

8.3 EXPLORING THE EFFECTIVENESS OF 1-2-3 MAGIC IN ENHANCING PARENT SELF-EFFICACY AND MANAGING CHILD PROBLEM BEHAVIOURS

As described in Section 8.1 there was a dropout rate of 25% from baseline to post-intervention. Therefore, although 100 parents were recruited at the start of the study, only 75 parents completed the 6-week course, thus the pre and post intervention analysis (within-groups effects) includes 75 parents. However, for the intervention vs control group (between-groups effects) analysis, the overall dropout rates differ across analyses (Figure 27-29). Within-groups effects analysis and between-groups effects analysis was conducted.

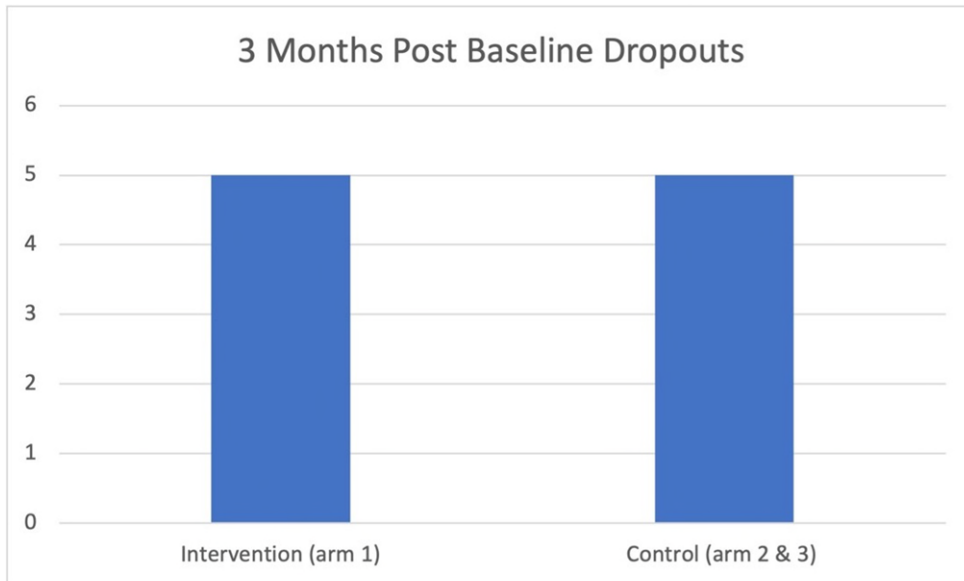


FIGURE 27.3 MONTHS POST BASELINE ANALYSIS DROPOUTS FOR INTERVENTION (ARM 1) VS CONTROL GROUPS (ARM 2 AND 3)

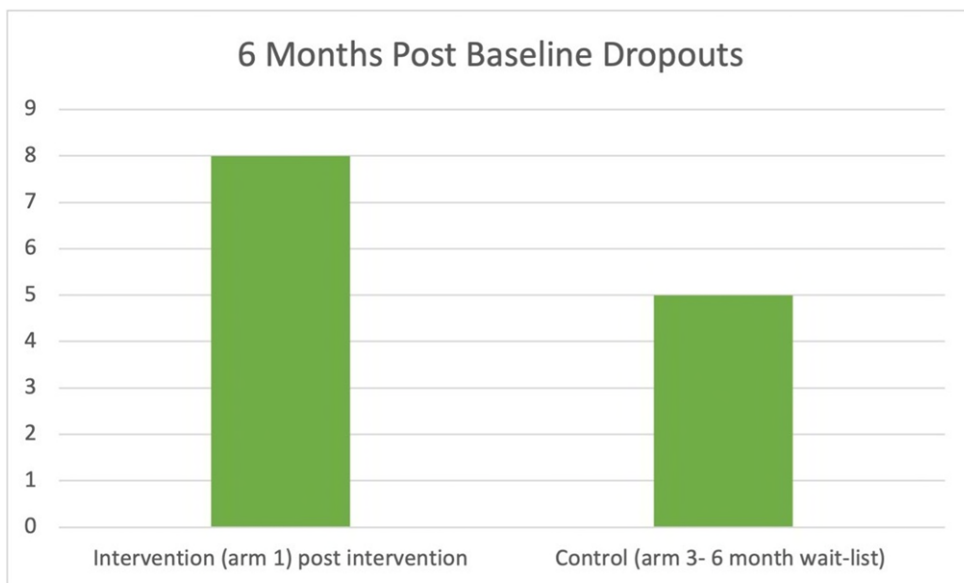


FIGURE 28.6 MONTHS POST BASELINE ANALYSIS DROPOUTS FOR INTERVENTION (ARM 1) VS CONTROL (ARM 3- 6 MONTHS WAIT-LIST)

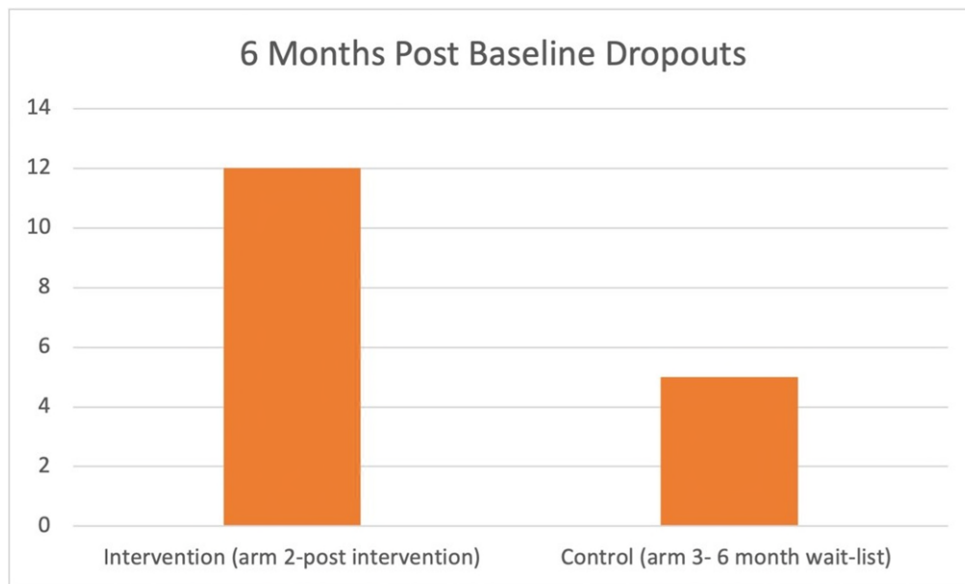


FIGURE 29.6 MONTHS POST BASELINE ANALYSIS DROPOUTS FOR INTERVENTION (ARM 2) VS CONTROL (ARM 3-6 MONTHS WAIT-LIST)

8.3.1 BETWEEN-GROUPS EFFECTS ANALYSIS (INTERVENTION VS CONTROL ANALYSIS)

Shapiro Wilks normality tests were used for all analyses to test whether the data were normally distributed. If data was normally distributed, either an independent or dependent t-test was carried out. If the data was not normally distributed, a Wilcoxon Signed-Rank test was used in place of a paired samples t-test and the Wilcoxon Rank-Sum test was used in place of the unpaired samples t-test. F tests were also used for unpaired analyses to test for homogeneity in variances when comparing between the three arms.

Unpaired t-tests were conducted to evaluate intervention group scores in comparison to control wait-list group scores. Additional unpaired t-test analyses were conducted to compare the baseline and post-intervention score differences between intervention and control groups. It is important to note that when interpreting the results, an increase of TOPSE scores is desirable and a decrease of ECBI-I and ECBI-P scores is desirable. It is also important to note that the clinical cut-off rate for the ECBI-I is 131-133 and 15 for the ECBI-P (Eyberg and

Robinson, 1983). The clinical cut off rate indicates significant behavioural problems, more severe than typically observed in the general population.

The consideration of statistical corrections for multiple testing, such as Bonferroni's test, was considered however ultimately dismissed for several reasons. Firstly, all analyses were pre-specified according to the protocol outlined in Chapter 6. Additionally, instead of solely relying on p-values, the interpretation of results also involves assessing effect size estimates (mean difference) to ensure a comprehensive evaluation of findings and draw appropriate conclusions. In addition, concerns were raised that implementing statistical corrections may increase the risk of overlooking opportunities for identifying effective interventions that could be further developed to improve patient outcomes. Therefore the decision was made not to apply corrections for multiple testing (Rothman, 1990), opting instead for a cautious approach in interpreting the results.

8.3.1.1 THREE MONTHS POST BASELINE: ARM 1 (IMMEDIATE INTERVENTION GROUP) V ARM 2 (3 MONTH WAITLIST GROUP) AND ARM 3 (6 MONTH WAITLIST GROUP)

Unpaired t-tests were also conducted. For this analysis the TOPSE scores of 22 parents in Arm 1, who attended the 1-2-3 Magic programme (Mean (M) =381.9 Standard Deviation (SD)=47.10) were compared to the 67 parents in arms 2 and 3 constituting as the control group (M=313, SD= 50.60), these scores exhibited a significant improvement in parent self-efficacy, $p < 0.001$ (Table 20). In addition, a notable comparison between the ECBI-I scores of the intervention group (M=139, SD=31.9) with those of the control group (M=167.3, SD=25.8) underscored significant improvements within the intervention group, $p < 0.001$. Shifting the focus, the exploration extended to ECBI-P scores, wherein a comparison between those who completed the 1-2-3 Magic programme (M=12.5, SD=8.22) and the control group (M=22.7, SD=6.56) revealed noteworthy outcomes. Importantly, the implementation of the 1-2-3 Magic programme corresponded with a substantial reduction in ECBI-P scores, $p < 0.001$. Overall, the intervention

group not only displayed commendable improvements in parent self-efficacy scores but also in child problem behaviour scores, both intensity scale and problem scales.

TABLE 20. THREE MONTHS POST BASELINE: INTERVENTION (ARM 1-IMMEDIATE INTERVENTION GROUP) VS CONTROL (ARM 2- 3-MONTH WAITLIST GROUP & ARM 3- 6 MONTH WAITLIST GROUP)

Measure	Intervention(n=22)		Control(n=67)			P Value
	Mean	SD	Mean	SD	Mean Difference	
TOPSE	381.9	47.10	313.0	50.60	69.3	p<0.001
ECBI-I	139	31.9	167.3	25.8	-27.3	p<0.001
ECBI-P	12.5	8.22	22.7	6.56	-10.2	p<0.001

Additionally, Table 21 displays the change in scores from baseline to 3 months post baseline compared between the intervention and control groups. Unpaired t-test were also carried out for this analysis. The scores indicate that TOPSE scores in the intervention group improved from baseline to 3 months post baseline (Mean difference=43.6, SD= 42.5) whereas in contrast the control group TOPSE scores deteriorated (Mean difference =-9.58, SD= 31.3), the difference between the intervention and control group was statistically significant (p<0.001). It was also noticed that the ECBI-I baseline vs 3 months post baseline scores also improved (decreased) in the intervention group by a mean difference of -22.5 (SD=18.3) whereas interestingly the scores got slightly numerically worse after 3 months on the wait-list groups (Mean difference= 3.22, SD=14.4), the difference between the intervention and control group was also significant (p<0.001). Wilcoxon rank sum analysis was used for the ECBI-P. Results for the ECBI-P replicated those of the ECBI-I as the intervention group improved scores by a median difference of -8 (IQR=-11 to -5.25), whereas the control group remained consistent with only a median difference change of 0.8 (IQR=-2 to 3)

from baseline to 3 months post intervention. Likewise, this association was significant ($p < 0.001$).

TABLE 21. THE CHANGE IN SCORES FROM BASELINE TO 3 MONTHS POST BASELINE: INTERVENTION VS CONTROL

Measure	Intervention (n=22)				Control (n=67)				P Value
	Mean difference	SD	Mdn difference	IQR	Mean difference	SD	Mdn difference	IQR	
TOPSE	43.6	42.5	31	11 to 71.25	-9.58	31.3	-8	-27 to 7.5	p<0.001
ECBI-I	-22.5	18.3	-20.5	-30.7 to -13.3	3.22	14.4	2	-5 to 11	p<0.001
ECBI-P	-8.64	6.8	-8	-11 to -5.25	0.8	4.68	1	-2 to 3	p<0.001*

* Wilcoxon rank sum test was used as an alternative to unpaired t-test as there were significant differences between the variances

8.3.1.2 SIX MONTHS POST BASELINE: ARM 1 (IMMEDIATE INTERVENTION GROUP) V ARM 3 (6 MONTH WAITLIST GROUP)

In this analysis, unpaired t-tests or their non-parametric equivalent were conducted to evaluate the impact of the 1-2-3 Magic intervention between two groups (Table 22). The first group (Arm 1) comprised 20 parents who received the intervention, while the second group (Arm 3) consisted of 31 parents on a 6-month waitlist control. Notably, the TOPSE scores of the intervention group (M=387, SD=56.10) who underwent the 1-2-3 Magic programme exhibited remarkable improvements in their TOPSE scores showcasing the effectiveness of the intervention in comparison to the control wait-list group (M=287, SD=52.40) ($p < 0.001$).

This positive trend can also be observed in ECBI-I scores, the intervention group (Arm 1) displayed significant reductions (Median (Mdn)=142, Inter Quartile Range (IQR)=112.50-165.20) compared to the waitlist control group (Mdn=161, IQR=150-181), ($p=0.01$), implying a notable improvement in the intervention group ECBI-I scores. Furthermore, for ECBI-P scores, the intervention group (Arm 1) displayed marked decreases (Mdn=11.50, IQR=2.50-21.50) compared to the control wait-list group (Mdn=22, IQR=18-26.50) ($p=0.003$). To summarise, these findings collectively highlight substantial score improvements for all outcome measures within the intervention groups compared to the control wait-list group, highlighting the effectiveness of the 1-2-3 Magic programme.

TABLE 22. SIX MONTHS POST BASELINE: INTERVENTION (ARM 1 -POST INTERVENTION) VS CONTROL (ARM 3-6 MONTH WAIT LIST)

Measure	Intervention (n=20)				Control (n=31)				Mean Difference	Mdn Difference	P Value
	Mean	SD	Mdn	IQR	Mean	SD	Mdn	IQR			
TOPSE	387	56.1	406	355.2- 419.8	287	52.4	298	244- 320	100	108	<0.001
ECBI-I	141	43.2	142	112.5- 165.2	167	23.2	161	150- 181	26	19	0.01*
ECBI-P	13.2	11	11.5	2.50- 21.50	21.8	5.92	22	18- 26.50	8.6	10.5	0.003*

* Wilcoxon rank sum test was used as an alternative to unpaired t-test as the data are not normally distributed

Table 23 displays the change in scores from baseline to 6 months post baseline compared between arm 1 post intervention and arm 3 (6month wait-list) control group. Within the intervention group, the TOPSE scores exhibited a notable ascent, increasing from their baseline values (Mdn difference=43, IQR=13.25 to 61.25). Conversely, the control group's TOPSE scores took a significant downturn (Mdn difference=-26, IQR= -54 to -10.50 , $p<0.001$), revealing a stark contrast between the two groups. Furthermore, the ECBI-I scores followed a similar pattern. In the intervention group, these scores displayed a noteworthy decrease, indicating an improvement with a Mdn difference of -17.5 (IQR=-33.25 to -3). Curiously, the scores in the wait-list control group showed a numerical upturn after 6 months on the wait-list (Mdn difference=-8, IQR= -12 to 6). Once again, the difference between the intervention and control groups holds statistical significance ($p<0.001$). The results for the ECBI-P mirror those of ECBI-I. The intervention group demonstrated improvement with a Mdn difference of -8.5 (IQR=-14 to -2), while the control group exhibited marginal change with a Mdn difference of -1 (IQR=-3.5 to 2). This association, too, is statistically significant ($p=0.001$), underscoring the consistency of the results across different analyses.

TABLE 23. THE CHANGE IN SCORES FROM BASELINE TO 6 MONTHS POST BASELINE: INTERVENTION (ARM 1 -POST INTERVENTION VS CONTROL (ARM 3- 6 MONTH WAIT LIST)

Measure	Intervention (n=20)				Control (n=31)				P Value
	Mean difference	SD	Mdn difference	IQR	Mean difference	SD	Mdn difference	IQR	
TOPSE	44.2	51.9	43	13.25 to 61.25	-32.2	33.9	-26	-54 to -10.50	p<0.001*
ECBI-I	-19.2	28	-17.50	-33.25 to -3	-3	14.3	-8	-12 to 6	p<0.001*
ECBI-P	-7.6	8.3	-8.5	-14 to -2	-0.7	4	-1	-3.5 to 2	P=0.001*

* Wilcoxon rank sum test was used as an alternative to unpaired t-test as the data are not normally distributed

8.3.1.3 SIX MONTHS POST BASELINE: INTERVENTION (ARM 2 - 3 MONTHS POST INTERVENTION) VS CONTROL (ARM 3- 6 MONTH WAIT-LIST)

Six months after the baseline assessment, the intervention group (Arm 2) consisting of 24 parents who underwent the 1-2-3 Magic intervention was compared to the control group (Arm 3) consisting of 31 parents who were on a 6-month wait list (Table 24). The results revealed a significant increase in the TOPSE scores for the intervention group ($M=357$, $SD=51$), indicating a significant improvement in their scores compared to the control group 3 months after intervention commencement ($M=287$, $IQR=52.40$) ($p<0.001$). ECBI-I scores between the parents in the intervention group ($Mdn=150$, $IQR=138.80-177.80$) demonstrated a decrease in median scores compared to those in the control group ($Mdn=161$, $IQR=150-181$) ($p=0.16$). Similarly, for ECBI-P scores, the intervention group ($Mdn=19.50$, $IQR=10.75-25$) showed a decrease in median scores compared to the control group ($Mdn=22$, $IQR=18-26.50$), $p=0.17$.

In summary, outcome measure scores can be observed comparing Arm 2 (intervention) and Arm 3 (control) group scores taken at 6 months post baseline in Table 24. The results indicate that there was a statistically significant difference in scores between the intervention group and the control group for the TOPSE score. This suggests that the intervention had a noticeable impact on parent self-efficacy compared to the control group 3 months after intervention commencement in Arm 2 (6 months post-baseline).

TABLE 24. 6 MONTHS POST INTERVENTION: (ARM 2 -POST INTERVENTION) VS CONTROL (ARM 3- 6 MONTHS WAIT-LIST)

Measure	Intervention (n=24)				Control (n=31)				Mean Difference	Median Difference	P Value
	Mean	SD	Mdn	IQR	Mean	SD	Mdn	IQR			
TOPSE	357	51	368	332.2- 388.5	287	52.4	298	244- 320	70	70	<0.001
ECBI-I	160	29.2	150	138.8- 177.8	167	23.2	161	150- 181	7	11	0.16*
ECBI-P	18.5	8.80	19.5	10.75- 25	21.8	5.92	22	18- 26.50	3.3	2.5	0.17*

*Wilcoxon rank sum test was used as an alternative to unpaired t-test as the data are not normally distributed

Table 25 displays the change in scores from baseline to 6 months post baseline compared between arm 2 post intervention and arm 3 (6 month wait-list) control group. Results mirror those of Table 23 especially for arm 3 as they are the same results. However, the mean difference change for the intervention group, whilst following the same trends as Table 23, slightly numerically differ. The TOPSE scores exhibited a notable ascent, increasing from their baseline values (Mdn difference=29, IQR=18.50-38.75). The ECBI-I scores followed also improved with a mean difference of -14.9 (SD=18.8). and the ECBI-P also demonstrated improvement with a mean difference of -7.4 (SD=5.4).

TABLE 25. THE CHANGE IN SCORES FROM BASELINE TO 6 MONTHS POST BASELINE: INTERVENTION (ARM 2 -POST INTERVENTION) VS CONTROL (ARM 3- 6 MONTH WAIT LIST)

Measure	Intervention (n=24)				Control (n=31)				P Value
	Mean difference	SD	Mdn difference	IQR	Mean difference	SD	Mdn difference	IQR	
TOPSE	28.12	34.1	29	18.50 to 38.75	-32.2	33.9	-26	-54 to -10.50	p<0.001*
ECBI-I	-14.9	18.8	-14	-32.8 to -1	-3	14.3	-8	-12 to 6	p=0.01
ECBI-P	-7.4	5.4	8.5	-11.3 to -4.3	-0.7	4	-1	-3.5 to 2	p<0.001

* Wilcoxon rank sum test was used as an alternative to unpaired t-test as the data are not normally distributed

8.3.2 WITHIN-GROUPS EFFECTS ANALYSIS (PRE-INTERVENTION VS IMMEDIATELY POST INTERVENTION)

Paired samples t-test or Wilcoxon Signed rank test analyses were conducted to compare pre-post intervention scores for the outcome measures for every individual. See Table 26 for pre-post scores and Figures 30-32 for a linear graph of the results over different time-points.

8.3.2.1 ALL ARMS BEFORE AND AFTER 1-2-3 MAGIC

Pre-post TOPSE scores exhibited significant improvement after the intervention. Before the intervention, the TOPSE scores had a mean of 315.10 (SD=56.80), while immediately after, they increased to a mean of 358.40 (SD=54.1), demonstrating a significant improvement in parent self-efficacy (mean difference= 43.3, $p<0.001$). Similarly, using the ECBI-I scale, the pre-intervention scores showed a mean of 167 (SD=25.50), which decreased to a mean of 148 (SD=28.8) post-intervention, signifying positive progress in the intensity of child problem behaviours (mean difference=18.6, $p<0.001$). Lastly, the ECBI-P scores exhibited similar trends, with pre-intervention scores having a mean of 22.80 (SD=6.40) and post-intervention scores a mean of 16.30 (SD=8.97), indicating notable improvement (mean difference=6.5, $p<0.001$). These findings collectively emphasise the efficacy of the 1-2-3 Magic intervention in enhancing outcomes across multiple outcome measures. Results are displayed in Table 26.

8.3.2.2 INDIVIDUAL ARMS BEFORE AND IMMEDIATELY AFTER 1-2-3 MAGIC – TOPSE

Arm 1 TOPSE scores from pre intervention (Mean=337, SD=60) and immediately post intervention (Mean=372, SD=55) indicate a marginally significant improvement in post intervention scores with a mean difference of 35, $p=0.05$. Arm 2 TOPSE scores from pre intervention (Mean=324.8, SD=52.30) and immediately post intervention (Mean=358.7, SD=54.1) also indicated a significant improvement in post intervention scores, mean difference=33.9, $p=0.02$. Similarly, to Arm 1 and 2, Arm 3 TOPSE scores from pre intervention

(Mean=280.7, SD=43.40) and immediately post intervention (Mean=344.4, SD=51.80) denoted a significant improvement in post intervention scores mean difference=53.7, $p<0.001$.

Overall, all arms displayed an improvement in TOPSE scores, post intervention.

8.3.2.3 INDIVIDUAL ARMS BEFORE AND AFTER 1-2-3 MAGIC - ECBI-I

The ECBI-I scores across all arms also showed an improvement as the scores numerically decreased comparatively between pre intervention and post intervention. Arm 1 ECBI-I scores from pre intervention (Mean=162.50, SD=27.30) and immediately post intervention (Mean=148, SD=32.40) indicate a numerical decrease in the mean score however, it did not display statistical significance (mean difference=14.5, $p=0.09$). On the other hand,

Arm 2 and arm 3 did exhibit a significant difference in pre-post intervention ECBI-I scores. Arm 2 pre intervention (Mdn=171, IQR=157-182) and immediately post intervention (Mdn=141, IQR=133-171) indicated a significant improvement in post intervention scores with a Mdn difference of 30, $p=0.01$.

Moreover, arm 3 ECBI-I pre intervention scores (Mean=166, SD=22.60) vs immediately post intervention scores (Mean=143.20, SD=26.50) also indicated a significant improvement in post intervention scores with a mean difference of=22.8, $p=0.003$.

8.3.2.4 INDIVIDUAL ARMS BEFORE AND AFTER 1-2-3 MAGIC - ECBI-P

Replicating the trend of the ECBI-I score results, arm 1 did not find a statistically significant difference, however arms 2 and 3 did. Arm 1 ECBI-P scores pre intervention (Mean=21.65, SD=6.79) compared to immediately post intervention (Mean=16.90, SD=10.1) exhibited a mean difference of 4.75, $p=0.11$. Preintervention (Mean=24.17, SD=6.41) ECBI-P scores for arm 2 vs post intervention (Mean=17.55, SD=8.69) indicated a significant improvement in post intervention with a mean difference of 6.62, $p=0.01$. Lastly, Arm 3 ECBI-P scores from pre intervention (Mean=22.20, SD=5.92) and immediately post intervention (Mean=14.09, SD=8.08) indicated a significant improvement in post intervention scores with a mean difference of 8.1, $p<0.001$.

To outline the main points, it can be observed in Table 26 that Arm 2, Arm 3, and all arms combined showed a statistically significant improvement in parenting TOPSE self-efficacy scores after the intervention (one week after completion of the course). While Arm 1 did not display a statistically significant effect for the ECBI-I and ECBI-P scores, there is a noticeable numerical improvement in mean scores between pre intervention and post intervention across all of arm one's outcome measures. Overall, the frequency and severity of child problem behaviours were reported to be statistically significantly decreased after the intervention for all arms combined.

TABLE 26. PRE-IMMEDIATELY POST 1-2-3 MAGIC SCORES ALL ARMS AND INDIVIDUAL ARMS

Measure	All arms (n=75)			Arm 1 (n=23)			Arm 2 (n=29)			Arm 3 (n=23)		
	Pre	Post	P Value	Pre	Post	P Value	Pre	Post	P value	Pre	Post	P value
TOPSE	M=315.1 SD=56.8 Mdn=313, IQR=277.5- 351.5	M=358.4 SD=54.1 Mdn=363, IQR=321- 403	p<0.001	M=337 SD=60 Mdn=338, IQR=300- 384	M=372 SD=55 Mdn=391, IQR=327- 421.5	0.05	M=324.8, SD=52.3 Mdn=324 IQR=283- 356	M=358.7, SD=54.1 Mdn=374 IQR=315- 400	0.02	M=280.7, SD=43.4 Mdn=294 IQR=244- 305	M=344.4, SD=51.8 Mdn=351 IQR=315.5- 371.5	p<0.001
ECBI-I	M=167, SD=25.5 Mdn=163 IQR=150- 183.5	M=148.4, SD=28.8 Mdn=143 IQR=128- 168.5	p<0.001	M=162.5 SD=27.3 Mdn=160, IQR=144.5- 184.5	M=148, SD=32.4 Mdn=148 IQR=122.5- 172	0.09	M=172 SD=26.3 Mdn=171, IQR=157- 182	M=153 SD=28 Mdn=141, IQR=133- 171	0.01 ^a	M=166, SD=22.6 Mdn=161 IQR=152- 179	M=143.2, SD=26.5 Mdn=143 IQR=126.5- 156	0.003
ECBI-P	M=22.8 SD=6.40 Mdn=23, IQR=18- 28.5	M=16.3 SD=8.97 Mdn=18, IQR=9.50- 23	p<0.001	M= 21.65, SD=6.79 Mdn=22 IQR=16.50- 27	M=16.9, SD=10.1 Mdn=20 IQR=7.50- 24	0.11	M=24.17, SD=6.41 Mdn=25 IQR=19- 29	M=17.55, SD=8.69 Mdn=18 IQR=12- 24	0.01	M=22.2, SD=5.92 Mdn=23 IQR=18- 26.50	M=14.09, SD=8.08 Mdn=15 IQR=9-21	p<0.001

^aWilcoxon signed rank test was used as an alternative to paired t-test as the data are not normally distributed.

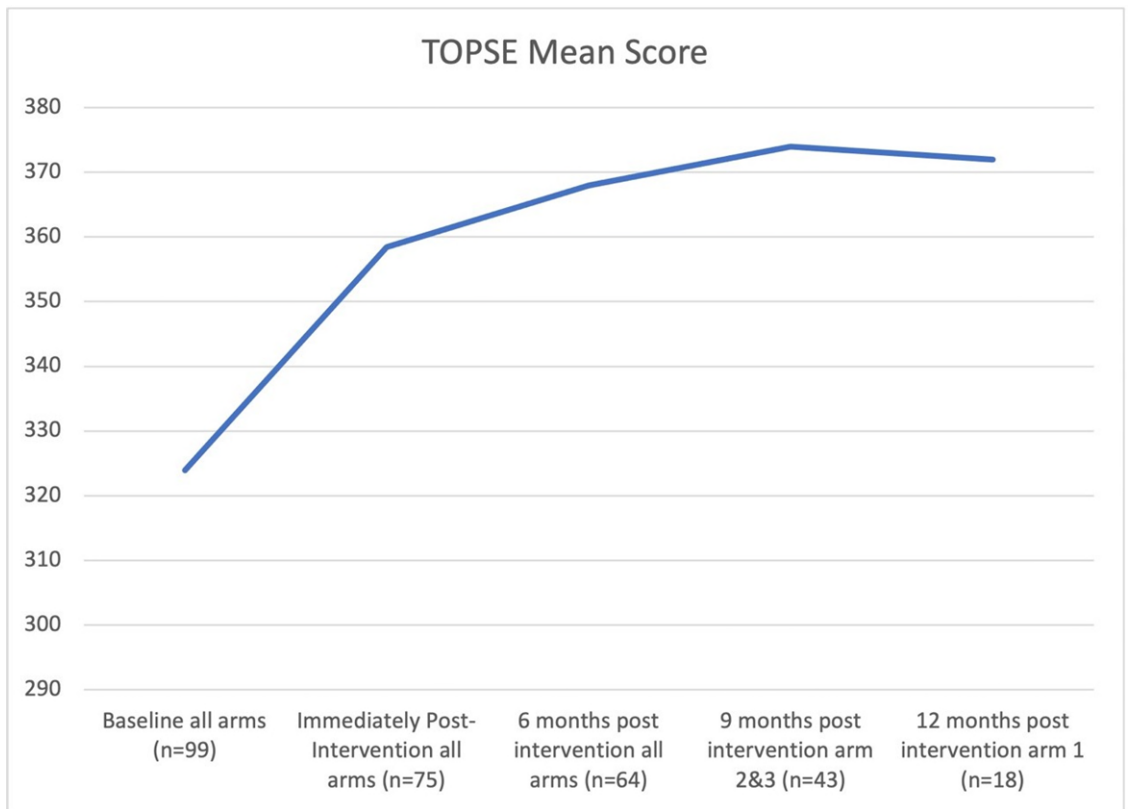


FIGURE 30. GRAPH OF TOPSE MEAN SCORE FROM BASELINE TO 12 MONTHS POST INTERVENTION

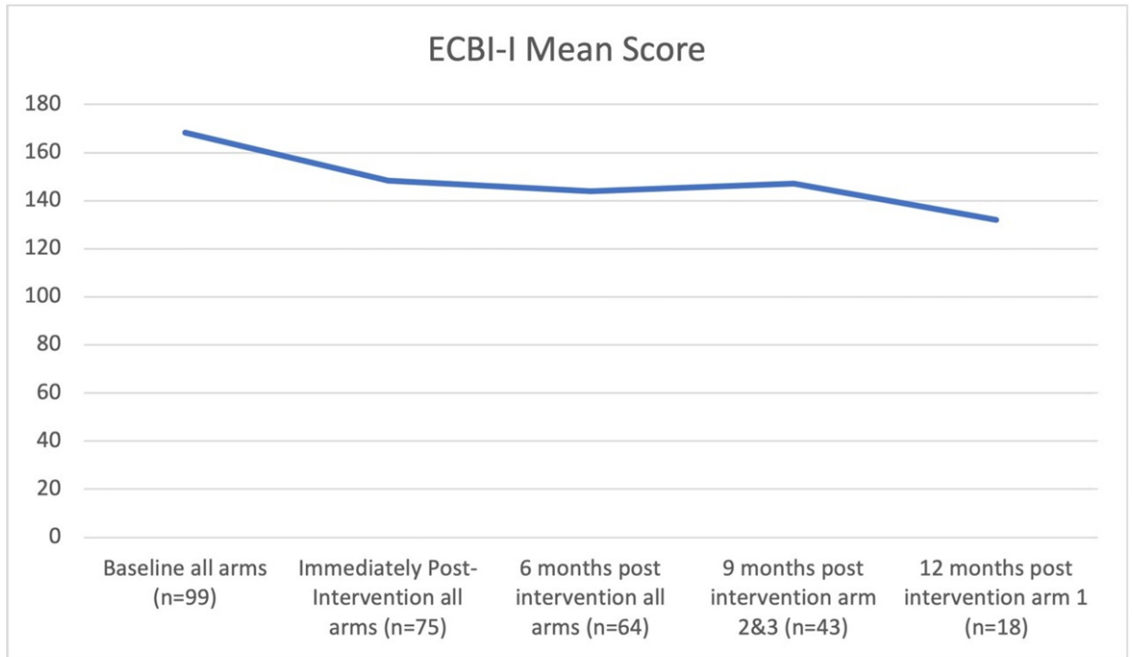


FIGURE 31. GRAPH OF ECBI-I MEAN SCORE FROM BASELINE TO 12 MONTHS POST INTERVENTION

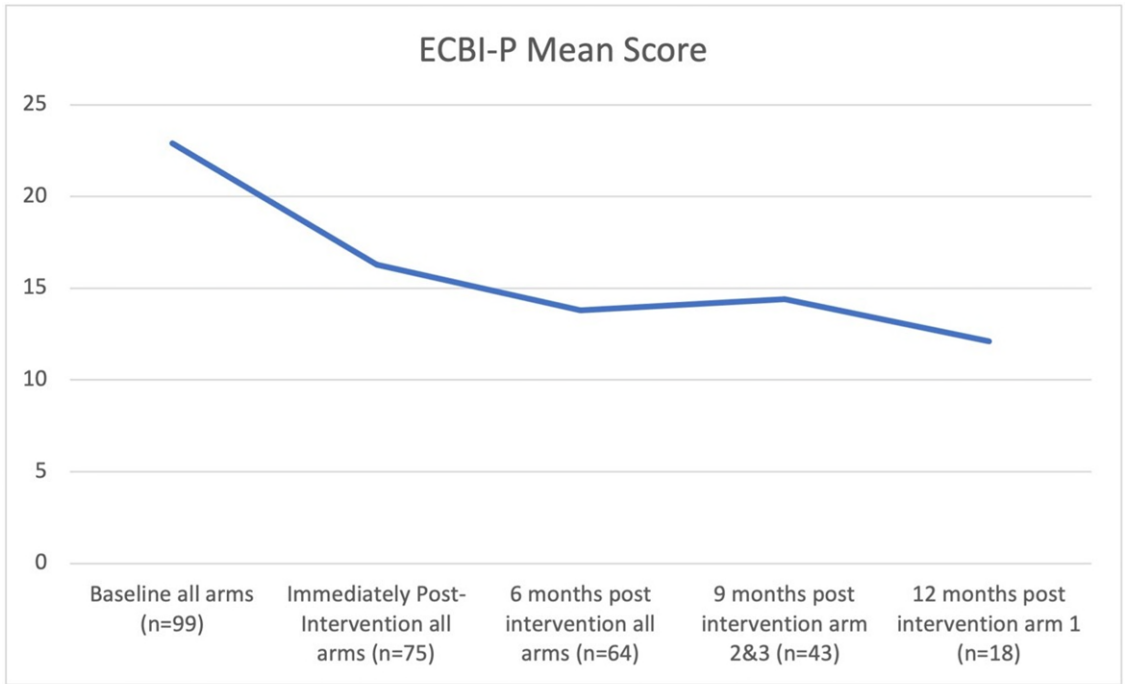


FIGURE 32.GRAPH OF ECBI-P MEAN SCORE FROM BASELINE TO 12 MONTHS POST INTERVENTION

8.4.3 WAIT-LIST GROUPS- CHANGES IN SCORES WHILE WAITING TO RECEIVE INTERVENTION.

The baseline and pre-intervention scores for Arms 2 and 3 were compared using the paired samples t-test to determine whether being on the wait-list would exhibit any changes in scores. See Table 27 for baseline vs pre-intervention scores for the wait-list groups.

8.4.3.1 ARM 2 (3 MONTH WAIT-LIST)

Results displayed that Arm 2, which was on the 3-month wait-list, did not have any significant changes in parent self-efficacy scores or in child problem behaviours.

8.4.3.2 ARM 3 (6-MONTH WAIT-LIST)

Arm 3, which was on the 6-month wait-list, also showed no significant changes in both the problem scale and the intensity scale of child problem behaviours. However, the paired samples t-test did indicate a significant decrease in parent self-efficacy scores.

TABLE 27. BASELINE VS PRE-INTERVENTION SCORES OF WAIT-LIST GROUPS

Measure	Arm 2: 3 Month Wait-list(n=33)			Arm 3: 6 Month Wait-list (n=31)		
	Baseline	Pre- Intervention	P Value	Baseline	Pre- Intervention	P value
TOPSE	M=329, SD=44.9	M=326, SD=49.7	0.73	M=319, SD=44.3	M=287, SD=52.4	0.00
ECBI-I	M=171, SD=22.5	M=168, SD=27.8	0.73	M=170, SD=20.7	M=167, SD=23.2	0.58
ECBI-P	M=23.9, SD=6.20	M=23.6, SD=6.62	0.84	M=22.5, SD=5.94	M=21.8, SD=5.92	0.59

8.4.4 WITHIN-GROUPS EFFECTS: FOLLOW-UP

Table 28 shows the results for 6 month follow up through paired t-test analysis. The TOPSE scores from immediately post intervention (M=359, SD=53.1) and 6 months post intervention (M=368, SD=50.8) indicate that results slightly improved with a mean difference of 9, $p=0.39$. Indicating that whilst there was a small improvement of follow-up scores, this was not statistically significant.

ECBI-I scores from immediately post intervention (M=147, SD=28.8) and 6 months post intervention (M=144, SD=33.4) displayed a slight numerical decrease with a mean difference of 3, $p=0.49$.

ECBI-P scores from immediately post intervention (M=15.60, SD=8.82) and 6 months post intervention (M=13.80, SD=9.30) indicate that the intervention effects had a slightly reduced trend with a mean difference of 1.8, $p=0.21$. Whilst all the scores had either been slightly elevated or decreased over a 6-month post intervention period, none of these differences were statistically significant.

The results follow a consistent trend of slightly decreased ECBI-I and ECBI-P scores across 9-months follow-up and 12-months follow-up (none of which are statistically significant). TOPSE scores for 9-months follow-up did display a slight numerical increase however, in the 12-month follow-up they decreased from a mean of 383 to 372, despite this numerical decrease, there was not a statistically significant change. Results for 9-months follow-up and 12-months follow-up are displayed in Tables 29 and 30 respectively.

TABLE 28. 6 MONTHS POST INTERVENTION (ALL ARMS)

Measure	Immediately Post intervention (n=64)		6 Months Post intervention(n=64)		Mean Difference	P Value
	Mean	Sd	Mean	SD		
TOPSE	359	53.1	368	50.8	9	0.39
ECBII	147	28.8	144	33.4	3	0.49
ECBIP	15.60	8.82	13.80	9.30	1.8	0.21

TABLE 29. 9 MONTHS POST INTERVENTION (ARMS 1 AND 2)

Measure	Immediately Post intervention (n=43)		9 Months Post intervention(n=43)_		Mean Difference	P Value
	Mean	Sd	Mean	SD		
TOPSE	361	56	374	58.30	2.30	0.26
ECBII	150	29.30	147	30.20	0.90	0.57
ECBIP	16.90	9.27	14.40	8.93	0.34	0.21

TABLE 30. 12 MONTHS POST INTERVENTION (ARM 1)

Measure	Immediately Post intervention (n=18)		12 Months Post intervention(n=18)_		Mean Difference	P Value
	Mean	Sd	Mean	SD		
TOPSE	383	59.40	372	73.30	11	0.66
ECBII	141	32.70	132	39.60	9	0.46
ECBIP	15.40	10.10	12.10	10.80	3.30	0.35