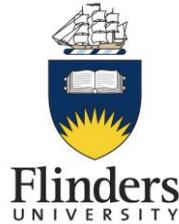


FLINDERS UNIVERSITY
ADELAIDE • AUSTRALIA



Flinders Human Behaviour & Health Research Unit

Releasing Children's Shining Potential

**Improving the social and emotional wellbeing of
primary school children through Journeywork**

Journey into Schools Report
August 2010

Results of Emotional Wellbeing Measures

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Chapter 5

Results of Emotional Wellbeing Measures

5.1 Emotional Wellbeing Questionnaire: CES-DC

Five main analyses were conducted on the emotional wellbeing questionnaire data:

1. Analysis of the total raw scores.
2. Analysis of the *levels of emotional challenge* experienced by the children according to cut-off scores: 0 to 15 = little or no challenge; 16 to 24 = mild emotional challenge; 25+ = major emotional challenge.
3. Analysis by *domains of emotional wellbeing/challenge*: physical problems; depressed feelings; positive feelings; interpersonal relationships.
4. Analysis of *prevalence of symptoms of greatest challenge to emotional wellbeing* across all domains: that is, those children who scored a 2 (some emotional challenge) or a 3 (a lot of emotional challenge) (the positive feelings scores were reverse coded).
5. Comparison of child and parent scores.

5.1.1 Overall emotional wellbeing scores

Analysis of the *Emotional Wellbeing Questionnaire* self-reported responses involved conducting a number of analyses. In the first instance, describing the results of the total sample of children (n=24), with further analyses including only those children who completed all three questionnaires at baseline, Time 1 and Time 2 (n=19). Analyses of the total sample and the questionnaire completer sample showed a skewing of the results toward the direction of the extreme outliers (child 18 and 23). Consequently, an additional analysis of the questionnaire completer sample, with the outliers omitted (n=17), gives a more balanced understanding of the effects of attending the Journey Program on the participating children.

The overall group analyses were conducted to determine statistical significance, and individual children analyses, along with the qualitative analyses, were conducted to determine practical significance of implementation of the Journey Program.

The 20-item ratings of the *Emotional Wellbeing Questionnaire* are summed to a total score ranging from 0 to 60, with higher scores indicating increasing challenges to emotional wellbeing.

Of the 24 children with baseline data, 19 children completed all 3 emotional wellbeing questionnaires at the time points of baseline (B), Time 1 (T1) and Time 2 (T2). These 19 children were considered 'questionnaire completers' and are analysed and reported as a sub-group (n=19) of the total sample.

Descriptive analyses indicate that there was very little difference between the results of the total sample of children (n=24) and the children who completed all 3 questionnaires (n=19), therefore the results of the questionnaire completer children (n=19) are reported.

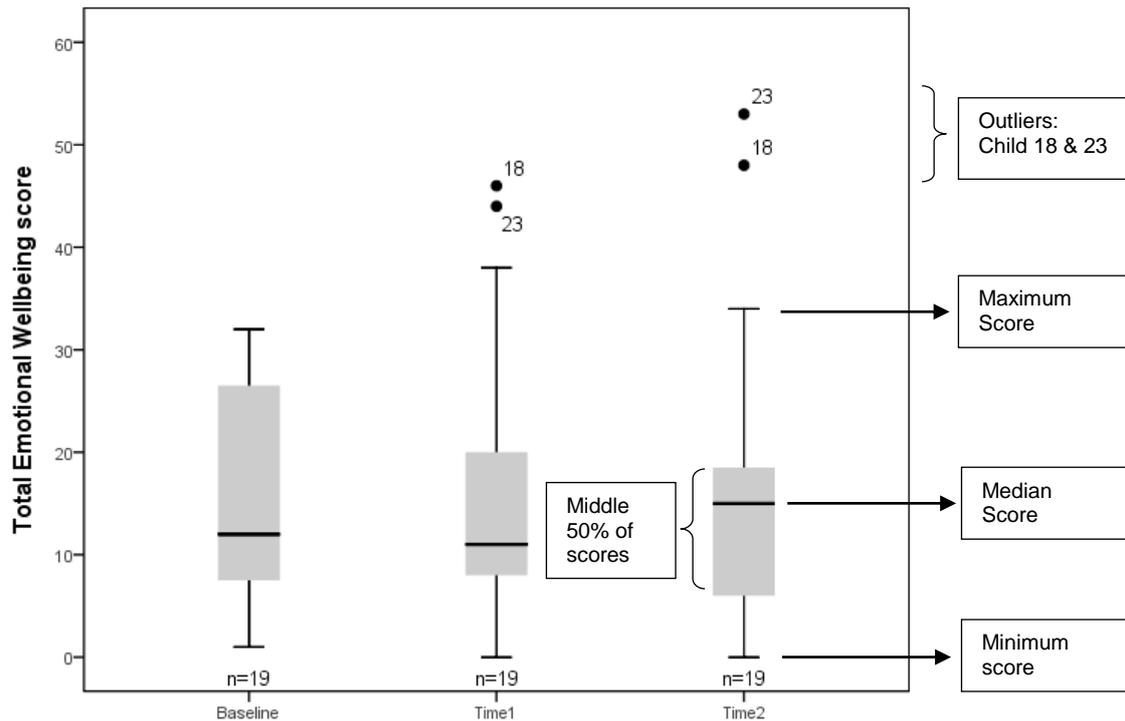
As can be seen in Table 3, there was a very wide range in raw scores (baseline=1-32; T₁=0-46; T₂=0-53) with 2 extreme outliers (children whose scores were well outside the scores of the other children; child identifier numbers 18 and 23 - refer Figure 7). Mean and median scores show that the children were marginally challenged emotionally at each time point. Whilst there was an increase over time in median scores, the increase was negligible when comparing the mean scores at each time point (Table 3). The median score at baseline was 12, dropping to 11 at Time 1 and increasing to 15 at Time 2, however it should be noted that the two outliers impact on the aggregated results and therefore are excluded from analysis further into this report. It should also be noted that the change in median and mean scores is small and caution should be taken when making any inferences from these changes in scores over time. The range (maximum and minimum scores), median (middle score) and the mode (most frequently occurring scores) are reported in Table 3, and illustrated in the box-plot below (Figure 7), with the 2 outliers identified.

These scores indicate that the children's responses to the emotional wellbeing questionnaire were variable.

Table 1: Total emotional wellbeing scores over time: Children questionnaire completers

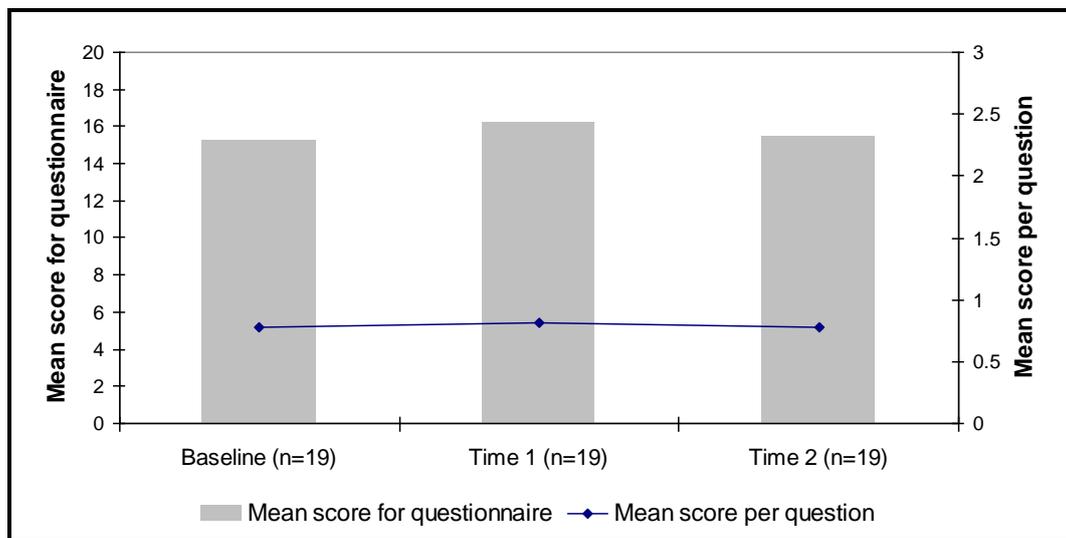
Children (n = 19)	Baseline	Time 1	Time 2
Mean score (questionnaire) <i>M (SD)</i>	15.26 (10.88)	16.16 (13.43)	15.47 (14.98)
Range	1-32	0-46	0-53
Median	12	11	15
Mode	1, 3, 10, 12	11	7
Mean score (per question) <i>M (SD)</i>	0.77 (0.56)	0.81 (0.69)	0.78 (0.75)

Figure 1: Box-plot: Total emotional wellbeing scores over time - Children questionnaire completers



When analysing the individual children’s scores per question, the mean score increased only slightly (by 0.04) from baseline to Time 1, then decreased by 0.03 from Time 1 to Time 2 (Table 3). The children’s scores also showed greater variability (i.e. increases in standard deviation over time) which indicates that the spread of scores (i.e. the range of scores) became greater between the time points (as shown by the box-plot in Figure 7). The mean scores for the questionnaire and for the individual questions are illustrated graphically in Figure 8.

Figure 2: Emotional wellbeing mean scores over time: Children questionnaire completers



Statistical analysis of the emotional wellbeing scores, using the Friedman test shows a change in scores over time, with no statistically significant differences in the wellbeing scores across the three time points of baseline, Time 1, and Time 2 ($\chi^2 = 1.947$, $n=19$, $p = .378$). Thus, overall results of the *Emotional Wellbeing Questionnaire* raw scores show no significant change over time in the group as a whole.

5.1.2 Emotional wellbeing scores for questionnaire completer children with outliers removed

The group of children who completed the *Emotional Wellbeing Questionnaire* at baseline, Time 1 and Time 2 were further analysed with the two outliers (child 18 and child 23) removed from the sample ($n=17$). Refer Figure 7 for outliers. Descriptive analysis of the data is as follows.

Table 4 shows that the children mean scores of emotional wellbeing decreased over time. The range remained fairly constant over the three time points, with the median decreasing from baseline to Time 2 ($B=10$, $T_2=7$). Mode scores remained the same to that of the total sample over time. When reviewing individual scores per question, the mean score decreased by 0.11 from baseline to Time 2.

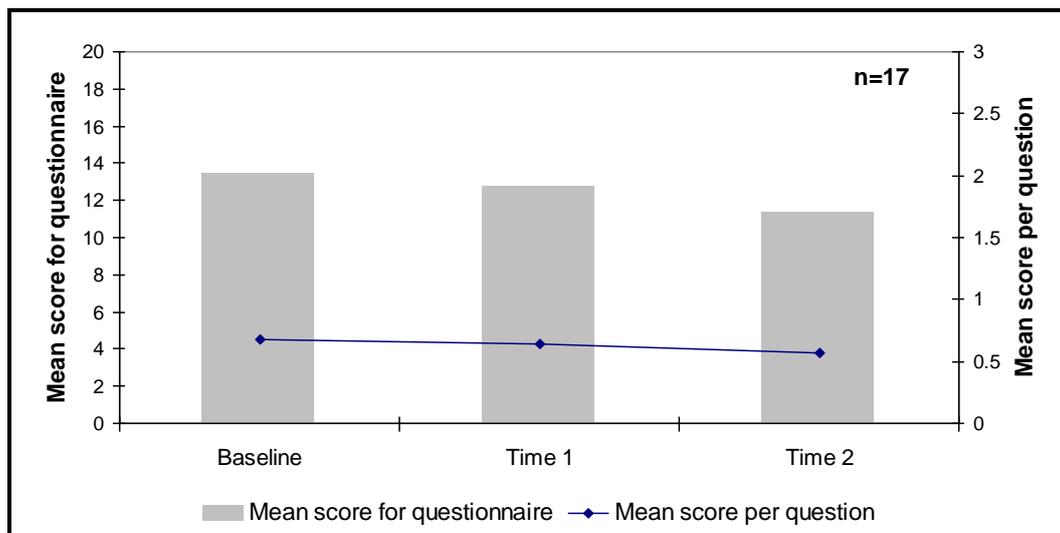
Table 2: Total emotional wellbeing scores: Children questionnaire completers with outliers omitted

Children ($n = 17$)	Baseline	Time 1	Time 2
Mean score (whole questionnaire) $M (SD)$	13.47 (10.03)	12.76 (9.30)	11.35 (8.97)
Range	1-32	0-38	0-34
Median	10	11	7
Mode	1, 3, 10, 12	11	7
Mean score (per question) $M (SD)$	0.68 (0.51)	0.64 (0.46)	0.57 (0.45)

Figure 9 illustrates that there was a decrease in mean scores over time, from baseline to Time 2, and along with the decrease in median score, the results suggest an improvement in emotional wellbeing, which is of practical significance for implementing Journeywork in schools.

Further analysis of the emotional wellbeing scores over time using a Friedman test indicated that there was no statistically significant differences in the scores across the three time points of baseline, Time 1, and Time 2 ($\chi^2 = 4.687$, $n=17$, $df=2$, $p = .096$).

Figure 3: Emotional wellbeing mean scores over time: Children questionnaire completers with outliers omitted



5.1.3 Overall emotional wellbeing scores in relation to number of Journeywork sessions attended: Questionnaire completers

The number of sessions attended by the children was recorded. To examine whether there was any relationship between the number of Journeywork sessions attended by the children who completed all three questionnaires ($n=19$) and their emotional wellbeing scores, a Spearman's Rank Order Correlation was conducted. The number of sessions attended by the questionnaire completer children (including the outliers) was statistically significant to their score achieved at Time 1 (Table 5 $p < .01$). The relationship was a strong negative correlation ($r = -.655$) indicating that as the total number of sessions increased over time, the children's total score decreased (emotional wellbeing improved). This relationship however was weaker and not statistically significant at the Time 2 interval, where the mean number of Journeywork sessions attended was decreasing. The relationship between the number of sessions attended by the questionnaire completer children, omitting the outliers, was also conducted yielding similar results at Time 1 and Time 2 ($r = -.540$, $p < .05$).

These findings are promising, suggesting that with regular Journeywork over time, children's emotional wellbeing can improve.

Table 3: Number of sessions attended in relation to emotional wellbeing scores: Questionnaire completers

Children ($n=19$)	Time 1	Time 2
Mean score (SD)	16.16 (13.43)	15.47 (14.98)
Mean No. of sessions (SD)	6.00 (1.29)	4.68 (1.11)
Spearman's rho	-.602**	-.296
Sig. (2-tailed)	.005	.219

**Correlation is significant at the 0.01 level (2-tailed)

5.1.4 Individual emotional wellbeing scores: Questionnaire completers

Analysis of the questionnaire completer's (n=19) individual raw scores identified a decrease in scores for the majority the children (i.e. 12 children; 63.2%) from baseline to Time 2. This decrease in scores indicates an improvement in emotional wellbeing following completion of Journeywork. Child 2 showed the greatest improvement in emotional wellbeing, with a decrease in score of 25 points, with child 5 and 9 each showing a considerable improvement with a decrease in scores of 12 points. Alternatively, child 23 showed a decline in emotional wellbeing with the greatest increase in score of 22 points, followed by child 18 with an increase in score of 18 points (refer Table 6: baseline, Time 1 and Time 2 raw scores). Note: children 18 and 23 were the outliers and remained at the major challenge to emotional wellbeing throughout the study.

Table 4: Change in total raw scores over time, level of emotional wellbeing and change in level of emotional challenge by sub-group, in order of most improvement in wellbeing*: Questionnaire completers

Child ID (n=19)	Baseline	Time 1	Time 2	Change in scores: Baseline to Time 2 In order of most improvement in wellbeing*	Change in level of emotional challenge by sub-group: Baseline to Time 2
2	32 ^a	20 ^b	7 ^c	-25 ^d	Major improving to little
5	28 ^a	10 ^c	16 ^b	-12 ^d	Major improving to mild
9	14 ^c	13 ^c	2 ^c	-12 ^d	No change
10	10 ^c	1 ^c	0 ^c	-10 ^d	No change
24	26 ^a	24 ^b	17 ^b	-9 ^d	Major improving to mild
4	10 ^c	8 ^c	4 ^c	-6 ^d	No change
7	20 ^b	18 ^b	15 ^c	-5 ^d	Mild improving to little
19	12 ^c	11 ^c	7 ^c	-5 ^d	No change
17	18 ^b	8 ^c	15 ^c	-3 ^d	Mild improving to little
22	9 ^c	14 ^c	7 ^c	-2 ^d	No change
3	6 ^c	4 ^c	5 ^c	-1 ^d	No change
12	1 ^c	0 ^c	0 ^c	-1 ^d	No change
20	3 ^c	11 ^c	7 ^c	+4 ^e	No change
13	27 ^a	38 ^a	34 ^a	+7 ^e	No change
16	9 ^c	11 ^c	20 ^b	+11 ^e	Little challenge to mild
21	3 ^c	6 ^c	19 ^b	+16 ^e	Little challenge to mild
14	1 ^c	20 ^b	18 ^b	+17 ^e	Little challenge to mild
18	30 ^a	46 ^a	48 ^a	+18 ^e	No change
23	31 ^a	44 ^a	53 ^a	+22 ^e	No change
Mean	15.26	16.16	15.47		
SD	10.88	13.43	14.98		

^a = Major challenge to emotional wellbeing at baseline, Time 1 and Time 2 (scores 25+)

^b = Mild challenge to emotional wellbeing at baseline, Time 1 and Time 2 (scores 16-24)

^c = Little or no challenge to emotional wellbeing at baseline, Time 1 and Time 2 (scores 0-15)

^d = Decrease in score (-) indicates improvement in emotional wellbeing from baseline to Time 2

^e = Increase in score (+) indicates decrease in emotional wellbeing from baseline to Time 2

5.1.5 Level of emotional challenge experienced by the individual children: Questionnaire completers

To examine the data further, the level of challenge to emotional wellbeing experienced by the individual children was identified as sub-groups by using cut-off scores: 0-15 indicating those children with little or no challenge to emotional wellbeing; 16-24 indicating those children with a mild challenge to emotional wellbeing; and scores 25 and above indicating those children who had a major challenge to emotional wellbeing in the previous week ^[66]. Table 7 shows the number (%) of children with total scores in each level over time.

Table 5: Number of questionnaire completers across emotional challenge levels by cut-off scores

Children (n=19)	Baseline n (%)	Time 1 n (%)	Time 2 n (%)
25+ Major challenge	6 (31.6%)	3 (15.8%)	3 (15.8%)
16-24 Mild challenge	2 (10.5%)	4 (21.1%)	5 (26.3%)
0-15 No or Little change	11 (57.9%)	12 (63.2%)	11 (57.9%)

Of practical significance is the number (%) of children who changed level of emotional challenge sub-groups over time, (i.e. those children whose emotional wellbeing improved, remained the same, or decreased to the extent that their level of emotional challenge changed).

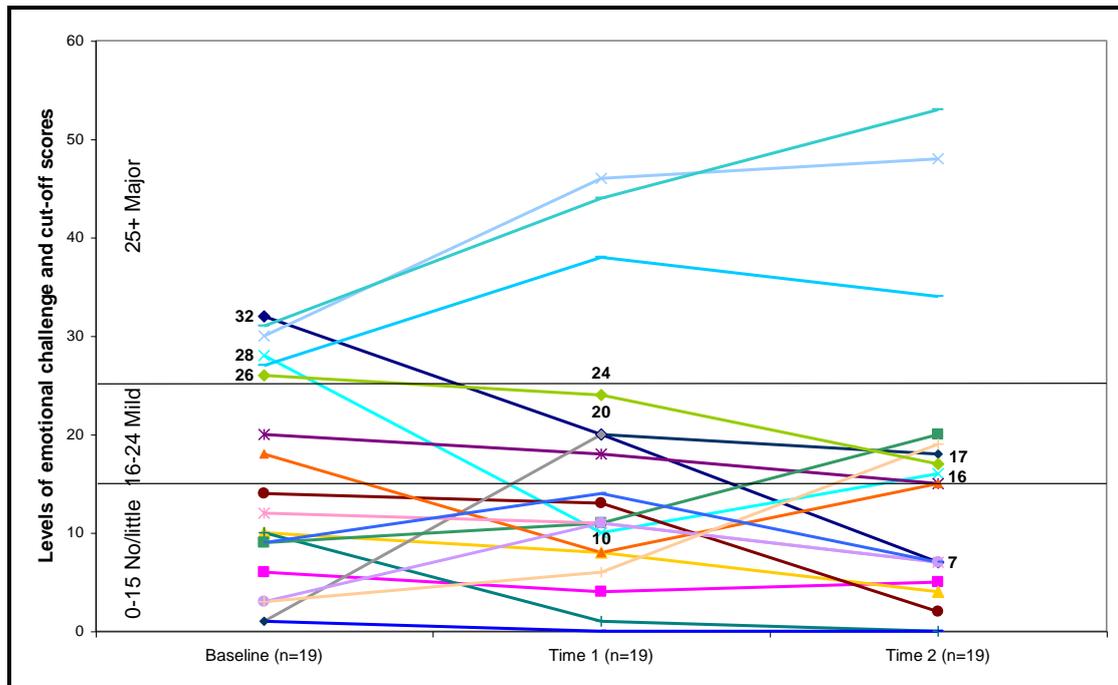
At baseline there were 6 children (31.6%) whose scores indicted a major challenge to emotional wellbeing (i.e. total raw score=25+) (child 2, 5, 13, 18, 23, & 24). At Time 1 and Time 2, following Journeywork sessions, only three of these children (15.8%) (child 13, 18 and 23) remained at the major challenge to wellbeing level (Table 7). These same three children (child 13, 18 and 23) remained emotional challenged throughout the study (Table 6). From observation of their actual behaviours, the practitioners were aware of the challenges to wellbeing of these three children. Consequently, the children received additional individual Journeywork over the period of the study. The teachers were also aware of the children's challenges, reporting that these children were experiencing difficulties at home during this period of time (*Researcher field notes; Parent group interview comments*).

As shown in Table 6, from baseline to Time 2, child 2 improved considerably, changing from experiencing a major challenge to emotional wellbeing, to little emotional challenge, and four (21%) children improved by one level (major to mild or mild to little) (child 5, 7, 17, & 24). Eleven children (57.9%) remained in the same level, even though their individual scores changed. In contrast, from baseline to Time 2, three children (15.8%) changed from experiencing little challenge to emotional wellbeing, to experiencing mild challenge (child 14, 16, & 21). On further analysis, the 2 outlier scores were omitted from the data and results showed that there was no statistical significance ($\chi^2 = 4.687$, $n=17$, $df = 2$, $p = .096$) to changes in overall emotional wellbeing scores over time.

Table 6 shows changes in raw scores, levels of emotional challenge, and change in level over time. Figure 10 illustrates graphically, the changes in the children's emotional wellbeing scores across the time intervals and within the levels of emotional wellbeing cut-off points, with child, 2, 5 and 24's raw scores marked to show considerable improvement over time.

Of practical significance is the finding that the majority children (63.2%) decreased their raw scores from baseline to Time 2, indicating an improvement in emotional wellbeing following completion of Journeywork. Furthermore, 26.3% (n=5) of children improved and changed from one level to another level of wellbeing, with 57.9% (n=11) remaining at the same level of wellbeing or challenge to wellbeing. Only 15.8% (n=3) of children decreasing in wellbeing, changing from little challenge to mild challenge.

Figure 4: Individual scores across time by levels of emotional challenge: Children questionnaire completers



Greatest improvement in emotional wellbeing scores over time:

Raw scores: 32, 20, 7=Child 2

Raw Scores: 28, 10, 16=Child 5

Raw Scores: 26, 24, 17=Child 24

5.1.6 Emotional wellbeing across the domains – Physical, depressed feelings, positive feelings and interpersonal relationships: Questionnaire completers omitting outliers

As discussed previously in the ‘methods’ chapter, the *Emotional Wellbeing Questionnaire* (CES-DC) items can be further divided into symptom domains: physical problems, depressed feelings, positive feelings, and interpersonal relationship problems. Analysis of the domain sub-groups provides a more complete understanding of the specific areas in which children improved, remained the same, or were more emotionally challenged [55, 67].

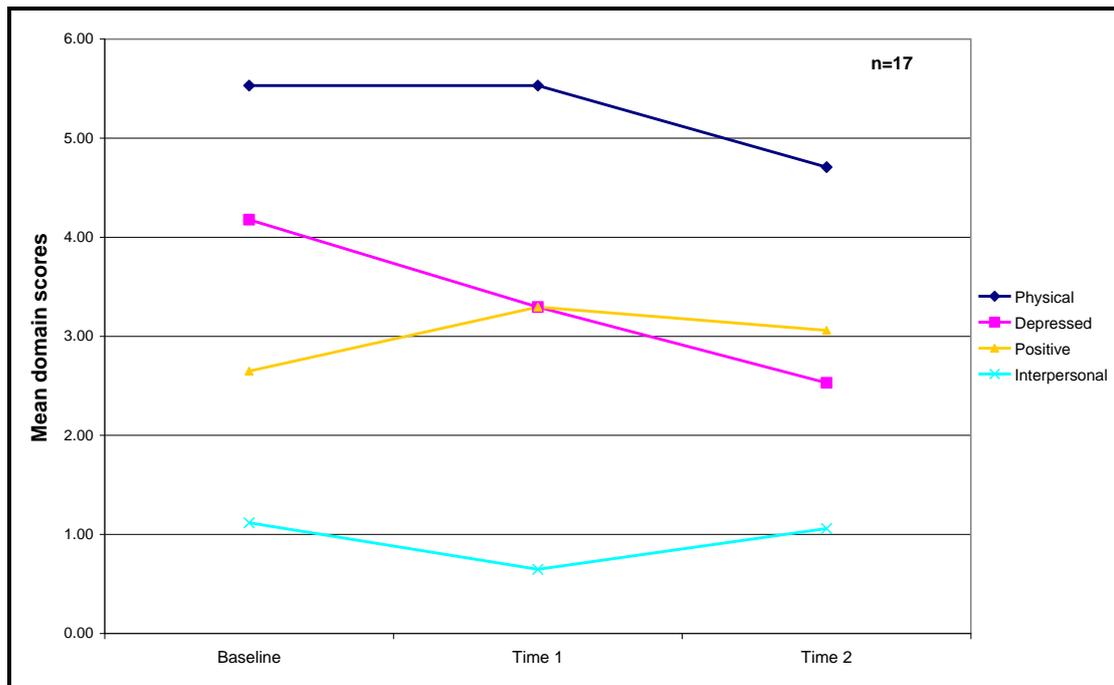
To determine improvement, decline or no change in the questionnaire completer children with the outliers omitted (n=17) from baseline to Time 2, each child’s baseline score was subtracted from the Time 2 score to give a difference. Negative differences in scores indicate an improvement in emotional wellbeing for the domain, and a positive difference in scores indicates a decline in emotional wellbeing in that domain.

As shown in Table 8 and illustrated in Figure 11, there was a decrease (improvement) in mean scores in the physical (-0.82), depressed feelings (-1.65), and interpersonal relationships (-0.06) domains, and an increase (less wellbeing) in mean scores in the positive feelings (0.41) domain. The change in the children's mean scores across the time periods in each domain is very small and caution should be taken when making inferences from these changes in scores.

Table 6: Mean domain scores and standard deviation over time: Children questionnaire completers omitting outliers

Children (n=17)	Baseline Mean (SD)	Time 1 Mean (SD)	Time 2 Mean (SD)	Difference Time 2 - Baseline
Physical problems	5.53 (4.56)	5.53 (4.47)	4.71 (4.04)	-0.82
Depressed feelings	4.18 (4.19)	3.29 (3.48)	2.53 (3.95)	-1.65
Positive feelings	2.65 (1.97)	3.29 (2.34)	3.06 (2.66)	0.41
Interpersonal relationships	1.21 (1.50)	0.65 (1.00)	1.06 (1.75)	-0.06

Figure 5: Mean domain scores over time: Children questionnaire completers omitting outliers



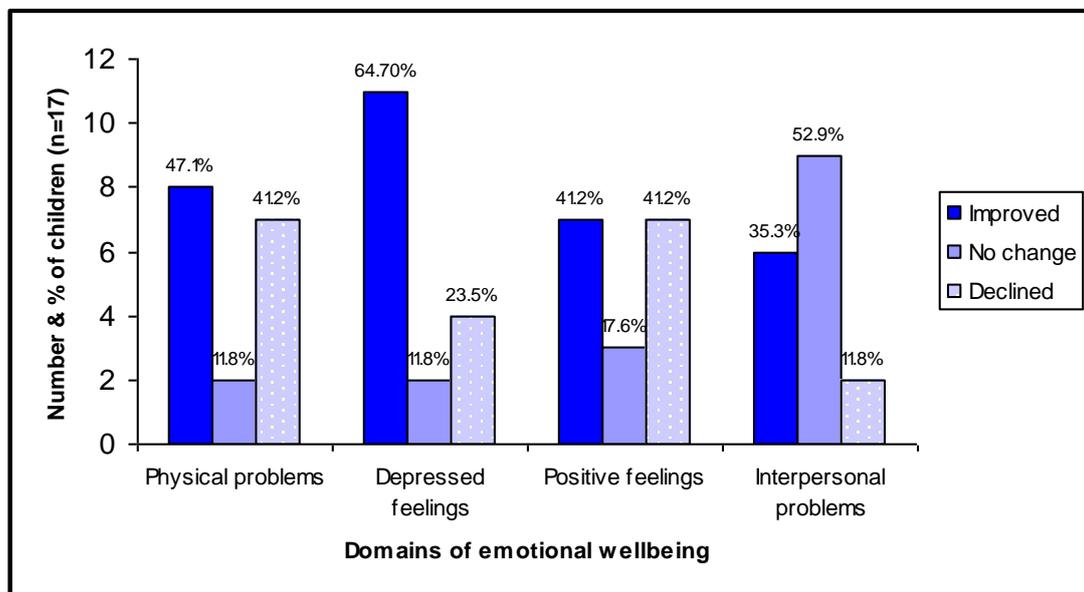
To analyse the domain mean scores over time, a Friedman test was conducted for each domain (physical, depressed, positive and interpersonal respectively). Whilst the scores show a small change over time, there were no statistically significant difference in the scores across the three time points of baseline, Time 1, and Time 2 (Physical $\chi^2 = .136$, $p = .934$; Depressed $\chi^2 = 4.290$, $p = .117$; Positive $\chi^2 = 2.679$, $p = .262$; Interpersonal $\chi^2 = 4.500$, $p = .105$).

On further analysis, this sub-sample of children (n=17) were examined individually. A difference in scores over time was determined by subtracting their baseline scores from their Time 2 scores in each domain and identifying the number the number of children

whose emotional wellbeing improved (scores decreased over time), remained the same, and declined (scores increased over time).

As illustrated in Figure 12, the greatest improvement in emotional wellbeing occurred in the depressed feelings domain; 64.7% of the children decreased in depressed feelings scores from baseline to Time 2, with only 23.5% (4 children) showing a decline in emotional wellbeing in the depressed feelings domain (i.e. increase in depressed feelings scores). This result is of practical significance in supporting the implementation of Journeywork. In addition, 47.1% of children showed an improvement in the physical domain, 41.2% showed an improvement in the positive feelings domain, and 35.3% showed an improvement in the interpersonal domain. In contrast, individual children showed a decline in emotional wellbeing in each domain with 41.2% of children declining in the physical problems and positive feelings domains. The interpersonal relationships domain showed the greatest number of children with no change in their scores from baseline to Time 2 (n=9, 52.9%).

Figure 6: Individual children’s change in emotional wellbeing by domain from baseline to Time 2: Questionnaire completers with outliers omitted



5.1.7 Prevalence of symptoms of greatest challenge to emotional wellbeing across the domains: Questionnaire completers omitting outliers

Following Bettge *et al* [67], the prevalence of symptoms of greatest challenge to emotional wellbeing (sad or depressive symptoms) were examined further. The aim of this analysis was to determine those symptoms that were the most challenging for the children at baseline, and identify if there were changes to the number of children who were no longer challenged or remained challenged in these areas following participation in Journeywork sessions (Time 2).

Symptoms of greatest challenge to emotional wellbeing were considered to be those questions answered with a 2='some' or 3='a lot', and for the positive feelings questions 3='not at all' or 2='a little' (questions 4, 8, 12, 16 were reverse coded). The questions

answered with a '3' or '2' were aggregated, and the number of children collated. The results are described below as the numbers (%) of agreement with each single symptom.

At baseline, children indicated symptoms of greatest challenge to emotional wellbeing in just under 4 questions (mean=3.71; 18.5%). This decreased at Time 1 to a mean of 3.24 questions (16.2%), and showed a further decrease in the mean number of questions answered with a '3' or '2' to 3.00 (15.0%) at Time 2. These results indicate that the self-reporting of symptoms of greatest challenge to emotional wellbeing in the *Emotional Wellbeing Questionnaire* (CES-DC) was decreasing over time. This decrease in number of responses is small and caution should be taken when making any inferences from these changes over time.

To investigate the actual symptoms where the children changed their scores on the *Emotional Wellbeing Questionnaire* over time, each question was examined for the number of children who scored symptoms of greatest challenge to emotional wellbeing within each domain (i.e. those questions answered with a '2' or a '3').

As indicated in Table 9, the number of responses showing symptoms of greatest challenge to emotional wellbeing from baseline to Time 2 decreased in 50% of the questions (10 questions: 1, 2, 3, 4, 6, 9, 11, 14, 18, and 20). This indicates that there was an improvement in emotional wellbeing, with less children responding to these questions with a '3' or a '2'. A further 4 questions showed no change in the number of children showing symptoms of greatest challenge to emotional wellbeing from baseline to Time 2. In contrast, there were 6 questions where the number of responses with a '2' or a '3' increased from baseline to Time 2. There was one question (symptom) where none of the children rated a score of a '3' or a '2' at Time 2 - question 6 ("I felt down and unhappy"), suggesting a slight improvement in the children who previously scored this a '3' or a '2'.

Table 9 shows each of the questions (symptoms) and illustrates the number of responses rated a score of a '3' or a '2' that is, the areas of greatest emotional challenge to this group of children. For example, the highest number of responses (n=6) of greatest challenge related to physical problems in getting started in doing things and lack of positive feelings that the children weren't as good as other children.

This information may assist school principals, teachers, support staff, parents and the children themselves, to further understand the problems and feelings underlying children's behaviours.

Table 7: Frequency of symptoms of greatest challenge to emotional wellbeing in the Physical, Depressed, Positive* and Interpersonal domains (aggregated responses 'some' & 'a lot') examined question by question for questionnaire completer children omitting outliers

Question no.	Children (n=17) Domain	Aggregated responses: 'some' & 'a lot' Number of responses (n) & percentage (%)					
		Baseline		Time 1		Time 2	
		n	%	n	%	n	%
Physical problems							
1	I was bothered by things that usually don't bother me ¹	3	17.6	5	29.4	1	5.9
2	I did not feel like eating, I wasn't very hungry ¹	4	23.5	3	17.6	3	17.6
5	I felt like I couldn't pay attention to what I was doing ²	4	23.5	3	17.6	4	23.5
7	I felt like I was too tired to do things ^{2,3}	5	29.4	5	29.4	5	29.4
11	I didn't sleep as well as I usually sleep ¹	4	23.5	4	23.5	3	17.6
13	I was more quiet than usual ⁴	1	5.9	2	11.8	2	11.8
20	It was hard to get started doing things ¹	6	35.3	2	11.8	2	11.8
<i>Total number of responses</i>		27		24		20	
Depressed feeling							
3	I wasn't able to feel happy, even when my family or friends tried to help me feel better ¹	3	17.6	1	5.9	1	5.9
6	I felt down and unhappy ¹	4	23.5	3	17.6	0	-
9	I felt like things I did before didn't work out right ¹	3	17.6	4	23.5	2	11.8
10	I felt scared ⁴	2	11.8	3	17.6	4	23.5
14	I felt lonely, like I didn't have any friends ¹	2	11.8	1	5.9	1	5.9
17	I felt like crying ²	3	17.6	0	-	3	17.6
18	I felt sad ¹	3	17.6	1	5.9	1	5.9
<i>Total number of responses</i>		20		13		12	
Positive feeling*							
4	I felt like I was just as good as other kids ¹	6	35.3	6	35.3	4	23.5
8	I felt like something good was going to happen ⁴	5	29.4	7	41.2	7	41.2
12	I was happy ⁴	1	5.9	1	5.9	2	11.8
16	I had a good time ⁴	0	-	3	17.6	1	5.9
<i>Total number of responses</i>		12		17		14	
Interpersonal relationship problems							
15	I felt like kids I know were not friendly or that they didn't want to be with me ⁴	2	11.8	0	-	3	17.6
19	I felt people didn't like me ²	2	11.8	1	5.9	2	11.8
<i>Total number of responses</i>		4		1		5	

*Positive feelings reversed items (3=not at all and 2=a little)

¹ Showed a decrease in the number of children with a 2 or 3 from baseline to Time 2

² Showed no change in the number of children with a 2 or 3 from baseline to Time 2

³ Showed no change across all three time periods

⁴ Showed an increase in the number of children with a 2 or 3 from baseline to Time 2

5.1.8 Child / Parent comparisons: Emotional Wellbeing Questionnaire

Each child participant and their parent were given a numerical identifier to ensure matching anonymity (e.g. C1 with P1). These identifiers enabled analysis of data for between-group comparisons (child/parent groups). To conduct this analysis, question 14: "I felt lonely, like I didn't have any friends"; was omitted from the child questionnaire, to match the questions in the parent questionnaire following post-pilot adjustment to the parent questionnaire.

It is important to note in the analyses below that the number of matched child-parent pairs varied over each time point and some of these matched pairs do not repeat across all three time points. There were 20 pairs (83.3%) at baseline, 13 pairs (54.2%) at Time 1, and 7 pairs (29.2%) at Time 2, with a total of 6 child-parent pairs of data (25%) across all three time points.

The following descriptive analysis looks at the corresponding matching pairs of data - child to parent at each of the three time points (Table 10).

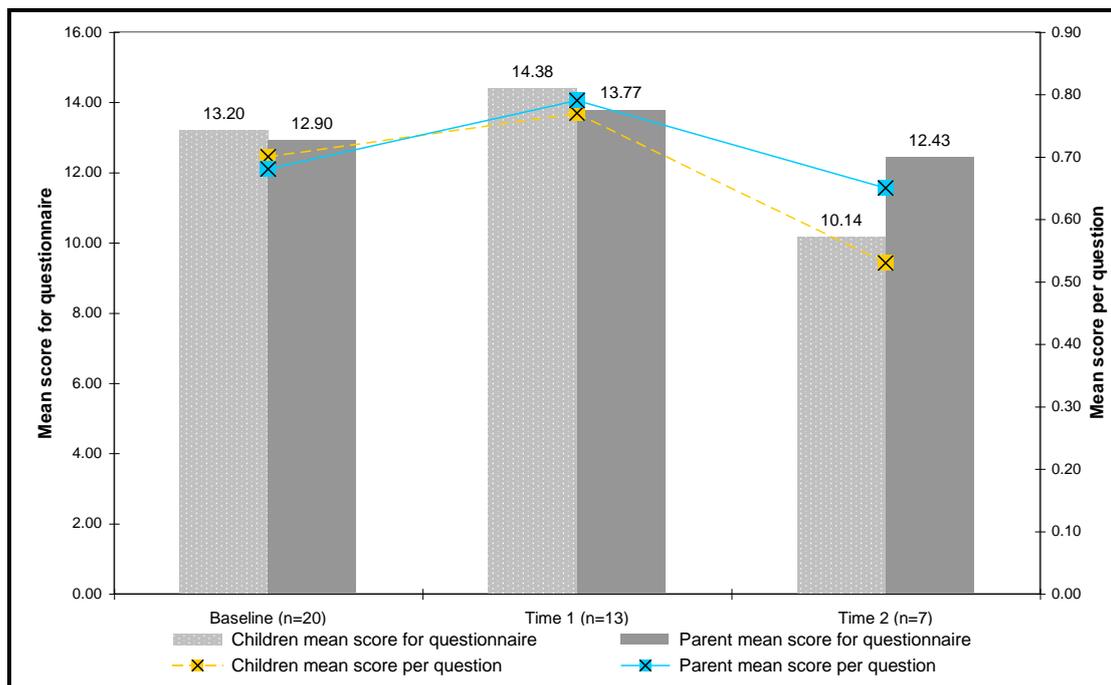
The children scored themselves slightly higher at Time 1, but lower than baseline at Time 2. A similar pattern can be seen from the parents mean scores. The median score for children was 10 at baseline, 11 at Time 1, and decreasing to 7 at Time 2, with the parent median score starting at 8.5 increasing to 12 at Time 1 and decreasing slightly to 11 at Time 2. It should be noted that only one of the two outliers indicated above appears in the baseline data, and the other outlier appeared in the Time 1 data (i.e. number 18 at baseline only and number 23 at Time 1 only). Neither of these outliers has matched child-parent data at Time 2. This impacts on the aggregated results at each time point.

As reported in Table 10, the mean score per question varied slightly over the three time points for both children and parents. Once again, the change in mean score is small and caution should be taken when making any inferences from these results (Figure 13).

Table 8: Matched child-to-parent pairs emotional wellbeing scores over time

	Baseline	Time 1	Time 2
No. of matched pairs (% of total sample n=24)	20 (83.3%)	13 (54.2%)	7 (29.2%) ^b
Children			
Mean score (whole questionnaire) <i>M</i> (<i>SD</i>)	13.20 (9.67)	14.38 (12.39)	10.14 (11.05)
Range	1-32	1-43	0-33
Median	10	11	7
Mode	1 ^a	10	7
Mean score (per question) <i>M</i> (<i>SD</i>)	0.70 (0.53)	0.77 (0.68)	0.53 (0.58)
Parents			
Mean score (whole questionnaire) <i>M</i> (<i>SD</i>)	12.90 (9.82)	13.77 (10.25)	12.43 (10.89)
Range	1-31	4-41	0-31
Median	8.5	12	11
Mode	4	12	0 ^a
Mean score (per question) <i>M</i> (<i>SD</i>)	0.68 (0.52)	0.79 (0.54)	0.65 (0.57)
^a Multiple modes exist. The smallest value is shown			
^b Caution should be taken when making inferences from this small sample size of 7 matched pairs			

Figure 7: Overall child / parent comparisons for the Emotional Wellbeing Questionnaire



NB: There are only 6-matched pairs across all three time points

To further investigate for differences between the child- and parent-groups on their emotional wellbeing scores across time a Mann-Whitney U test was conducted for each time point. There was no statistically significant difference between the two groups at each time point ($U_B = 195.000$, $Z_B = -.136$, $p = .892$; $U_{T1} = 83.000$, $Z_{T1} = -.077$, $p = .939$; $U_{T2} = 21.500$, $Z_{T2} = -.385$, $p = .700$). Thus, whilst the total scores showed difference between the two groups (parents scoring their children lower than the children did themselves) at each time point, there is no statistically significant difference in scores between the two sets of scores (parent-child).

A further analysis was conducted comparing the children-parent matched pairs of scores across the domains of physical, positive feelings, and interpersonal relationships at each time point. Recall that one of the depressed feelings questions was omitted from the parent questionnaire. Consequently, the comparisons for the depressed feeling domain below have the question: "I felt lonely, like I didn't have any friends" – omitted from the child results.

As shown in Table 11, for the physical domain, the mean scores for the children were higher than their parents across the three time points, with the child and parent groups indicating a similar trend in change of scores over time, indicating the children felt slightly more challenged than their parents felt they were. For the depressed feelings domain, the mean scores for the children decreased over the time points, indicating that the children were less challenged over time, whereas at baseline the parent's scores were lower than the children's scores, increasing to being higher than the children's scores at Time 2. This suggests that the parents perceived their children to be slightly more challenged than the children felt. For the positive feelings domain, the mean scores of the children at baseline and Time 2 decreased, indicating that the children felt more positive feelings over time. In contrast, the parents mean scores increased across the three time points, suggesting that the parents perceived their children to be not as positive as the children felt themselves to

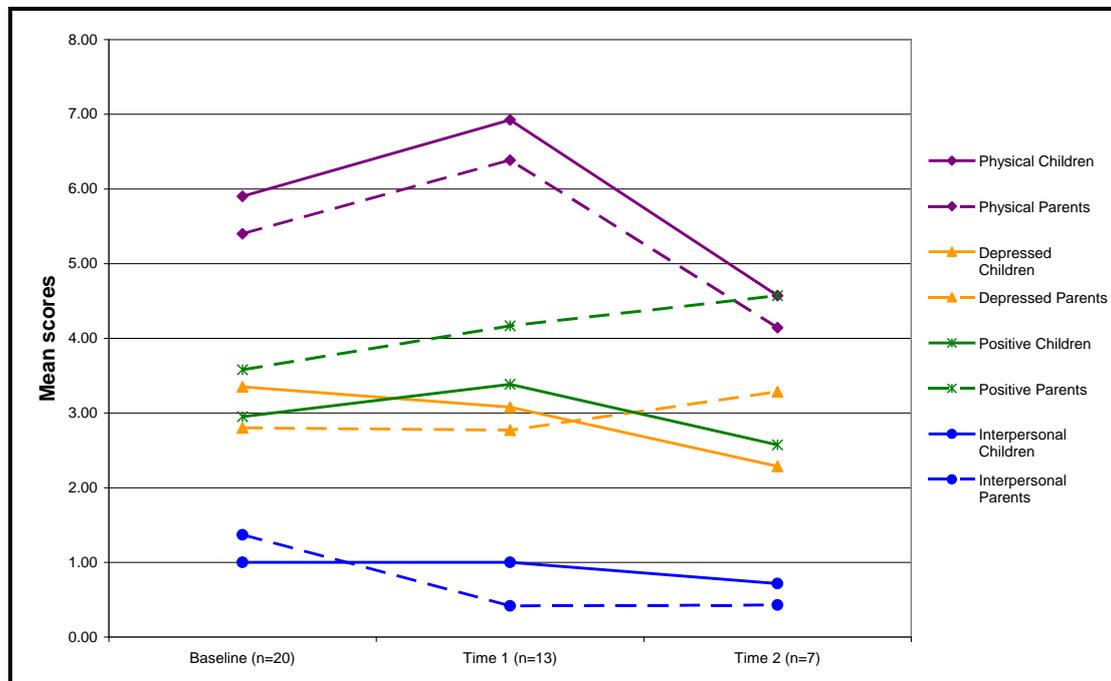
be. For the interpersonal relationships domain both children and parents showed a decrease in mean score over time, with the parents scoring the children slightly more challenged in this domain at baseline, and slightly less challenged following Journeywork. Figure 14 illustrates the changing patterns of scores over time.

In summary, for *this sub-group of children matched-pairs with their parents*, the children's mean scores suggest that these children felt better over time in all four domains. The pattern of the parents mean scores suggest that they perceived their children to have improved emotional wellbeing in the physical and interpersonal relationships domains, and not in the depressed and positive feelings domains.

Table 9: Children / Parent matched pairs comparison of mean domain scores (standard deviation) over time

Mean (SD)		Baseline n=20	Time 1 n=13	Time 2 n=7
Physical	Children	5.90 (5.01)	6.92 (5.63)	4.57 (4.35)
	Parents	5.40 (4.11)	6.38 (4.07)	4.14 (4.10)
Depressed feelings	Children	3.35 (3.54)	3.08 (3.38)	2.29 (4.79)
	Parents	2.80 (3.17)	2.77 (4.27)	3.29 (4.07)
Positive feelings	Children	2.95 (2.35)	3.38 (3.36)	2.57 (1.62)
	Parents	3.58 (2.48)	4.17 (2.48)	4.57 (3.05)
Interpersonal relationships	Children	1.00 (1.38)	1.00 (1.47)	0.71 (1.25)
	Parents	1.37 (1.80)	0.42 (0.90)	0.43 (1.13)

Figure 8: Children / Parent comparison of mean scores by domain over time



A matched-pairs analysis was also conducted on those children and parents who completed all three *Emotional Wellbeing Questionnaires*. It is important to note that this analysis includes only 6-matched pairs of children and parents (25% of the total sample). Therefore, any conclusions from this analysis should be made with caution.

Reviewing raw scores, with the adjustment made by omitting question 14 from the children's questionnaire, there was a decrease in the scores for five of the matched pairs over time indicating an improvement in emotional wellbeing reported by both the children and their parents. Only one child-parent pair showed an increase in score from baseline to Time 2 (ID 13) (Table 12).

Table 10: Child-parent matched pairs who completed all three assessment time points: Raw scores over time

Matched pairs n=6		Baseline	Time 1	Time 2	Change in scores Baseline to Time 2
ID 2	Child	32	20	7	-25 ^a
	Parent	27	22	11	-16 ^a
ID 3	Child	6	3	5	-1 ^a
	Parent	4	9	3	-1 ^a
ID 4	Child	10	8	4	-6 ^a
	Parent	4	5	0	-4 ^a
ID 7	Child	19	17	15	-4 ^a
	Parent	23	19	22	-1 ^a
ID 10	Child	10	1	0	-10 ^a
	Parent	10	5	7	-3 ^a
ID 13	Child	25	36	33	8 ^b
	Parent	26	41	31	5 ^b
<i>Child mean score (SD)</i>		<i>17.00 (10.12)</i>	<i>14.17 (13.08)</i>	<i>10.67 (12.01)</i>	
<i>Parent mean score (SD)</i>		<i>15.67 (10.89)</i>	<i>16.83 (13.83)</i>	<i>12.33 (11.93)</i>	

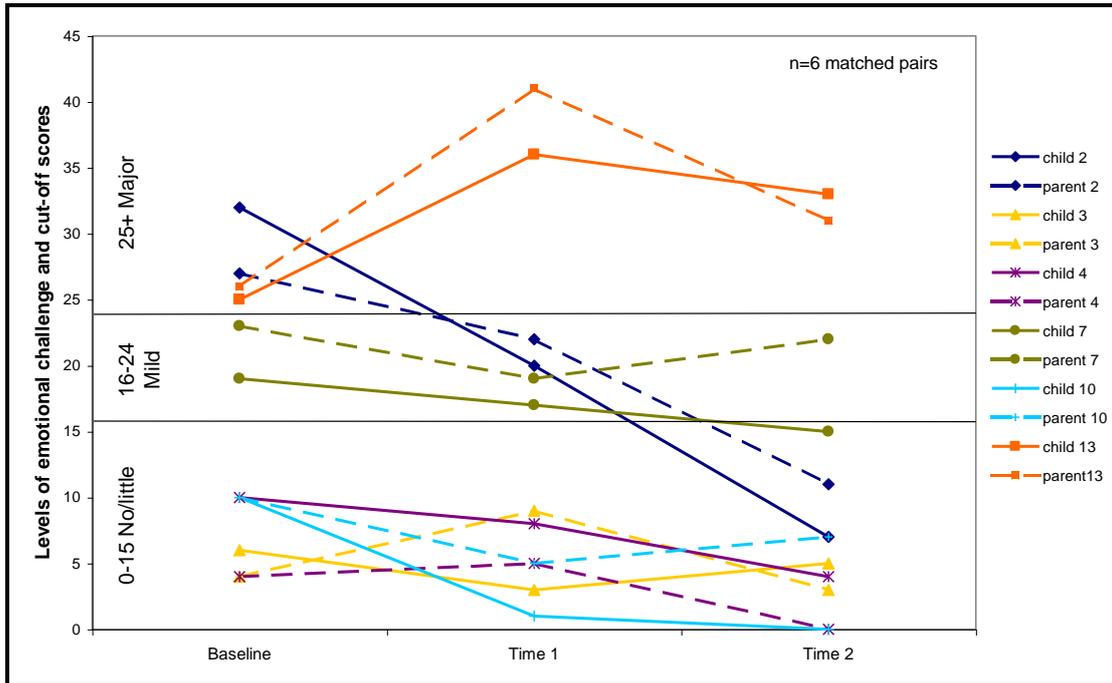
^a = improved Emotional Wellbeing score from Baseline to Time 2 (i.e. negative scores).

^b = did not improve in Emotional Wellbeing score from Baseline to Time 2 (i.e. positive scores).

A further analysis comparing any change in the levels of challenge to emotional wellbeing cut-off points between the matched pairs was also conducted to identify whether the parents perceived their children to be experiencing no/little emotional challenge, mild and major emotional challenge over time.

As illustrated in Figure 15, the raw scores of both the parents and their children were within the same levels of challenge to wellbeing at baseline and Time 1. At Time 2, one child's scores were within the mild challenge level (16-24 range), whilst their parent's scores were just within the no/little challenge level (0-15 range).

Figure 9: Child-parent matched pairs: Raw scores across time by level of challenge to emotional wellbeing cut-off points



To analyse the scores over time for each group, a Friedman test was conducted. Whilst the scores show a change over time, there was no statistically significant differences in the scores across the three time points of baseline, Time 1, and Time 2 for either the children or the parents on the *Emotional Wellbeing Questionnaire* ($\chi^2_{child} = 5.333$, $n=6$, $df=2$, $p = .069$; $\chi^2_{parent} = 2.333$, $n=6$, $df=6$, $p = .311$). Thus, each group did not differ significantly over the three time points.

To investigate these six pairs of matched data for differences between the child and parent groups on their emotional wellbeing scores across time, a Mann-Whitney U test was conducted for each time point. No statistically significant difference was found between the groups at each time point ($U_{baseline} = 16.000$, $Z_{baseline} = -.323$, $p=.747$; $U_{Time 1} = 14.000$, $Z_{Time 1} = -.642$, $p=.521$; $U_{Time 2} = 17.000$, $Z_{Time 2} = -.161$, $p=.872$). Thus, whilst the total scores showed differences between the two groups, the two sets of scores are not significantly different from each other at the independent time points.

These results suggest that overall, the parents' perception of the emotional wellbeing of their children was similar to how their children perceived themselves to be feeling. Even so, the numbers on which this conclusion is made is very small and a larger sample would be needed to confirm these findings.

5.2 Visual analogue scale (VAS) of happy/sad emotion faces

Prior to and following each Journey session, the children were asked to colour-in one face on a six-point Likert scale of happy to sad faces, where 1=Happy through to 6=Very sad (Figure 4, 'methods' chapter). The lower the self-reported VAS emotion score (i.e. towards 1), the happier the child felt. The children's sheets did not have the actual scores documented. The total sample (n=24) results are reported in this section because of the direct relationship of the scores to each Journeywork session attended; each pre- and post-session VAS represents a snapshot in time, and gives an indication of the direct impact of Journeywork on the child's wellbeing.

Not all of the children attended all of the Journeywork sessions, and of those who did attend Journeywork sessions, there were 7 occasions when the forms were filled out incorrectly and 6 occasions where the forms were not filled out at all. Two reasons were identified for the children not completing the forms or not completing them correctly: 1) they were in a rush to leave and attend another school session, and 2) they were playing games in filling out the forms.

5.2.1 VAS emotion scores: Total sample over time

The children's VAS emotion scores pre- and post- each Journey session were recorded and the difference in scores calculated by subtracting the 'after' score from 'before' score. A negative result in the difference score indicates an improvement in VAS score and indicates that the children felt better on these occasions. Table 13 shows the results for Time 1 (following one term of Journeywork sessions) and Time 2 (following two terms of Journeywork sessions).

Table 11: Children’s mean VAS emotion scores before and after each Journey session for Time 1 and Time 2

n=24 Child's ID	Time 1			Time 2		
	Mean VAS score		Difference Time 1	Mean VAS score		Difference Time 2
	Before	After		Before	After	
1	3.00	1.83	-1.17 ^a	1.67	1.00	-0.67 ^a
2	1.80	2.20	0.40	1.60	1.40	-0.20 ^a
3	1.00	1.25	0.25	1.33	1.00	-0.33 ^a
4	2.00	1.25	-0.75 ^a	1.43	1.00	-0.43 ^a
5	3.17	2.33	-0.83 ^a	2.00	1.67	-0.33 ^a
6	2.75	2.00	-0.75 ^a	1.00	1.50	0.50
7	2.00	1.60	-0.40 ^a	3.00	2.50	-0.50 ^a
8	1.80	1.60	-0.20 ^a	1.00	1.25	0.25
9	2.67	2.50	-0.17 ^a	2.80	3.00	0.20
10	1.71	1.43	-0.29 ^a	1.75	1.25	-0.50 ^a
11	2.75	2.25	-0.50 ^a	2.75	2.00	-0.75 ^a
12	3.50	2.75	-0.75 ^a	1.83	2.67	0.83
13	2.00	1.60	-0.40 ^a	1.60	1.40	-0.20 ^a
14	2.00	1.40	-0.60 ^a	1.50	1.00	-0.50 ^a
15	1.13	1.00	-0.13 ^a	1.00	1.00	0.00
16	2.17	2.50	0.33	2.00	2.00	0.00
17	2.67	2.67	0.00	3.00	1.71	-1.29 ^a
18	3.00	2.67	-0.33 ^a	3.00	2.67	-0.33 ^a
19	1.63	1.00	-0.63 ^a	1.67	1.17	-0.50 ^a
20	1.17	1.83	0.67	1.00	1.00	0.00
21	2.43	1.71	-0.71 ^a	3.50	2.25	-1.25 ^a
22	2.00	2.00	0.00	1.29	2.43	1.14
23	4.60	1.80	-2.80 ^a	4.60	2.80	-1.80 ^a
24	2.50	2.25	-0.25 ^a	3.00	1.29	-1.71 ^a
Mean (SD)	2.31 (.815)	1.89 (.529)	-0.42^a	2.06 (.939)	1.71 (.674)	-0.35^a
	<i>Felt happier Time 1 (n, %)</i>		<i>18 (75%)</i>	<i>Felt happier Time 2 (n, %)</i>		<i>16 (66.7%)</i>
	<i>No change Time 1 (n, %)</i>		<i>2 (8.3%)</i>	<i>No change Time 2 (n, %)</i>		<i>3 (12.5%)</i>
	<i>Didn't feel as happy Time 1 (n, %)</i>		<i>4 (16.7%)</i>	<i>Didn't feel as happy Time 2 (n, %)</i>		<i>5 (20.8%)</i>

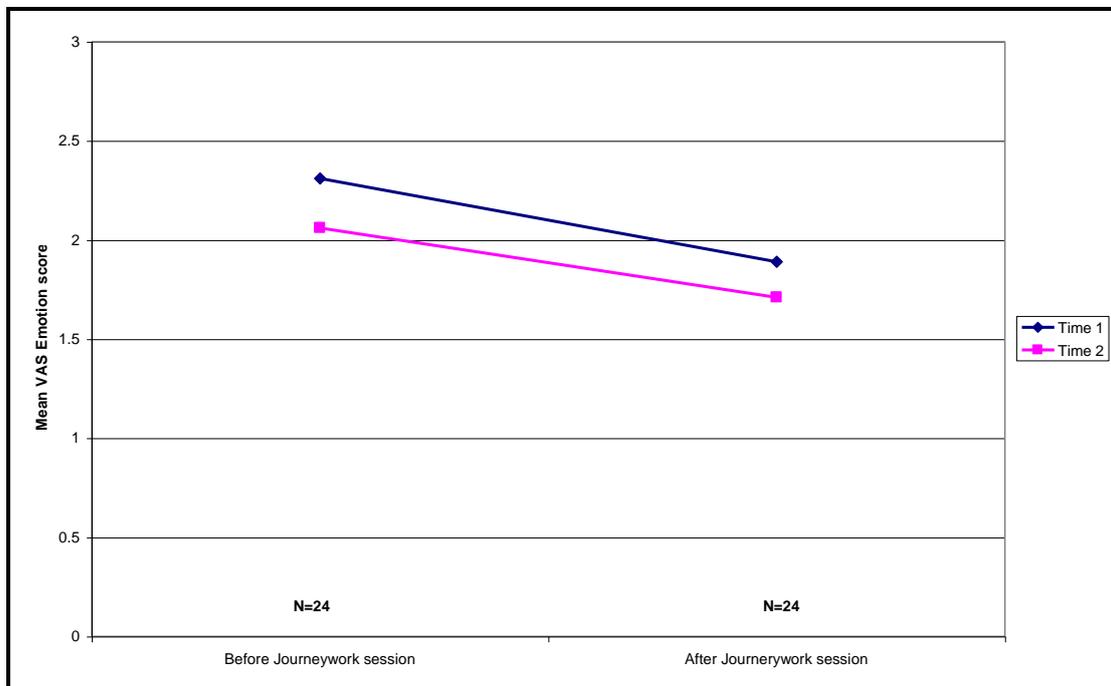
^a = Improved VAS emotion scores over time (i.e. negative difference scores).

As can be seen in Table 13, at Time 1, 75% of children showed a decrease in mean VAS emotion scores indicating that they felt happier, with 8.3% of the children showing no change, and only 16.7% of children showing a slight increase in mean score indicating that they did not feel happier from before to after the session. At Time 2, 66.7% of children showed a decrease in mean VAS emotion scores indicating that they felt happier, with 12.5% showing no change, and 20.8% of children showing a slight increase in mean score indicating that they didn't feel as happy from before to after the session.

Overall, the children felt happier indicated by a decrease in mean VAS emotion scores at both Time 1 and Time2 (i.e. mean_{T1before}=2.31, mean_{T1after}=1.89 and mean_{T2before}=2.06, mean_{T2after}=1.71 respectively). This is illustrated in Figure 16. To test whether the change in VAS emotion scores at each time point was significant; a Wilcoxon Signed Rank test was conducted. The results pre-session to post-session were statistically significant at both Time 1 ($Z_{Time\ 1}=-2.726, p<.01$) and Time 2 ($Z_{Time\ 2}=-2.465, p<.05$), indicating a short-term change from before to after attending a Journey session.

These results suggest that the Journey sessions were well received and the children were happier or at ease post-session and provide evidence to support implementing Journeywork for direct changes to children’s emotional wellbeing.

Figure 10: Mean VAS emotion scores before and after each Journey session at Time 1 and Time 2



5.2.2 Impact of number of Journey sessions attended on VAS emotion scores

To investigate the impact of Journeywork on the VAS emotion scores, further analysis was conducted. The number of sessions attended by the children following one term (Time 1) and two terms (Time 2) of Journeywork are shown in Table 14.

Table 12: Number of sessions attended by the total sample of children

Number of sessions	Time 1	Time 2
	Number of children n (%) (n=24)	Number of children n (%) (n=24)
3 or less	1 (4.2%)	6 (25.0%)
4	2 (8.3%)	7 (29.2%)
5	7 (29.2%)	6 (25.0%)
6	7 (29.2%)	5 (20.8%)
7	3 (12.5%)	-
8	4 (16.7%)	-

The mean number of sessions attended at Time 1 was 5.88 ($SD=1.36$; median=6). This reduced slightly at Time 2 to a mean of 4.29 sessions ($SD=1.30$; median=4) (Table 15).

The mean VAS emotion score in relation to the mean number of sessions attended is illustrated in Figure 17.

To examine whether there was any relationship between the number of sessions attended by the children and their mean VAS emotion scores, a Spearman's Rank Order Correlation was conducted. The number of sessions attended by the children was statistically significant to their before and after mean VAS emotion scores at Time 1 ($r_{\text{before}} = -.555, p = .005; r_{\text{after}} = -.538, p = .007$), indicating there was a strong correlation between the number of sessions attended and the mean VAS scores (i.e. as the number of sessions increased, the children's mean VAS scores decreased, indicating that they felt happier following Journeywork sessions). At the Time 2 interval, the number of sessions attended by the children was less and found to not be statistically significant to the mean VAS before and after scores, and the correlations were very weak ($r_{\text{before}} = .038, p = .859; r_{\text{after}} = .014, p = .947$) (Table 15).

These findings provide evidence to support that with attendance at regular Journey sessions over time, children's emotional wellbeing can increase.

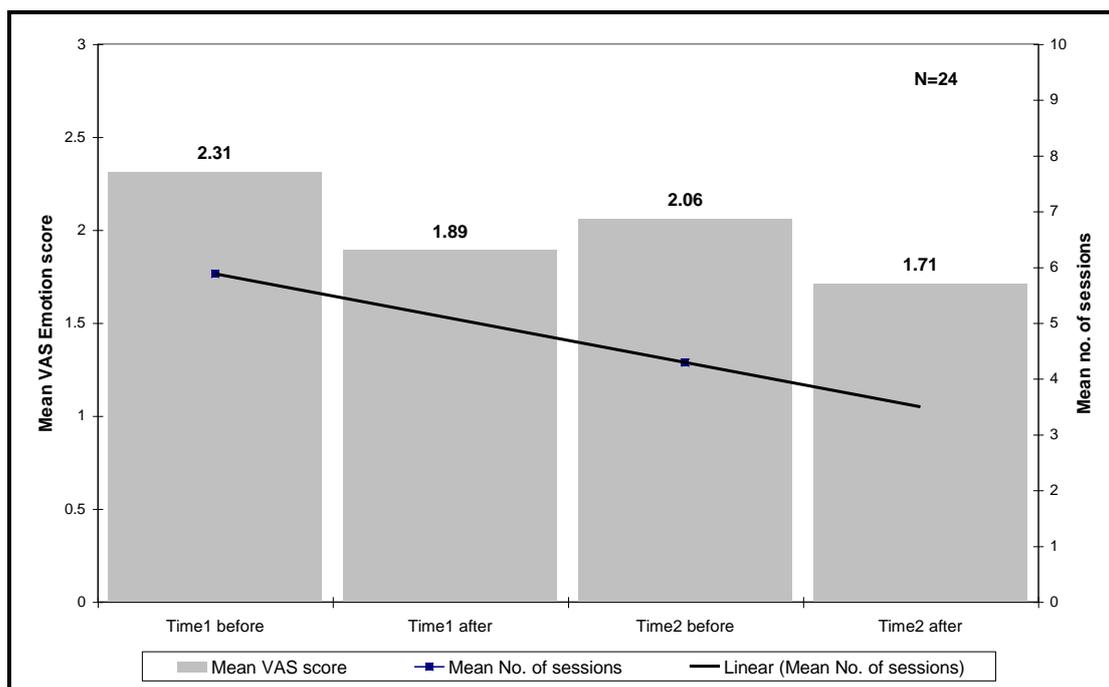
Table 13: Number of sessions attended by VAS emotion scores before and after Journey sessions at Time 1 and Time 2

Children (<i>n</i> =24)	Time 1		Time 2	
	Mean VAS Emotion score (SD)	2.31 (.815)	1.89 (.529)	2.06 (.939)
Minimum VAS Emotion score	1.00	1.00	1.00	1.00
Maximum VAS Emotion score	4.60	2.75	4.60	3.00
Median VAS Emotion score	2.09	1.83	1.71	1.45
Mean No. of sessions (SD)	5.88 (1.36)		4.29 (1.30)	
Median no. of sessions	6		4	
Mode no. of sessions	5 ^a		4	
Min – Max no. of sessions	3 – 8		2 – 6	
Spearman's rho	-.555	-.538	.038	.014
Sig. (2-tailed)	.005*	.007	.859	.947

^a Multiple modes exist. The smallest value is shown

* Correlation is significant at the 0.01 level (2-tailed).

Figure 11: Number of sessions attended by VAS Emotion scores before and After at Time 1 & Time 2



5.3 Chapter summary

The results of the *Emotional Wellbeing Questionnaire* show that there was no statistical significance to changes in overall group emotional wellbeing scores over time. Of practical significance is the finding that 63.2% (n=12) of the children completers (n=19) decreased their raw scores from baseline to Time 2, indicating an improvement in emotional wellbeing following completion of Journeywork. Further analysis showed that 21% (n=4) of children improved to the degree that they changed from one level to another level of wellbeing, and one child (5.3%) changed two levels – from major to little challenge to emotional wellbeing. Eleven children 57.9% remained at the same level of wellbeing or challenge to wellbeing. Three children (15.8%) declined in emotional wellbeing from little challenge to mild challenge. This is not surprising because the children were becoming more aware of, and feeling their emotions and one of these children was experiencing difficulties at home during this period of time.

Analysis of the physical, depressed, positive and interpersonal domain sub-group scores indicated that while there was a small change over time, there was no statistically significant difference in the scores across the three time points of baseline, Time 1, and Time 2. On further analysis of the individual children completers with outliers omitted (n=17) the greatest improvement in emotional wellbeing occurred in the depressed feelings domain with 64.7% of the children showing a decrease in depressed feelings scores from baseline to Time 2. This improvement in the depressed feelings domain is of practical significance in supporting the implementation of Journeywork.

For the other domains, 47.1% of children showed an improvement in the physical domain, 41.2% showed an improvement in the positive feelings domain, and 35.3% showed an improvement in the interpersonal domain. In contrast, individual children showed a decline in emotional wellbeing in each domain with 41.2% of children declining in the

physical problems and positive feelings domains. The interpersonal relationships domain showed the greatest number of children with no change in their scores from baseline to Time 2 (n=9, 52.9%). These results are not surprising, because the nature of Journeywork is to increase children's awareness of their feelings. The finding that the majority of children improved in the depressed feelings domain show that overall, they were happier.

In relation to the prevalence of symptoms of greatest challenge, that is, where the children scored a symptom (question) as being present '2= some' or a '3= a lot', the results show that there was a decrease in the number of '2' and '3' responses over time in 50% of the questions. This is suggestive of an improvement in emotional wellbeing, with less children responding to these questions with a '3' or a '2'. A further 4 questions showed no change in the number of children showing symptoms of greatest challenge to emotional wellbeing from baseline to Time 2. In contrast, there were 6 questions where the number of responses with a '2' or a '3' increased from baseline to Time 2. There was one question (symptom) where none of the children rated a score of a '3' or a '2' at Time 2 - question 6 ("I felt down and unhappy"), suggesting a slight improvement in the children who previously scored this a '3' or a '2'. These changes in number of responses are small however, and caution should be taken when making any inferences from these changes over time.

Analyses comparing child and parent scores showed no statistical significance in scores over time. These results suggest that overall, the parents' perception of the emotional wellbeing of their children was similar to how their children perceived themselves to be feeling. Even so, the numbers on which this conclusion is made is very small and a larger sample would be needed to confirm these findings. It is important to note that by Time 2, there were only 6 child-parent pairs of data across all three time points

Results from analysis of the visual analogue scale of happy/sad faces pre-session to post-session after receiving Journeywork indicated a statistically significant change in wellbeing at both Time 1 and Time 2 ($Z_{\text{Time1}} = -2.726, p < .01$; $Z_{\text{Time2}} = -2.465, p < .05$). This finding provides evidence to support implementing Journeywork on a regular basis. It is an important finding for both parents and teachers who could learn and apply Journey tools daily to assist children manage their emotions as they arise.

The most significant findings of the emotional wellbeing measures relate to the impact of the number of Journeywork session attended on the emotional wellbeing of the children. Analysis of the results of the *Emotional Wellbeing Questionnaire* showed that there was a statistically significant relationship between the number of Journey sessions attended and decreases (improvement) in emotional wellbeing scores. From baseline to Time 1, when more sessions were attended by the children, the relationship was a strong negative correlation ($r = -.655$) indicating that as the total number of sessions increased over time, the children's total score decreased significantly (emotional wellbeing improved). This relationship was weaker and not statistically significant at the Time 2 interval, where the mean number of Journeywork sessions attended was decreasing. Analysis of the VAS showed that the number of sessions attended by the children was statistically significant to their before and after mean VAS emotion scores at Time 1 ($r_{\text{before}} = -.555, p = .005$; $r_{\text{after}} = -.538, p = .007$), indicating there was a strong correlation between the number of sessions attended and the mean VAS scores. As the number of sessions increased, the children's mean VAS scores decreased significantly, indicating that they felt happier following Journeywork sessions. At the Time 2 interval, the number of sessions attended by the children was less and found to not be statistically significant to the mean VAS before and after scores, and the correlations were very weak ($r_{\text{before}} = .038, p = .859$; $r_{\text{after}} = .014, p = .947$).

These findings are promising, suggesting that with regular Journeywork over time, children's emotional wellbeing can improve.