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Exploring Children's Writing during a Therapeutic Storywriting Intervention: A Mixed Methods Study

by

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<u>ABSTRACT</u>

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EXPLORING CHILDREN'S WRITING DURING A THERAPEUTIC STORYWRITING INTERVENTION: A MIXED METHODS STUDY

Georgina Maclean

Emotional difficulties in children and young people are associated with poor behavioural, social and educational outcomes (Kern, Hilt-Panahon & Sokol, 2009). A systematic review was carried out to explore the effects of therapeutic writing interventions on students' emotional and academic outcomes and to develop an understanding of the underlying mechanisms that might help to explain these effects. Therapeutic writing interventions were found to be effective in reducing symptoms of stress, depression and anxiety and were related to improvements in academic performance. Underlying mechanisms that were associated with positive outcomes included changes in cognition, improvements in coping strategies and improvements in working memory capacity. The review highlighted a lack of research exploring the effects of therapeutic writing techniques on academic outcomes with younger students.

The empirical paper sought to address some of the gaps in the existing research highlighted in the review. The research utilised a sequential explanatory mixed methods design to investigate the effects of a therapeutic storywriting intervention on children's writing. The first quantitative phase consisted of two studies. The first study investigated the effects of a therapeutic storywriting intervention on children's writing achievement in comparison to a matched control group. The intervention group (n=28) made significantly greater academic gains compared to the control group (n=28). The second study examined to what extent the intervention facilitated cognitive changes through exploring changes in children's use of written language during the therapeutic storywriting intervention. There were some significant changes in children's use of emotional and causal words; however these did not significantly predict greater academic gains. In the second qualitative phase, narrative analysis was used to explore and compare the stories written by children who had made the most and least gains. There were a number of similarities between both groups' stories; however more of the stories written by children who had made the least gains ended negatively and lacked helpful secondary characters. The quantitative and qualitative findings are discussed with reference to prior research.

Contents

List of tables

List of figures

List of figures

DECLARATION OF AUTHORSHIP

I, Georgina Maclean declare that the thesis entitled 'Exploring children's writing during a therapeutic storywriting intervention: a mixed methods study' and the work presented in the thesis are both my own, and have been generated by me as the result of my own original research. I confirm that:

- this work was done wholly or mainly while in candidature for a research degree at this University;

- where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;

- where I have consulted the published work of others, this is always clearly attributed;

- where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;

- I have acknowledged all main sources of help;

- where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;

- none of this work has been published before submission.

Signed: …………………………………………………………………..

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Acknowledgements

Definitions and Abbreviations

α   alpha

BESD   Behavioural, emotional and social difficulties

B   beta

DfE   Department for Education

GPA   Grade point average

H   Kruskal-Wallis test value

LIWC   Linguistic Inquiry and Word Count

M   Mean

Mdn   Median

N   Total number of participants

r   Pearson's correlation

SD   Standard deviation

SE   Standard error

SEN   Special Educational Needs

t   t test value

U   Mann-Whitney test value

X²   Chi square test value

z   z-score

Chapter 1: Review Paper

How can therapeutic writing interventions help to improve emotional and academic outcomes? A systematic review of the literature

Word Count: 9217

1.1 Introduction

This review integrates the research evidence and underlying theories into two different therapeutic writing interventions which both aim to improve students' emotional development and academic performance. Before presenting the systematic review it is necessary to introduce the two writing interventions and to present an overview of their strengths and limitations. The introduction begins by highlighting the relationship between emotional intelligence and later outcomes for children (Parker, et al., 2004). The introduction then provides a brief overview of the theoretical underpinnings and the limited research evidence into a therapeutic storywriting intervention (Waters, 2002) used with children in schools. Then a different therapeutic writing intervention, the expressive writing paradigm (Pennebaker & Beall, 1986) is introduced which is supported by a large evidence base. This introduction is followed by a systematic review which critically evaluates the evidence into the use of the expressive writing paradigm (Pennebaker & Beall, 1986) on students' emotional and academic outcomes. Finally the review synthesises the evidence and the theoretical underpinnings of the two interventions.

It is argued that emotional intelligence is fundamental for children's general success and wellbeing in later adult life (Humphrey, Curran, Morris, Farrell & Woods, 2007). Emotional intelligence refers to the ability to recognise emotions, to reason using emotions, to understand and to manage emotions (Mayer & Savoley, 1997). Poor emotional intelligence is related to poorer outcomes later on in life including truancy and expulsions from school (Petrides, Frederickson & Furnham, 2004) and an increased risk of substance abuse, mental health problems and delinquency (Kam, Greenberg & Walls, 2003). Furthermore emotional intelligence has been found to significantly predict academic success (Parker, et al., 2004). Therefore it is argued that schools should facilitate the development of pupils' emotional skills alongside their academic skills (Humphrey et al., 2007).

1.1.1 Therapeutic Storywriting

Therapeutic storywriting is a relatively new intervention which aims to promote children's emotional development as well as their academic skills through using story metaphor as a tool to address emotional issues (Waters, 2004). Therapeutic storywriting is aimed at pupils aged between seven and thirteen (Waters, 2004). The intervention is run in groups with a maximum of six pupils in each group and runs weekly over ten weeks (Waters, 2004). During a therapeutic storywriting intervention children are encouraged to write stories in which they can externalise and project their own worries or concerns on to story characters (Waters, 2004). Waters (2008) argues that the use of story metaphor enables children to explore emotional issues that are too overwhelming to discuss directly. Therapeutic storywriting is underpinned by different theories and approaches. The central

underlying theories are Bion's (1984) theory of thinking and Assagioli's (1965) theory of subpersonalities.

Bion (1984) states that the capacity to think develops within an inter-subjective relationship and that the other person in the relationship needs to contain the child's anxiety through containing their troubling thoughts and feelings to enable thinking to take place. This underpins an important aspect of the therapeutic storywriting intervention, the act of sharing stories with an adult (Waters, 2002). When sharing a child's story the adult is able to verbally reflect the child's anxieties and emotions which gives them meaning and language which the child is then able to internalise (Bion, 1984). This process enables the child to become more able cope with their feelings and to focus their attention on other experiences (Waters, 2004).

Assagioli (1965) describes the self as being made up of a set of subpersonalities, each with specific traits, emotions and behaviours. Assagioli (1965) argues that some of these subpersonalities are unconscious and that there is a need to recognize and accept them. Assagioli's subpersonality theory is used in psychotherapy in order to help individuals synthesise aspects of the self, leading to self-realization and personal growth (Firman, 2011). Waters (2001) argues that therapeutic storywriting enables children to become aware of various subpersonalities or aspects of themselves through externalising them onto story characters. Therapeutic storywriting is also thought to enable children to integrate subpersonalities with each other through exploring how to resolve situations between characters (Waters, 2001).

Therapeutic storywriting has been used in a number of schools to support children's emotional and academic literacy, yet as this literature review will demonstrate, the research into the approach is very limited. There is however substantial research into other therapeutic writing approaches which have been found to support emotional and academic development. The following introductory sections will critically explore the existing research into therapeutic storywriting. Research and underlying theories into alternative therapeutic writing approaches will then be introduced. The introduction will conclude by discussing the rationale and research questions for the subsequent systematic review.

1.1.2 Research into Therapeutic Storywriting

Therapeutic storywriting has been shown to have a positive impact on children with social, emotional or behavioural difficulties (Waters, 2010). Twelve pupils who took part in a therapeutic storywriting intervention demonstrated a reduction in overall stress, a reduction in behavioural difficulties and a decrease in exclusions from school post-intervention (Waters, 2010). However the results of this study are limited due to the small sample size and the lack of a control group. Thus it is

not clear whether the outcomes were a result of the intervention or other confounding variables such as a result of receiving more attention during the intervention.

Other research found that therapeutic storywriting had a positive effect on pupils' own perceptions of their emotional and academic literacy (Waters, 2004). Twenty-one pupils aged between seven and eleven from four schools were interviewed after taking part in the intervention. The pupils said they felt the group helped them to express and reflect on their own feelings and helped to improve their spelling, handwriting and punctuation (Waters, 2004). However the results are limited due to possible social desirability bias meaning that the children might have given the answers they thought the researcher wanted to hear. Another limitation was that some of the interview questions were quite leading. For example, the children were asked to describe in what ways the intervention had helped them.

Other research has used a case study methodology to explore how therapeutic storywriting enabled children to express previously undisclosed emotional issues (Waters, 2001). All of the pupils were reported to have made improvements in their literacy skills, including improvements in sentence construction and handwriting (Waters, 2001). Whilst the case studies provided rich and detailed qualitative information into how the children's stories reflected and helped them to deal with their emotional issues, the use of this methodology means the results cannot be generalized to the wider population.

More recently research has been carried out with 32 members of school staff who were trained in therapeutic storywriting (Batchelor, 2012). The results were limited due to a large amount of missing data; however pupils who were described by school staff as having low self-esteem prior to the intervention showed an increase in their feelings of comfort with others. Those children who were described as having poor social skills prior to the intervention showed a significant improvement in conduct and an increase in prosocial-behaviour. Staff members running the groups reported an increase in children's confidence and motivation to write after the intervention (Batchelor, 2012).

1.1.3 Strengths and limitations

Therapeutic storywriting is a creative way to help children explore emotional issues and develop academic skills simultaneously. Whilst the research findings into the effects of the intervention on outcomes for children are promising, the research is quite limited. The majority of published research into therapeutic storywriting has been carried out by the author of the approach. Thus there might well be bias in the results to prove the effectiveness of the intervention. However the author does acknowledge this fact (Waters, 2004) and discusses methods used to minimise bias including using an external researcher to oversee the research design (Waters, 2004) and to analyse a proportion of transcripts to ensure consistency (Waters, 2010).

The research findings are also limited by small sample sizes. The majority of the studies did not include data from a control group which calls into question whether other factors such as differences in personality, environmental factors or other lessons around emotional development being delivered by school staff might have had an impact on the quantitative results. The majority of the studies also used teacher reports to gather pre and post measures. It is not clear whether the children's class teachers were aware the children were in a therapeutic storywriting group or were aware of the aims of the intervention. If they were aware of the purpose of the intervention this might have biased their views towards the intervention having a positive impact.

Therapeutic storywriting also aims to improve children's academic literacy; however there is a lack of objective evidence to support this claim. Whilst the intervention has a theoretical framework, the research carried out to date has not explored the mechanisms which might explain any such effects of the intervention on children's emotional and academic literacy. However there is another therapeutic writing paradigm which has been used mainly with older student populations which is shown to have a positive impact on students' emotional and academic outcomes and is supported by a large evidence base (Pennebaker & Francis, 1996).

1.1.4 Expressive writing paradigm

The expressive writing paradigm was initially developed by Pennebaker and Beall (1986). In this procedure participants are instructed to write expressively, disclosing their deepest thoughts and feelings about an upsetting topic (Pennebaker & Chung, 2007). A large amount of research has found that expressive writing has a positive impact on emotional and academic outcomes (Pennebaker & Francis, 1996).

Frattaroli (2006) conducted a meta-analysis on 146 published and unpublished studies on expressive writing, which used an empirical study methodology. Results from the meta-analysis reported that expressive writing does have beneficial effects with an overall r-effect size of .075 (Frattaroli, 2006). Whilst this is a small effect size by standard conventions (Cohen, 1998) the authors argue that this should still be seen as important as it is comparable to other reported effect sizes in related research domains (Frattaroli, 2006). The meta-analysis found that emotional outcomes including distress, depression, anxiety, subjective wellbeing and anger were all shown to improve as a result of the intervention (Frattaroli, 2006). Other outcomes including cognitive functioning and grades also improved. Studies that were more successful involved participants who had a history of trauma, involved a larger dose of intervention, involved participants disclosing events that had not been fully processed and involved relatively short follow up periods.

1.1.5 Theoretical perspectives of therapeutic writing techniques

It is not entirely clear why expressive writing techniques have an impact on emotional and academic outcomes. One of the earliest theories was inhibition theory which proposes that the inhibition of thoughts is harmful to wellbeing (Frattaroli, 2006). This theory states that people are often unable or unwilling to talk about traumatic experiences (Pennebaker, Colder & Sharp, 1990). Therefore it is argued that encouraging the expression of inhibited thoughts and feelings through writing should reduce the negative impact on wellbeing and improve positive psychological functioning (Pennebaker et al., 1990). However inhibition theory has been called into question due to evidence that has shown there is no greater benefit to psychological wellbeing from writing about previously undisclosed traumas as opposed to previously disclosed traumas (Greenberg & Stone, 2002).

Other research suggests that changes that occur through expressive writing might be explained by cognitive change theory (Pennebaker & Seagal, 1999). Cognitive change theory claims that writing enables people to express and reorganise their thoughts and feelings to create more meaningful and coherent narratives of their experiences (Pennebaker & Seagal, 1999). Research carried out into expressive writing has demonstrated some support for cognitive change theory. Pennebaker and Seagal (1999) found that the more people use positive emotion words and a moderate amount of negative emotion words the more their health improved. Other research found that those who went from using fewer causal and insight words to using a much higher number over the course of the intervention showed the most significant improvements in health and academic achievement (Pennebaker, Mayne & Francis, 1997). Causal words, such as "because" and "reason," relate to the discussion of causes of emotions and events, and insight words, such as, "understand" and "realize," relate to cognitive processes associated with thinking.

An alternative hypothesis for the positive effects of expressive writing is self-regulation theory (Cameron & Nicholls, 1998). This theory proposes that writing is a mastery experience which enables an individual to make sense of traumatic events and to identify ways to cope with their emotions associated with the events. This enables the individual to have more of a sense of control over their experiences which is thought to improve their emotional regulation, reduce negative affect and improve positive wellbeing (Cameron & Nicholls, 1998). This theory seems to differ from cognitive change theory by highlighting the importance of identifying and developing coping strategies.

1.1.6 Summary

Pennabaker et al. (1990) and Waters' (2002) research into therapeutic writing come from different backgrounds of health and education respectively. Whilst both use slightly different methods, there are some clear similarities between them. Both highlight the importance of translating

thoughts and feelings into written language in order to process them and give them meaning, coherence and structure. Both emphasise writing as a tool to enable participants to externalise their experiences and emotional difficulties in order to be able to safely examine them. The remainder of this review will critically evaluate the research into variations of Pennebaker's expressive writing paradigm. Whilst previous meta-analyses have been carried out in this area (Smyth, 1998; Frattaroli, 2006) a large amount of research has been carried out since their publication, including research with younger populations which is especially relevant for this review.

1.1.7 Review Questions

This review aims to explore the effects of therapeutic writing interventions on students' emotional development and their academic performance and to develop an understanding of the mechanisms that might help to explain any effects. This review also aims to explore how the research into the expressive writing paradigm (Pennebaker & Beall, 1986) may be related to Waters (2001) intervention into therapeutic storywriting. To meet these aims the specific questions posed by this review are:

1. To what extent does expressive writing have an effect on emotional and academic outcomes for students?

2. In what ways does expressive writing have an effect on emotional and academic outcomes for students?

3. How might the research into expressive writing help to explain the effects of a therapeutic storywriting intervention on children's emotional wellbeing and academic performance?

1.2 Review Methodology

The studies included in this review paper were identified through systematic searches for relevant published research. Figure 1 is a visual representation of the systematic search methodology employed in this review.

Figure 1: Flow chart of the study selection process

The following electronic databases and citation indexes were used in this review: PsycINFO, PsycARTICLES, The Educational Research Information Center (ERIC) and the British Education Index (BEI). All searches were carried out in November 2012. This was repeated in March 2013 and

no new studies were identified as meeting the inclusion criteria. Electronic databases were searched using the combination of search terms show in Table 1. This was followed by scanning the reference lists of papers to identify further studies of interest.

Table 1.

Search terms used for searching electronic databases

Target population terms	Intervention terms	Outcome terms
school children	expressive writing	academic
pupils	therapeutic storywriting	academic achievement
students	therapeutic writing	academic performance
	story making	grade/s
	story writing	grade level
	diary keeping	grade point average
	experimental disclosure	exam
	writing paradigm	test
	emotional disclosure	learning
	disclosure	emotion/s
		emotional

1.2.1 Inclusion and Exclusion Criteria

Studies were subjected to inclusion and exclusion criteria related to the aims of this review (see table 2). Only participants who were in educational settings were included as this relates most closely to the therapeutic storywriting intervention which takes place in school settings. Only interventions that involved participants exploring emotional issues through writing were included; other writing interventions that did not focus on developing emotional outcomes were excluded. As the research questions aim to explore the effects of the interventions on emotional and academic outcomes, the outcome measures included any measurement of the effects of the intervention on emotional and/or academic performance including subjective measures such as self-report questionnaires and more objective measures such as grades or marks on a test. The 38 studies that met the criteria were subject to an in-depth review of key features, as summarised in appendices A and B. Checklists and guidelines from the Critical Appraisal Skills Programme (CASP) were used to guide the evaluation of the methodological quality and the key features of each study (CASP, 2013).

Table 2.

Inclusion/Exclusion Criteria Used for the Screening of Studies

Study Item	Inclusion Criteria	Exclusion Criteria
Participants	School children and college students in school or college setting	Pre-school children Adults who are not college students
Intervention	Interventions that involve writing tasks which focus on exploring emotions through writing.	Writing interventions that do not focus on exploring emotions.
Outcomes	Studies that explore the effects of expressive writing on emotional and/or academic outcomes.	Studies that do not include emotional and/or academic outcomes.
Language	Published in English	Published in any language other than English.
Type of research	Research that is primary in nature. Published studies.	Research that is not primary in nature e.g. discussion or review of studies. Unpublished dissertations

1.3 Systematic Review Results

1.3.1 Study characteristics

Geographic location. The studies were conducted in a number of different countries (see Appendices A and B). Twenty-eight studies were carried out in the USA, two were carried out in the UK, three in Australia, two in Spain, two in Italy and one in Canada. The fact that the majority of studies were carried out in the USA might be a limitation when comparing studies and when discussing their relevance and applicability to English society. This is because societal characteristics, cultural, community and social factors in these countries are different.

Participants. The specific age range in the research section of this thesis will be primary school pupils aged between 7 and 11. However there is a distinct lack of research looking at the therapeutic use of writing with this age group. Only five studies were carried out with school age

children between the ages of four and sixteen, four with secondary age pupils and one with a mixture of primary and secondary aged pupils (see Appendix B). Therefore in order to gain sufficient research evidence to answer the research questions, this review included studies on students of all ages who were in an education setting.

The majority of the studies used college students as participants and 16 studies used undergraduate psychology students as participants. This is often a critique of psychological experiments which have been identified as, "the study of the psychology of the college sophomore," (Wilson, Aronson & Carlsmith, 2010, p.55). This might have an impact on external validity and the ability to generalise findings.

Another limitation of the studies explored in this review is the fact that 33 studies had a higher percentage of female participants than male participants, and two of the studies used only female participants (Kenardy & Tan, 2006; Patterson & Singer, 2007). This might be a reflection of the large amount of participants drawn from undergraduate psychology courses which tend to be mainly female; however this does mean that the results of these studies are subject to gender bias. This is of interest since studies suggest that men might benefit more from written emotional disclosure than women (Hijazi, Tavakoli, Slavin-Spenny & Lumley, 2011; Wong & Rochlen, 2009). It is argued that this might be due to cultural norms and environmental factors that discourage men to talk about their emotions (Wong & Rochlen, 2009). However, Frattaroli (2006) looked at the potential moderating effects of gender on outcomes and did not find any support for the theory that men might benefit more from expressive writing.

A further limitation is that 32 studies used participants who were not displaying poor emotional health. Only seven studies used participants who were displaying emotional difficulties. Frattaroli (2006) found that the intervention tended to be more beneficial for those participants who had an existing emotional issue. Thus there might have been a floor effect in the studies with healthy participants.

1.3.2 Research Methodology

Research design. Thirty-six studies employed a mixed experimental randomised control design, which consisted of a mixture of within subject variables (e.g. time) and between subjects variables (e.g. condition). Randomised controlled studies are often considered to be the most appropriate for evaluating the effects of intervention as they limit the risk of bias. Two studies employed a correlational design (Abe, 2009; Lee & Cohn, 2010). Both these studies enabled the researchers to explore the relationship between language use and outcomes. However one of the limitations of employing a correlational design is that whilst they explore relationships between variables they cannot demonstrate that one variable causes a change in another.

Margola, Facchin, Molgora and Revenson (2010) employed a mixed methods quasi-experimental design to explore the effects of emotional disclosure after students had experienced the death of a classmate. It may be argued that one of the strengths of this design was that it enabled to the researchers to explore the effects of an expressive writing intervention after a real life traumatic event. This minimizes the threat to external validity; however this limits the ability to infer causation between variables as the result might be subject to other confounding variables such as individual differences in coping styles.

Measures. All studies used some form of self-report measure pre and post intervention. It may be argued that these are subjective and subject to biases such as social desirability or practice effects. However one of the strengths of using self-report measures, is that they provide information into how participants perceive the impact of the intervention (Cameron & Nichols, 1998). Some studies also used more objective measures to explore the effects of the intervention including performance on working memory tasks (Klein & Boals, 2001) and grade point averages (Lumley & Provenzano, 2003). Three studies (Abe, 2009; Kliewer, et al., 2011 and Reynolds, Brewin & Saxton, 2000) used teacher or supervisor ratings to measure student's performance or to measure changes in student behaviour. It is not clear whether the teachers knew if the pupils were in an experimental condition, however if they did then this might mean the results are subject to bias of expectations of the intervention on outcomes. Abe (2009) reported that the supervisors were blind to the experiment which should limit the potential bias of these measures. Fourteen studies used text analysis programmes to analyse the language used by participants. Whilst these programmes enable a large amount of data to be analysed quickly, they are not able to detect subtleties of language such as the use of metaphor (Pennebaker, et al., 1997), irony or sarcasm (Pennebaker, Mehl & Niederhoffer, 2003).

Interventions. Thirty-eight of the studies employed a variation of Pennebaker and Beall's (1986) original expressive writing intervention which consists of participants in the intervention group writing about a stressful or traumatic event for up to thirty minutes on up to three occasions. The majority of studies included a control group who took part in a control writing intervention which consisted of participants writing about neutral topics at the same time as the intervention group. Abe's (2009) study was the only study that did not employ a variation of this intervention and instead consisted of undergraduate students writing journals about their thoughts and feelings associated with their practical experiences of their course.

1.4   Effects of expressive writing interventions on emotional and academic outcomes

1.4.1 Emotional Outcomes in college students

A number of studies found that participants in the expressive writing group experienced an increase in negative emotions immediately after writing in comparison to controls. However the majority of studies found that the intervention group experienced positive effects on emotional outcomes in the longer term. For example Páez, Velasco and González (1999) found that participants showed a decrease in positive mood immediately after writing about traumatic events, but two months later participants showed an increase in positive mood and a decrease in negative affect. Similarly Tavakoli, Lumley, Hijazi, Slavin-Spenny and Parris (2009) found that participants in the expressive writing group reported higher levels of homesickness and anxiety after the intervention but also reported more positive affect than other groups.

Expressive writing was also found to be related to a number of other positive emotional outcomes. Wong and Rochlen (2009) found that participants in the expressive writing group showed a greater reduction in psychological distress than the control group after the intervention. Danoff-Burg, Mosher, Seawell and Agee (2010), found that participants in the experimental groups showed a reduction in depressive symptoms and stress at a one month follow up in comparison to controls. Epstein, Sloan and Marx (2005) found that participants in the disclosure group reported fewer symptoms of anxiety and depression one month after the intervention compared to controls.

Similarly Sloan, Marx, Epstein and Lexington (2007) found that participants in the disclosure group who were experiencing symptoms of post-traumatic stress disorder reported fewer depressive symptoms and fewer post-traumatic stress symptoms one month after the intervention. Finally Maestas and Rude (2012) found that an expressive writing intervention was effective in increasing autobiographical memory specificity and this was partially mediated by a reduction in avoidance. Autobiographical memory specificity refers to the ability to recall specific aspects of memories rather than general memories (Maestas, & Rude, 2012). This has implications for emotional wellbeing as poor autobiographical memory specificity is thought to be related to depressive symptoms (Maestas, & Rude, 2012).

Gortner, Rude and Pennebaker (2006) found that the intervention was only beneficial in reducing depressive symptoms for participants who reported suppressing their emotions. The authors argue that these participants benefitted more because they were less likely to express their emotions through other means such as talking. Similarly Hijazi et al. (2011) found that participants who reported difficulties in identifying, regulating and describing their feelings experienced more positive affect at a two and a half month follow up compared to participants without these emotional

difficulties. This lends some support to Frattaroli's (2006) findings that expressive writing is more beneficial for people with an existing emotional issue.

Expressive writing was found to be helpful in reducing negative emotional experiences prior to exams. Frattaroli, Thomas and Lyubomirsky (2011) found that students who were asked to write about their thoughts and feelings about an upcoming exam showed a decrease in depressive symptoms prior to their exams. Similarly Wolitzky-Taylor and Telch (2010) found that an expressive writing intervention led to a reduction in academic worry, both immediately after the intervention and at a three month follow up. However it must be noted that participants in other experimental conditions which included worry exposure or relaxation techniques all experienced a reduction in academic worry in comparison to a wait list control group.

As well as measures of psychological health, participants also discussed their own self perceived benefits of the intervention. Patterson and Singer (2007) found that participants who wrote about traumatic experiences rather than trivial experiences rated their essays as more personal and emotional. Pennebaker et al. (1990) found that 76% of participants who wrote about their thoughts and feelings about transferring to college reported that the writing experience helped them to gain insight into their situation.

Whilst there were a number of benefits of expressive writing interventions on emotional outcomes in the short term it is questionable whether the benefits last in the longer term. Sloan, Feinstein and Marx (2009), found that the expressive writing group showed a significant decrease in depressive symptoms in comparison to controls at a two month follow up, but these results were not sustained at later follow up assessments. The authors discuss the fact that the writing intervention might be more beneficial in the longer term if participants attend booster sessions to help them deal with new stressors that occur over time (Sloan et al., 2009).

Some studies reported no benefits of the expressive writing intervention on emotional outcomes. Greenberg and Stone (1992) found that participants in the written disclosure group showed higher levels of negative effect immediately after writing and no significant differences over time on emotional outcomes. However more analysis revealed that participants who rated their trauma as more severe showed a decrease in physical symptoms two months after the study. Páez, et al. (1999) found that the amount of time spent writing was important for positive emotional outcomes. When participants were required to write for just three minutes on one occasion they displayed more negative affect immediately after writing and there were no long term differences between experimental or control groups in terms of mood (Páez, et al., 1999).

1.4.2 Emotional Outcomes in school aged pupils

Very few disclosure writing studies have been carried out with younger students of school age. Those that have been carried out with younger populations have found mixed results. Soliday, Garofalo and Rogers (2004) carried out a study with eighth-grade students who were randomly assigned to an emotional or neutral writing condition. The pupils in the emotional writing group showed a significant decrease in psychological distress and an increase in positive disposition after the intervention in comparison to the control group. Reynolds et al. (2000) carried out a similar study in the UK with students from two primary and two secondary schools. In contrast to the results found by Soliday et al. (2004) they found no significant difference between the expressive writing group and the control group on emotional outcomes. The authors discussed the fact that some of the younger students produced very short pieces of writing, which might mean they did not engage in appropriate levels of emotional disclosure for the intervention to have a significant impact. However further analysis found that students from urban schools who took part in the expressive writing intervention showed a reduction in anxiety scores. Students who reported keeping a diary also displayed more positive outcomes (Reynolds et al., 2000).

Giannotta, Settanni, Kliewer and Ciairano (2009) carried out a study with students from one middle school in an urban area of Italy. Similarly to Reynolds et al. (2000) they found no significant differences between the emotional writing group and the control groups in terms of emotional outcomes (Giannotta et al., 2009). The authors argue that the results might be limited as the measures used tend to be used with clinical populations. However they did find that the emotional writing group showed an increase in their use of positive cognitive reframing coping strategies, including positive and optimistic thinking in comparison to the control group (Giannotta et al., 2009). They found that adolescents who had experienced high levels of victimisation showed the greatest increase in optimistic and positive thinking (Giannotta et al., 2009). Margola, et al. (2010) explored the effects of an expressive writing intervention on pupils' coping styles following the death of a classmate. They found that pupils who benefitted the most disclosed more emotions relating to the event and attempted to make meaning out of the event in their writing. Margola et al. (2010) suggest that this indicates that the pupils became more able to regulate their emotional responses over the course of the intervention.

Finally Kliewer, et al. (2011) explored how written emotional disclosure could help pupils from high violence neighbourhoods deal with their experiences of witnessing violence. The results of this study found that teacher ratings of aggression were lower two months after the intervention (Kliewer et al., 2011). Furthermore they found that youth who had experienced higher levels of exposure to violence benefitted most from the intervention. Kliewer et al., (2011) argue that this might be linked to an improvement in students' emotional regulation ability, in that the intervention helped them to process their emotions and gain control over them. However these improvements were not maintained

in the longer term, six months after intervention. Therefore the researchers argue that pupils might benefit from more sessions to help them deal with different situations.

1.4.3 Academic Outcomes in college students

Some studies found that as well as having a positive impact on emotional outcomes written emotional disclosure was also found to have a positive impact on academic outcomes including an increase in grade point averages (GPA) or exams scores. These findings are limited to college aged students as there are no existing studies exploring the effects of an expressive writing intervention on academic outcomes of younger pupils. Frattaroli et al. (2011) found that participants in the disclosure group scored significantly higher in their exams than participants in the control group. However this was limited to particular exams, the authors argue that these results might be related to differences in study patterns as those participants for whom the intervention was effective started studying earlier (Frattaroli et al., 2011).

Pennebaker and Francis (1996) found that participants in the written emotional disclosure group achieved higher GPAs in the semester following the intervention in comparison to the control group. However they report that this result was only marginally significant. Similarly Lumley and Provenzano (2003) found that students who participated in a written emotional disclosure intervention scored significantly higher GPAs compared to controls, whose mean GPA dropped over two semesters. Cameron and Nicholls, (1998) also found that participants in the disclosure condition scored higher GPAs than participants in the self-regulation or control group. They argue that this result might be because the participants in the self-regulation condition were encouraged to think about strategies to help them cope with stress which often involved focussing on improving social relationships which might have been detrimental to their academic results (Cameron & Nicholls, 1998). Wolitzky-Taylor and Telch (2010) found that the written emotional disclosure group were the only group to demonstrate a significant increase in GPA compared to the worry exposure, relaxation or control group. Finally, Pennebaker et al. (1990) found that participants in expressive writing group maintained their GPAs post intervention in comparison to a control group, however this was a trend and was not statistically significant.

In contrast Radcliffe, Stevenson, Lumley, D'Souza and Kraft (2010) conducted three randomised control trials looking at the impact of written emotional disclosure on academic outcomes. In two out of three studies they found no significant difference between the experimental or control condition in terms of GPA. Similarly Sloan et al. (2009) also found no significant differences between groups in terms of GPA. Radcliffe et al. (2010) argue that written emotional disclosure might be more beneficial for health and emotional outcomes, whereas academic outcomes are subject to a number of other factors. However, Radcliffe et al. (2010) did find some beneficial effects on

academic outcomes in one study. They found that academically at risk students who wrote for a greater number of sessions scored significantly higher GPAs, failed less classes and were less likely to fail the semester in comparison to the control group. Furthermore they found that male academically at risk students benefitted more than female students (Radcliffe et al., 2010).

1.5 Mechanisms related to positive outcomes from expressive writing interventions

1.5.1 Cognitive Change

Research has found that written emotional disclosure is effective in improving emotional and academic outcomes; however it is not clear how this effect occurs. Cognitive change theory proposes that the process of putting traumatic experiences into language leads to important cognitive changes (Pennebaker & Francis, 1996). These changes include helping the individual form a coherent schema of the event, enabling self-reflection and facilitating the ability to cope with the trauma (Pennebaker & Francis, 1996). It may be argued that writing about a previously undisclosed trauma and writing about the same event repeatedly over time might lead to greater cognitive processing. (Epstein et al., 2005; Páez, et al., 1999).

Epstein et al. (2005) found that writing about the same traumatic event rather than different traumatic events was linked to greater positive affect. Páez, et al. (1999) found that participants who wrote about an undisclosed trauma demonstrated a better cognitive-affective assimilation of the event compared to the control group or those who wrote about a previously disclosed trauma. This was evidenced by decreased emotional affect, an increase in the perception of controllability and accountability of the event and an increase in positive mood after writing (Páez, et al., 1999). Greenberg and Stone (1992) however found no differences between the participants who had previously disclosed their traumas compared to those who had not, yet they did find a difference according to the severity of trauma. Thus it may also be argued that writing about a more severe trauma might also lead to greater cognitive processing.

It is argued that both emotional engagement and cognitive processing are important to the effectiveness of written disclosure (Burke & Bradley, 2006). Seih, Chung and Pennebaker (2011) found that writing in the first or second person was linked to participants feeling more emotionally involved. Danoff-Burg et al. (2010) explored whether encouraging participants to use more of a narrative structure in their writing would be linked to more positive outcomes in terms of psychological adjustment. Participants were randomly assigned to a narrative writing, a standard expressive writing or a control condition. Whilst both groups showed less stress and depressive symptoms, the standard expressive writing group rated their essays as more meaningful and emotional. It is argued that encouraging participants to use more of a narrative structure led them to

focus more on the facts and structure of their writing and less on their emotional reactions to it (Danoff-Burg et al., 2010). Similarly Kleiwer et al. (2011) found that students who were told they could write using stories, songs or poetry did not show positive outcomes in teacher ratings of aggression. It is argued that this might be because they felt constrained by the form of writing and might have focussed on the structure of their writing rather than their thoughts and feelings (Kleiwer et al., 2011). Thus it appears that encouraging participants to focus on the narrative structure of their writing might thwart their ability to process their emotional reactions surrounding the event.

Changes in language use over the course of an expressive writing intervention are often used to indicate emotional processing and cognitive changes (Pennebaker & Chung, 2007). A number of studies have found that participants in expressive writing groups use more negative emotion words, more positive emotion words and more causal and insight words in their writing compared to a control group (Burke & Bradley, 2006; Epstein et al., 2005; Frattaroli et al., 2011 and Reynolds et al., 2000). Furthermore Frattaroli et al. (2011) found that participants in the disclosure group who used more positive emotion words showed a greater reduction in depressive symptoms prior to an exam and those who used more causal words showed a greater reduction in depressive symptoms after the exam. Abe (2009) found that students who used more insight words and positive emotion words in their practical experience journals were rated more highly in terms of their performance by their supervisors. Pennebaker and Francis (1996) found that an increase in causal and insight related words and positive emotion words from the first to the last day of writing was related to greater health improvements. Expressive writing might have an impact on emotional health which in turn improves participants' ability to focus on other aspects such as academic work (Pennebaker & Francis, 1996).

1.5.2 Working Memory

The theory that changes in emotional and cognitive processing might account for the positive effects of written disclosure has prompted researchers to explore how the intervention might have an impact on working memory (Klein & Boals, 2001; Kellogg, Mertz & Morgan 2010). Working memory is responsible for controlled processing and attention which is needed for a number of complex cognitive tasks including comprehension, reasoning and problem solving (Klein & Boals, 2001). Brewin and Lennard, (1999) argue that the method of emotional disclosure should not put too much of a load on working memory. They found that the process of hand-writing in comparison to typing was associated with greater disclosure and more perceived benefits. They argued that this may be because typing puts a greater load on working memory and thus leads to lower levels of emotional disclosure and ultimately fewer benefits.

Klein and Boals (2001) found that participants in the written emotional disclosure group demonstrated greater gains in their working memory capacity compared to the control group. They

found that an increase in cognitive words, referring to cause and insight, over the course of the intervention predicted an increase in working memory capacity (Klein & Boals, 2001). Furthermore they found that students who showed the greatest increases in working memory scores also showed the greatest improvement in GPA (Klein & Boals, 2001). In a second experiment Klein and Boals (2001) found that participants who were instructed to write about a negative event demonstrated the greatest decline in avoidant or intrusive thinking and showed an increase in their working memory capacity. Thus they argue that producing a coherent narrative of a stressful experience through writing improves emotional outcomes which in turn frees working memory capacity helping individuals cope with experiences and enabling them to focus on other factors such as academic work.

More recently Kellogg et al. (2010) also found that written emotional disclosure was linked to an increase in working memory capacity. However Kellogg et al. (2010) found that there were no significant differences between the groups in terms of decreases in avoidant and intrusive thinking. They argue that emotional disclosure might have a positive impact not through reducing intrusive thoughts but through blunting the negative emotional impact of these thoughts (Kellogg et al., 2010).

1.5.3 Self-regulation

Self-regulation theory highlights the impact of the written disclosure on the development of coping strategies (Cameron & Nicholls, 1998). Giannotta et al., (2009) found that written emotional disclosure was linked to an increase in the use of positive cognitive reframing coping strategies. Cameron and Nicholls, (1998) randomly assigned participants to a standard disclosure writing task, control writing or self-regulation group where participants were encouraged not only to disclose their emotions but also to develop, appraise and revise coping plans. Participants in the self-regulation task reported stable levels of college adjustment and negative mood, whereas the standard disclosure group reported decreases in college adjustment and increases in negative mood. Participants in the self-regulation group also reported that they felt they had more control over their problems (Cameron & Nicholls, 1998).

Thus it may be argued that encouraging individuals to disclose their emotions about a traumatic event whilst also encouraging them to develop coping strategies has more beneficial effects. Similarly Guastella and Dadds (2009) employed a growth writing condition where participants were asked to disclose their emotions about an event and to write about their coping strategies and any positive aspects of their experiences. Participants in the growth writing group reported a significant reduction in anxiety and negative affect after writing in comparison to controls.

Benefits from expressive writing tasks might be related to individual differences in coping styles. Sloan, Marx, Epstein and Dobbs (2008) found that the intervention was particularly effective in reducing depressive symptoms for those individuals who have a tendency to brood and ruminate

(Sloan et al., 2008). Kenardy and Tan (2006) found that avoidance coping significantly predicted outcomes. They found that high avoidance copers benefited more from a prolonged writing condition which took place over four sessions (Kenardy & Tan, 2006). Kenardy and Piercy (2006) found that high avoidance copers also benefitted more from written emotional disclosure if they were made aware of reactions to trauma prior to the intervention. Lee and Cohn (2010) found that a self-regulation writing task was found to be particularly beneficial for participants who were identified as pessimists. It is argued that pessimists might have a more ruminative coping style and therefore benefit from being encouraged to think about ways to cope with stressful events (Lee & Cohn, 2010).

1.5.4 The role of positive emotions

Other research has found that writing about positive events (Marlo & Wagner, 1999) or about the positive aspects of stressful events (Segal, Tucker & Coolidge, 2009) have also been found to produce psychological health benefits. Marlo and Wagner (1999) conducted an experiment where they randomly assigned participants to disclose their thoughts and feelings about a negative, traumatic event or about a positive event. The participants in both these experimental groups showed an increase in psychological health and a decrease in psychological stress in comparison to controls, with the positive event group showing the most improvements overall (Marlo & Wagner, 1999). Segal et al. (2009) found that participants who were encouraged to write down their positive thoughts and feelings about a traumatic experience showed a higher level of understanding, insight and cognitive reorganisation than other groups. However one of the limitations of these studies is that they both used nonclinical student samples. Given the findings that an avoidance coping style might have an effect on outcomes (Kenardy & Tan, 2006), writing about positive events or about positive feelings might enable high avoidance copers to continue to avoid disclosing more painful thoughts and feelings about a topic which might be detrimental to positive psychological health in the long term.

North, Pai, Hixon and Holahan (2011) randomly assigned participants to a standard written emotional disclosure group, a positive reappraisal group or a group which combined both methods. They found that participants who were encouraged to accept their negative emotions about an event and then to explore the positive aspects of the problem experienced more positive emotional wellbeing, an increase in psychological acceptance and less negative emotions after the intervention than the other groups (North et al., 2011). Therefore they argue that accepting negative emotions and seeking out the positives might be an optimal strategy in developing positive psychological wellbeing.

1.6 Summary

Written emotional disclosure has been shown to have beneficial effects for older students on a number of emotional outcomes including reducing symptoms of stress (Sloan et al, 2007) anxiety and

depression (Epstein et al, 2005) and academic worry (Wolitsky-Taylor & Tech, 2010). The intervention has also been shown to have a positive effect on a variety of academic outcomes including increases in GPAs (Lumley & Provenzano, 2003) and improvements in exam scores (Gortner et al., 2006). Expressive writing interventions carried with out with younger populations have demonstrated mixed results with some finding it was linked to reductions in stress (Soliday et al., 2004) and others finding it had little impact on emotional outcomes (Reynolds et al., 2000; Giannotta et al., 2009). However the intervention was found to improve younger students' ability to cope with stressful situations (Giannotta et al., 2009) and led to a decrease in teacher ratings of student aggression (Kliewer et al., 2011).

A number of studies have been carried out which explored how expressive writing has an impact on emotional and academic outcomes. It is argued that expressive writing works by helping participants to develop a coherent narrative of their thoughts and feelings about a stressful experience (Pennebaker & Francis, 1996). This may reduce the negative emotional impact of the event (Gortner et al., 2006) which may then free cognitive processes such as working memory capacity enabling individuals to focus on other tasks (Klein & Boals, 2001). This might account for the findings that expressive writing is related to improvements in academic performance (Frattaroli et al, 2011).

Other research indicates that expressive writing is useful in helping individuals develop positive coping strategies (Cameron & Nicholls, 1998) which has important implications for their ability to cope with future stressors. Furthermore there is some evidence to suggest that expressive writing interventions should be adapted to account for individual differences in coping styles (Lee & Cohn, 2010). Some research suggests that encouraging participants to write about the positive aspects of stressful experiences as well as the negative aspects might be a particularly useful strategy in developing emotional wellbeing (North et al., 2011).

1.7 Synthesis of the literature into therapeutic storywriting and expressive writing

There are a number of similarities between the research into the effects of a therapeutic storywriting intervention (Waters, 2001) and expressive writing (Pennebaker & Beall, 1986). Both bodies of research have found that exploring emotional issues through writing leads to a reduction in stress (Waters, 2010; Danoff-Burg et al., 2010 and Sloan et al., 2007). There is evidence from both approaches that writing can lead to a reduction in teacher ratings of behavioural difficulties such as aggression (Waters, 2010; Kliewer et al., 2011). Participants from both interventions reported that the intervention helped them to express and reflect on their feelings (Waters, 2004; Pennebaker et al, 1990). Therapeutic storywriting also aims to develop academic skills as well as improving emotional outcomes (Waters, 2004), yet there is limited research to support this claim. However a number of different studies into expressive writing found that it is related to positive academic outcomes

including improvements in GPA (Pennebaker & Francis, 1996) and exam results (Gortner et al., 2006).

Expressive writing interventions tend to involve participants writing down their thoughts and feelings about a stressful event; the writing is not shared with anyone. However one of the key aspects of therapeutic storywriting is that stories are shared with an adult and other pupils in the group (Waters, 2004). During this process the adult is able to give the children's feelings meaning and language through verbally reflecting their feelings back to them. This enables children to internalise this emotional vocabulary and facilitates the containment of anxiety (Bion, 1984). It may be argued that older students are more likely to have an awareness of emotional vocabulary and they are therefore able to find meaning themselves during the writing process. However younger children might need more support to help them identify and develop an understanding of different feelings. This might explain why some of the research into expressive writing with younger participants did not have any positive effects on emotional outcomes (Reynolds et al., 2000; Giannotta et al., 2009). Reynolds et al., (2000) argued that some of the children's writing was very short in length indicating that this process might not have enabled them to engage in appropriate levels of emotional disclosure. Thus one of the limitations of using writing as a technique for children to explore emotional issues is that their engagement in emotional disclosure is to some extent dependent on their academic writing ability. This has implications for adults running the therapeutic storywriting interventions in school as they may need to support the children's ability to engage in emotional disclosure through acting as a scribe for children with poorer writing skills.

One of the theories behind therapeutic storywriting is that the containment of anxiety enables thinking to take place (Bion, 1984). This may be linked to studies into expressive writing which have shown that expressive writing was related to a reduction in symptoms of anxiety and stress (Danoff-Burg et al., 2010; Epstein et al., 2005 and Sloan et al., 2007). This might also be linked to the idea that disclosing emotions through writing leads to important cognitive changes such as changes in working memory which is thought to be responsible for controlled processing and attention (Klein and Boals, 2001). Research has shown that expressive writing leads to a decline in intrusive and avoidant thinking and to an increase in working memory capacity (Klein & Boals, 2001). Furthermore increases in working memory have been found to be linked to an increase in grades (Klein & Boals, 2001). If similar processes occur during a therapeutic storywriting intervention, this might help to explain why it has been perceived as beneficial in supporting children's academic development as well as their emotional literacy (Waters, 2004). However not all of the research demonstrated that expressive writing decreases avoidant or intrusive thinking (Kellogg et al., 2010) or improves academic outcomes (Radcliffe et al., 2010). Further research has demonstrated that expressive writing interventions are more beneficial for participants who have more negative coping styles (Sloan et al., 2008; Kenardy & Tan, 2006). Thus it is possible that therapeutic storywriting might have

more beneficial effects for children with more negative coping styles including ruminative or avoidant coping styles.

The idea that expressive writing is beneficial because it helps individuals to form a coherent narrative of an event may also have important implications for the effects of a therapeutic storywriting intervention. This is because children in a therapeutic storywriting intervention are encouraged to write stories which tend to have a very clear structure. However it is important to note that some research found that interventions that put too much emphasis on structure do not enable individuals to fully engage emotionally with the writing process (Danoff-Burg et al., 2010). Therefore whilst children are encouraged to write in the format of a story during a therapeutic storywriting intervention it might be important to ensure that they do not feel too constrained by this structure and to ensure that there is an emphasis on the expression of emotions during the writing process.

However writing in the form of a story does lend itself to exploring how to resolve issues which might enable children to develop the ability to cope with problems. Stories tend to have a clear introduction which tends to set the scene of the story, a middle which tends to involve a problem and an ending which tends to involve a resolution of the problem (Labov, 1972). Expressive writing has been shown to be beneficial in supporting individuals in developing coping strategies (Cameron & Nicholls, 1998). Thus it may be argued that stories may enable children to process and deal with difficult feelings but might also to help them explore ways of resolving or coping with problems. The fact that children are encouraged to write using story metaphor during a therapeutic storywriting intervention might also be particularly useful when exploring ways to solve problems. This is because metaphor is thought to help individuals externalise themselves from their problems which can feel less threatening and can help them to explore ways to resolve their problems (Waters, 2004).

The key difference between the two writing interventions is that therapeutic storywriting encourages children to deal with emotional issues through the use of story and metaphor whilst the expressive writing paradigm encourages individuals to explicitly write about traumatic events. Whilst there is some evidence to suggest that children's stories are reflective of their own emotional issues and traumatic life events (Waters, 2001), it might be possible for children to write stories that are not reflective of their emotional issues, especially children who are avoidant in their coping styles. Thus it is important that adults who are facilitating the intervention are aware of the children's emotional issues and any traumatic events they have experienced and reflect these in their own writing if the children are not. This would enable children to deal with these issues through discussing the adult's story, even if they are not reflected in their own writing.

1.8   Conclusions and Recommendations for Future Research

This literature review lends support to the idea that encouraging individuals to explore their thoughts and feelings through writing has a positive impact on a number of emotional and academic outcomes. However whilst there is some evidence to suggest that findings from adult literature can be replicated with younger samples, the research into using written emotional disclosure techniques with younger populations is limited and is still an area which warrants more exploration. Another limitation is that all of the studies that looked at the use of expressive writing techniques with younger populations focused on the effects of the intervention on emotional outcomes. Given the findings which demonstrated that the intervention had an impact on academic outcomes with older students it would useful to look at the impact of therapeutic writing techniques on academic outcomes with younger students.

A further limitation of the studies included in this review is that the majority of them used only quantitative techniques to explore the effects of the intervention. A number of studies used computer software to explore language used in participants' writing. One of the limitations of using computer software programmes is that whilst they place words into categories they cannot analyse other qualitative, more subtle aspects of narrative such as the depth of emotion or use of metaphor. Therefore future research could use a mixture of quantitative and qualitative techniques to enable a more in depth exploration of the effects of the intervention on narrative.

Finally this review explored how the research into the expressive writing paradigm (Pennebaker and Beall, 1986) might be related to research into therapeutic storywriting (Waters, 2001). Future research could look directly at whether the same mechanisms that have been found to be related to the positive effects of expressive writing might also be related to the effects of therapeutic storywriting on outcomes for children.

Chapter 2: Empirical Paper

Exploring Children's Writing during a Therapeutic Storywriting

Intervention: A Mixed Methods Study

Word Count: 10,966

1.9 Introduction

Behavioural, emotional and social difficulties (BESD) are the most common type of need identified amongst children and young people at school action plus, which is when external agency advice is requested to support young people in school (DfE, 2011). Students with BESD have the poorest behavioural, social and educational outcomes of any group including higher rates of criminality, problems with substance abuse, lower grades and higher school dropout rates (Kern, et al., 2009).

Research has shown that there is a relationship between emotional intelligence and behavioural and academic outcomes (Petrides, et al., 2004). Emotional intelligence is the ability to perceive emotions, to reason with emotions, to understand and to manage emotions (Mayer & Salovey, 1997). Petrides et al. (2004) found that emotional intelligence was negatively associated with truancy and expulsions from school. Parker et al. (2004) found that higher levels of adaptability, interpersonal skills and stress management skills were significantly associated with higher grades. Risk factors associated with poor social and emotional wellbeing include having learning or communication difficulties, family breakdown, bereavement or socio-economic disadvantages (Adi, Killoran, Janmohamed & Stewart-Brown, 2007).

Adi et al. (2007) found that the more the risks in a child's life are reduced through support and interventions the less vulnerable the child will be to subsequent problems. Schools are well placed to reduce such risk factors and to promote students' emotional health and wellbeing. However since the introduction of national testing and the increasing importance of league tables, schools are often under a lot of pressure to get better academic results (Schaps, 2010). Thus schools can face a dilemma between focussing their resources on developing children's academic skills or developing their social and emotional skills.

Therapeutic storywriting is an intervention which aims to support the development of children's emotional and academic literacy at the same time (Waters, 2008). Therapeutic storywriting uses metaphor, both within children's own stories and within stories written by an adult, to address emotional issues that might be hindering a young person's ability to learn (Waters, 2004). During the intervention children are encouraged to project their feelings onto story characters to help them explore difficult emotions. Sunderland (2000) argues that the use of therapeutic stories enables children to develop healthier ways of coping with situations. Research has found that encouraging young people to disclose their emotions through writing helped them to develop more positive coping strategies (Giannotta et al., 2009).

The two main theories underpinning the intervention are Assagioli's (1965) theory of subpersonalities and Bion's (1984) theory of thinking. Waters (2004) argues that by projecting

subpersonalities onto stories through the use of metaphor the child can explore aspects of themselves that they find too overwhelming to confront directly. The use of metaphor enables pupils to externalise their problems in a way which feels safe (Waters, 2004). Similarly, Pennebaker and Chung (2007) argue that therapeutic writing enables individuals to detach themselves from their surroundings in order to look at themselves from different perspectives.

Another important aspect of the therapeutic storywriting intervention (Waters, 2002) is the act of sharing stories with an adult. Bion (1984) argues that anxiety needs to be contained by sharing troubling thoughts, feelings and experiences with another person to enable thinking to take place. Klein and Boals (2001) found that individuals who have experienced stressful events are more likely to experience intrusive thinking and rumination which impacts on their ability to attend to and process information. When sharing stories the adult can verbally reflect the child's anxiety in order to give their feelings meaning and language which the child can internalise (Bion, 1984). Through identifying and sharing thoughts and feelings with an adult the child is more able cope with them and is more likely to be able to focus their attention on other subjects when required (Waters, 2004).

Therapeutic storywriting has been shown to have a significant impact on children with BESD (Waters, 2010). Research was conducted using a pretest-posttest design with 12 pupils who took part in a therapeutic storywriting intervention (Waters, 2010). The intervention had a positive impact on pupils' emotional distress, post intervention the majority of pupils showed a significant reduction in overall stress. The intervention also had a positive impact on pupils' behaviour evidenced by a significant reduction in behavioural difficulties and a significant decrease in school exclusions after the intervention (Waters, 2010).

Other research employed a qualitative methodology to explore children's own perceptions of the effects of a therapeutic storywriting intervention on their emotional and academic literacy (Waters, 2004). Pupils interviewed after the intervention said they felt it helped them reflect on their feelings and the majority of the group felt it helped to improve their spelling, handwriting or punctuation (Waters 2004). The results from these studies are limited due to the fact that the majority of published research into therapeutic storywriting has been carried out by the author of the intervention. The research findings are also limited by small sample sizes and a lack of control groups. These limitations call into question whether other confounding variables such as individual differences or environmental factors might have had an impact on the results. Despite these limitations, promising initial evidence indicates that therapeutic storywriting can have positive effects on children with BESD. Therapeutic storywriting also aims to improve children's academic literacy, yet there is a lack of studies investigating this claim.

Another body of research has shown that therapeutic writing can have a positive impact on academic achievement (Pennebaker & Francis, 1996). In this study 72 students were randomly

assigned to write about their thoughts and feelings about starting college or about superficial topics over three days. Students who wrote about their thoughts and feelings had a significant reduction in health centre visits for illness and improved grade point averages, compared to controls. Similarly, Cameron and Nicholls (1998) found that students who were instructed to disclose their feelings made significant gains in their academic achievement in comparison to controls.

Whilst Pennabaker's (1996) and Waters' (2002) work on therapeutic writing come from different backgrounds of health and education and use slightly different methods, the approaches are similar in a number of ways. Both approaches discuss the fact that when experiences, thoughts and feelings are translated into written language they can be more easily processed, given meaning, coherence and structure. Both approaches place an emphasis on the medium of writing as a method to enable the individual to distance themselves from the topic to enable them to safely examine aspects of themselves (Assagioli, 1965) or to make sense of experiences (Pennebaker & Chung, 2007).

It is not entirely clear why therapeutic writing techniques have an impact on BESD and academic achievement. Research suggests that effects may be explained according to cognitive change theory (Pennebaker & Seagal, 1999). Cognitive change theory exclaims that writing enables people to develop more meaningful, coherent narratives of their experiences (Pennebaker & Seagal, 1999). Cognitive change theory describes the importance of understanding the meaning and significance of events and the emotional responses to the situation (Pennebaker & Francis, 1996). Previous research found that only those who wrote about the facts of a traumatic event and their emotional response to it exhibited long-term benefits, in comparison to those who wrote either just about the facts or their emotional reactions (Pennebaker & Beall, 1986).

A large amount of research has been found to support cognitive change theory (Pennebaker & Chung, 2007). Pennebaker and Seagal (1999) found that people use who used more positive emotion words and a moderate amount of negative emotion words showed the greatest improvements in health. Other research found that those who showed the most significant improvements in health and academic achievement were those who went from using few causal and insight words to using a much higher number by last day of writing (Pennebaker, Mayne, & Francis, 1997). Causal words relate to the discussion of causes for emotions and events and insight words relate to cognitive processes associated with thinking.

Research has found that therapeutic writing that involves the disclosure of emotions is linked to positive emotional, behavioural health and academic outcomes (Pennebaker & Chung, 2007). Therapeutic storywriting aims to improve emotional and academic literacy (Waters, 2004). However, whilst there is some preliminary evidence suggesting this intervention improves emotional and behavioural outcomes (Waters, 2010), there is currently no published research looking at effects of this particular intervention on children's academic literacy. There is also no published data exploring

the possible mechanisms which might explain any such effects of the intervention on children's emotional and academic literacy.

1.9.1 Research questions and hypotheses

The purpose of this mixed methods sequential explanatory study was to investigate the effects of a therapeutic storywriting intervention on children's writing and to explore the underlying mechanisms which might help to explain these effects. This research consists of three studies to address each of the following research questions:

1. What are the effects of a therapeutic storywriting intervention on children's academic writing achievement?

The aim of this study was to investigate the effects of a therapeutic storywriting intervention on children's writing achievement in comparison to a matched control group. It was hypothesised that children in the intervention group would make greater academic gains in their writing than children in the matched control group.

2a. Do children in a therapeutic storywriting intervention display changes in their use of emotional and cognitive language in their writing?

2b. Do any such changes in children's use of language during the intervention predict greater gains in academic writing?

The aim of this study was to use a text analysis programme to examine in what ways (if any) children display cognitive change though their use of language during a therapeutic storywriting intervention. It was hypothesised that children in the intervention group would come to use more positive emotion words and more words relating to causal and insightful thinking over the course of the ten week intervention. A related aim was to test whether any such changes in children's use of language could predict greater gains in academic writing.

3. What are the similarities and differences in the overall structure and the themes of the stories of the children who made the most or the least gains in their academic writing achievement?

The aim of this qualitative study was to explore and compare the stories written by children who made the most and least gains in their academic writing achievement in order to help to explain and contextualise the quantitative results.

1.10   Method

1.10.1   Mixed Methods Design

A mixed methods design was employed in this study. This is a procedure for generating and analysing data using both quantitative and qualitative methods within a single study in order to allow for a more in depth exploration of the research problem (Creswell & Plano Clark, 2011). When used in combination quantitative and qualitative methods can provide a more complete picture of the research problem (Teddlie & Tashakkori, 2009). This research is underpinned by the philosophical paradigm of pragmatism which emphasises the importance of the research questions and argues that methods should be chosen which are best suited to answer these questions (Creswell & Plano Clark, 2011).

The rationale for using a mixed methods design in this particular study was because neither method alone could address the research questions. Quantitative analysis was required to determine the effects of a therapeutic storywriting intervention on children's academic writing achievement. The quantitative analysis was also used to explore how children display changes in their use of language during a therapeutic storywriting intervention and to explore the relationship between changes in language use and academic gains. Whereas the qualitative analysis was used in order to help interpret the quantitative results through exploring other aspects of children's storywriting that might help to explain the quantitative results. Specifically the qualitative analysis was used to explore in more depth the similarities and differences between the stories of the children who made the most or least gains in their academic writing achievement.

A sequential explanatory mixed methods design was used in this study (Creswell & Clark, 2011). This design consists of two distinct phases (Creswell & Clark, 2011). In the first phase quantitative data were collected and analysed. The results of the quantitative phase allowed for the purposeful selecting of participants for the second qualitative phase. Figure 2 presents a visual representation of the design of this study.

Phase One – Quantitative

Research Questions

relating to each study

Therapeutic storywriting group (n = 28)	Non-therapeutic storywriting group (n = 28)

Study 1

Data analysis of academic writing achievement pre and post intervention	Data analysis of academic writing achievement pre and post intervention

1. What are the effects of a therapeutic story writing intervention on children's academic writing achievement?

Study 2

LIWC text analysis of language used in writing over the course of the ten week intervention

2a Do children in a therapeutic story writing intervention display changes in their use of emotional and cognitive language in their writing?

Data analysis of language used in writing over the course of the intervention.

2b. Do any such changes in children's use of language during the intervention predict greater gains in academic writing?

Writing Selection for phase two

Study 3

Phase Two - Qualitative

3. What are the similarities and differences in the overall structure and the themes of the stories of the children who made the most or the least gains in their academic writing achievement?

Narrative analysis of children's writing based on results from phase one

Most gains (n = 7)
Least gains (n = 7)

Figure 2: Visual model for sequential explanatory mixed method design

1.11   Quantitative Phase - Study One

1.11.1   Design

A quasi-experimental between groups design was used to investigate research question 1: What are the effects of a therapeutic storywriting intervention on children's academic writing achievement? The independent variable was taking part in the therapeutic storywriting intervention. The dependent variable was academic writing achievement.

1.11.2   Therapeutic Storywriting Intervention

Therapeutic Storywriting (Waters, 2004) is a 10 week intervention designed to support children and young people whose emotional difficulties are getting in the way of their learning. The intervention uses story metaphor to help children and young people explore emotional issues. All of the facilitators in this study attended a training course run by Hampshire Educational Psychology Service in how to set up and deliver therapeutic storywriting groups based on Waters (2004) model. All of the facilitators were teaching assistants working in different schools. In four of the schools there were two teaching assistants who delivered the intervention together and in two of the schools just one teaching assistant ran the group. The facilitators were taught to deliver each session as follows:

1. Relaxation exercise followed by labelling and discussing current feelings.

2. Presentation of a story theme which reflects some of the emotional issues experienced by members of the group. Children are allowed to choose to write about the presented story theme or to write about a different story theme that is more pertinent to them.

3. Twenty minutes of writing by both the children and the group facilitators.

4. Sharing of stories, during which time the facilitator explores and reflects on emotional issues in the stories.

5. The session ends with a game to help to develop listening skills.

The teaching assistants all attended regular supervision group sessions run by Hampshire Educational Psychology Service to discuss their therapeutic storywriting groups.

1.11.3 Participants

Pupils identified as having BESD from primary schools across Hampshire were initially selected to take part in therapeutic storywriting group interventions. The teaching assistants responsible for running the therapeutic storywriting intervention in each school were asked to liaise with their school's Special Needs Co-ordinator (SENCO) to identify a small group of up to six children to take part in the intervention. Whilst there were other children in each school who could benefit from taking part in the intervention, the children were selected on the basis that their emotional needs were having a more significant impact on their learning and wellbeing. Other children who it was thought might benefit from the intervention were identified to take part in future therapeutic storywriting groups.

Each school (n= 12) that was involved in the therapeutic storywriting intervention which ran from October 2011 to February 2012 was approached to take part in the study. Six schools agreed to take part in this research. Reasons given for not taking part included upcoming Ofsted inspections (n = 4), involvement in other research (n = 3), or staff pressures because of high staff absence rates (n = 2) or heavy work load (n = 3).

The SENCo of each school that agreed to take part was then asked to identify a matched control for each pupil involved in the intervention. The control group was matched to the intervention group by age, gender, ability level and were selected from the same class as the intervention pupils. The children in the control group were also identified as having BESD.

Parents of children in the intervention (n = 33) and the control group (n = 33) were contacted by letter to inform them about this study (see Appendix C). Parents of children in the intervention group were asked to fill out and return a consent form to the school if they agreed to their child's academic writing achievement data and their child's therapeutic stories being used in the study, (see Appendix D). In addition pupils who had taken part in the therapeutic storywriting group were also given a letter asking them to give verbal assent to their stories being used in their research, (see Appendix E). Parents of children in the control group were asked to fill out and return a consent form asking them if they agreed to their child's academic writing achievement data being used in the study (see Appendix F).

All of the parents of the control group (n = 33) gave consent for their children's academic writing achievement data to be used in the study. Five out of the 33 parents of children in the intervention group approached did not consent to their children's stories and writing achievement data being used in the study. In total 56 pupils, all with BESD, took part in this study (32 boys and 24 girls mean age = 8.08, range 7.03 to 11.03, SD = 1.46). The intervention group and the matched control group each contained 28 pupils (16 boys and 12 girls). As this was the first controlled study exploring

the effects of a therapeutic storywriting intervention on children's academic writing achievement there was no existing data on which to carry out a priori power analysis.

1.11.4 Measures

Academic Writing Achievement. Schools in England that are funded by central government are required to teach the National Curriculum. National Curriculum levels are used to assess pupils' ability in each subject and to compare the progress of individual pupils to pupils of the same age across the country. For most subjects there are eight levels of achievement for pupils aged between five and 14 years, level one is the lowest and level eight is the highest. Each level is subdivided into three sublevels, which are: a, the child has reached the top of this level and is working towards the next level; b, the child is working well within the level and c, the child has started to work at this level. Teachers are required to frequently assess each pupil using the national curriculum levels to assess progress throughout each academic year. The teacher assessment is guided by detailed level descriptions supplied by the Department for Education (DfE, 2013).

It is argued that teacher assessment, when subject to external checks, can be a more valid form of assessment than standardized testing as it assesses a wider range of pupils' learning over a longer period of time (Bew, 2011). There is some evidence that teacher judgements have been found to have concurrent validity with other standardized assessments (Harlen, 2004). Teachers' assessment practices are externally assessed by Ofsted and 92% of schools have been found to have robust assessment practices (Bew, 2011). However there is evidence of bias in teacher assessment in relation to pupil characteristics including behaviour, gender, special educational needs and overall achievement (Bew, 2011). It is likely that the teachers assessing pupil progress in this study were aware that the pupils were in a therapeutic storywriting group which might have affected their assessment of pupils' progress in this study.

Schools were asked to provide national curriculum levels of writing achievement before and after the therapeutic storywriting intervention for the intervention and the control group. The national curriculum writing levels were converted to numerical format. National curriculum level 1c was converted to 1, level 1b was converted to 2 and this process was continued to the highest grade in the sample, 5b which was converted to 14. The pre intervention writing scores were subtracted from the post intervention writing scores to calculate a ratio of gains over the course of the intervention for each participant.

1.11.5 Procedure

Ethical approval was obtained from the University of Southampton's School of Psychology Ethics committee (see Appendix G). The researcher met with the parents of the pupils in the

intervention group in each school in order to explain what their child's participation in this study would involve and to give them an opportunity to ask any questions. The use of therapeutic storywriting as an intervention means that children may disclose very sensitive and personal information during the intervention. During the initial meeting parents were asked to give their child a letter (see Appendix E) and to discuss the research with their children. Parents were asked only to give consent if their children were happy for their stories to be used in this research. The researcher also met with the facilitators of the intervention in each school to discuss whether they had any concerns about any of the stories being used in this research. Parents of pupils in the intervention and control group were then sent letters containing information about the research. The letters outlined the parents' right to withdraw their child's data at any time during the research (see Appendix C).

Once consent had been given by parents, schools were asked to provide writing achievement data for the intervention and control group for the period before and after the intervention. The data was then analysed sequentially as outlined in the design section of this paper (See figure 1).

1.11.6 Statistical Methods

The data were checked to determine whether assumptions had been met in order to carry out a parametric analysis. Histograms and p-plots revealed that the academic writing achievement gains data were normally distributed. Therefore parametric tests were used.

1.12   Results

1.12.1 Descriptive Statistics

Preliminary analyses confirmed that there were no significant differences between the intervention and control group prior to the intervention in terms of school (two-tailed Fisher exact $p = 1.00$), gender X^2 (1, $N = 56$) = .00, $p = .61$, age $t(54) = -.08$, $p = .93$ and academic writing achievement $t(54) = -.04$, $p = .97$, (see table 3).

Table 3.

Means and Standard Deviations of Pupils' Age and Writing ability across schools pre-intervention.

School	Total	Intervention Group (n = 28)						Control Group (n = 28)					
		gender		age		writing levels		gender		age		writing levels	
		m	f	M	(SD)	M	(SD)	m	f	M	(SD)	M	(SD)
School 1	6	3	3	10.05	(0.05)	7.00	(1.90)	3	3	10.05	(0.05)	7.00	(1.67)
School 2	4	2	2	7.07	(0.03)	2.25	(0.96)	2	2	7.06	(0.03)	2.25	(0.96)
School 3	6	4	2	8.04	(0.05)	5.33	(2.25)	4	2	8.04	(0.05)	5.33	(2.50)
School 4	5	3	2	7.03	(0.01)	1.40	(0.89)	3	2	7.04	(0.01)	1.60	(0.89)
School 5	5	2	3	10.07	(0.02)	10.80	(0.84)	2	3	10.09	(0.03)	10.80	(0.83)
School 6	2	2	0	9.10	(0.01)	8.50	(0.71)	2	0	9.06	(0.05)	8.50	(0.71)
Total	28	16	12	8.06	(0.03)	5.88	(1.26)	16	12	8.06	(0.03)	5.91	(1.26)

Note. m = male; f = female; M = mean; SD = standard deviation.

1.12.2 Achievement

Overall gains in writing achievement ranged from 0 to 3 national curriculum levels. To test the hypothesis that children who took part in the therapeutic storywriting intervention would make greater academic gains in their writing achievement than those who did not take part an independent-means t-test was carried out. On average writing gains were significantly greater for the intervention group ($M = 1.50$, $SE = 0.16$) than the control group ($M = 1.00$, $SE = 0.13$), $t(54) = 2.47$, $p = .02$, r = 0.32.

Further analysis revealed that this finding was consistent across schools. There was no significant difference between writing gains made by pupils in the intervention group in different schools $F(5,22) = 1.17$, $p = .35$ (see table 4).

Table 4.

Means, Standard Deviations and Range of Pupils' Writing Gains

School	Intervention Group			Control Group		
	M	(SD)	Range	M	(SD)	Range
School 1	1.50	0.55	1-2	1.00	0.63	0-2
School 2	1.50	1.29	0-3	1.25	0.96	0-2
School 3	1.00	0.63	0-2	1.00	0.63	0-2
School 4	1.40	1.14	0-3	0.40	0.55	0-1
School 5	1.80	0.45	0-2	1.40	0.55	0-1
School 6	2.50	0.70	2-3	1.00	0.44	0-1
Total	1.50	0.84	0-3	1.00	0.67	0-2

Note. M = mean; SD = standard deviation

1.13 Discussion

The results of this study supported the hypothesis that children in a therapeutic storywriting group would make greater academic gains in their writing than children in the control group. Children in the therapeutic storywriting group made significantly greater academic gains in terms of their writing achievement in comparison to children in a matched control group, with some children in the intervention group making as many as three national curriculum sublevels improvement.

One of the limitations of this study was that it was not possible to randomly allocate children to the intervention or control condition. This was because the children were selected to take part based on the impact of their emotional needs on their learning and wellbeing. However the fact that the intervention group were matched to a control group by age, gender and ability level should have minimised any potential selection bias. A further limitation of this study was that teachers grading the children's writing before and after the intervention were likely to be aware that the children were taking part in an intervention, which might have had an impact on their assessment. However the fact that teacher assessment is carried out with very specific criteria and subject to external moderations should have minimised any potential bias in teacher assessment.

Whilst there was a significant difference overall, not all of the children in the intervention group made significant improvements in their writing achievement. Some children made two or three gains in national curriculum levels, whereas some made zero gains or just one gain. Pennebaker and Chung (2007) found that academic gains were related to emotional and cognitive changes in language

use over the course of a writing intervention. Thus the following study aims to explore whether cognitive change theory (Pennebaker & Seagal, 1999) might help to explain these differences.

1.14 Study Two

1.14.1 Design

A within group design was used to explore research question 2a: Do children in a therapeutic storywriting intervention display changes in their use of emotional and cognitive language in their writing? The independent variable was the time of intervention, which had two levels, week one and week ten. There were four dependent variables, positive emotional vocabulary, negative emotional vocabulary, causal words and insight words. These four dependent variables were chosen based on existing research that has found that changes in these four language dimensions are related to gains in academic achievement (Pennebaker & Chung, 2007).

Logistic Regression was used to investigate research question 2b: Do any changes in children's use of emotional and cognitive language during a therapeutic storywriting intervention predict greater gains in academic writing? The predictor variable was change in language use, which had four levels; change in positive emotional vocabulary, change in negative emotional vocabulary, change in causal words and change in insight words. The dependent variable was gains in academic writing achievement, which had two levels; most gains and least gains.

1.14.2 Participants

Participants in this study were the same participants from study one who took part in the therapeutic storywriting intervention.

1.14.3 Measures

Linguistic Inquiry and Word Count (LIWC; Pennebaker, Booth & Francis, 2007). The Linguistic Inquiry and Word Count (LIWC) is a text analysis application which is used to identify the emotional, cognitive and structural categories of words used within written or spoken language. The LIWC contains a default dictionary composed of almost 4,500 words that define word categories. The application analyses text word by word and calculates the percentage of words that match each category. The categories include general processes such as overall word count and words per sentence, standard linguistic dimensions such as pronouns, verbs and articles and psychological processes such as affective, cognitive and social processes.

In this particular study The LIWC was used to explore children's written use of language relating to cognitive (causal and insight words) and affective processes (positive and negative emotional vocabulary) as they proceeded through a therapeutic storywriting intervention. The LIWC has been shown to have good internal consistency for affective processes ($\alpha = .97$), and for cognitive processes ($\alpha = .97$). The LIWC scales and judges ratings are highly correlated indicating good external validity (Pennebaker, Chung, Ireland, Gonzales & Booth, 2007). Cronbach's alphas indicated that internal reliability was good for the dimensions of the LIWC used in the current study $\alpha=.71$ for cognitive processes and $\alpha=.84$ for affective processes.

1.14.4 Procedure

Once consent had been given by parents, schools were also asked to provide copies of all stories written by each pupil during the ten weeks of the therapeutic storywriting intervention. The researcher collected the data from each school. All written stories were then transcribed into an electronic format by the researcher. Each of the children's stories were analysed using LIWC (Pennebaker et al., 2007) in order to explore changes in children's language use during the course of the therapeutic storywriting intervention.

1.14.5   Statistical Methods

The amount of positive emotional, negative emotional, insight and causal words pupils used in their writing during their first and final therapeutic storywriting session were compared to get a total figure of gains in each of the language dimensions. The data on each of the language dimensions were not normally distributed and were positively skewed and platykurtic, therefore non-parametric tests were used. The Mann-Whitney test was used to explore whether there were any significant differences in language dimensions at the beginning of the intervention according to gender. The Kruskal-Wallis test was used to explore whether there were any significant baseline differences in language dimensions in terms of school and year group. A Bonferroni correction was applied therefore all baseline effects are reported at a .0167 level of significance.

The data on academic writing achievement had a very narrow range, ranging from zero to three national curriculum levels. Therefore academic gains in writing were put into two categorical variables of 0-1 gains and 2-3 gains.

1.15   Results

1.15.1 Language use at baseline

There were no significant differences in any of the language dimensions in the children's writing according to year group or school prior to the intervention (see table 5).

Table 5.

Baseline measures of language use according to year group and school.

	Year group		School	
	Kruskal-Wallis	*p values*	Kruskal-Wallis	*p values*
Positive emotional vocabulary	$H(3) = .89$	$p = .83$	$H(5) = 3.54$	$p = .47$
Negative emotional vocabulary	$H(3) = 2.48$	$p = .48$	$H(5) = 4.22$	$p = .38$
Causal words	$H(3) = 1.61$	$p = .66$	$H(5) = 1.91$	$p = .75$
Insight words	$H(3) = 9.67$	$p = .02$	$H(5) = 8.16$	$p = .02$

Note: Bonferroni corrected statistical significance $p < .0167$

1.15.2 Changes in language use

A Wilcoxon Matched-Pairs test was used to explore the proposition that children who took part in a therapeutic storywriting group intervention would display changes in their use of emotional and cognitive language in their writing over the course of the intervention (see table 6). Children used significantly more positive emotion words in their final stories (*Mdn* = 3.56) compared to their initial therapeutic stories (*Mdn* = .85) $z = -2.05$, $p = .02$, $r = -.27$. Children used significantly more causal word in their final therapeutic stories (*Mdn* = .28) compared to their initial stories (*Mdn* = .00) $z = -2.22$, $p = .01$, $r = -.30$. There was no significant difference in the amount of negative emotion words children used in their final stories (*Mdn* = 1.54) $z = -.21$, $p = .85$, in comparison to their initial stories (*Mdn* = 1.36). There was no significant difference in the amount of insight words children used in their final stories (*Mdn* = .00) in comparison to their initial stories (*Mdn* = .00) $z = -.36$, $p = .37$.

Further analysis revealed that this finding was consistent across schools. There was no significant difference amongst schools between the amount of gains made by pupils in their use of

positive emotional vocabulary $H(5) = 3.07$, $p = .55$ or causal words $H(5) = 5.16$, $p = .27$, used by pupils in their writing at the end of the intervention.

Table 6.

Median and Interquartile range of LIWC language dimensions

	LIWC Analysis of stories	
	First story	Final Story
Language dimension	Mdn (Range)	Mdn (Range)
Emotional Dimensions		
Positive emotional vocabulary	.85 (10.26)	3.56 (10.00)
Negative emotional vocabulary	1.36 (16.67)	1.54 (9.09)
Cognitive dimensions		
Causal words	.00 (8.33)	.28 (5.56)
Insight words	.00 (3.57)	.00 (4.32)

Note. Mdn = median

A binary logistic regression was conducted to explore whether any changes in children's use of language during the intervention would predict greater gains in academic writing achievement. Academic gains was the outcome variable and gains in positive emotional vocabulary and causal words from the first to the last story were the predictor variables.

The model accounted for between 5.1% and 6.8% of the variance in academic achievement scores, with 64.3% of the pupils who had made the least gains and 42.9% of pupils who had made the most gains successfully predicted. Overall, 53.6% of predictions were accurate. Table 7 provides coefficients for each of the predictors. The full model did not significantly predict gains in academic writing achievement (omnibus chi-square = 1.46, df = 2, p =.48). This would indicate that gains in the use of emotional vocabulary and causal words over the course of a therapeutic storywriting intervention was not predictive of greater gains in academic writing achievement.

Table 7.

Logistic Regression analysis for LIWC language dimensions.

| | | 95% CI for Odds Ratio | | |
	B (*SE*)	**Lower**	**Odds Ratio**	**Upper**
constant	-0.18 (0.42)			
Positive emotional gains	0.13 (0.11)	0.92	1.13	1.41
Causal gains	0.02 (0.18)	0.72	1.02	1.45

Note. R^2 = .05 (Cox & Snell), .07 (Nagelkerke). Model X^2 1.46(2) *p* >.05.

1.16   Discussion

The hypothesis that children who had taken part in a therapeutic storywriting group would use more positive emotion words and more words relating to causal and insightful thinking over the course of the intervention was partially supported. There was a significant increase in the amount of positive emotion words and causal words used by children in their final stories compared to their first stories. However there was no significant difference in the amount of insight words used by children in their first and final stories. Furthermore gains in the use of positive emotion words and causal words did not significantly predict greater gains in academic writing achievement.

One of the limitations of this study was that some of the children's stories were quite short and therefore the overall percentage of emotional and cognitive language used in the stories was limited. Thus any changes in language use may not have been large enough to fully explore whether they could predict gains in academic achievement. The results of this study would suggest that cognitive change theory does not account for gains in academic achievement. This is in contrast to other research which has found a relationship between changes in language use and academic gains (Pennebaker & Francis, 1996).

Study one demonstrated that some children made greater gains in academic writing achievement than others, but study two was unable to identify predictors of academic gains. Thus a qualitative study was carried out in order to explore other factors that might help to explain the differences in children's gains in academic writing achievement.

1.17   Qualitative Phase - Study Three

1.17.1 Design

The aim of this qualitative study was to explore and compare the stories written by children who made the most gains and those who made the least gains in their academic writing achievement. A further aim was to help to explain and to contextualise the quantitative results. The qualitative analysis was used to answer the following research question:

What are the similarities and differences in the overall structure and the themes of the stories of the children who made the most or the least gains in their academic writing achievement?

1.17.2 Data Collection

The children who made the most and the least gains in academic achievement after taking part in a therapeutic storywriting group intervention were put into two groups of least gains (0 -1 gains) and most gains (2 - 3 gains). Due to the time limitations of completing a piece of doctoral research it was not possible to analyse all of the children's stories. Furthermore as narrative analysis focusses on the analysis of each narrative as a whole unit this method tends to use small sample sizes (Riessman, 1993) Therefore a random sample of 25% (seven children) from each group were selected. Each child selected was given a pseudonym which is used throughout the analysis to ensure confidentiality. The final stories written by the randomly selected groups of children were then selected for analysis. The decision was made to analyse the final stories, rather than the stories from any other sessions as it was expected that the intervention would have had the most impact by the final week.

1.17.3 Data Analysis

The selected stories were analysed using a narrative analysis approach. According to Reissman (2008), "Narrative analysis refers to a family of methods for interpreting text that have in common a storied form" (p. 11). Narrative analysis differs from other forms of qualitative analysis in that it takes the whole narrative into account and focuses on how the narrative is structured as well as themes that occur within the narratives (Murray, 2003). The emphasis on story structure as well as themes was thought to be particularly appropriate for the analysis of the written stories in this study. This is because all of the written stories had a clear structure and it was thought that looking at the structure of the stories as well as themes would be a useful way to explore similarities and differences between the stories in both groups.

Each story was transcribed by the researcher and then read a number of times in order to become familiar with both the structure and the content of each story (Murray, 2003). According to

Murray (2003) narrative analysis is carried out in two broad phases, the first is descriptive and the second is interpretive. In the first descriptive phase key structural features of each story were identified. The plot for each story was initially summarised by the researcher (see tables 8 and 9) and analysed according to the threefold classification scheme developed by Gergen and Gergen (1997) as shown in table 10. This approach is useful in analysing the structure of the plot and the overall tone of each story by exploring the directionality of events (Gergen & Gergen, 1997).

According to Gergen and Gergen (1997) there are three forms of narrative in relation to the development of a plot over time. The progressive narrative focuses on advancement, achievement and success; in these narratives the plot moves towards a positive ending and often ends with the character achieving a desired goal. The regressive narrative, moves through a process of deterioration or decline; in these narratives the plot moves from a positive start towards a negative ending and the character moves further away from their goals. Finally in the stable narrative incidences occur throughout the plot but the individual remains unchanged with respect to their emotions or the achievement of their goals at the end. Plots can move between progressive, regressive and stable narratives. For example in the romance-melodrama a regressive narrative is often followed by a progressive narrative, whereas in a tragedy a progressive narrative may be followed by a regressive narrative (Gergen & Gergen, 1997).

Whereas other qualitative approaches analyse data on a line by line basis, narrative analysis tends to break text down into segments, which are self-contained episodes or events within the story (Hiles, & Čermák, 2007). According to Labov (1972) a full narrative contains six elements: an abstract (summary or point of story); orientation (to time, place, characters and situation); complicating action (sequence of events, usually including a crisis or turning point); evaluation (narrator comments on meaning and emotions about events); resolution (outcome of plot); and a coda (end of story which brings the story back to the present). The structure of each story was further analysed using Labov's structural elements (1972) as shown in Appendix H.

Propp's character theory (1968) was used to help explore the different characters included in each story. Propp (1968) analysed a number of folk tales and identified seven different characters types who each perform a function which provides a structure for the text. These include: the hero; the helper; the villain; the false hero (who claims to be a hero but these claims turn out to be false), the donor (who gives the hero something special such as a magical object or wisdom), the dispatcher (who sends the hero on his mission), the princess and the princesses father. According to Propp (1968) each story includes a central character who is often a hero; however they might take another form such as a victim or a seeker of knowledge or treasure.

Whereas the structural element of the narrative analysis was largely deductive as it involved organising data according to particular structural components, the thematic element of the analysis

was inductive in that the themes were drawn from the data itself (Reissman, 2008). Themes were identified through thoroughly reading each story and through identifying initial codes (see Appendix I). This process was repeated with all of the stories, which generated more initial codes. After this the data relevant to each code were collated from all of the stories. These codes were then grouped into overarching themes through an iterative process which involved re-reading the stories to explore potential links between themes. At this stage 24 codes were identified within the data and collated into a coding frame (see Appendix J).

In the second interpretative phase (Murray, 2003), the structural elements of the stories and themes were explored within the broader theoretical literature on story structure and the therapeutic use of stories with children. In narrative analysis the researcher is central to the process (Murray, 2003). Therefore the results are based on the researcher's own interpretation of the stories in relation to the research aims. The results section begins by discussing the similarities and differences between the structural elements of the stories. This is followed by a discussion of the inductive themes and an exploration of the similarities and differences between the themes in both groups. Particular stories were selected to be included on the basis that they were felt to be good illustrations of each theme.

1.18   Results

Tables 8 and 9 contain a plot summary of each of the stories written by pupils in both groups.

Table 8.

Summary of the final stories written by children who made the least academic gains.

Name	Summary of Plot
Paula	This story is about two girls, Poppy and Charlotte. At the beginning of the story they are playing a game of snakes and ladders. Charlotte wins and Poppy gets very angry and decides not to be her friend anymore. Then Poppy writes down her feelings and talks to her mum. In the end they make up and become friends again.
Sarah	Sarah wrote about all the things she would buy and do if she saved up and had a lot of money. This included buying a car, buying some clothes and shoes and going out to parties.
Tom	The story is about a balloon that begins his life in a plastic bag with some other balloons. First of all they are inflated and tied to a fence. Then they are set free and go on a journey. They are then caught and bashed around by some 'balloon bullies' before they see a bird who they think is coming to rescue them. At the end the bird does not rescue the main character; instead it pops the balloon and kills him.
Jonathon	This story is about Craig, who finds out that the year is coming to an end. First Craig heads to the airport whilst everything is crashing and crumbling around him. He then picks up a plane and tries to rescue his friend in Spain but is too late. He then goes to his old school where the plane runs out of fuel. Finally he goes into the school and rescues everyone by getting them all into the plane.
Tanya	The story is about a girl who is lost in the woods. Then she finds a stone and makes a wish to go home to be with her parents. Her wish comes true and she goes home and eventually sees her parents.
Cathy	The story is about two sisters Maria and Helena who are jealous of each other. Maria becomes so jealous of her sister that she takes her favourite toy away and hides it from her.
Nick	This story is about a character called Lucas who travels through various portals. On his adventure he comes across different monsters and creatures. In the end he is attacked by a creature that teleports back to his home with him.

Table 9.

Summary of the final stories written by children who made the most academic gains.

Name	Summary of Plot
Mandy	This story begins with the main character talking to her mother about going to a new school. The character reflects on this decision and does some research into the new school. She decides she wants to go there and she then tells her friends she is leaving. Finally she goes to her new school.
Rosie	This story is about a girl and her parents who go looking for a polar bear in the woods. The girl finds the polar bear but then cannot find the rest of her family. Eventually she finds the rest of her family who were hiding from her and they take the polar bear to the vets. Finally the polar bear becomes a pet that she plays with and cuddles up with at night.
Ross	The story is about a witch who flies around searching for people who have died so that they can be taken to heaven.
Elizabeth	This story is about Sally the seahorse who has broken her tail and feels sad because she cannot go out to play with her friends. Sally feels bored but then Nemo the fish comes to visit her bringing her a present which helps her feel better.
Jack	The story is about a grumpy owl, who is so grumpy he cannot see and cannot leave his nest to get food. Eventually another owl comes to help him and gives him some food and some advice. The grumpy owl acts on the advice and is then able to leave his nest and see other owls.
Laura	The story is about a girl who is shy and cannot talk to other people. However she has an orange that she talks to. One day the orange talks to her and she tells the orange about her problem. The orange then gives her some advice which the girl follows and at the end she makes a new friend.
William	This story is about a farm horse called Max who has no friends. One day a mysterious horse character appears and tells Max that the other horses are jealous of him because he is fast. The mysterious horse figure waves his magical stick and all the other horses come over and apologise to Max. The story ends with them all becoming friends.

1.18.1 Structural analysis of narrative

Most of the children's stories in both groups contained a number of the elements of a narrative as identified by Labov (1972), (see Appendix H). A notable exception was Sarah's story from the least gains group. Sarah's narrative was about her wish, there was no orientation to characters, time or

place. Instead the narrative read more like a list of things she would do if she had a lot of money. All of the stories included an orientation which introduced the main characters and the setting for the story. The stories contained a sequence of complicating actions which were either carried out by the main character or the main character was a passive recipient of the actions of others. Most of the stories included a resolution which often involved the main problem in the story being solved or overcome. However Cathy's story from the least gains group did not appear to have any resolution which leaves the reader feeling that the story is unfinished.

There appeared to be a slight difference in terms of the structure of the plot and the emotional tone of the stories between both groups (see table 10). Both groups had examples of stories which had a regressive followed by a progressive narrative structure (Gergen & Gergen 1997). These stories tended to include negative events or problems experienced by the main character which were then followed by a positive outcome involving a resolution of the problem or an attainment of goals. However three of the stories written by children in the least gains group followed a stable/regressive structure (Gergen & Gergen, 1997) in which the plot deteriorated over time and ended negatively for the main character. Whereas all of the stories written by children in the most gains group ended positively.

Table 10.

Narrative structure of story plots according to Gergen and Gergen's (1997) classification scheme.

Narrative structure of plot	Group	(no. of stories)	Percentage
Progressive narrative	Most gains	(n= 1)	14%
(positive ending)	Least gains	(n = 0)	0%
	Total in both groups	(n = 1)	7%
Regressive followed by	Most gains	(n = 5)	71%
progressive narrative	Least gains	(n = 3)	43%
(positive ending)	Total in both groups	(n = 8)	57%
Stable narrative	Most gains	(n = 0)	0%
(neutral throughout story)	Least gains	(n = 1)	14%
	Total in both groups	(n = 1)	7%
Stable/regressive narrative	Most gains	(n = 0)	0%
(negative throughout the story	Least gains	(n = 3)	43%
and negative ending)	Total in both groups	(n = 3)	21%
Stable/progressive narrative	Most gains	(n = 1)	14%
(positive throughout the story and	Least gains	(n = 0)	0%
positive ending)	Total in both groups	(n = 1)	7%

1.18.2 Inductive thematic analysis of narrative

During the inductive thematic analysis of the stories characterisation emerged as a core theme. Characterisation relates to the actions of the main characters and the relationships between characters. Characterisation was informed by three other themes that emerged from the data: sense of belonging; consequences of emotions; and impact of external factors.

Characterisation. The stories written by children in both groups included a number of traditional story characters similar to those identified by Propp (1968), (see tables 11 and 12). A number of characters in the children's stories from both groups were animals or objects which might have helped the children to externalise their feelings and situations and therefore make the process feel less threatening (Waters, 2004). Both groups had examples of main characters who were heroes, seekers or victims either of others characters behaviour towards them or due to the consequences of their own behaviour. Some of these victimised characters actively tried to help themselves in the stories whereas others were passive and tended to rely on other characters to help them overcome their problems. Two of the stories written by the children in the least gains group had examples of main characters who were oppositional and acted in a negative way towards others, often as a result of their own negative emotions.

There appeared to be a difference in terms of the secondary characters in the stories between the two groups. Six of the stories written by children who made the most gains included supportive or helpful characters who helped the main character in the story. These characters are similar to 'helpers' or 'donors' (Propp, 1968). However in the group who made the least gains only two of the stories mentioned a helpful character or object. In this group the secondary characters were either victims or they were villains who were oppositional towards the main character.

Table 11.

Description of main and secondary characters in children's stories in the least gains group.

	Main Character	**Secondary characters**
Paula	Poppy - an oppositional character	Charlotte - Poppy's friend /victim Poppy's mum - helper
Sarah	Sarah did not write in a story format therefore the main character cannot be defined.	No secondary characters
Tom	balloon - victim	Friends who are also victims. A figure - an oppositional character Balloon bullies – villains Bird - false hero
Jonathon	Craig – hero	Friends -victims
Tanya	Girl – seeker	Stone – donor Mum and Dad – passive characters
Cathy	Maria – an oppositional character	Helena – Maria's sister/victim
Nick	Lucas – victim	Monsters –villains Creature -villain

Table 12.

Description of main and secondary characters in children's stories in the most gains group.

	Main Character	**Secondary characters**
Mandy	Mandy - seeker	Mum - helper Friends - helpers
Rosie	Rosie –seeker	Mum and Dad - helpers Misty - helper Polar Bear - victim Vet - helper
Ross	Witch – a helpful character	Dead people - victims
Elizabeth	Sally the seahorse –victim	Penelope the penguin – friend Tom the turtle – friend Nemo the fish –friend/helper
Jack	Mr Grumpy the owl - victim	Kind owl -helper/donor
Laura	Girl - victim	Orange - helper/donor girl - best friend
William	Max the farm horse – victim	A magical horse - donor/helper Other horses - oppositional characters

Belonging. A number of stories within both groups demonstrate the main characters desires and attempts to belong to a social group. This is illustrated in William's story.

> 'Once there was an old farm horse who had no friends but one day it was about
> to change……. His name was Max, the reason why he had no friends was
> because he was very very fast, he would canter and gallop all day.'

> (William - most gains)

The main character receives some help from a mysterious figure. This character appears to act as both a 'helper' and 'donor' (Propp, 1968), as he offers the character some insight into his current situation and explains why the other characters are jealous of him.

> 'He was in his field when it happened, a very weird figure appeared. He trotted
> over and whinnied loudly. It was holding a stick with sparkles coming out of it. It
> was another horse, it spoke very clearly and gently and this is what it said, "all of
> the horses are just jealous because you are very fast".'

> (William - most gains)

The main character appears quite passive in the story as the helper in the story is the one who solves his problem for him. However because of the help of the mysterious figure the story is resolved by the main character making friends and belonging to a social group.

> 'He waved his stick and all the horses came over. They said sorry and did Max
> want to play with them. So they cantered round the field all day. At the end of the
> day, the horse and wand were gone.'

> (William - most gains)

Similarly Laura's story is about a main character who does not have any friends. This story is another example where the main character is quite passive and does not appear to have the inner resources to help themselves. In this story, unlike William's story, the other characters are friendly and try to help the main character.

> 'Once there was a girl. She had a secret and did not want to tell anyone. At
> school people asked her what was wrong, but she didn't answer, instead she
> walked off.'

However she has one friend which is an object, perhaps because it is an object rather than another person she feels she feels more able to talk to it.

> 'Although she had one friend, it was an orange. But she thought it was more than an orange, it was her best friend, she sometimes talked to it.'

<div align="right">(Laura - most gains)</div>

Similarly to William's story, the main character receives some help from this other character. The orange acts as a 'helper' (Propp, 1968) in that it gives her some advice.

> 'One day the orange spoke, it said "what is your problem?" The girl picked her hand up from her maths homework and said, "Did you just speak?" "Yes" said the orange and one and a half hours later she had finished her story. The problem was she was shy and couldn't speak to new people. The orange said, "you need to speak to new people".'

<div align="right">(Laura - most gains)</div>

The main character acts on the advice of the 'helper' and like William's story the story ends with the girl no longer feeling lonely and feeling a sense of belonging towards another character. Both Laura's and William's stories seem to demonstrate an understanding that sharing problems with someone else can help to solve them.

> 'So the next day a girl came up and asked if she could play, she said "of course you can" and in the end they were the best of friends.'

<div align="right">(Laura - most gains)</div>

Consequences of emotions. A number of stories in both groups describe situations where the main characters emotions have an impact on their behaviour. In both groups there are examples of different coping strategies used by the main character to deal with their emotions. The following story written by Jack in the most gains group is about an owl whose emotions have a significant impact on him.

> 'The ground owl Mr Grumpy was so grumpy that he could not see. And because he couldn't see he wasn't allowed to leave the nest and that made him angry,

because all that grumpiness he was really hungry and he can get no juicy worms
to eat.'

<div align="right">(Jack - most gains)</div>

The main character appears to be so overwhelmed by his negative emotions that he is not able to look after himself. The complicating actions relate to the actions of another owl who plays the role of a 'helper'.

'Two days later another owl came to the nest and brought him a nice juicy worm
to eat. Mr Grumpy said to the nice owl "thank you," the lovely owl said "you've
got to loosen up and calm down".'

<div align="right">(Jack - most gains)</div>

The advice given from the 'helper' in this story appears to be about using more positive coping strategies. The main character acts on the advice from the helpful character and then experiences a change in his emotions. According to subpersonality theory (Assagioli, 1965) this other owl might refer to a different aspect of the self. The two different characters appear to integrate within the story which helps to resolve the problem.

'So Mr Grumpy did and he could see now he said "thank you." Mr Grumpy was
not so grumpy now he could leave the nest he shouted out he was free he can see
all of his owl friends and all because of this one owl.'

<div align="right">(Jack - most gains)</div>

Unlike Jack's story, the main character in Mandy's story takes the form of an active character. The opening scene provides an orientation to the situation in which the main character describes feeling worried about a potential change in her life.

'A few weeks ago me and my Mum were talking about me going to a different
school, I felt shocked, scared and worried.'

<div align="right">(Mandy – most gains)</div>

The complicating actions describe behaviours carried out by the main character to help herself to work through her worries. The main character appears to have some positive coping strategies including giving herself time to think about and reflect on the situation, finding out more information

and talking about the situation with her mother who appears to play the part of a 'helper' (Propp, 1968).

> 'I said to Mum, "can I think about that?"
>
> Mum said, "OK," also she said, "we will go and see it and the head teacher and the children in your class."
>
> I went to my bedroom with my computer and looked at the school. It looked lovely, there are two classrooms in year five, all the children looked nice and the head teacher looked nice and the playground looked nice too. In year five there is a man who is a year five teacher and there are two ladies who do a job share, it looked great. A few hours later I came out of my room and said to Mum, "when can I start?"'

<div align="right">(Mandy - most gains)</div>

Mandy then goes on to describe a further challenge faced by the main character in telling her friends about her leaving school. Again the main character faces this challenge even though she was worried about it.

> 'The next day at school I had to tell my friends, they were upset. I was nervous but I had to tell them, they said they understood. Then a week later I went to this new school.'

<div align="right">(Mandy - most gains)</div>

In comparison to Mandy's story where the main character uses some positive coping strategies, two of the stories written by children who made the least academic gains involve the main character acting negatively as a consequence of feelings of jealousy. Cathy's story is about two sisters who appear to be quite jealous of each other. The orientation sets the scene of the story and explains why the two characters feel jealous towards each other.

> 'One day, there were two sisters called Maria and Helena. Maria was three and Helena was seven. Maria got more attention. Helena was jealous but when Maria was six, Helena was ten and she had a boyfriend and Maria was jealous.'

<div align="right">(Cathy – least gains)</div>

The complicating actions consist of the main character Maria taking revenge on her sister because of her feelings of jealousy towards her. Maria appears to act negatively because she cannot express or contain her feelings of jealousy. The story ends here and there appears to be a lack of any sort of

resolution between the two sisters. Similarly to the main character in Jack's story the negative emotions experienced by the main character lead to negative behaviour. However unlike Jack's story the main character receives no support from other characters and there is no attempt by the main character to try to change their feelings.

> 'Maria was so sad she took Helena's best toy, called Barbie. She hid Barbie
> where she could not find it.'

> (Cathy – least gains)

Similarly to Cathy's story, Paula's story involves the main character falling out with another character due to feelings of jealousy.

> 'One beautiful, bright, summer's day, Poppy and Charlotte were playing snakes
> and ladders. When Charlotte won, Poppy got so mad that she decided she would
> never be Charlotte's friend, ever again.'

> (Paula – least gains)

The complicating actions in Paula's story describe a sequence of events in which the main character appears to dwell on her negative emotions. This story differs from Cathy's story in that the main character attempts to deal with her emotions by first writing them down and then talking to her mother. The fact that the main character expresses their emotions through writing might reflect the fact that Paula has internalised the act of writing down emotions as a coping strategy which mirrors the therapeutic storywriting intervention.

> 'When they got home, Poppy wrote in her book,

> 'Dear Diary, today my life has been a real disaster because Charlotte won and
> she didn't let me have a chance, so I got so mad that I felt really ferocious. I felt
> that I could rip anything apart into millions of pieces. We were heartbroken.'

> Mum called "Dinner time!"

> I screamed: "I'm coming!" I refused to eat my dinner.

> Mum said "What's the matter ?" I told her that my friend and I had broken up.'

> (Paula – least gains)

It is not explicit in the text but perhaps the act of writing down her feelings and talking to her mother helped the main character deal with her emotions. The story ends with both characters becoming friends again.

'So the next day, we both said: "Shall we make friends?"

"OK friend!"' (19)

<div align="right">(Paula – least gains)</div>

Impact of external factors. Some of the stories in both groups describe situations where external factors have an impact on the main character. Two of the stories written by children in the least gains group provide good illustrations of this theme. Both of these stories lack any helpful secondary characters which meant that the main character had no help in dealing with the impact of external factors. In both these stories the main character appears to be a victim of their current situation. The main character in Tom's story is a balloon, as a balloon the character has no control over what happens to him in the story. The complicating actions in the story are a description of things that happen to the main character over which he is completely powerless.

> 'My life started in a plastic bag. On it, it had a sign that said something like this
> on it '99p'. Then a peculiar shaped figure picked me up! I was quite content in
> the bag but as soon as we (me and my friends) were taken out of the bag, we
> started to be inflated! Then we were tied to a string and strapped to a fence!
> Another figure came and snipped me and my friends off the fence!'

<div align="right">(Tom – least gains)</div>

The main character appears to enjoy the sense of freedom he gets from floating up in the sky. However it is not long before the balloon and his friends become victims of the behaviour of other oppositional characters. Tom uses a lot of similes which help to create more vivid images of others behaviour towards the balloons.

> 'Up, up, up and up we went. We saw the place where the figure picked up our
> bag. We saw the factory where we were born (made). It was fascinating.
> Suddenly we were disturbed by a cackle of menace, I felt nervous, It was them.
> His old acquaintances. The balloon bullies. They bashed us about like basket
> balls. They played with us like a cat does with food.'

<div align="right">(Tom – least gains)</div>

 At the end of the story the reader is made to believe that the balloons are going to be rescued. However the rescuer turns out to be a 'false hero'. Propp (1968) described a 'false hero' as someone who appears to be acting heroically but turns out to be a villainous character. The action of the 'false hero' in this story ultimately ends with the main character's demise. This story is similar in structure to a tragedy (Gergen & Gergen, 1997) as the plot is regressive and ends negatively.

> 'Suddenly a large white feathered beast came to our rescue. Peck, bang, peck,
> bang, peck, boom. We were saved. Peck, bang, what? Peck, bang, peck, bang and
> a millisecond after, peck, bang. I was dead.'

(Tom – least gains)

In Nick's story the main character plays more of an active role. Nick's story begins with an orientation which describes how the main character feels. From the start of the story we learn that the main character does not want to go home.

> 'Lucas knew it was time to go home but he didn't want to. The monsters were
> gone. Somehow gone.'

(Nick – least gains)

The complicating actions in Nick's story describe a series of events in which the main character tries to face the villainous characters. This is in contrast to Tom's story where the main character is powerless to act against the villains in the story.

> 'He looked everywhere except the first portal. He didn't want to go in because of
> the constant fighting. He cursed under his breath and jumped in more confident
> this time. A worm like figure was standing there. It seemed to teleport, leaving
> Lucas straight away alone. … he followed the instructions because there were 4
> portholes.'

(Nick – least gains)

At the end of the story the main character is attacked and ends up with the creature following him back to his home. There is a sense that the main character feels trapped in the situation as it appears that the battle is going to start all over again.

> 'There came an echoing.
>
> He saw the creature. It grabbed him and teleported the creature back to his house.
> Like some reversal to do it all again.'

Home is normally associated with being a safe and secure environment; however the main character's home in this story has been invaded by a creature. This creates the sense that there seems to be no escape from this creature. Bettelheim (1991) argues that monsters in stories relate to internal conflicts between difficult feelings. The different story characters might relate to different aspects of the self

(Assagioli, 1965) or to emotions that are unpleasant and difficult to control. Sunderland (2000) argues that children's stories enable others to gain valuable insights into the child's psychological landscape and their views of the world which is often based on their previous experiences. The creature in this story might relate to a person in the child's life who has been perceived as threatening in some way.

Both Nick and Tom's stories end up with the main character being defeated by villains, which gives the reader the sense that the main character feels overwhelmed and unable to control their situation. This sense of uncontrollability may be related to the children's locus of control which refers to the extent to which individuals believe they have power over events in their lives (Rotter, 1966). The children may have developed learned helplessness due to their previous experiences of events that were uncontrollable. Thus the children's previous experiences may have led the children to believe that future events will also be out of their control (Nolen-Hoeksema, Girgus, & Seligman, 1986).

1.19 Discussion

The specific aim of the qualitative phase was to explore the similarities and differences in the overall structure and the themes of the stories of the children written by the children who made the most or the least gains in their academic writing achievement.

There were some similarities in the overall structure of the plot and the emotional tone of the stories between the two groups according to Gergen and Gergen's (1997) classification scheme. Both groups contained examples of stories that had a regressive followed by a progressive structure. However there was a difference in that the least gains group had more examples of regressive stories that were fairly negative throughout and ended negatively for the main character.

During the inductive thematic narrative analysis characterisation emerged as a core theme which was informed by three other themes; belonging, consequences of emotions and impact of external factors. Both groups had examples of stories which were about belonging in terms of the relationships between characters in the stories. A number of the stories from both groups demonstrated an understanding of the consequences of emotions on behaviour. There appeared to be a slight difference in the use of secondary characters in the stories between both groups. The stories from the least gains groups contained more villains and fewer helpful characters. This meant that external factors had an impact on the main characters who appeared to be overwhelmed by the problems in the stories and did not receive any help in solving them.

Narrative analysis and in particular the frameworks of Gergen and Gergen (1997) and Labov (1972) facilitated the exploration of similarities and differences in the stories written by children in both groups by focusing on both structural and thematic elements of the children's storywriting. One

of the benefits of using a qualitative approach was that it enabled the researcher to explore aspects of children's writing that were not possible to explore using other methods such as a text analysis programme.

There were some limitations with this method of analysis. The time limitations of completing piece of doctoral research meant that only a small sample of the children's final stories could be analysed. Fewer time constraints would have enabled further stories from each of the children to have been included which would have allowed the researcher to explore patterns within each of the children's own writing. A further limitation was that the stories were also very specific to the children who wrote them and were based on their own experiences, thus making generalisation difficult. The practical implications of the qualitative findings for future implementations of the therapeutic storywriting intervention will be discussed in the overall discussion.

1.20   Overall discussion

The purpose of this explanatory mixed methods design was to investigate the effects of a therapeutic storywriting intervention on children's writing and to explore the underlying mechanisms which might help to explain any such effects. Study one found that children in a therapeutic storywriting group made significantly greater gains in their writing achievement compared to a matched control group. Study two found that children used significantly more positive emotional and causal words in their stories over the course of a therapeutic storywriting intervention; however these changes in language use did not predict greater academic gains. Study three employed a qualitative methodology and found that there were a number of similarities between the stories of the children who made the most and least academic gains in terms of story structure and themes. However the analysis did highlight some differences in that more of the stories written by children who had made the least gains had a regressive structure and contained fewer helpful secondary characters.

Previous research has found that emotional difficulties lead to very poor outcomes in later life (Petrides et al., 2004). The development of emotional skills is fundamental in the development of longer term positive emotional health and wellbeing (Adi et al., 2007). Therapeutic storywriting purports to improve both emotional and academic outcomes (Waters, 2004). Whilst previous research has shown that therapeutic storywriting improves emotional outcomes (Waters, 2010), this is the first study to demonstrate that it may also have a positive effect on academic achievement. This provides some support for previous research which demonstrates that engaging in written emotional disclosure has a positive impact on academic as well as emotional outcomes (Pennebaker & Francis, 1996). The fact that therapeutic storywriting may help to develop both emotional and academic might make it particularly appealing to schools.

One of the limitations of this research was that the children were selected to take part in the therapeutic storywriting intervention by school staff based on their perceptions of the impact of the children's emotional needs on their learning and wellbeing. This selection process may be subject to bias according to staff perceptions of the children and their emotional needs. Future research could use a standardised screening tool to facilitate the selection of participants in order to minimise any potential selection bias. This research was also limited by focusing solely on the effects of the intervention on children's writing achievement. Previous research found a link between therapeutic writing and grades in a variety of subjects (Pennebaker & Francis, 1996). Therefore an area for future research might be to explore the link between the effects of the intervention on children's performance in other subjects. A further limitation was that this research only explored the effects of the intervention in the short term. Therefore further research could explore the effects of the intervention on academic outcomes in the longer term.

Whilst there was a significant difference overall, not all of children in the intervention group made greater gains in their academic writing achievement. The second study in the quantitative phase explored whether cognitive change theory, indicated by changes in children's language use in their writing throughout the intervention, might explain why some children made greater gains in their writing achievement. There were some significant changes in the children's use of causal words and positive emotional vocabulary. The change in children's use of emotional vocabulary might indicate a development in their understanding of a variety of emotions, which is related to emotional intelligence (Mayer & Salovey, 1997). This study was limited to exploring changes in children's use of written language, future research could explore whether the intervention might also have an effect on children's spoken vocabulary.

Changes in language use did not significantly predict which children made greater gains in their writing achievement. In this particular study cognitive change theory does not seem to provide a sufficient explanation as to why some children made significantly greater gains than others in their writing achievement. This might have been linked to the fact that some of the stories were short in length and contained a limited amount of cognitive and emotional words, thus making it difficult to fully explore the extent to which language changes could predict academic gains. Furthermore changes in language use have been linked to positive outcomes in relation to a slightly different writing intervention which focuses on disclosing emotions about a stressful event (Pennebaker & Francis, 1996), whereas therapeutic storywriting involves writing metaphorical stories in order to explore emotional issues (Waters, 2004). The differences between these interventions might mean that different mechanisms might account for the results. Therefore a qualitative study employing narrative analysis methods was conducted to explore other aspects of the children's storywriting that might help to explain why some children made greater academic gains than others.

The narrative analysis found that the majority of the children's stories in both groups contained many of the structural elements as identified by Labov (1972). This may provide some support for the theory that writing enables individuals to create a more meaningful and coherent narrative in which to express and reorganise their thoughts and feelings (Pennebaker & Seagal, 1999). It is argued that the use of metaphor enables individuals to externalise their issues (Waters, 2004) which can help them explore aspects of themselves from difference perspectives (Pennebaker & Chung, 2007). The majority of the pupils wrote in the third person and many used animals as main characters. This might have helped them to externalise issues and therefore explore how to solve them. There were some slight differences in the overall structure of the stories between the groups in that more children in the least gains group wrote stories in which the plot was regressive and ended negatively for the main character. This has implications for facilitators running the groups; if they notice that pupils stories tend to end negatively they might want to focus on helping the children to come up with different endings.

A number of the stories from both groups demonstrated an understanding of the consequences of emotions on behaviour. In both groups there were examples where the main character used different strategies to help them deal with their emotions. These included talking to other characters, actively seeking out more information or expressing emotions through writing. The ability to manage emotions is an important aspect of emotional intelligence (Mayer & Salovey, 1997). The findings in this study might indicate that the intervention facilitates the development of coping strategies, as found in previous research using other therapeutic writing techniques (Giannotta et al., 2009). However further research is needed to explore this proposition in more detail. This has implications for the intervention in that facilitators might want to include modelling and discussion of different strategies in order to support children in developing more positive coping strategies.

During the inductive thematic analysis characterisation emerged as a core theme. According to Assagioli's (1965) theory of subpersonalities some of the children's characters in the stories might relate to different aspects of themselves. However these characters might provide some insight into the children's experiences and their view of their current situation (Sunderland, 2000). There appeared to be a slight difference between the secondary characters in both groups' stories. The least gains group contained more examples of secondary characters who were villains or victims and there was a distinct lack of helpful secondary characters in these stories. This has implications for running therapeutic storywriting groups as it would be useful for the facilitators in the group to model helpful characters in their own stories and to encourage children to incorporate helpful characters in their stories. This should help the children to develop an understanding that others can help them to solve problems and should develop their problem solving and positive coping strategies.

The use of mixed methods in this research facilitated a more in depth and thorough exploration of the effects of a therapeutic storywriting intervention on children's writing that would not have been possible using just one method. Both quantitative and qualitative methods facilitated the investigation of the specific effects of the intervention on children's academic achievement and changes in language use as well as a broader exploration of the children's stories in terms of story themes and structure. In this particular study changes in children's language use were not found to be predictive of greater academic gains. Therefore the inclusion of a qualitative study enabled the researcher to explore other factors which might help to explain the quantitative results. However one of the challenges of using both quantitative and qualitative methods was that it was very labour intensive and time consuming.

1.21   Conclusion

This study investigated the effects of a therapeutic storywriting intervention on children's writing and explored the underlying mechanisms that might help to explain these effects. Research suggests that the intervention can have a positive effect on emotional outcomes (Waters, 2010), but this previous research had some methodological limitations including small samples sizes and a lack of control groups. This is the first study to use a matched control group and to demonstrate that the intervention may also have a positive effect on academic outcomes. Cognitive change theory was not found to be predictive of greater gains in academic achievement. However, a narrative analysis suggested that there were some differences between the stories written by the children who made the most and least gains. These findings have implications for future implementations of therapeutic storywriting interventions in schools. Facilitators may want to encourage children to include helpful characters in their stories and may want to focus on helping the children to come up with more positive endings for their stories. The fact that the intervention may have a positive impact on academic as well as emotional outcomes might make it particularly appealing to schools that are under pressure within the current education system to improve pupils' levels of achievement (Schaps, 2010). In conclusion therapeutic storywriting is a promising intervention that may be used by schools to help develop children's emotional and academic literacy which are important in the development of positive emotional health and wellbeing in the longer term (Adi et al., 2007).

Appendix A: Summary of included studies involving older participants

Study	Context	Participants	Intervention	Measures	Outcomes	Mediators/Moderators	Study Design
Abe (2009)	USA	N= 66 94% - female Undergraduate students enrolled in a mental health specialization programme.	Writing weekly journals to discuss their practical experience and their thoughts/feelings associated with these experiences	Supervisor rating scale to assess students' performance Linguistic Analysis of writing using the Linguistic Inquiry and Word Count (LIWC; Pennebaker, Booth, & Francis, 2007).	Academic: Positive emotion words and insight words were correlated with supervisors rating of student performance.	Positive emotion words, insight words and 'we' words significantly predicted supervisors ratings of students performance	correlational design
Brewin & Lennard (1999)	UK	N = 80 40 – male 40 –female College students	Students were randomly assigned to write about a neutral or stressful topic by typing or writing	Positive Affect subscale of the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988).	Emotional: Writing longhand in comparison to typing was associated with greater disclosure, greater negative affect and greater perceived benefits.		Quantitative 2 (writing condition) $\times$ 2 (writing format) between-subjects experimental design.

Burke & Bradley (2006)	USA	N = 169 62.9% - female Students from undergraduate psychology and sociology courses	Students were randomly assigned to write in one of three conditions trauma narrative, trauma dialogue or control writing.	PANAS (Watson, Clark, & Tellegen, 1988). LIWC (Pennebaker, Francis & Booth, 2001) Trauma content-analysis	Emotional: Both experimental groups experienced more negative affect after writing than the control group.	The experimental groups used more cognitive, causal and insight words than the control group. The dialogue group used more present tense and affective words than the narrative group.	Quantitative Between-subjects experimental design.
Cameron & Nicholls (1998)	USA	N = 122 33 - male 89 - female First year college students enrolled in introductory psychology or English courses	Students were classified as pessimist or optimists and were then randomly assigned to one of three conditions: self-regulation writing task, a disclosure writing task or a control writing task over three weekly writing sessions.	Life Orientation Test (LOT; Scheier & Carver, 1985) College Adjustment Test (Pennebaker et al., 1990) Negative Mood Scale (Cameron et al., 1995) NEO Personality Inventory (Costa & McCrae, 1992) An assessment of task effectiveness Grade Point Averages	Emotional: The control group experienced more of an increase in negative mood in comparison to the self-regulation group. Academic: The disclosure group achieved higher Grade Point Averages in comparison to the self-regulation and control groups		Quantitative 3 (writing condition) $\times$ 2 (optimism) x 2 (pre-test/post-test) mixed experimental design.

Danoff-Burg, Mosher, Seawell & Agee (2010)	USA From 1 state University	N = 101 48 – male 53 - female Undergraduate students	Students were randomly assigned to one of three conditions: narrative writing, standard expressive writing or control writing. All groups wrote for 20 minutes on two occasions.	Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977) Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983),	Emotional: Both the narrative and expressive writing group reported lower depressive symptoms and perceived stress after the experiment compared to the control group.	Greater narrative structure was associated with less depressive symptoms. Greater emotionality of the writing was associated with less perceived stress.	Quantitative Between-subjects experimental design.
Epstein Sloan & Marx (2005)	USA From a large urban university	N = 94 48 – male 46 – female Undergraduate students on an introductory psychology course.	Students were randomly assigned to one of two conditions: disclosure writing or control writing. Participants in each group wrote for 20 minutes on three consecutive days.	Depression, Anxiety and Stress Scale (DASS; Lovibond & Lovibond, 1995) Pennebaker Inventory of limbic languidness (PILL; Pennebaker, 1982) LIWC (Pennebaker, Francis & Booth, 2001) Physiological reactivity using measures of heart rate.	Emotional: Participants in the disclosure group reported significantly fewer symptoms of depression and anxiety than the control group in follow up assessments.	Participants in the disclosure group used more negative, positive, causal and insight words in their writing in comparison to the control group.	Quantitative 2 (writing condition) × 2 (gender) x 2 (time) mixed experimental design.

Frattaroli Thomas & Lyubomirsky (2011)	USA Participants were recruited from a few different colleges	N = 104 30% - male 70% - female Undergraduate students from university and preparatory classrooms	Students were randomly assigned to one of two conditions: emotional disclosure writing or control writing. Participants in each group wrote for 30 minutes on one occasion nine days before an exam.	Severe Depression subscale of the General Health Questionnaire (Goldberg & Hillier, 1979) Intrusive thoughts scale used (Lepore, 1997) Cognitive test anxiety scale (Cassady & Johnson, 2002). Exam results	Academic: Participants in the disclosure group scored significantly higher in their exam than the participants in the control group. Emotional: Participants in the disclosure group reported significantly less depressive symptoms prior to their exam than the control group	Participants in the disclosure group used more negative, positive, causal and insight words in their writing in comparison to the control group. Participants in the disclosure group who used more positive emotion words showed greater reductions in depressive symptoms before the exam. Those who used more words linked to causation showed greater reductions in depressive symptoms a week after the exam. Depression and anxiety did not mediate the effects of emotional writing on exam performance.	Quantitative mixed experimental design.
Gortner, Rude & Pennebaker, (2006).	USA From 1 university	N = 90 24 – male 66 – female Depression-	Students were randomly assigned to one of two conditions: expressive writing or control writing.	Beck Depression Inventory (BDI; Beck et al., 1979) Inventory to Diagnose Depression– Lifetime (IDD-L;	Emotional: Participants who reported suppressing their emotions more showed significantly less	Changes in brooding mediated the impact of the expressive writing intervention on depression symptoms	Quantitative mixed experimental design.

		vulnerable college students from university	Participants in each group wrote for 20 minutes on three consecutive days	Zimmerman & Coryell, 1987). Ruminative Response Scale (RRS; Nolen-Hoeksema & Morrow, 1991). Emotion Regulation Questionnaire (ERQ; Gross & John, 2003). Follow-up Questionnaire on Participants' Subjective Experience (FQPSE; Pennebaker, Colder & Sharp, 1990).	depressive symptoms at a six month follow up in comparison to the control group.	
Greenberg & Stone (1992)	USA	N = 90 24 – male 66 – female Undergraduate psychology students	Students were randomly assigned to one of three writing conditions: disclosed trauma, undisclosed trauma or control writing. Participants in each group wrote	Southern Methodist University Health Questionnaire (SMU-HQ), PANAS, Watson, Clark, & Tellegen, 1988) Pennebaker's	Emotional: Participants in the disclosed trauma group reported significantly higher levels of negative mood immediately after writing	Quantitative mixed experimental design.

			on four days	Negative Mood Scale (Pennebaker, 1982) Essay evaluation measure	No significant differences were found over time between the groups on emotional outcomes		
Guastella & Dadds (2009)	Australia From 1 university	N = 93 26% - male 74% - female Undergraduate psychology students who reported having a past upsetting experience and significant symptoms of intrusion and avoidance	Students were randomly assigned to one of two writing conditions: unstructured expressive writing or growth writing. Participants in each group wrote for 30 minutes on one a day a week over three weeks	Self-Report Process Identification Questionnaire (SPIQ, Guastella and Dadds 2006) DASS-21 (Lovibond & Lovibond, 1995) PANAS (Watson, Clark, & Tellegen, 1988)	Emotional: Participants in the growth writing group reported a significant reduction in anxiety and negative affect two months after the writing task.		Quantitative mixed experimental design.
Hijazi, Tavakoli, Slavin-Spenny, & Lumley, (2011).	USA From an urban university	N = 108 58% - male 42% - female International university students	Students were randomly assigned to one of four writing conditions: expressive writing, assertiveness training, a	Acculturative Stress Scale for International Students (ASSIS; Sandhu & Asrabadi 1994) Toronto Alexithymia	Emotional: Participants who reported more stress at baseline predicted greater positive affect after engaging in expressive writing		Quantitative 2 (expressive writing or not) x 2 (time) mixed experimental design.

			combination or control writing condition. Participants in each group wrote on three days over a week with each writing session lasting for at least 20 minutes.	Scale-20 (TAS-20; Bagby et al. 1994) PANAS (Watson, Clark, & Tellegen, 1988) Patient Health Questionnaire (PHQ-15; Kroenke et al. 2002) CES-D (Radloff, 1977)	and assertiveness training tasks.	
Kellogg, Mertz & Morgan (2010).	USA	N = 61 Undergraduate psychology students from one university	Students were randomly assigned to one of two writing conditions: expressive writing or control writing conditions. Participants in each group wrote on three sessions, each lasting for 20 minutes	arithmetic operation-word memory span task (OSPAN; Turner & Engle, 1989). PILL; Pennebaker, 1982) LIWC (Pennebaker et al., 1997). The Impact of Event Scale (IES, Horowitz, Wilner, & Alvarez, 1979).	Academic: Participants in the expressive writing group showed a significantly larger increase in working memory capacity than control participants.	Quantitative 2 (condition) x 2 (time) mixed experimental design.

Kenardy & Piercy (2006).	Australia from 1 university	N = 161 40 – male 121 – female psychology students	Students were randomly assigned to one of two writing conditions: expressive writing with explanation or expressive writing without explanation. Participants in each group wrote on four consecutive occasions, each lasting for 20 minutes	IES-R; Weiss & Marmar, 1997); General Health Questionnaire (GHQ-28; Goldberg & Hillier, 1979) Coping style questionnaire; (Billings & Moos, 1981). The Pennebaker Physical Symptoms Questionnaire and Negative Mood Questionnaire (Pennebaker, 1982) Subjective Essay Evaluation Questionnaire (EEQ;Pennebaker, 1982).	Emotional: Participants who received an explanation about trauma reactions prior to expressive writing experienced a significantly greater reduction in anxiety than those who received no explanation prior to the writing task.		Quantitative mixed experimental design.
Kenardy & Tan (2006).	Australia From 1 university	N = 118 All female College students	Students were randomly assigned to one of two writing conditions: one session of written	Ways of coping revised scale (WOC-R; Folkman & Lazarus, 1985)	Emotonal: High avoidance copers reported significantly more traumatic	Avoidance coping significantly predicted outcomes at a two month follow up.	Quantitative mixed experimental design.

			disclosure or four sessions of written disclosure. Participants in each group wrote for 20 minutes for each session.	Impact of Event Scale (Horowitz, Wilner & Alvarez, 1979) Pennebaker's Physical Symptoms Scale (Pennebaker, 1982) Pennebaker's Negative Mood Scale (Pennebaker, 1982)	symptoms post intervention than low avoidance copers. High avoidance copers in the brief writing condition reported significantly more trauma related symptoms than those in the prolonged condition		
Klein & Boals (2001).	USA	Experiment 1 N = 77 30 – male 47 – female First semester college freshmen	Students were randomly assigned to one of two writing conditions: expressive writing or control writing. Participants in each group wrote on three sessions, each lasting for 20 minutes over two weeks.	Arithmetic operation-word memory span task (OSPAN, Turner & Engle, 1989) College Adjustment Test (CAT; Pennebaker et al., 1990). Grade Point Averages	Academic: Participants in the expressive writing group demonstrated a significantly larger increase in working memory (WM) capacity than control participants. Working memory increases were linked to higher grade point averages	An increase in cognitive words over the intervention predicted increases in WM. Students who showed the greatest improvements in WM had the largest increases in Grade Point Averages	Quantitative 3(writing condition) X 2 (gender) X 2 (time) mixed experimental design.

Experiment 2				
N = 106 44 – male 60 – female First semester college freshmen	Students were randomly assigned to one of three writing conditions: positive topic writing, negative topic writing or control writing. Participants in each group wrote on three occasions, each lasting for 20 minutes over two weeks.	OSPAN, Turner & Engle, 1989) IES; Horowitz, Wilner, & Alvarez, 1979) Grade Point Averages	Academic: Participants in the negative expressive writing group demonstrated a significantly larger increase in working memory (WM) capacity than the positive writing or control group. Emotional: Participants in the negative expressive writing group showed the greatest decline in avoidant and intrusive thinking.	3(writing condition) X 2 (gender) X 2 (time) mixed experimental design.

Lee & Cohn, (2010).	USA From 1 university	N = 153 64% - female University students	Students were instructed to write about a stressful event related to college life on one occasion lasting for approximately 20 minutes.	COPE (Carver et al., 1989) WOC-R; Folkman & Lazarus, 1985) CSI; Amirkhan, 1990) CES-D; Radloff, 1977) LIWC Pennebaker et al., 2001).	Emotional: Depression scores were related to the use of negative emotions words in writing.	Emotional: Participants who used more negative emotion words scored lower on problem -focused coping scores. Insight related words were associated with lower scores on measures of emotion focused coping.	Correlational design
Lumley & Provenzano, (2003).	USA	N = 74 22 - male 52 - female College students enrolled in introductory psychology courses reporting high levels of physical symptoms	Students were randomly assigned to one of two conditions: disclosure writing (writing about a stressful experience) or control writing (writing about time management) over four consecutive days.	Somatization subscale of the Symptom Checklist–90—Revised (Derogatis, 1983) 5-item Credibility Scale (Borkovec & Nau, 1972) Daily mood rating scale Grade point average (pre and post intervention)	Academic: The disclosure group achieved higher Grade Point Averages in comparison to the control group.	Emotional: Improved mood from the fist to the last day of writing predicted improved grades for the disclosure group but not the control group.	Quantitative A mixed experimental design.

Maestas, & Rude (2012).	USA From 1 University	N = 207 30% - male 70% - female Undergraduate psychology students	Students were randomly assigned to one of three groups: traditional expressive writing; specific expressive writing or control writing over three consecutive days. For each group the writing sessions lasted for 20 minutes	A computerized version of the Autobiographical Memory Test (AMT; Rekart et al. 2006; Williams and Broadbent 1986). BDI; Beck et al. 1961 The Ruminative Response Scale of the Response Style Questionnaire (RRS; Nolen-Hoeksema & Morrow, 1991) The White Bear Suppression Inventory (WBSI; Wegner & Zanakos, 1994)	Academic: Both expressive writing groups showed a significantly greater autobiographical memory specificity compared to the control groups at a six month follow up.	The effect of the traditional expressive writing intervention on autobiographical memory specificity was partially mediated by a reduction in avoidance. Rumination did not partially mediate the effects of the intervention on memory.	Quantitative mixed experimental design.
Marlo & Wagner (1999).	USA	N = 156 53 – male 103 -female Undergraduate psychology students	Students were randomly assigned to one of three writing conditions: positive feelings group; negative feelings group or control writing group on four	The Profile of Adaptation to Life, Holistic Form (PAL-H; Ellsworth, 1981) The Symptom Checklist (SCL90-R; Derogatis,	Emotional: All groups showed improvements in psychological health post intervention. The positive feelings group showed the most		Quantitative One-way between subjects experimental design.

occasions.	1977)	improvements.	
	The State-Trait Anxiety Inventory (STAI; Speilberger, 1983)	Participants in the negative and positive feelings groups both showed significantly higher increases in physical sensations following the intervention in comparison to the control group. The negative feelings group showed significant increases in negative mood following the intervention. The positive feelings group did not show significant increases in positive mood.	

| North, Pai, Hixon & Holahan (2011) | USA

From 1 university | N = 315

110 – male

205 - female

University undergraduate students | Students were randomly assigned to one of three writing conditions: emotional disclosure; positive reappraisal or acceptance and positive reappraisal (combination of first two) for 20 minutes a day over four consecutive days. | The Fordyce Emotions Questionnaire (Fordyce, 1988)

Acceptance and Action Questionnaire (Hayes, Strosahl, & Wilson, 2004).

Positive/Negative Mood Scale (PNMS; Diener & Emmons, 1984)

Positive Affect subscale of the PANAS, Watson, Clark, & Tellegen, 1988).

CES-D; Radloff, 1977)

The Life Orientation Test (Scheier & Carver, 1985)

Emotional distress scale | Emotional:

Positive and negative emotions decreased for all groups post intervention. | Emotional:

Participants in the acceptance and positive reappraisal group experienced more positive emotional wellbeing post intervention than the other groups. | Quantitative

Mixed experimental design. |
|---|---|---|---|---|---|---|

Páez, Velasco & González (1999)	Spain	N = 52 66% - female University undergraduate psychology students	Students were randomly assigned to one of three writing conditions: undisclosed trauma; disclosed trauma or control (writing about social events) for 20 minutes a day over three consecutive days.	Subjective evaluation of the event. (Greenberg & Stone, 1992) Appraisal of the event. (Velasco & Paez, 1997). Impact of Event Scale (Horowitz, Wilner & Alvarez, 1979) Positive Affect subscale of the PANAS; Watson, Clark, & Tellegen, 1988). The impact of remembering scale (Rime et al., 1991) TAS-26 and TAS-20; Taylor, Bagby, & Parker, 1997).	Emotional: Participants who wrote about a traumatic event displayed a decrease in positive mood immediately after writing, however in the long term they displayed an increase in positive mood and a decrease in negative effect compared to the control group post intervention.	Participants who wrote about an undisclosed traumatic event demonstrated a better cognitive-affective assimilation of the event after the intervention compared to the other two groups.	Quantitative Mixed experimental design.
	Spain	N = 52 65% - female University undergraduate psychology	Study 2 Students were randomly assigned to one of three writing conditions:	Subjective evaluation of the event. (Greenberg & Stone, 1992) Appraisal of the event. (Velasco &	Emotional: Participants who wrote about a traumatic event displayed an increase in		Quantitative Mixed experimental design

	students	undisclosed trauma; disclosed trauma or control (writing about social events) for 3 minutes on one occasion.	Paez, 1997). Impact of Event Scale (Horowitz, Wilner & Alvarez, 1979) Positive Affect subscale of the PANAS; Watson, Clark, & Tellegen, 1988). The impact of remembering scale (Rime et al., 1991) TAS-26 and TAS-20; Taylor, Bagby, & Parker, 1997).	negative affect immediately after writing. There were no long term differences between the groups in terms of mood or cognitive assimilation of the event after the intervention.		
Patterson & Singer (2007).	USA From a small liberal arts college	N = 40 40 - female college students	Students were randomly assigned to one of four writing conditions: trauma/no expectancy; trivial/no expectancy, trauma/ expectancy or trivial/expectancy for 15 minutes a day over three	Symptom Checklist-90-R (SCL-90-R; Derogatis, 1994) Mental Health Inventory (MHI; Rand Corporation & Ware, 1897) Last Day of Writing Questionnaire (Pennebaker, 1982)	Emotional: Participants who wrote about trauma's rated their essays as more personal and emotional than those who wrote about trivial topics.	Emotional: Participants who were told about the benefits of the intervention beforehand showed significant mental health improvements in comparison to the other groups.	Quantitative Mixed experimental design.

consecutive days.

Pennebaker Colder & Sharp (1990)	USA	N = 130 67 – female 63 - male first-semester college students	Participants were randomly assigned to an experimental or control group. Writing took place over three consecutive days, 20 minutes each day.	PANAS (Watson, Clark, & Tellegen, 1988) the Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1965) The Self Concealment Scale (SCS; Larson & Chastain, 1988). CAT Scholastic Aptitude Test Grade Point Averages	Academic: Participants in the experimental group maintained their GPA's post intervention in comparison to the control group, however this was a trend and was not statistically significant. Emotional: The majority of participants in the intervention group felt it helped them to gain insight.	The experimental group used more positive, more negative emotion words, more negations and more self-references than the control group	Quantitative 2 (writing condition) × 4 (wave) between-subjects experimental design.
Pennebaker & Francis (1996)	USA	N = 72 44 – females 28 - males First year college students	Participants were randomly assigned to write about emotional or neutral topics for three consecutive days, 20 minutes each day.	Reaction Time Tasks Thought-generation task Grade Point Averages Post experiment questionnaire	Academic: Grade-point averages increased for the experimental participants from the first to the second semester in comparison to controls.	Greater use of positive emotion words, causal and insightful words predicted health changes but not changes in grade point averages.	Quantitative Between-subjects experimental design.

				LIWC (Pennebaker & Francis, 1996).	.		
Radcliffe, Stevenson, Lumley, D'Souza, & Kraft, (2010)	USA The writing sessions took place in a laboratory.	Study 1 N = 96 15 – male 81 – female Undergraduate psychology students who suffer from headaches	Students were randomly assigned to one of two writing conditions: expressive writing (about trauma or stressful experience) or control writing (about time management). Participants in each group wrote on four occasions, each lasting for 20 minutes over two weeks.	Grade Point Average (GPA) LIWC (Pennebaker et al., 2007). Positive and Negative Affect Schedule-Expanded Version (Watson & Clark, 1994)	Academic: There was no significant difference between both groups in GPA during the writing semester or the subsequent sememster. Emotional: Students in the Expressive writing group showed a significant increase in negative mood after writing.	Students in the Expressive writing group used more negative emotion words in their writing.	Quantitative A mixed experimental design.
	USA Writing sessions 1 and 4 sessions took place in a laboratory. Writing	Study 2 N = 124 21 – male 103 – female Undergraduate	Students were randomly assigned to one of three conditions: expressive writing (about one stressful	Grade Point Average (GPA) LIWC (Pennebaker et al., 2007). writing using the	Emotional: Students in the Expressive writing group showed a significant increase in negative mood	Students in the Expressive writing group used more negative emotion words in their writing.	Quantitative A mixed experimental design

sessions 2 and 3 took place in a private place of the participants choosing.	psychology students who report having an unresolved stressful experience.	experience); control writing (about time management); or no-writing group. Participants in each writing group wrote on four occasions, each lasting for 20 minutes over two weeks.	LIWC Positive and Negative Affect Schedule-Expanded Version (Watson & Clark, 1994)	after writing. Academic: Overall there was no significant difference between the groups in GPA during the writing semester or the subsequent semester.	
USA All writing sessions took place in the classroom.	Study 3 N = 68 30 – male 38 – female New college students enrolled in a programme for academically at risk students	Students were randomly assigned to one of two conditions; expressive writing (about stressful experiences and how they might cope) or control writing (about planned actions). Participants in each group wrote on four occasions, each lasting for 20 minutes over four	Grade Point Average (GPA) Classes and semester failed. Linguistic Analysis of writing using the Linguistic Inquiry and Word Count (LIWC; Pennebaker, Francis & Booth, 2001) Positive and Negative Affect Schedule-Expanded Version	Academic: For students that wrote for at least two out of the four days, the expressive writing group showed a significantly higher GPA than the control group. The expressive writing group also failed significantly less classes and had a lower semester fail rate than the control	Quantitative A mixed experimental design.

			weeks.	(Watson & Clark, 1994)	group. Male students in the expressive writing showed a significant reduction in the classes failed and were less likely to fail the semester.		
Segal, Tucker & Coolidge (2009)	USA From 1 university	N = 90 30 – male 60 - female undergraduate psychology students	Students were randomly assigned to one of three writing conditions: standard prompt; negative prompt or positive prompt for 20 minutes a day over three sessions.	IES (Horowitz, Wilner & Alvarez, 1979) The postexperimental questionnaire (PEQ, Murray & Segal, 1994) PANAS (Watson, Clark, & Tellegen, 1988). Content analysis (Murray & Segal, 1994)	Emotional: All groups experienced a reduction in feelings of distress and negative affect.	Students in the positive prompt group showed a greater level of understanding, insight and cognitive reorganisation than the other two groups.	Quantitative Mixed experimental design.
Seih, Chung, & Pennebaker (2011)	USA From 1 university	Study 1 N = 55 28 – male 27 – female	Students were randomly assigned to one of three writing conditions: first, second or third person writing	LIWC (Pennebaker, Booth, & Francis, 2007). Positive and Negative Mood Scale (Diener &	Emotional: Students who wrote in the first or second person perceived the writing as more valuable and felt		Quantitative A between subjects experimental design.

	Undergraduate psychology students	perspectives. Participants in each group wrote on three occasions, each lasting for 5 minutes.	Emmons, 1984; Burton & King, 2008). Post session questionnaires	more emotionally involved that those who wrote in the third person.		
USA From 1 university	Study 2 N = 129 37 – male 92 – female Undergraduate psychology students	Students were randomly assigned to one of six writing conditions: students wrote in the first, second and third person perspectives. Each group wrote in a different order. Participants in each group wrote on three occasions, each lasting for 5 minutes.	LIWC (Pennebaker, Booth, & Francis, 2007). Positive and Negative Mood Scale (Diener & Emmons, 1984; Burton & King, 2008). Post session questionnaires	Emotional: Students who wrote in the first person perceived the writing as more valuable and felt more emotionally involved that those who wrote in the third person.	Perspective switching resulted in a greater use of cognitive mechanism words although this was a trend and was not a significant result.	Quantitative A within subjects experimental design.

| Sloan, Feinstein, & Marx (2009). | USA

From 1 university | N = 68

31 – male

37 – female

Undergraduate college students | Students were randomly assigned to one of two writing conditions: expressive writing (about traumatic or stressful experiences) or control writing (about how they spent their time). Participants in each group wrote on three occasions, each lasting for 20 minutes on three consecutive days. | DASS (Lovibond & Lovibond, 1995)

PILL (Pennebaker, 1982)

Grade Point Average (GPA) | Emotional and Academic:

There were no significant differences between the groups in terms of physical health, stress, anxiety or GPA after the intervention.

Emotional:

Participants in the expressive writing condition displayed a significant decrease in depressive symptoms at a 2 month follow up. However these results were not sustained at further follow up periods. | Quantitative

2 (writing condition) 3 (assessment period) mixed experimental design. |

Sloan, Marx, Epstein & Lexington (2007)	USA From 1 university	N = 82 16 – male 66 – female Undergraduate college students with a history of trauma and symptoms of post traumatic stress	Students were randomly assigned to one of three writing conditions: emotional expression; insight and cognitive assimilation or control writing. Participants in each group wrote on three consecutive days each lasting for 20 minutes.	Posttraumatic Stress Diagnostic Scale (PDS, Foa, 1996) BDI–II (Beck, Steer, & Brown, 1996). PILL (Pennebaker, 1982) Self-Assessment Manikin (SAM; Bradley & Lang, 1994) Physiological reactivity using heart rate reactivity LIWC, (Pennebaker et al., 2001)	Emotional: Participants in the emotional expression group demonstrated significant improvements in physical and psychological health in comparison to the other two groups.	Greater changes in self-reported arousal and reduced use of positive emotion words mediated the change in PTSD symptoms	Quantitative A 3 (Condition) X 2(Time) repeated measures experimental design.

Sloan, Marx, Epstein & Dobbs (2008)	USA From 1 university	N = 69 24 – male 45 – female First year college students	Students were randomly assigned to one of two writing conditions: expressive writing or control writing. Participants in each group wrote on three occasions, each lasting for 20 minutes on three consecutive days.	Ruminative Responses Scale (RRS; Nolen-Hoeksema & Morrow, 1991). DASS (Lovibond & Lovibond, 1995)		Emotional: Brooding moderated the outcome for expressive writing. Participants who display a brooding ruminative style reported significantly less depressive symptoms after the intervention compared to participants who display less brooding.	Quantitative A mixed experimental design.
Tavakoli, Lumley, Hijazi, Slavin-Spenny & Parris (2009)	USA From an urban university	N = 118 60% - male 40% - female International university students	Students were randomly assigned to one of three writing conditions: expressive writing; assertiveness training or combination of the two.	Acculturative Stress Scale for International Students (ASSIS; (Sandhu & Asrabadi, 1994) PANAS (Watson, Clark, & Tellegen, 1988) Patient Health Questionnaire (PHQ-15; Kroenke, Spitzer, & Williams, 2002) Perceptions of the Interventions		Emotional: Participants who received the expressive writing intervention reported more homesickness and anxiety but also more positive affect than the other two groups. Group assertiveness training less to less negative affect than the other two groups	Quantitative A mixed experimental design.

Scale

Wolitzky-Taylor & Telch, (2010)	USA From an urban university	N = 113 75.2% - female College students experiencing academic worry	Students were randomly assigned to one of four conditions: worry exposure; expressive writing; relaxation or waitlist control. Participants were asked to practice three times a week for one month.	Academic worry questionnaire (AWQ; Wolitzky & Telch, 2005) Penn state worry questionnaire (PSWQ; Meyer, Miller, & Metzger, 1990) Grade Point Average (GPA) Perceived stress scale (PSS; Cohen, Kamarck, & Mermelstein, 1983)	Emotional: All groups demonstrated an improvement in academic worry over the course of treatment except the control group. Academic: The expressive writing group were the only group to demonstrate a significant increase GPA in comparison to the other groups.	Quantitative A mixed experimental design.
Wong & Rochlen (2009).	USA From a large public university	N = 158 Male undergraduate college	Students were randomly assigned to one of two conditions: experimental or	LIWC; (Pennebaker, Francis et al., 2001). Restrictive	Emotional: Participants in the experimental group reported a greater reduction	Quantitative 2 (experimental vs. control group) x 2 (high vs.low

students	control writing Participants were asked to write for twenty minutes a day over three days.	Emotionality Scale (RES). One of the subscales of the Gender Role Conflict Scale (GRCS; O'Neil et al., 1986). BSI-18. The BSI-18 (Derogatis, 2000) Positive Relations With Others Scale. (PRWOS; Ryff, 1989) Personal Growth Scale (PGS; Ryff, 1989)	in psychological distress than the control group after the intervention. Participants with high levels of restrictive emotionality reported less positive relationships with others.	restrictive emotionality) x 3 (Time 1, 2, and 3) repeated measures design.

Appendix B: Summary of included studies involving younger participants

Study	Context	Participants	Intervention	Measures	Outcomes	Mediators/Moderators	Study Design
Giannotta, Settanni, Kliewer, & Ciairano (2009).	Italy From 1 middle school in an urban area	N = 155 Male – 74 Female - 81 Italian adolescents in the 7th grade (mean age 12.24 yrs)	Students were randomly assigned to one of two conditions: disclosure writing or control writing. Participants in each group wrote for 20 minutes on four writing sessions over two weeks.	Social Experience Questionnaire (SEQ-Crick & Grotpeter, 1995; Italian version Gini, 2008) Child Depression Inventory (CDI; Kovacs, 1981, 1985; Italian validated version: Camuffo, Cerutti, Lucarelli, & Mayer, 1988 IES-R (Weiss & Marmar, 1997 Coping Strategies Checklist (CCSC; Ayers, Sandler,West, & Roosa, 1996)	Emotional: Participants in the disclosure group displayed a significant increase in their use of positive cognitive reframing coping strategies in comparison to participants in the control group. Participants did not display a reduction in their level of internalising or post-traumatic stress symptoms after the intervention.	Victimized youth showed a greater increase in optimistic and positive thinking and repression coping than youth who experienced low levels of victimization	Quantitative mixed experimental design.

| Kliewer, Lepore, Farrell, Allison, Meyer, Sullivan & Greene (2011) | USA From 3 public middle schools. | N = 258 55% - female Seventh grade students from three public schools living within high-violence urban neighbourhoods | Students were randomly assigned to one of three writing conditions: standard expressive writing, enhanced expressive writing or control writing. Participants in each group wrote twice a week for up to 20 minutes on eight occasions. | Problem Behavior Frequency Scales (Farrell, Kung, White, & Valois, 2000). Teacher Report Form of the Achenbach System of Empirically Based Assessment (TRF; Achenbach, 1991). Emotion Regulation Checklist (Shields & Cicchetti, 1995). Survey of Children's Exposure to Community Violence (Richters & Saltzman, 1990). LIWC; Pennebaker et al., 2007) | Emotional: Teacher rated aggression was lower two months after the intervention for pupils in the standard expressive writing group. | Youth with high levels of exposure to violence benefited most from the expressive writing intervention. | Quantitative mixed experimental design. |

Margola, Facchin, Molgora & Revenson, (2010)	Italy From one class in one high school	N = 20 7 – male 13 – female Mean Age = 15 High school students who were in the same class as a fellow classmate who died in class.	Students were asked to write about their thoughts and feelings following the death of their classmate on three occasions, each lasting for 20 minutes on three consecutive days.	Self-report questionnaire IES-R (Weiss & Marmar, 1997, Italian Version Giannantonio, 2003) LIWC (Pennebaker et al., 2001). T-LAB 5.1 (Lancia, 2004)	Emotional: There were significant changes in the content of the pupils' stories over time. The first stories focused on the facts surrounding the events, whereas the final stories contained more positive emotional words, future oriented words and cognitive processing words.		Quantitative Quasi-experimental design.
Reynolds, Brewin & Saxton, (2000).	UK Participants were recruited from four schools: an urban primary school; an urban secondary school; a suburban	N = 191 Primary and secondary school students. Age range between 8 – 13.	Students were randomly assigned to one of three conditions: emotional writing (thoughts and feelings about things that have made them stressed, upset or	The Birleson Depression Inventory (Birleson, 1981). Spence Children's Anxiety Scale (Spence, 1994) Children's Somatisation Inventory (CSI;	Emotonal: There were no significant differences between the three groups on outcomes measured. Further analysis revealed a	Emotional: Participants in the emotional writing group used more words related to cognitive strategies e.g. casual and insight words. Participants in the emotional writing group used more positive and negative emotion	Quantitative 2 (area) X 2 (age) X 3 (condition) mixed experimental design.

	primary school and a suburban secondary school.		angry); control writing (about how they spend their time); or non-writing control group. Participants in each writing group wrote on three occasions, each lasting for up to 20 minutes over two weeks.	Walker, Garber & Green, 1991) Strengths and Difficulties Questionnaire (SDQ, Goodman, 1997) administered to pupils and teacher. Life Events Questionnaire (LEQ, Masten, Neemann & Andenas, 1994) Days absent pre and post. LIWC (Pennebaker, et al., 2001)	significant group x time interaction in anxiety scores for urban school children only. There was a significant group x time interaction on total SDQ scores for children who reported using a diary prior to the study.	words.	
Soliday, Garofalo, & Rogers (2004)	Canada From four classrooms in a suburban middle school.	N = 106 47 – male 59 – female Eighth grade students	Students were randomly assigned to one of two writing conditions: emotional or neutral writing. Participants in each group wrote on three consecutive days, each	The Children's Somatization Inventory (CSI;Garber, Walker& Zeman, 1991) The Somatization scale of the Youth Self-Report Inventory (YSR; Achenbach, 1991)	Emotional: Students in the emotional writing condition experienced a decrease in psychological distress and an increase in positive disposition after	The emotional writing group used more positive emotion words throughout the intervention compared to the control group.	Quantitative mixed experimental design.

lasting for 20 minutes.	CESD (Radloff, 1977)	the intervention.	
	Positive and Negative Affect Schedule for Children (PANAS; Laurent et al., 1999)		
	Children's Hope Scale (HOPE; Snyder et al., 1997)		
	Life Orientation Test–Revised (LOT; Scheier, Carver, & Bridges, 1994)		
	LIWC; Pennebaker, et al., 2001)		

Appendix C: Parent Information Sheets

Intervention group

UNIVERSITY OF
Southampton

Study Title: An exploration of a therapeutic storywriting intervention on children's writing.
Researcher: Georgina Maclean
ERGO Study ID number: 2274

Please read this information carefully before deciding to take part in this research. If you are happy to participate you will be asked to sign a consent form.

What is the research about?

I am a trainee Educational Psychologist carrying out a research project on therapeutic storywriting. Therapeutic storywriting uses story metaphor to enable children to explore and address emotional issues. The study aims to investigate the effects of a therapeutic storywriting intervention on children's academic writing.

Why has my child been chosen to take part?

As you will be aware, you child participated in a therapeutic storywriting group at school for ten weeks from October 2011 to February 2012.

What will my child be required to do if I consent to them taking part?

Your child will not be asked to do any new writing for this project; rather I will look at the writing your child has already produced at school in the story writing group. I have enclosed a letter for your child explaining that I would like to look at their stories. Please could you share the letter with your child. If they are happy for me to look at their stories and if you are happy to consent to your child's writing being used in this study, I will get copies of your child's story writing from the school. I then hope to analyse it to explore how their writing and their use of language may have changed over the course of the intervention. With the permission of the Head Teacher I will also use school data on pupil academic writing achievement from September 2011 to March 2012 to compare the writing achievement of children who were involved in the therapeutic storywriting intervention to those who were not involved in the intervention.

Are there any benefits in my taking part?

It is hoped that this research will add to the current knowledge about therapeutic storywriting and the effects it may have on children's academic writing. A summary of the results of this study will be given to your child's school and will be available for you to view if you wish.

I hope that you will be happy for your child's data to be used in this project. There is some further information about this study on the next page. If you would like any more information about the nature of the study or have any further questions please contact me through the Hampshire Educational Psychology Service on, 02392 441496, or via email: gm2g10@soton.ac.uk

Yours Faithfully,

Georgina Maclean
Trainee Educational Psychologist
Southampton University

<u>Further Information</u>

Names will be changed on all data collected in order to ensure pupil confidentiality. No names will be mentioned in the write up of this research. The data will be stored in a locked file and kept for ten years. It will not be made available for any other purposes.

If you agree to your child's academic writing achievement data and story writing being used in this study you have the right to withdraw at any time even after the research has taken place, the relevant data will be removed from the study.

This project has received ethical approval from the School of Psychology, University of Southampton. Any queries regarding this ethical approval may be directed to the Chair of the Ethics Committee, Psychology, University of Southampton, Southampton, SO17 1BJ. Phone: +44 (0)23 8059 4663, email slb1n10@soton.ac.uk

Control group

UNIVERSITY OF
Southampton

Study Title: An exploration of a therapeutic storywriting intervention on children's writing.
Researcher: Georgina Maclean
ERGO Study ID number: 2274

Please read this information carefully before deciding to take part in this research. If you are happy to participate you will be asked to sign a consent form.

What is the research about?

I am a trainee Educational Psychologist carrying out a research project on therapeutic storywriting. Therapeutic storywriting uses story metaphor to enable children to explore and address emotional issues. The study aims to investigate the effects of a therapeutic storywriting intervention, which took place between October 2011 and February 2012, on children's academic writing achievement.

Why has my child been chosen to take part?

In order to understand the effects of the therapeutic storywriting intervention, a comparison will be made between the academic writing achievement of children who were involved and those who were not involved in the initial story writing intervention. Your child was not involved in the original intervention. If you consent to taking part in this study it is hoped that you child's academic writing achievement data will form part of the comparison group.

What will my child be required to do if I consent to them taking part?

Your child will not be asked to do anything new for this project. With the permission of the Head Teacher I will use school data on pupil academic writing achievement to compare the academic writing achievement of the therapeutic storywriting group to the control group. Academic achievement will be based on teacher reports of National Curriculum levels in writing from September 2011 to March 2012.

Are there any benefits in my taking part?

It is hoped that this research will add to the current knowledge about therapeutic storywriting and the effects it may have on academic writing achievement. A summary of the results of this study will be given to your child's school and will be available for you to view if you wish.

I hope that you will be happy for your child's data to be used in this project. There is some further information about this study on the next page. If you would like any more information about the nature of the study or have any further questions please contact me through the Hampshire Educational Psychology Service on, 02392 441496, or via email: gm2g10@soton.ac.uk

Yours Faithfully,

Georgina Maclean
Trainee Educational Psychologist
Southampton University

Further Information

Names will be changed on all data collected in order to ensure pupil confidentiality. No names will be mentioned in the write up of this research. The data will be stored in a locked file and kept for ten years. It will not be made available for any other purposes.

If you agree to your child's academic writing achievement data being used in this study you have the right to withdraw at any time even after the research has taken place, the relevant data will be removed from the study.

This project has received ethical approval from the School of Psychology, University of Southampton. Any queries regarding this ethical approval may be directed to the Chair of the Ethics Committee, School of Psychology, University of Southampton, Southampton, SO17 1BJ (Tel: 02380 595578).

Appendix D Parent Consent Form – intervention group

UNIVERSITY OF Southampton

Study title: An exploration of a therapeutic storywriting intervention on children's writing
Researcher name: Georgina Maclean
Ethics reference number: 2274

Please initial the box(es) if you agree with the statement(s):

I have read and understood the parent information sheet
and have had the opportunity to ask questions
about the study

☐

I agree to my child's academic writing achievement data being used
for the purpose of this study

☐

I agree to my child's storywriting being used for the purpose of
this study and I understand that my child's name will not be reported
in the study.

☐

I understand that I may request any data about my child
to be withdrawn at any time without my legal rights being affected

☐

Data Protection

I understand that information collected in this study will be stored on a password protected computer and that this information will only be used for the purpose of this study. All files containing any personal data will be made anonymous.

Name of parent (print name)……………………………………………………

Signature of parent………………………………………………………………..

Date………………………………………………………………………………

Appendix E: Letter for Pupils

Dear (name of pupil)

I am Georgina Maclean, a student at the University of Southampton. I am carrying out a project on children's writing. I would like to look at all the stories you wrote during your story writing group at school to help me with my project. If you are happy for me to look at your stories please tell your (mum/dad/carer). If you are happy and if they are happy for me to look at your stories then they will let me know. I will then get copies of your stories from the school.

If you have any questions about my project you can ask (name of person running intervention in school) for more information.

Yours Faithfully

Georgina Maclean

Trainee Educational Psychologist

Southampton University

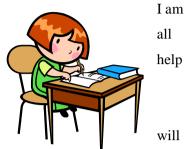**Appendix F: Parent Consent Form – Control Group**

UNIVERSITY OF
Southampton

Study title: An exploration of a therapeutic storywriting intervention on children's writing
Researcher name: Georgina Maclean
Ethics reference number: 2274

Please initial the box(es) if you agree with the statement(s):

I have read and understood the parent information sheet
and have had the opportunity to ask questions
about the study

I agree to my child's academic writing achievement data being used
for the purpose of this study and I understand that my child's name will
not be reported in the study.

I understand that I may request any data about my child
to be withdrawn at any time without my legal rights being affected

Data Protection
I understand that information collected in this study will be stored on a password protected computer and that this information will only be used for the purpose of this study. All files containing any personal data will be made anonymous.

Name of parent (print name)…………………………………………………

Signature of parent……………………………………………………………..

Date……………………………………………………………………………

Appendix G: Ethical approval

Southampton UNIVERSITY OF

Ms Georgina Maclean   RGO Ref: 8628
School of Psychology
University of Southampton
University Road
Highfield
Southampton
SO17 1BJ

27 June 2012

Dear Ms Maclean

Project Title An Exploration of a Therapeutic Story Writing Intervention on Children's Writing: A mixed Methods Study

This is to confirm the University of Southampton is prepared to act as Research Sponsor for this study, and the work detailed in the protocol/study outline will be covered by the University of Southampton insurance programme.

As the sponsor's representative for the University this office is tasked with:

1. Ensuring the researcher has obtained the necessary approvals for the study
2. Monitoring the conduct of the study
3. Registering and resolving any complaints arising from the study

As the researcher you are responsible for the conduct of the study and you are expected to:

1. Ensure the study is conducted as described in the protocol/study outline approved by this office
2. Advise this office of any change to the protocol, methodology, study documents, research team, participant numbers or start/end date of the study
3. Report to this office as soon as possible any concern, complaint or adverse event arising from the study

Failure to do any of the above may invalidate the insurance agreement and/or affect sponsorship of your study i.e. suspension or even withdrawal.

On receipt of this letter you may commence your research but please be aware other approvals may be required by the host organisation if your research takes place outside the University. It is your responsibility to check with the host organisation and obtain the appropriate approvals before recruitment is underway in that location.

May I take this opportunity to wish you every success for your research.

Yours sincerely

Dr Martina Prude
Head of Research Governance

Tel: 023 8059 5058
email: rgoinfo@soton.ac.uk

Corporate Services, University of Southampton, Highfield Campus, Southampton SO17 1BJ United Kingdom
Tel: +44 (0) 23 8059 4684 Fax: +44 (0) 23 8059 5781 www.southampton.ac.uk

Appendix H: Structural coding of stories

Least Gains Group

	Paula	Sarah	Tom	Jonathon	Tanya	Cathy	Nick
Abstract (AB)		My Wish				There were two sisters called Maria and Helena.	
Orientation (OR)	One beautiful, bright, summer's day, Poppy and Charlotte were playing snakes and ladders.		My life started in a plastic bag. On it, it had a sign that said something like this on it '99p'. It was them. His old acquaintances. The balloon bullies.	At about 3 pm yesterday, a British airways plane had crashed into the Atlantic Ocean. Craig turned off the TV. His house was now completely furnished and he was ready to get a job.	In the woods was a shiny stone. One day a little girl in the woods, she was lost.	Maria was three and Helena was seven.	Lucas knew it was time to go home
Complicating Action (CA)	When Charlotte won Poppy decided she would never be Charlotte's friend, ever again. When they got home, Poppy wrote in her book…. Mum said "What's the matter?" I told her that my friend and I had broken up.	I would save up my money and buy a posh house and a posh car with no roof and have some posh music. some posh clothes like a posh dress with diamonds on it. I would go out to parties with my dress and some high heels that look posh	but as soon as we (me and my friends) were taken out of the bag, we started to be inflated! Then we were tied to a string and strapped to a fence! Another figure came and snipped me and my friends off the fence! Up, up, up and up we went. We saw the place where	Craig went back into his house and there on the TV was something that made him shocked The year 2012 was coming to an end. Craig got straight into his car. The houses were tumbling everywhere. Buildings were	She found the stone and made a wish in it her wish was that she could go home to see her mum and dad. Her wish came true, but her mum and her dad was not there so she went into her bedroom and read a book	Maria got more attention. Helena was jealous but when Maria was six, Helena was ten and she had a boyfriend and Maria was jealous. Maria was so sad she took Helena's best toy, called Barby. She hid Barby where she	The monsters were gone. Somehow gone. He looked everywhere except the first portal. He cursed under his breath and jumped in more confident this time. A worm like figure was standing there. It seemed to teleport, leaving Lucas

| and have some flowers. | the figure picked up our bag. We saw the factory where we were born (made).

They bashed us about like basket balls. They played with us like a cat does with food, | smashing to the ground. He did not know how to fly an airplane, but he rushed straight to the airport. The ground had cracks everywhere. He got into a jet and tried to fly off. He was in the sky and needed to get to Spain to pick up Dan, but then it was too late, the whole of Spain was underwater. He had to go to England and warn everyone. But just at that moment, he noticed his fuel gauge was empty. He was about to crash into a school - bang! He was alive, but he went outside and saw that it was Springfield school, he went inside and they were all alive. He jumped into the class and said "You need to come with me." | could not find it. | straight away alone. Up, up on past ;30 pillars to the ... he followed the instructions because there were 4 portals. There came an echoing. |

Evaluation (EV)	Poppy got so mad				Helena was jealous Maria was jealous. Maria was so sad
Resolution (RE)	So the next day, we both said: " Shall we make friends?" "OK friend!"	Suddenly a large white feathered beast came to our rescue. Peck, bang, peck, bang, peck, boom. We were saved. Peck, bang, what? Peck, bang, peck, bang and a millisecond after, peck, bang. I was dead.	He jumped into the class and said "You need to come with me." Two hours later and the whole school was in the airplane.	finally her mum and dad was home hooray she said. The End		He saw the creature. It grabbed him and teleported the creature back to his house. Like some reversal to do it all again.
Coda						

Most gains group

	Mandy	Rosie	Ross	Elizabeth	Jack	Laura	William
Abstract (AB)				Sally the seahorse ….has broken her tail.	The ground owl Mr Grumpy was so grumpy that he could not see.	Once there was a girl.	Once there was an old farmhorse who had no friends
Orientation (OR)	A few weeks ago me and my Mum were talking about me going to a different school	The next day me and my Mum and Dad got up out of bed and we started to make our way down to the woods	One day there was a witch flying in the sky	When Sally was playing tag she fell over. she didn't have anyone to play with	And because he couldn't see he wasn't allowed to leave the nest because all that grumpiness he was really hungry and he can get no juicy worms to eat.	She had a secret and did not want to tell anyone. At school people asked her what was wrong, but she didn't answer, instead she walked off.	but one day it was about to change……. His name was Max, the reason why he had no friends was because he was very very fast, he would canter and gallop all day. He was in his field when it happened,
Complicating Action (CA)	I said to Mum, "can I think about that?" Mum said, "OK," also she said, "we will go and see it and the headteacher and the children in your class." I went to my bedroom with my computer and	the polar bear had gone. "Where has it gone?" said Misty. "I don't know," said Mum. We searched and searched but we couldn't find it anywhere. So everyone was just about to give up when just then I shouted	She was a good witch and was looking for dead people so they could be burnt	because she has broken her tail, and now she can't go out with her friends. Sally sat down to read a book, she	Two days later another owl came to the nest and brought him a nice juicy worm to eat. Mr Grumpy said to the nice owl "thank you," the lovely owl said "you've got to loosen up and	Although she had one friend she had it was an orange. But she thought it was more than an orange, it was her best friend, she sometimes talked to it. One day the	a very weird figure appeared. He trotted over and whinnied loudly. It was holding a stick with sparkles coming out of it. It was another horse, it spoke very clearly and gently and this is what it said "all of the horses are just jealous

looked at the school….there are two classrooms in year five, In year five there is a man who is a year five teacher and there are two ladies who do a job share.

because I was last to give up. Everybody ran over to see what I was shouting about. I pointed to the left, everybody looked, there was nothing but I could see the polar bear. They walked over leaving me on the floor, they couldn't see nothing.

Then a polar bear walked over to me and I held it close and shouted for everyone to come back, but they had gone. Where had they gone? I was lost

I walked with the polar bear to the left where I sent everybody but I couldn't see them. I looked everywhere, I even looked behind the trees because that is where they normally hide.

They weren't there. They thought I couldn't see them but I could. They were hiding up the tree, they got down and deliberately walked past reception with the polar bear and took it to the vets. It took four hours to

was very good at reading just like Tom the Turtle.

calm down."

orange spoke, it said "what is your problem?" The girl picked her hand up from her maths homework and said, "Did you just speak?" "Yes" said the orange

one and a half hours later she had finished her story. The problem was she was shy and couldn't speak to new people.

because you are very fast."

do the operation.

Evaluation (EV)	It (The school) looked lovely all the children looked nice and the headteacher looked nice and the playground looked nice it (the school) looked great.			She was a good witch	Sally feels very sad. Sally was very bored.		"all of the horses are just jealous because you are very fast."
Resolution (RE)	A few hours later I came out of my room and said to Mum, "when can I start?" Mum said, "I will ring them." This lady said, "can you take this place on the 22nd March?" "OK," said Mum. Then a week later I went to this new school.	Soon the bear came out and we couldn't see any blood anywhere, it was stitched up and we took it home as a pet	taken to heaven.	Nemo the fish came to vist and gave Sally a present "Thank you," said Sally. "It's OK," replied Nemo. The present was a box of chocolates, "mmmm" said Sally to	So Mr Grumpy did and he could see now he said thank you. Mr Grumpy was not so grumpy now he could leave the nest he shouted out he was free	The orange said, "you need to speak to new people". So the next day a girl came up and asked if she could play, she said "of course you can" and in the end they were the best of friends.	He waved his stick and all the horses came over. They said sorry and did Max want to play with them. So they cantered round the field all day. At the end of the day, the horse and wand were gone.

herself, that
was nice.

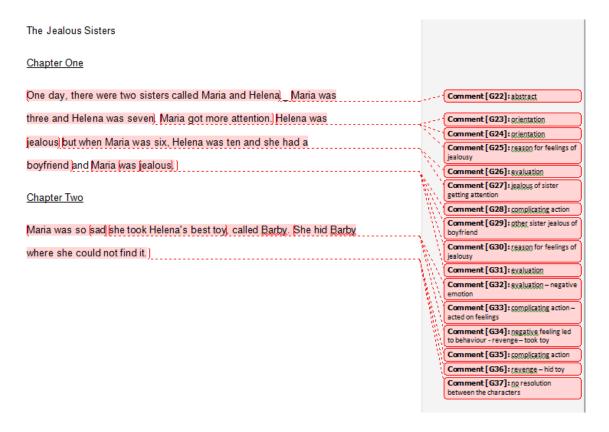| **Coda** | Did I ever find them? Find out next!

Now we and our dogs always play with it. It has its own bed on my bed next to me so at night I can snuggle up with it, so I'm not cold in bed anymore. | | he can see all his owl friends and all because of this one owl. |

Appendix I: Examples of initial coding of stories

Story written by a child who made the most academic gains

The Grumpy Owl Who Can't See

The ground owl Mr. Grumpy was so grumpy that he could not see. And because he couldn't see he wasn't allowed to leave the nest and that made him angry, because all that grumpiness he was really hungry and he can get no juicy worms to eat. Two days later another owl came to the nest and brought him a nice juicy worm to eat. Mr. Grumpy said to the nice owl "thank you," the lovely owl said "you've got to loosen up and calm down." So Mr. Grumpy did and he could see now he said thank you. Mr. Grumpy was not so grumpy now he could leave the nest he shouted out he was free he can see you all his owl friends and all because of this one owl.

Comment [G1]: Negative emotion

Comment [G2]: Consequences of emotions

Comment [G3]: abstract

Comment [G4]: consequences of emotions

Comment [G5]: Further negative emotion

Comment [G6]: Emotions had impact on characters behaviour

Comment [G7]: Not able to look after himself/passive

Comment [G8]: orientation

Comment [G9]: Help from another character

Comment [G10]: Character gives him food

Comment [G11]: Positive evaluation of character

Comment [G12]: Advice on managing negative emotions

Comment [G13]: Complicating action

Comment [G14]: followed advice

Comment [G15]: positive consequences from following advice

Comment [G16]: able to move

Comment [G17]: feeling free

Comment [G18]: able to socialise with others

Comment [G19]: resolution

Comment [G20]: advice helped to alter characters emotions and behaviour

Comment [G21]: coda

Story written by a child who made the least academic gains

The Jealous Sisters

Chapter One

One day, there were two sisters called Maria and Helena.   Maria was

three and Helena was seven. Maria got more attention. Helena was

jealous but when Maria was six, Helena was ten and she had a

boyfriend and Maria was jealous.

Chapter Two

Maria was so sad she took Helena's best toy, called Barby. She hid Barby

where she could not find it.

| Comment [G22]: abstract |
| Comment [G23]: orientation |
| Comment [G24]: orientation |
| Comment [G25]: reason for feelings of jealousy |
| Comment [G26]: evaluation |
| Comment [G27]: jealous of sister getting attention |
| Comment [G28]: complicating action |
| Comment [G29]: other sister jealous of boyfriend |
| Comment [G30]: reason for feelings of jealousy |
| Comment [G31]: evaluation |
| Comment [G32]: evaluation – negative emotion |
| Comment [G33]: complicating action – acted on feelings |
| Comment [G34]: negative feeling led to behaviour - revenge – took toy |
| Comment [G35]: complicating action |
| Comment [G36]: revenge – hid toy |
| Comment [G37]: no resolution between the characters |

Appendix J: Thematic coding of stories

CATEGORY	SUB-CATEGORY	No	DESCRIPTION	EXAMPLES
MAIN CHARACTER	Empowered/hero	1.1	main character helps themselves or other people	" He (Craig) got straight into his car. ….. He did not know how to fly an airplane, but he rushed straight to the airport. ". "I went to my bedroom with my computer and looked at the school"
MAIN CHARACTER	Victim	1.2	The main character is a victim of the situation or from the behavior of others.	"The balloon bullies. They bashed us about like basket balls. They played with us like a cat does with food".
MAIN CHARACTER	Passive	1.3	The main character is passive in their attempts to help themselves and relies on others to help them.	" "Ground Owl Mr Grumpy….. because of all that grumpiness he was really hungry and he can get no juicy worms to eat"
MAIN CHARACTER	Oppositional/villain	1.4	main character is oppositional towards others	" Poppy decided she would never be Charlotte's friend, ever again" "Maria …… took Helena's best toy, called Barby. She hid Barby where she could not find it".
MAIN CHARACTER	Relationship with other characters	1.5	Main character is described in terms of relationships towards other characters.	"There were two sisters called Maria and Helena". "she thought it was more than an orange, it was her best friend"

SECONDARY CHARACTERS	Helpful characters helpers/donors	2.1	Key characters in the stories who help the main character	"another owl came to the nest and bought him a nice juicy worm to eat". "a weird figure….holding a stick…. He waved his stick and all the horses came over. They said sorry." "the orange spoke, it said, "what's your problem?""
SECONDARY CHARACTERS	Oppositional characters/villains/false hero's	2.2	Key characters in the stories who are in conflict with the main character	"the balloon bullies" "the creature. It grabbed him."
SETTING	Main place where the story is set – fixed	3.1	Where the main part of the story is set	"one day …..in the woods" "flying in the sky" "He was in his field when it happened"
SETTING	Place where the story is set – changing	3.2	Description of setting as changing.	"The houses were tumbling everywhere. Buildings were smashing to the ground."
EMOTIONS	positive	4.1	Positive emotions/pleasant feelings.	"It (The school) looked lovely all the children looked nice and the head teacher looked nice and the playground looked nice it (the school) looked great". "I would enjoy it very much."
EMOTIONS	negative	4.2	Negative and unpleasant emotions/feelings	"Sally the seahorse feels sad because she has broken her tail". "he was not allowed to leave the nest and that made him feel angry".

				"I felt shocked, scared and worried."
				"I felt really ferocious. I felt I could rip anything apart into a million pieces."
				"I felt nervous, it was them."
EMOTIONS	empathy	4.3	Characters show empathy towards others.	"Poor Sally thought Penelope the penguin".
CONSEQUENCE OF EMOTIONS	positive	5.1	Positive consequence of experiencing emotions	"A few hours later I came out of my room and said to Mum, "when can I start?" …. Then a week later I went to this new school".
CONSEQUENCE OF EMOTIONS	negative	5.2	Negative consequence of experiencing emotions	"Maria was so sad she took Helena's best toy, called Barby. She hid Barby where she could not find it". "Mr. Grumpy was so grumpy that he could not see".
SENSE OF BELONGING	lonely	6.1	Main character experiences feeling alone or lonely	"Sally….didn't have anyone to play with" "there was an old farmhorse who had no friends" "the problem was she was shy and couldn't speak to new people"
SENSE OF BELONGING	lost	6.2	Main character experiences being lost.	"where had they gone, I was lost and burst into tears" "little girl in the woods, she was lost…..she wished she could go home and see her mum and dad".
SENSE OF BELONGING	conflict	6.3	Main character experiences conflict.	"when Charlotte won, Poppy got so mad that she decided she would never be Charlotte's friend

				"anymore"
				"the balloon bullies bashed us about."
				"the creature….grabbed him"
ACTION	journey	7.1	Main character goes on an adventure/journey	"he got into a jet and tried to fly off"
				"there was a witch flying in the sky"
				"Up, up and up we went. We saw the place where the figure picked up our bag. We saw the factory where we were born (made). It was fascinating"
ACTION	Helping others	7.2	Main character helps themselves/helps another character	"He jumped into the class and said 'You need to come with me'."
ACTION	Passive/receives help from others	7.3	Main character receives help from other characters	"Nemo the fish came to vist and gave Sally a present".
				"The orange said, "you need to speak to new people".
				"the lovely owl said 'you've got to loosen up and calm down'."
RESOLUTION	Change in emotion and/or behaviour	8.1	Character feels/acts differently at the end of the story	" Mr. Grumpy was not so grumpy now he could leave the nest he shouted out he was free."
				"The present was a box of chocolates, 'mmmm' said Sally to herself, 'that was nice'."
RESOLUTION	Making friends	8.2	Main character makes up with	"So the next day, we both said: 'Shall we make

			old friends or makes some new friends	"friends?' 'OK friend!'."
				"the next day a girl came up and asked if she could play, she said "of course you can" and in the end they were the best of friends".
RESOLUTION	rescue	8.3	The main character rescues other characters	"Two hours later and the whole school was in the airplane."
				"looking for dead people to take them to heaven."
RESOLUTION	negative	8.4	The story has a negative ending	"Suddenly a large white feathered beast came to our rescue. Peck, bang, peck, bang, peck, boom. We were saved. Peck, bang, what? Peck, bang, peck, bang and a millisecond after, peck, bang. I was dead".
				"It grabbed him and teleported the creature back to his house."

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