

An exploration of the therapeutic story writing intervention as a means of reducing anxiety and enhancing working memory and the academic attainment of anxious children.

By Jerricah Holder (Trainee Educational Psychologist)

Childhood Anxiety:

Anxiety has been found to be one of the most common mental health problems in childhood, affecting around five to 10% of children and young people. Although a certain degree of worry or anxiety can be viewed as a normal part of child development, for some children their anxieties can become so chronic and persistent that they have debilitating effect on their lives (Costello, et al., 2004; Essau & Ollendick, 2013; APA, 2013).

As well as disrupting children's well-being, anxiety has also been associated with poorer educational outcomes (Davis et al., 2008; Mazzone et al., 2007). Research and theory (e.g. Processing Efficiency Theory) suggests that anxious children may underperform at school because their worrisome thoughts reduce the capacity of their verbal working memory (Eysenck et al., 2007; Hadwin et al., 2005; Ng & Lee, 2010).

It was therefore predicted that the educational outcomes of anxious children might be improved by interventions (such as therapeutic story writing) that provide anxious children the opportunity to explore their worries in a manner that reduces anxiety and frees up the working memory resources needed for cognitively demanding tasks at school.

Therapeutic Story Writing:

Ten-week targeted intervention which was designed to support pupils in Key Stage 2 who are experiencing Social, Emotional and Behavioural difficulties. The model employs the medium of story, in which pupils are encouraged to write stories in which they can project their own worries and concerns onto story characters. Potential strategies and way of coping with the difficult emotion or experience are then discussed and practiced through the metaphor of the story (Waters, 2004).

Each session has the following six components:

1. Feelings check-in
2. Review of previous week's stories and the emotional literacy aspects of these stories
3. Suggestion of a story theme which reflects the emotional issues relevant to the group
4. Children and teacher writing stories for 20 minutes
5. Sharing of stories and discussion of emotional content of stories
6. Story game

Research design:

- ❖ This study set out to explore the impact of a therapeutic story writing intervention on anxious children's levels of anxiety, verbal working memory and academic attainment. The intervention group received the intervention straight away and the control group received the intervention the following term.
- ❖ In total 26 primary school aged children, all experiencing anxious affect, took part in this study. Child-rated anxiety scores on the Spence Anxiety Scale confirm that both the intervention ($M = 9.00$) and control group ($M = 9.10$) were experiencing elevated levels of anxious affect prior to the intervention. Similarly the mean verbal working memory standardised score for the intervention ($M = 81.43$) and control group ($M = 84.6$) fell within the below average range, which confirms that the participants were also experiencing difficulty in the area of working memory prior to the intervention.

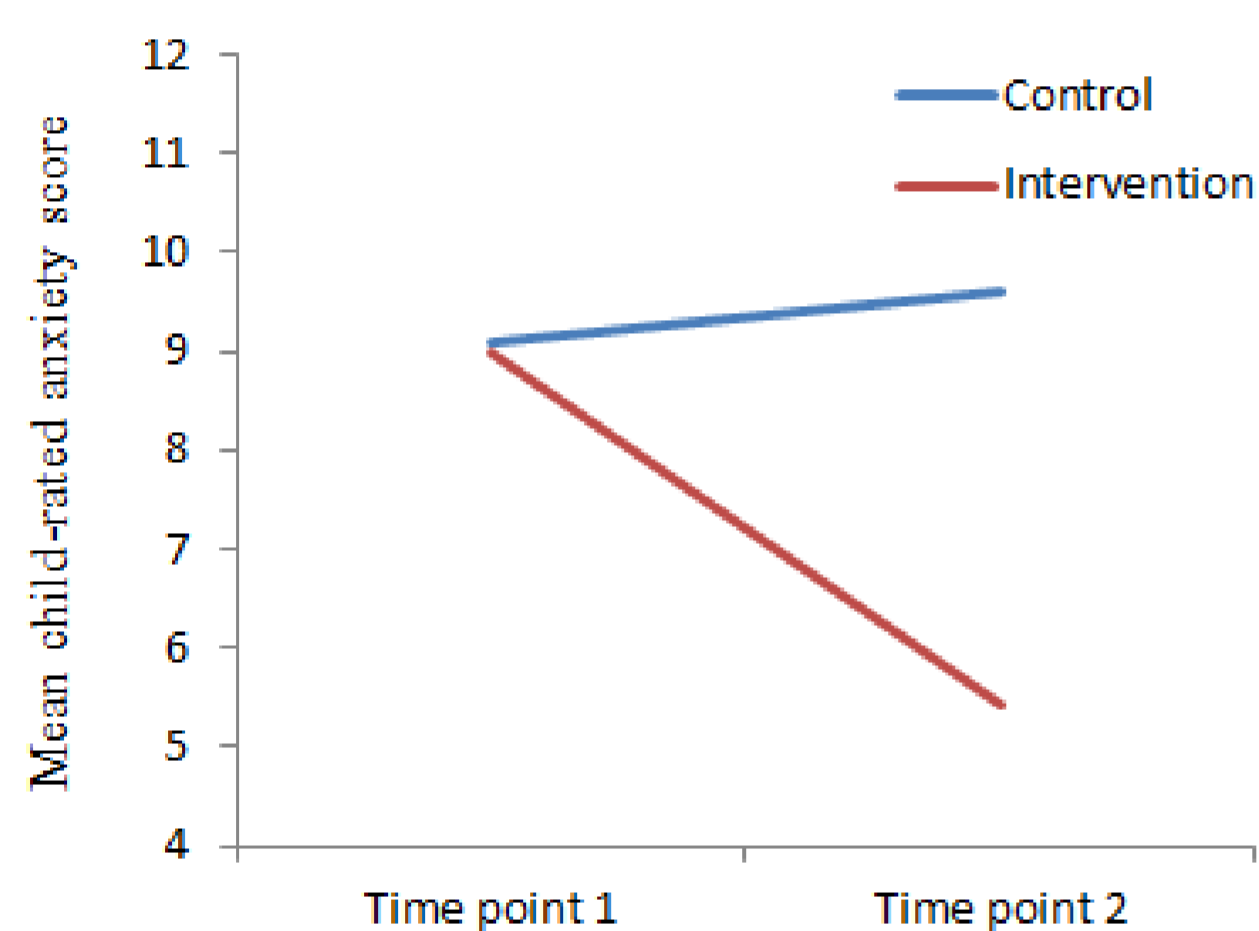


Figure 2: Participants' mean child-rated anxiety scores across T1 and T2 for intervention and control participants. A raw score above 9 = suggests elevated levels of anxious affect.

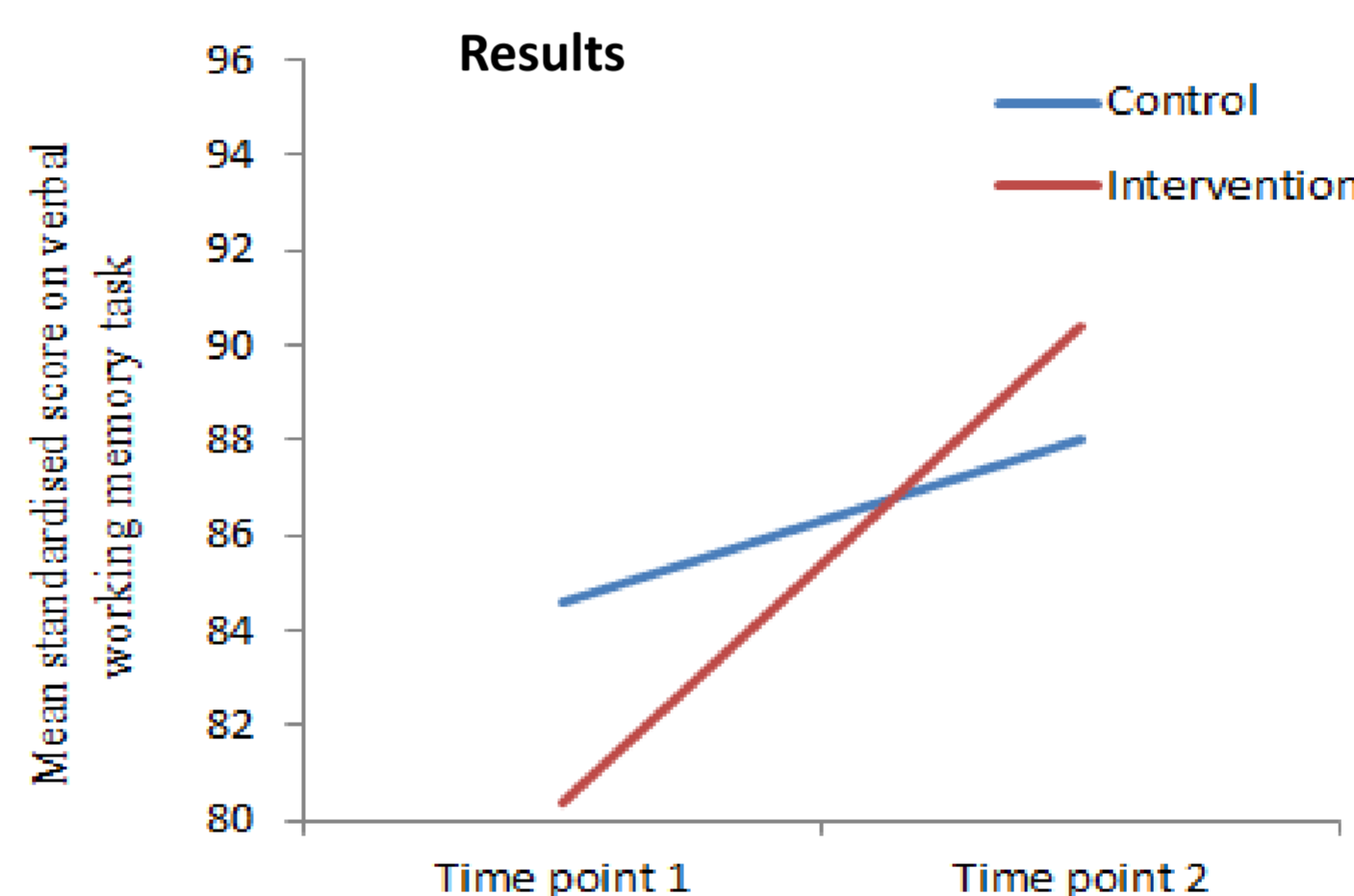


Figure 3: Participants' mean standardised score on the verbal working memory task across T1 and T2 for intervention and control participants (85-115 = average range).

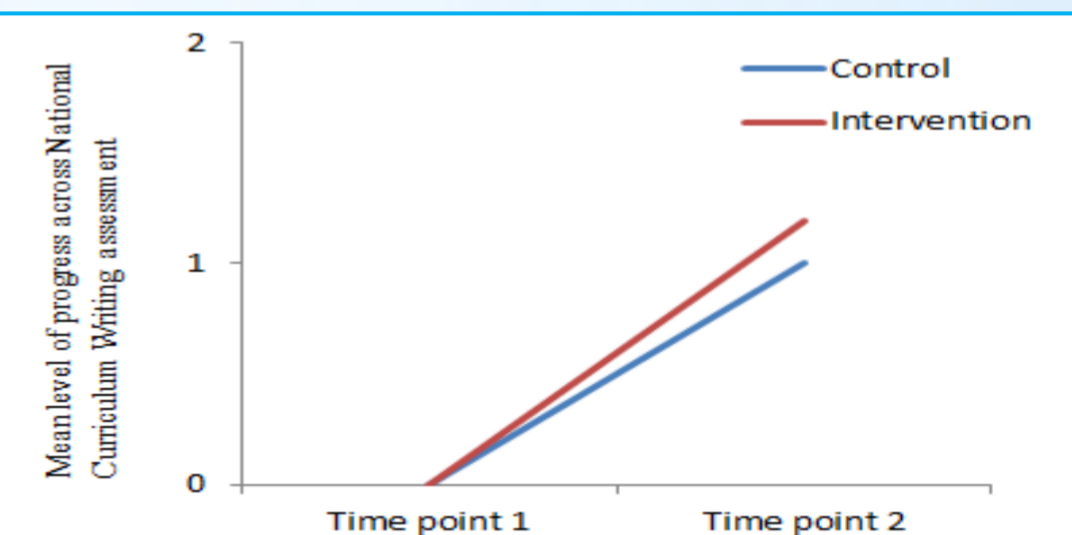


Figure 5: Participants' mean level of progress across NC Writing attainment (according to sub-levels) across T1 and T2 for intervention and control participants.

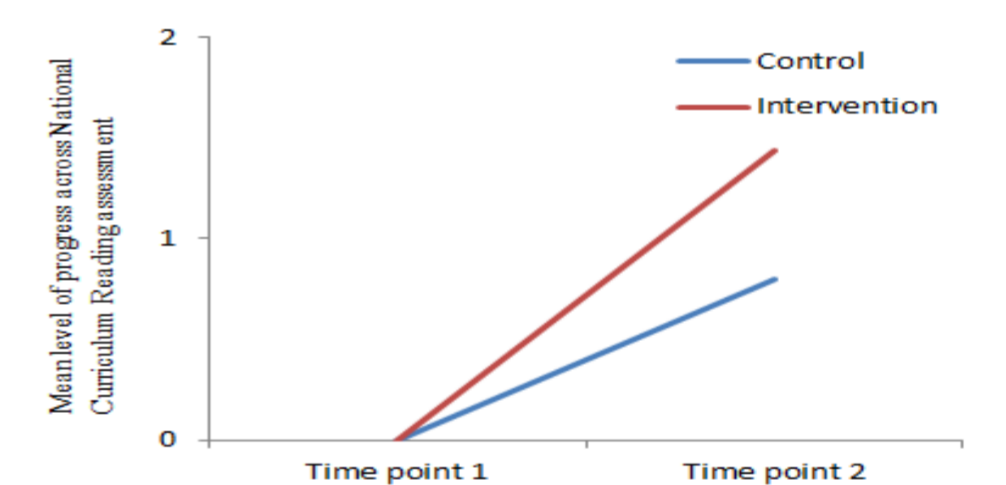


Figure 6: Participants' mean level of progress across NC Reading attainment (according to sub-levels) across T1 and T2 for intervention and control participants.

Main Findings

Child rated anxiety :

- Intervention group mean child-rated anxiety scores decreased from T1 ($M = 9.00$) to T2 ($M = 5.43$) and this decrease was significant, $t(15) = 8.73, p = .000$.
- Following the TSW intervention, 87% of the participating children achieved a child-rated anxiety score that was below the elevated range (T score <60 , $n = 14$) and 56% fell within the average range (T score <50 , $n = 9$). The children's answers to the questions on the child-rated anxiety score not only suggests that their levels of anxiety decreased significantly, but for some, this decrease was to such an extent that they were no longer reporting elevated levels of anxiety.
- By contrast, the control groups levels of anxiety across T1 ($M = 9.10$) and T2 ($M = 9.60$) increased slightly. Although this increase was not statistically significant, $t(9) = -.89, p = .4$, it is very concerning that the anxiety levels of the control group children increased.

Working Memory:

- Intervention group mean verbal working memory increased from T1 ($M = 80.38$) to T2 ($M = 90.38$) and this difference was significant, $t(15) = -6.01, p = .000$.
- Following the intervention, 81% of the intervention group achieved a score on the verbal working task that was within the average range (85-115) which suggests that a large proportion of the intervention group were no longer experiencing verbal working memory difficulties. By contrast, the control groups children's verbal working memory performance did not differ significantly, $t(9) = -.84, p = .4$, across T1 and T2 and remained below the average range.
- Of the small number of children who completed the follow up assessments, the results suggest that the improvements in anxiety and working memory were maintained at 4-week follow up and even further improvements were observed for some participants.

Attainment:

- The control group made on average .80 sub-levels of progress across reading and 1 sub-level of progress across writing; whereas the intervention group made 1.44 sub-level of progress across reading and 1.19 across writing. The level of progress across T1 and T2 was significant for the intervention, $t(13) = 10.26, p = .000$ and the control group $t(9) = -4.74, p = .001$. These results suggest that although a significant improvement between T1 and T2 in attainment was observed for the intervention group, this effect were not exclusive to the intervention group.
- Although the interaction effect did not reach statistical significance, it is the author's opinion that these effects should still be considered to be of educational importance. Particularly when considering that the primary aim of the therapeutic story writing intervention is to support children's social and emotional needs and it is not a targeted academic reading or writing intervention per se. It is also possible that NC levels may not have been a sensitive enough measure to capture progress made over 10 weeks.

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