the Research. You are responsible for making sure that the research is conducted according to the REC approved research protocol. You are also responsible for the actions of all your co-investigators and research staff involved with this research. You must also ensure that the research is conducted within the standards of your field of research.

2.Participant Enrollment. You may not recruit or enroll participants prior to the REC approval date or after the expiration date of REC approval. All recruitment materials for any form of media must be approved by the REC prior to their use. If you need to recruit more participants than was noted in your REC approval letter, you must submit an amendment requesting an increase in the number of participants.

3.Informed Consent. You are responsible for obtaining and documenting effective informed consent using **only** the REC-approved consent documents, and for ensuring that no human participants are involved in research prior to obtaining their informed consent. Please give all participants copies of the signed informed consent documents. Keep the originals in your secured research files for at least five (5) years.

4.Continuing Review. The REC must review and approve all REC-approved research protocols at intervals appropriate to the degree of risk but not less than once per year. There is **no grace period.** Prior to the date on which the REC approval of the research expires, **it is your responsibility to submit the continuing review report in a timely fashion to ensure a lapse in REC approval does not occur.** If REC approval of your research lapses, you must stop new participant enrollment, and contact the REC office immediately.

5.Amendments and Changes. If you wish to amend or change any aspect of your research (such as research design, interventions or procedures, number of participants, participant population, informed consent document, instruments, surveys or recruiting material), you must submit the amendment to the REC for review using the current Amendment Form. You **may not initiate** any amendments or changes to your research without first obtaining written REC review and approval. The **only exception** is when it is necessary to eliminate apparent immediate hazards to participants and the REC should be immediately informed of this necessity.

6.Adverse or Unanticipated Events. Any serious adverse events, participant complaints, and all unanticipated problems that involve risks to participants or others, as well as any research related injuries, occurring at this institution or at other performance sites must be reported to Malene Fouch within **five (5) days** of discovery of the incident. You must also report any instances of serious or continuing problems, or non-compliance with the RECs requirements for protecting human research participants. The only exception to this policy is that the death of a research participant must be reported in accordance with the Stellenbosch Universtiy Research Ethics Committee Standard Operating Procedures. All reportable events should be submitted to the REC using the Serious Adverse Event Report Form.

7.Research Record Keeping. You must keep the following research related records, at a minimum, in a secure location for a minimum of five years: the REC approved research protocol and all amendments; all informed consent documents; recruiting materials; continuing review reports; adverse or unanticipated events; and all correspondence from the REC

8.Reports to Sponsor. When you submit the required reports to your sponsor, you **must** provide a copy of that report to the REC. You may submit the report at the time of continuing REC review.

9.Provision of Counselling or emergency support. When a dedicated counsellor or phsychologis provides support to a participant without prior REC review and approval, to the extent permitted by law, such activities will not be recognised as research nor the data used in support of research. Such cases should be indicated in the progress report or final report.

10.Final reports. When you have completed (no further participant enrollment, interactions, interventions or data analysis) or stopped work on your research, you must submit a Final Report to the REC.

11.On-Site Evaluations, Inspections, or Audits. If you are notified that your research will be reviewed or audited by the sponsor or any other external agency or any internal group, you must inform the REC immediately of the impending audit/evaluation.

Appendix D: Letter to schools – permission to conduct the study

Dear principal,

RE: REQUEST FOR PERMISSION TO CONDUCT DOCTORAL RESEARCH AT SCHOOL – PhD STUDENT LISA VISAGIE (29-NOVEMBER-2014)

Firstly, I would like to take this opportunity to thank you again for allowing me to conduct previous research at your school in 2009. An article detailing the research findings was recently published in an international journal (Visagie, Loxton, Ollendick & Steel, 2013) (Please find a copy of the article attached). Findings from this research highlighted the need for further investigation into the field of anxiety in children with visual impairments. To this end, I am currently registered as a PhD Psychology student at the University of Stellenbosch, and I am planning to undertake research under the co-supervision of Prof Helene Loxton and Prof Leslie Swartz to complete my dissertation entitled: *Development, implementation and evaluation of a CBT-based intervention programme for the management of anxiety symptoms in South African children with visual impairments*. The project was approved by the Research Ethics Committee: Human Research (Humaniora, Protocol number: HS888/2013) at Stellenbosch University on 31 January 2013, and the Western Cape Education Department (WCED) on 7 May 2013 (Reference no: 20130507-10635).

My project is aimed at developing, implementing and evaluating an anxiety prevention programme for children with visual impairments. Anxiety is a common emotion most of us experience. At some point in our lives all of us will feel anxious when confronted with a difficult situation. This is also true for children with visual impairments (Visagie et al., 2013) and previous research involving children with physical disabilities (including visual impairments) suggests that they are at increased risk for the development of psychological difficulties (including anxiety) when compared to their non-disabled peers (see Gullone, 1996 for an overview). For this reason, it is important to equip these children with the necessary skills and strategies to deal with anxious feelings when they arise; in this way the onset of full-blown anxiety disorders may be prevented. Various well-researched anxiety prevention programmes have been implemented successfully with sighted children (e.g., Kendall's (1990) Coping Cat programme, Barrett's (1995) Coping Koala programme, Stallard's (2002) Think Good-Feel Good programme, Barrett's (2004, 2005) FRIENDS programme and Rapee et al.'s

(2006) Cool Kids® programme). Although these programmes have provided positive results in the past (see Briesch, Hagermoser Sanetti & Briesch, 2010 for an overview) they are not suitable for use with children who have visual impairments, as their content (i.e., cartoons, colouring in pictures, workbook and visual-based activities) is not very accessible to this specific population. It is for this reason that this project is aimed at the development and evaluation of a positive and accessible anxiety prevention programme specifically tailored for South African children WHO have visual impairments. The advantage of this project is that children are taught a range of anxiety management skills which provide them with an emotional toolbox to help manage their emotions effectively (Stallard, 2010).

The children's parents/guardians will be informed of the project and asked for their consent. Thereafter all assenting children will be asked to take part in a five week programme consisting of 10 twice-weekly sessions lasting approximately 40 minutes each. These sessions will be administered on the school premises during an appropriate time negotiated with you - the school, as to not interfere with the children's class activities and curriculum. The ten sessions will incorporate child-friendly activities aimed at promoting the development of emotional, cognitive and problem solving skills to increase children's competencies to deal with future problems.

In addition, assenting children will also be asked to take part in a focus group discussion and complete a Biographical Questionnaire and two short child-friendly self-report questionnaires (including: The Revised Child Anxiety and Depression Scale (RCADS) (Chorpita, Yim, Moffitt, Umemoto & Francis, 2000), and The Penn State Worry Questionnaire for Children (PSWQ-C) (Chorpita, Tracey, Brown, Collica, & Barlow, 1997) which measure symptoms of anxiety. These questionnaires are to be administered on four occasions during the 2014 school year. Information obtained through the administration of these two questionnaires will provide important data against which the effectiveness of the prevention programme can be evaluated.

To this end, this is a friendly, enthusiastic request to you as headmaster of children falling within the target population to allow them to partake. Permission to conduct the study has been granted by the WCED (A copy of the permission letter is attached). As put forth in the WCED guidelines the following conditions will be adhered to:

1. The principals/teachers/learners are under no obligation to assist in this investigation.

2. The principals/learners/schools should not in any way be identified from the results of the investigation.
3. All arrangements concerning this investigation will be done personally by the researcher.

It will be preferable if you do not discuss anything with regards to the research with the children prior to the research date. It would be highly appreciated if we could schedule a meeting during January 2014 at a time that would suit you to discuss further logistics. I shall follow-up in January. If you have any further questions regarding the study, please feel free to contact me at any time at visagie.lisa@gmail.com or on 082 456 4622.

Your assistance in the above regard will be highly appreciated, and I believe that your participation will be of great benefit to both yourself and the children involved.

Thank you for considering my request.

Yours Sincerely

Ms Lisa Visagie	Prof Helene Loxton	Prof Leslie Swartz
PhD Psychology Student	PhD Research Supervisor	PhD Research Co-Supervisor

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Appendix E: Parent/guardian information leaflet and consent form

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PARTICIPANT INFORMATION LEAFLET AND CONSENT FORM FOR USE BY PARENTS/LEGAL GUARDIANS

Title of the Research Project: Development, implementation and evaluation of a CBT- based intervention programme for the management of anxiety symptoms in South African children with visual impairments

Reference Number: HS888/2013

Principal investigator: Ms Lisa Visagie

Address: Department of Psychology
Stellenbosch University
Private Bag X1
Matieland
7602

Contact Number: 082 456 4622

E-mail: visagie.lisa@gmail.com

Dear Parent/Guardian

Your child is invited to take part in a research project which is currently being undertaken at the University of Stellenbosch. Please take some time to read the information presented here, which will explain the details of this project. If you have any questions or concerns with regards to the project, please feel free to contact the researcher. It is of great importance that you are satisfied and understand what the research entails, and how your child may be involved. Your child's participation is completely voluntary and you may decline to consent. No adverse consequences will result for your child if he/she does not take part. You may also withdraw your child from the project at any time, even if you initially gave consent for his/her participation.

This project was approved by the Research Ethics Committee: Human Research (Humaniora) at the University of Stellenbosch, and will be executed in accordance with the ethical guidelines and principles of the international Declaration of Helsinki, the South African Guidelines for good Clinical Practice and the Medical Research Council's (MRC) ethical guidelines for research.

What is this Research project all about?

The main aim of this project is to develop, implement and evaluate an anxiety prevention programme for children with visual impairments. Anxiety is a common emotion most of us have experienced. At some point in our lives everyone will feel anxious when confronted with a difficult situation. For this reason, it is important to equip children with the necessary skills and strategies to deal with these anxious feelings when they arise. In this way the onset of full-blown anxiety disorders can be prevented. Various well-researched anxiety prevention programmes have been used with great success (e.g., Kendall's "Coping Cat" programme, Staller's "Think good-Feel good programme" and Barrett's "FRIENDS for life programmes"). Although these programmes have provided positive results in the past, they are not suitable for use with children who have visual impairments, as their content (i.e., cartoons, colouring in pictures, workbook and visual-based activities) is not very accessible to this specific population. It is for this reason that this project is aimed at the development and evaluation of a positive and accessible anxiety prevention programme for children with visual impairments. The advantage of this project is that children will be taught problem solving skills and coping strategies that they can use in their day-to-day lives. In combination these skills and strategies increase children's emotional resilience and offer protection against stress and change.

Should you give your consent, your child will be asked to take part in a five week programme consisting of 10 twice-weekly sessions lasting approximately 40 minutes each. These sessions will be administered on the school premises during a time negotiated with the school. Thus, the programme will not interfere with the children's school curriculum. Sessions will incorporate child-friendly activities aimed at promoting the development of effective problem solving skills and coping strategies. In addition, your child will also be asked to complete three short child-friendly questionnaires which measure symptoms of anxiety. These questionnaires will be administered on four occasions during the 2014 school year. Information obtained through the administration of the three questionnaires will provide important data against which the effectiveness of the programme can be evaluated.

With your consent, information relating to your child's eye condition (what eye condition he/she has) and level of vision (is he/she totally blind or partially sighted) will be obtained from the school nurse. Furthermore, all 10 sessions will be video recorded and the researcher/research assistant will keep notes of each session. This data will be used purely for qualitative data analyses. In the interest of scientific ethics all data has to be stored for a period of five years. The data will be stored securely and only the researcher will have access to it.

Your child may also be asked to take part in an hour long focus group discussion. Ten children WHO will be selected randomly will be asked to take part. During the focus group children will be asked questions about how they experience anxiety, and they will be asked to try out some of the games and activities which are to be included in the programme. Their answers and comments will help develop the final programme.

Why has your child been invited to participate?
The target group of this project includes children between the ages of 9 and 13 who have visual impairments. As your child falls within this group, he/she has been invited to take part in the project.

What is your responsibility?
As the parent/guardian of a child who has a visual impairment, it is your responsibility to sign and return the attached informed consent form if you would let your child participate in the programme. Please, if you do not feel comfortable do not feel obliged to let your child take part in the research. No adverse consequences will result for your child if he/she does not take part.

Will your child benefit from participation in this project?
Although there are no financial benefits related to participation in this project, your child will still benefit from participation in the programme, as it is aimed at promoting the development

of problem solving skills and coping strategies. These skills and strategies can help your child to manage everyday anxiety and stress more effectively.

Does Participation in this project present any risks for my child?

It is expected that no discomfort which could impact upon your child's well-being will occur. In a similar study undertaken in the Stellenbosch area by Mostert and Loxton (2008), no emotional discomfort was reported by any of the children who took part. The researcher and promotor of the study are both registered Counselling Psychologists with the Health Professions Council of South Africa (HPCSA) and if any unexpected signs of emotional discomfort come to the fore, your child can be referred for further assistance to Prof. HS Loxton (study promotor on Tel. 021 808 3417) at the University of Stellenbosch.

Who will have access to your child's questionnaire data?

All information gathered from the children will be treated as confidential at all times, and all children will remain anonymous. When reporting the results, reference will only be made to the children in terms of aspects such as: age, gender, culture and level of vision. No information used in the study will be related back to your child in his or her own personal capacity. Only my research promotor and I (the primary researcher) will have access to the data.

Will you or your child be remunerated for participation in the project, and are there any costs involved?

Neither you nor your child will be remunerated for participation in this project, and it will cost you nothing to allow your child to participate.

Is there anything else that you should know or do?

If you have any questions or concerns with regards to the above, please feel free to contact me or Prof. HS Loxton (research promotor) on 021 808 3417 or hsl@sun.ac.za

You can also contact the Research Ethics Committee: Human Research (Humaniora) at the University of Stellenbosch if you have any further concerns or complaints that were not adequately addressed by the researcher. You will receive a copy of this information and consent form for your own records.

DECLARATION BY PARENT/LEGAL GUARDIAN

By signing below, I (name of parent/legal guardian) ……………………………………...……. agree to allow my child (name of child) ……………………………….…. who is ………. years old, to take part in a research project entitled: Development, implementation and evaluation of a CBT- based intervention programme for the management of anxiety symptoms in South African children with visual impairments

I declare that:

- I have read or had read to me this information and consent form and that it is written in a language with which I am fluent and comfortable.
- I have had a chance to ask questions and all my questions have been adequately answered.
- I understand that participation in this project is voluntary and I have not been pressurized to let my child take part.
- I understand that all information gathered from the project will remain confidential and anonymous.
- I may choose to withdraw my child from the project at any time and my child will not be penalized or prejudiced in any way.
- I understand that no potential risks exist for my child if my child participates in this project.
- I understand that the programme and questionnaires will be administered in my child's medium of instruction at school (either English or Afrikaans).
- I understand that the information gathered by the project will be published; however, none of the presented information will be linked to my child in any way.

Signed at (place) ....…........……………….. On (date) ………….....….. 2014

……………………………………..

Signature of parent/legal guardian

…………………………………….

Signature of witness

Appendix F: Ouer/voog inligtings blad 'n toestemmingsvorm

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DEELNEMERINLIGTINGSBLAD EN – TOESTEMMINGSVORM VIR GEBRUIK DEUR OUERS/WETTIGE VOOGDE

Titel van die navorsingsprojek: Die ontwikkeling, implementering en evaluering van 'n KGT-gebaseerde intervensieprogram vir die hantering van angssimptome in Suid-Afrikaanse kinders met visuele gestremdhede

Verwysingsnommer:	HS888/2013
Hoofnavorser:	Me Lisa Visagie
Adres:	Departement Sielkunde Stellenbosch Universiteit Privaat Sak X1 Matieland 7602
Kontaknommer:	082 456 4622
E-pos:	visagie.lisa@gmail.com

Beste ouer/voog

U kind word vriendelik uitgenooi om deel te neem aan 'n navorsingsprojek wat tans onderneem word by die Universiteit van Stellenbosch. Dit sal waardeer word indien u 'n tydjie kan afknyp om die onderstaande inligting wat die projek uiteensit deur te lees. Neem asseblief die vrymoedigheid om die navorser te kontak indien u enige vrae het of indien daar enigiets vir u onduidelik is. Dit is van die grootste belang om heeltemal tevrede te wees dat u duidelik verstaan waaroor die projek handel en hoe u kind moontlik betrokke mag wees. U kind se deelname is verder heeltemal vrywillig en dit staan u vry om deelname te weier. Indien u nie u toestemming gee nie, sal dit u kind op geen manier negatief beïnvloed nie. U mag hom/haar ook op enige tyd gedurende die projek onttrek, al het u aanvanklik toegestem tot sy/haar deelname.

Hierdie projek is deur die Etiekkomitee: Mensnavorsing (Humaniora) van die Universiteit van Stellenbosch goedgekeur, en sal uitgevoer word in ooreenkoms met die etiese riglyne en beginsels van die internasionale verklaring van Helsinki, die Suid-Afrikaanse Riglyne vir Goeie Kliniese Praktyk en die Mediese Navorsingsraad (MNR) se Etiese Riglyne vir Navorsing.

Wat behels hierdie navorsingsprojek?

Die hoofdoel van hierdie projek is om ‘n angsvoorkomingsprogram vir kinders met visuele gestremdhede te ontwikkel, te implementeer en te evalueer. Angs is ‘n algemene emosie, en almal van ons voel op een of ander stadium angstig as ons met ‘n moeilike situasie gekonfronteer word. Om hierdie rede is dit belangrik dat kinders toegerus is met die nodige vaardighede om angssimptome te hanteer. Op hierdie manier kan die ontstaan van volskaalse angsversteurings voorkom word. Verskeie goed nagevorsde angsvoorkomingsprogramme word met groot sukses geïmplementeer (bv. Kendal se “Coping Cat programme”, Stallard se “Think good-Feel good programme” en Barrett se “FRIENDS for life programme”). Alhoewel hierdie programme positiewe resultate in die verlede gelewer het, is hul inhoud (bv. “cartoons”, inkleurprentjies en visueel- gebaseerde aktiwiteite) nie geskik vir kinders met visuele gestremdhede nie. Vir hierdie rede is hierdie projek daarop ingestel om ‘n positiewe en toeganklike angsvoorkomingsprogram vir kinders met visuele gestremdhede te ontwikkel en te evalueer. Hierdie projek is voordelig deurdat kinders toegerus word met probleemoplossings- en hanteringsvaardighede wat hulle in alledaagse situasies kan gebruik. In kombinasie verhoog hierdie vaardighede kinders se emosionele veerkragtigheid wat help om hulle teen onnodige spanning te beskerm.

Indien u sou toestem tot u kind se deelname, sal hy/sy gevra word om deel te neem aan ‘n vyf week program wat bestaan uit twee weeklikse sessies (tien sessies altesaam) van ongeveer 40 minute elk. Hierdie sessies sal in oorleg met die skool tydens ‘n gepaste tydgleuf afgeneem word. Die program sal dus nie inmeng met die kinders se skoolkurrikulumaktiwiteite nie. Die sessies sluit kindervriendelike aktiwiteite in. Hierdie aktiwiteite is daarop gemik om vir kinders probleemoplossings- en hanteringsvaardighede te leer. U kind sal ook gevra word om drie kindervriendelike vraelyste wat angssimptome meet, te voltooi. Hierdie vraelyste sal by vier geleenthede tydens die 2014 skooljaar afgelê word. Inligting wat deur die drie vraelyste ingesamel word sal belangrike data verskaf waarteen die effektiwiteit van die program evalueer kan word.

Met u toestemming, sal inligting rakende u kind se oogkondisie (watter oog- kondisie hy/sy het) en vlak van visie (is hy/sy heeltemal blind of swaksiende) vanaf die skoolverpleegster verkry word. Al tien sessies van die program sal op video opgeneem word en die navorser/navorsingsassistent sal tydens die sessies notas maak. Hierdie data sal slegs vir kwalitatiewe data-analise gebruik word. In ooreenstemming met wetenskaplike etiek moet alle data vir ’n tydperk van vyf jaar gestoor word. Die data sal op ’n veilige plek gestoor word en slegs die navorser sal daartoe toegang hê.

U kind mag ook gevra word om deel te neem aan ’n uur lange fokusgroep- bespreking. Tien kinders sal lukraak geselekteer word om deel te neem. Tydens die fokusgroepbespreking, sal kinders vrae gevra word oor hoe hul angs ervaar en ook om sommige van die aktiwiteite wat in die program ingesluit gaan word, uit te toets. Die antwoorde en kommentaar wat die kinders verskaf sal help om die finale program te ontwikkel.

Waarom is u kind genooi om deel te neem?

Die teikengroep van hierdie projek sluit kinders tussen die ouderdomme van 9 en 13 wat ‘n visuele gestremdheid het in. Aangesien u kind binne hierdie groep val, word hy/sy uitgenooi om deel te neem aan die projek.

Wat sal u verantwoordelikhede wees?

As die ouer/voog van u kind is dit u verantwoordelikheid om die aangehegte ingeligte-toestemmingsvorm te teken en terug te stuur skool toe indien u u kind sou toelaat om deel te neem. Let asseblief daarop dat deelname nie verpligtend is nie en indien u nie u toestemming verleen nie, u kind op geen wyse benadeel sal word nie.

Sal u kind voordeel trek deur deel te neem aan hierdie projek?

Alhoewel daar geen finansiële voordele uit deelname aan die projek ontstaan nie, sal u kind nogtans baat vind deur deelname aan die program. Die program is daarop gerig om kinders se probleemoplossings- en hanteringsvaardighede uit te brei, sodat hulle alledaagse angs en spanning beter kan hanteer.

Hou deelname aan hierdie navorsing enige risiko's vir u kind in?
Daar word geen ongemak wat u kind se welsyn kan bedreig voorsien nie. In 'n onlangse soortgelyke studie wat deur Mostert en Loxton (2008) in die Stellenbosch-omgewing uitgevoer is, is daar geen emosionele ongemak deur enige kind gerapporteer nie. Die navorser sowel as die studieleier is albei geregistreerde Voorligtingsielkundiges by die "Health Professions Council of South Africa (HPCSA)" en indien daar enige onverwagte tekens van emosionele ongemak is, kan u kind vir verdere hulp verwys word. Na dr HS Loxton (tel. 021 808 3417) by die Universiteit van Stellenbosch.

Wie sal toegang hê tot u kind se vraelys data?
Alle inligting wat van die kinders verkry word, sal ten alle tye as vertroulik behandel word en al die kinders sal naamloos bly. Wanneer die resultate aangebied word, sal daar slegs na die kinders verwys word ten opsigte van hulle geslag, ouderdom, etnisiteit en vlak van visuele gestremdheid. Geen inligting sal enigsins direk persoonlik verbind kan word met u kind nie. Slegs ek (die primêre navorser) en my studieleier sal toegang hê tot die inligting.

Sal u of u kind betaal word vir deelname aan die projek en is daar enige koste verbonde aan deelname?
Nie u of u kind sal vergoed word om deel te neem aan die projek nie. Dit sal u niks kos om u kind te laat deelneem nie.

Is daar enigiets anders wat u moet weet of doen?
Indien u enige verdere navrae het of probleme teëkom, kan u met my skakel; óf met dr HS Loxton (studieleier) by tel. 021 808 3417 of hsl@sun.ac.za. U kan in verbinding tree met die Navorsingsetiekkomitee indien u oor enigiets bekommerd is of enige klagtes het oor iets wat nie behoorlik deur die navorser behandel is nie. U sal 'n afskrif van hierdie inligtings- en toestemmingsvorm ontvang vir u eie rekords.
VERKLARING DEUR OUER/WETTIGE VOOG

Deur die ondertekening van hierdie brief gee ek, (naam van ouer / voog) …... toestemming dat my kind, (naam van kind)..., wat …….. jaar oud is mag deelneem aan ‘n navorsingstudie getiteld: Die ontwikkeling, implementering en evaluering van ‘n KGT-gebaseerde intervensieprogram vir die hantering van angssimptome in Suid-Afrikaanse kinders met visuele gestremdhede.

Ek verklaar dat:

- Hierdie inligting en vrywaringsvorm deur myself of deur iemand anders aan my gelees is en dat dit in ‘n taal is waarmee ek vlot en gemaklik kan kommunikeer.
- Daar vir my kans gegee is om vrae te vra en al my vrae voldoende beantwoord is.
- Ek verstaan dat deelname aan hierdie projek vrywillig is en ek nie gedruk is om my kind te laat deelneem nie
- Ek verstaan dat al die inligting wat deur die projek ingesamel word vertroulik en anoniem sal bly.
- Ek mag besluit om my kind op enige stadium van die projek te onttrek en my kind op geen manier sal benadeel of beoordeel word nie.
- Ek verstaan dat geen potensiële gevaar vir my kind bestaan as my kind deelneem aan die projek nie.
- Ek verstaan dat die program en vraelyste in my kind se taal van onderrig aan hom / haar voorgelê sal word (In Engels of Afrikaans).
- Ek verstaan dat die inligting wat deur hierdie projek ingesamel word gepubliseer sal word. Alhoewel geen van die inligting gekoppel sal word aan my kind in sy / haar persoonlike hoedanigheid nie.

Geteken te (plek) ....…........………… op (datum) …....……….. 2014.

……………………………………….	…………………………
Handtekening van ouer / wettige voog	Handtekening van getuie

Appendix G: Participant information leaflet and consent form

	STELLENBOSCH UNIVERSITY

PARTICIPANT INFORMATION LEAFLET AND ASSENT FORM

TITLE OF THE RESEARCH STUDY: Development, implementation and evaluation of a CBT- based intervention programme for the management of anxiety symptoms in South African children with visual impairments

RESEARCHER'S NAME: Lisa Visagie

ADDRESS:
Department of Psychology
Stellenbosch University
Private Bag X1
Matieland
7602

CONTACT NUMBER: 082 456 4622

E-MAIL: visagie.lisa@gmail.com

What is research?

Research is something we do to find out how things and people work. We use research projects and studies to help us find out more about different problems. Research also helps us find better ways to help people.

What is this research project all about?

This research study wants to make up a programme that can help children deal with their problems and worries in a healthy way. All people feel worried or nervous from time to time, and this programme has been made to teach us better ways to cope when we feel like this. When you know how to deal with difficult things better, you can feel happier inside.

Why have I been asked to take part in this research project?

You have been asked to take part because you are one of the children who has a visual impairment. The researcher wants to make this programme especially for children like you. Children who are between 9 and 13 years old are taking part in the project.

Who is doing the research?

Lisa Visagie is doing the research. Lisa is a doctoral student and she is studying psychology at the University of Stellenbosch. Lisa is doing this research study for her school work. She wants to teach children how to cope when they are feeling worried or scared. Learning to cope can help us feel happier.

What will happen to me in this project?

You will be asked to take part in a positive and fun programme. This programme will have ten sessions, and each session will be about 40 minutes long. The sessions will be held in your classroom during school time. During the sessions you will be with other children in your class and you will play games, read stories, answer some questions and take part in a whole lot of fun activities! You might be asked to take part in a group where you and nine other children from your school will talk to the researcher and try out some of the games and activities before the other children in your class have to do them. You will also be asked to fill out three short questionnaires. The researcher will help you to fill them in. You will be asked to fill out these questionnaires four times during one school year. All the sessions will be recorded on a video camera and the researcher/research assistant will make notes during the sessions. This information will help the researcher to remember what happened during each session.

Can anything bad happen to me?

Nothing bad will happen to you, but, if you feel that you don’t want to take part in the programme anymore, you can stop and nothing will happen to you. You won’t get in trouble and nobody will be cross with you. If you don’t feel good after a session, the researcher will make sure that you talk to someone who can help you feel better. If you don’t like a part of the project you can tell the researcher or your teacher or parents and stop taking part straight away.

Can anything good happen to me?

Yes, you can learn helpful ways to deal with your worries and stress. You can use the skills that the programme teaches you in your everyday life at school and at home.

Will anyone know I am in the project?

The only people who will know you are in the project are the researcher, your parents, your teacher and you. When doing this research, everything you say and do will be kept confidential. This means that all the things you tell the researcher will be kept private, and the researcher won’t tell other people what you said or did.

Who can I talk to about the project?

If you have any questions or problems about the project, you can talk to:

- The researcher, her name is Lisa Visagie, you can phone her on 082 456 4622 or send her an e-mail at visagie.lisa@gmail.com.

OR

- Dr Helene Loxton, she is a psychologist who works at Stellenbosch University, you can phone her on 021 808 3417 or send her an e-mail at hsl@sun.ac.za.

What if I do not want to do this?

If you do not want to take part in the project you don’t have to. Even if your parents already said yes, you can still say no. No one can force you to take part in the project, it is your choice. If you say yes to take part in the project, but change your mind later nothing will happen to you. You are free to pull out of the project at anytime.

Do you understand this research project and do you want to take part in it?

☐ YES ☐ NO

Has the researcher answered all your questions?

☐ YES ☐ NO

Do you understand that you can pull out of the project at any time?

☐ YES ☐ NO

______________________________ ________________________

Signature of child Date

Appendix H: Deelnemer inligtings blad 'n toestemmingsvorm

	UNIVERSITEIT STELLENBOSCH UNIVERSITY

INLIGTINGSTUK EN TOESTEMMINGSVORM VIR DEELNEMERS

TITEL VAN NAVORSINGSTUDIE: Die ontwikkeling, implementering en evaluering van 'n KGT-gebaseerde intervensieprogram vir die hantering van angssimptome in Suid-Afrikaanse kinders met visuele gestremdhede

NAVORSER:	Lisa Visagie
ADRES:i	Departement Sielkunde Stellenbosch Universiteit Privaat Sak X1 Matieland 7602
KONTAKNOMMER:	082 456 4622
E-POS:	visagie.lisa@gmail.com

Wat is navorsing?

Navorsing leer ons hoe dinge en mense werk. Ons gebruik navorsingstudies of -projekte om meer oor probleme te leer. Navorsing leer ons ook hoe om mense beter te help.

Waaroor gaan hierdie navorsingsprojek?
Hierdie navorsingsprojek wil ‘n program vir kinders ontwikkel. Hierdie program sal vir kinders leer om hul probleme en bekommernisse beter te hanteer. Alle mense voel bekommerd of bang op een of ander tyd en hierdie program sal vir jou leer wat om te doen as jy so voel. As jy weet hoe om met moeilike probleme te werk, kan jy dit oplos en gelukkiger binne jouself voel.

Hoekom vra julle my om aan hierdie navorsingstudie deel te neem?
Jy is gevra om deel te neem omdat jy een van die kinders is wat ‘n visuele gestremdheid het. Die navorser wil die program spesiaal vir kinders soos jy maak. Kinders van 9 tot 13 jaar oud neem deel aan hierdie studie.

Wie doen die navorsing?
Lisa Visagie doen die navorsing. Lisa is ‘n doktorale sielkunde student van die Universiteit van Stellenbosch. Die navorsing is deel van haar skoolwerk. Lisa wil vir kinders leer wat hulle moet doen as hulle bekommerd of bang voel. As ons weet wat om te doen kan dit ons help om gelukkiger te voel.

Wat sal in hierdie studie met my gebeur?
Jy sal gevra word om deel te neem aan ‘n positiewe en opwindende program. Hierdie program het tien sessies en elke sessie sal omtrent 40 minute lank wees. Die sessies sal in jou klaskamer tydens skooltyd gehou word. Jy sal tydens die sessies saam met ander kinders in jou klas wees, en julle gaan speletjies speel, stories lees, so paar vrae antwoord en nog ‘n klomp ander lekker aktiwiteite doen! **Jy mag ook meskien gevra word om in ‘n groep saam met nege van jou skoolmaats met die navorser te gesels. Julle sal so paar vrae antwoord en van die program se aktiewieteite uit toets voor jou ander klasmaats hulle doen.** Jy sal ook gevra word om drie kort vraelyste in te vul; die navorser sal jou hiermee help. Jy sal die vraelyste vier keer in een skooljaar moet invul. Elke sessie sal met ‘n videokamera opgeneem word en die navorser en navorsingsassistent sal notas oor die sessies skryf. Hierdie inligting sal die navorser help om te onthou wat tydens die sessies gebeur.

Kan enigiets fout gaan?

Tydens hierdie navorsing sal geen skade aan jou gedoen word nie, maar as jy tydens die navorsing nie meer wil deelneem nie, kan jy ophou sonder dat enigiets met jou gebeur. Jy sal nie in die moeilikheid kom nie, en niemand sal vir jou kwaad wees nie. As jy na enige van die sessies enigsins sleg voel, sal die navorser seker maak dat daar iemand is wat jou kan help om beter te voel. As jy ongelukkig voel oor enige deel van die navorsing, kan jy vir jou ouers of vir die navorser sê, en jy kan dadelik ophou deelneem aan die projek.

Kan enigiets goeds met my gebeur?

Ja, jy kan nuttige maniere leer om met jou bekommernisse en spanning te werk. Jy kan die vaardighede wat die program jou leer in jou alledaagse lewe by die skool en by die huis gebruik.

Sal enigiemand weet ek neem deel?

Die enigste mense wat sal weet jy neem deel aan die projek is die navorser, jou ouers, jou onderwyser en jy self. Tydens hierdie navorsing bly al die inligting vertroulik. Dit beteken dat dit wat jy sê privaat sal bly tussen jou en die navorser. Die navorser gaan nie vir ander mense vertel wat jy gesê of gedoen het nie.

Met wie kan ek oor die projek praat?

As jy enige vrae oor of probleme met die projek het, kan jy met die volgende mense praat:

- Die navorser, haar naam is Lisa Visagie, jy kan haar bel by 082 456 4622 of vir haar 'n e-pos stuur by visagie.lisa@gmail.com.

OF

- Dr Helene Loxton, sy is 'n sielkundige wat by Stellenbosch Universiteit werk. Jy kan haar bel by 021 808 3417 of vir haar 'n e-pos stuur by hsl@sun.ac.za

Wat gebeur as ek nie wil deelneem nie?

As jy nie aan die projek wil deelneem nie, dan hoef jy nie. Al het jou ouers klaar ja gesê, mag jy nee sê. Niemand kan jou dwing om aan die projek deel te neem nie, dit is jou eie keuse. As jy ja sê om deel te neem, en jy wil later nie meer deelneem nie is dit reg, jy mag nee sê. Niks sal met jou gebeur nie. Jy kan ophou deelneem net wanneer jy wil.

Verstaan jy hierdie navorsingsprojek, en wil jy daaraan deelneem?

☐ JA ☐ NEE

Het die navorser ál jou vrae beantwoord?

☐ JA ☐ NEE

Verstaan jy dat jy kan ophou deelneem net wanneer jy wil?

☐ JA ☐ NEE

______________________________ ________________________

Handtekening van kind Datum

Appendix I: Biographical Questionnaire

All the information in this form will be used for research purposes alone and your identity (name, surname, etc.) will be kept confidential. This means that your information will be kept secret, and the researcher will not share your answers with other people.

Please answer all the questions

1. What is your name?

………………………………………………………………………………………………

2. What is your surname?

……………………………………………………………………………………………

3. How old are you?

…………………………………………………………………………………………………

4. When is your Birthday?

……………………………………………………………………………………………

5. Are you a boy or a girl?

Girl ☐

Boy ☐

6. What is your school's name?

………………………………………………………………………………………

7. What grade are you in?

……………………………………………………………………………………………

8. Where do you stay in the week? In the hostel or at home?

Hostel ☐

Home ☐

9. If you stay in the hostel, when do you go home?

Every Weekend ☐

Some Weekends ☐

Only Holidays ☐

10. What cultural/Ethnic group do you belong to?

Black ☐

Coloured ☐

White ☐

Appendix J: Biografiese vraelys

Al die inligting in hierdie vraelys sal slegs vir die navorsing gebruik word en jou inligting (naam, van, ouderdom, ens.) sal vertroulik bly. Dit beteken dat dit wat jy sê geheim sal bly tussen jou en die navorser. Die navorser gaan nie vir ander mense vertel wat jy gesê het nie.

Antwoord asseblief al die vrae.

1. Wat is jou naam? ....

2. Wat is jou van? ....

3. Hoe oud is jy? ....

4. Waneer verjaar jy? ....

5. Is jy ‘n seun of ‘n dogter?

Dogter ☐

Seun ☐

6. Wat is jou skool se naam? ....

7. In watter graad is jy? ....

8. Waar bly jy in die week? In die koshuis of by die huis?

Koshuis ☐

Huis ☐

9. As jy in die koshuis bly, wanneer gaan jy huis toe?

Elke Naweek ☐

Party Naweke ☐

Net Vakansies ☐

10. Aan watter kulturele of rasgroep behoort jy?

Swart ☐

Bruin ☐

Wit ☐

Appendix K: Qualitative Form 1: Qualitative Evaluation of the PAM Programme

All the information in this form will be used for research purposes alone and your identity (name, surname, etc.) will be kept confidential. This means that what you say will be kept secret, and the researcher will not share your answers with other people.

Please answer all the questions

1. What is your name? ....

2. What is your surname? ....

3. What is the date today? ....

4. What did you like most about the PAM programme?

………………………………………………………………………………………………………
………………………………………………………………………………………………………
……………………

5. What did you learn from the PAM programme?

………………………………………………………………………………………………………
………………………………………………………………………………………………………
……………………

6. Do you think anything about the PAM programme should be changed?

Yes ☐
No ☐

7. If you said yes, what should be changed?

………………………………………………………………………………………………………
………………………………………………………………………………………………………
……………………

Appendix L: Kwalitatiewe vorm 1: Kwalitatiewe evaluasie van die PAM program

Al die inligting in hierdie vraelys sal slegs vir die navorsing gebruik word en jou inligting (naam, van, ens.) sal vertroulik bly. Dit beteken dat dit wat jy sê geheim sal bly tussen jou en die navorser. Die navorser gaan nie vir ander mense vertel wat jy gesê het nie.

Antwoord asseblief al die vrae.

1. Wat is jou naam? ....

2. Wat is jou van? ....

3. Wat is vandag se datum? ....

4. Waarvan het jy die meeste gehou in die PAM program?

………………………………………………………………………………………………
………………………………………………………………………………………………
……………………

5. Wat het die PAM program jou geleer?

………………………………………………………………………………………………
………………………………………………………………………………………………
……………………

6. Dink jy enige iets van die PAM program moet verander word?

Yes ☐
No ☐

7. As jy ja gesê het, wat moet verander word?

………………………………………………………………………………………………
………………………………………………………………………………………………
……………………

Appendix M: Qualitative Form 2: My PAM Dog Form

All the information in this form will be used for research purposes alone and your identity (name, surname, etc.) will be kept confidential. This means that what you say will be kept secret, and the researcher will not share your answers with other people. The researcher would like to find out a bit more about what you thought of the PAM dog in the PAM programme. That is what this form is for. Remember there are no right or wrong answers.

Please answer all the questions

1. What is your name? ....

2. What is your surname? ....

3. What is the date today? ....

4. Did you give the dog that you got in the PAM programme a name?

Ja ☐

Nee ☐

5. If you said yes, what did you name your dog?

……

……

6. Why did you give your dog this name?

……………………………………………………………………………………………………

……………………………………………………………………………………………………

……………………

7. What did you learn from your dog?

…………………………………………………………………………………………………

…………………………………………………………………………………………………

……………………

8. What did you like most about your dog?

…………………………………………………………………………………………………

…………………………………………………………………………………………………

……………………

Appendix N: Kwalitatiewe Vorm 2: My PAM Hond Vorm

Al die inligting in hierdie vraelys sal slegs vir die navorsing gebruik word en jou inligting (naam, van, ens.) sal vertroulik bly. Dit beteken dat dit wat jy sê geheim sal bly tussen jou en die navorser. Die navorser gaan nie vir ander mense vertel wat jy gesê het nie. Die navorser wil graag meer uitvind oor wat jy gedink het van die PAM hond in die PAM program. Dis hoekom sy jou vra om hierdie vorm in te vul. Onthou daar is geen regte of verkeerde antwoorde nie.

Antwoord asseblief al die vrae.

1. Wat is jou naam? ....

2. Wat is jou van? ....

3. Wat is vandag se datum? ....

4. Het jy vir die hondjie wat jy in die PAM program gekry het ‘n naam gegee?

Ja ☐
Nee ☐

5. As jy ja gesê het, wat het jy jou hondjie genoem?

……………………………………………………………………………………………
……………………………………………………………………………………………
……………………

6. Hoekom het jy vir jou hondjie hierdie naam gegee?

……………………………………………………………………………………………
……………………………………………………………………………………………
……………………

7. Wat het jy by jou hondjie geleer?

……

……

……………………

8. Wat van jou hondjie het jy die meeste van gehou?

……

……

……………………

Appendix O: Qualitative form 3: Research facilitator observation form

By filling in this form you will assist the researcher in evaluating and improving the PAM programme. Try to answer as truthfully as possible. Your inputs are highly appreciated!

Session number:
Observers name:
School:

1. SESSION CONTENT:

The session content relates to all the information and activities covered by the researcher during the session.

1.1 In your opinion what aspect relating to the content of the session stood out the most?

____

____

____

____

1.2 In your opinion what aspect relating to the content of the session can be improved on?

____

____

____

____

1.3 In your opinion what part/aspect of the session did the group participants enjoy the most?

____

____

____

____

____

1.4 Have you got any additional comments or suggestions:

____

____

____

____

I appreciate your help in evaluating the PAM programme. Please indicate your rating of the following aspects relating to the content of this session by using the following scale: SD = Strongly Disagree D = Disagree N = Neutral A = Agree SA = Strongly Agree.

	SD	D	N	A	SA
Content was presented clearly					
Content was appropriate for the intended audience					
Content was in line with the session goals					The researcher clarified content in response to questions

2. SESSION PROCESS:

The session process refers to the way in which the session content was delivered by the researcher and the way in which the session proceeded.

2.1 In your opinion what aspect relating to the delivery of the session (process) stood out the most?

____

____

____

____

2.2 In your opinion what aspect relating to the delivery of the session (process) can be improved on?

____

____

____

____

2.3 Have you got any additional comments or suggestions:

____

____

____

____

Please indicate your rating of the following aspects relating to the <u>session process</u> by using the following scale: SD = Strongly Disagree D = Disagree N = Neutral A = Agree SA = Strongly Agree.

	SD	D	N	A	SA
Session progressed smoothly					

Session progressed at an appropriate pace.					

Please indicate the degree to which you agree with the following statement by using the following scale: SD = Strongly Disagree D = Disagree N = Neutral A = Agree SA = Strongly Agree.

	SD	D	N	A	SA
Overall the group leader adhered to the group manual					

Signature of Observer: ___________ Place signed: __________ Date: ___________

--oOo--