

Evaluating the Toolbox Parenting Courses: A Retrospective Survey of Participants from 2013 to 2017

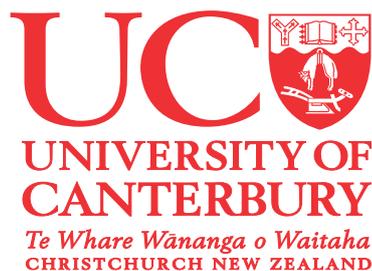
A report prepared for the Parenting Place

Myron Friesen

School of Educational Studies and Leadership
University of Canterbury

December 2018

Parenting
Place



Executive Summary

Parents in Aotearoa New Zealand have access to a wide variety of parenting resources to assist them with their parenting strategies, improve the social-emotional climate of their home, and manage challenging behaviours in their children. The suite of parenting courses offered by the Parenting Place (Toolbox Early Years, Middle Years, Tweens and Teens, and Building Awesome Whānau) are good examples of homegrown, community-lead parenting education that has broad reach and appeal, consistently attracting over 4000 participants each year. However, the Toolbox courses could also be criticised for lacking an evaluation track record. To address this need for better and more rigorous evaluation, Parenting Place began working with researchers at the University of Canterbury in 2017 and formalised a two-year research collaboration starting in January 2018.

The most recent evaluation of Toolbox had been in 2012-2013 and involved Toolbox participants completing two surveys prior to ($N = 4018$) and after completing the Toolbox course ($N = 3237$). Both of these surveys were cross-sectional, as participants were not tracked, thus no analyses were possible to evaluate changes in participants' parenting, relationships, or child behaviour over time. The present evaluation attempted to build upon this previous work, beginning with a retrospective, cross-sectional survey open to all Toolbox participants from 2013 to 2017. The study was reviewed and approved by the University of Canterbury Human Ethics Committee, and all participants were asked to read a detailed information sheet and complete a consent form before beginning the online questionnaire.

Methods

All Toolbox participants from the Early Years, Middle Years, and Tweens and Teens courses who had registered their contact details with Parenting Place since 2013 were sent a link to an online questionnaire on 1 March, 2018. Follow-up emails were sent fortnightly and the survey closed on 7 April, 2018. The survey was accessed over 800 times; however, many participants chose to skip questions resulting in usable data from between 150 (18%) to 563 (67%) participants, depending on the question. Please see Table 1 below for the number of participants across the three Toolbox courses, the year they completed the course, geographic region, and demographic characteristics.

The survey included a wide variety of questions that included both rating scales and open-ended questions for descriptive responses. Scales assessed parenting efficacy, relationship quality, family communication, parents' ability to reflect on the perspectives and experiences of their children, descriptions of family home life,

parenting strategies, child behaviour issues, and a ranking exercise of Toolbox learning resources. Participants were asked to complete the questions on family atmosphere, parenting strategies, and child behaviour issues twice – reflecting on their experiences before and then after the Toolbox course. Open-response questions requested participants to describe a parenting strategy they used the last time their child became angry or upset, the most helpful aspect of the Toolbox course for their parenting and/or home life, and any missing topics and/or limitations with the Toolbox course.

Results

Quantitative analyses. Table 3 below provides the descriptive statistics for all of the numeric scales. The results showed that across all the scales, on average participants believed the Toolbox course substantially improved their parenting efficacy and reflective functioning, and also improved their family communication and relationship satisfaction (although to a lesser extent than the other two). For measures that were assessed before and after Toolbox it is evident that there were substantial shifts in family atmosphere (both positive and negative) and parenting behaviours, and a smaller shift in child behaviour problems. All of these before/after comparisons were highly statistically significant with moderate to large effect sizes; although, these should be treated with caution due to sample bias and social desirability effects.

Comparisons of these measures across the three Toolbox courses (Early Years, Middle Years, Tweens and Teens), and year of course completion showed only one significant difference. Parents who last participated in the Early Years Toolbox course reported significantly more positive characteristics in their home environment after the course compared to those parents from the Tweens and Teens Toolbox course. This suggests that across the majority of outcomes measured, participants from each of the three courses reported similar improvements in their parenting and family life.

Comparisons of these measures across participant demographics revealed a few significant and rather surprising findings. First, when we compared the outcome measures across different groups of participants based on ethnicity, we found that European/Pākehā participants reported less positive outcomes than Māori/Pacific over 8 of 11 measures, and less positive outcomes than Asian parents over 5 of 11 measures. Thus, even though the Toolbox courses are not specifically tailored for Māori/Pacific and Asian parents, these two groups of parents, particularly Māori/Pacific parents, remembered the courses to be more effective. Second, when we correlated the outcome measures with socioeconomic status (SES) and age of first becoming a parent, we found a small but significant trend for parents with lower SES who reported that the course

was more beneficial for their relationship satisfaction and communication as well as their reflective functioning. This is the opposite of what other studies have found. In addition, parents who were older when they had their first child reported greater child behaviour problems than parents who were younger when they had their first child. This could be explained by the fact that these parents also had younger children, less experience with parenting, and were still in the process of learning to manage their children's behavioural challenges.

Participants were also asked to rank each of the Toolbox learning resources from those they felt were most helpful for their learning (1), to those that were least helpful for their learning (6). Participants ranked the curriculum manual and teaching videos highest, followed closely by group discussion, then facilitator competency and advice. The three lowest ranked teaching resources were mutual support and encouragement, role plays, and finally an 'other' category was ranked last. These results are not surprising as Toolbox invests considerable resources into publishing a quality curriculum manual and creating teaching and illustrative videos that are well produced. Group leaders are trained as facilitators of the programme and are not experts, thus they are likely to heavily rely on the curriculum. Finally, as the Toolbox course covers a variety of topics for parenting and improving the general quality of family life, role plays are not as strongly emphasised as they are in other parenting programmes that focus on behavioural management techniques.

Qualitative analyses. The analysis of participants' open-ended and descriptive responses revealed several interesting themes that occasionally overlapped across questions. These questions asked about a recent parenting strategy used, the most helpful aspect of Toolbox, and if participants thought there were any limitations to the Toolbox course.

First, for both the questions about a recent parenting strategy and the most helpful aspect of Toolbox, parents frequently talked about the value of Toolbox for helping them understand their children better, gaining a better perspective of themselves as parents, and the need for managing their own response to their children before (or in tandem with) trying to help their children manage their emotions and behaviour. In addition to this, almost 1 in 4 parents described the most helpful aspect of Toolbox as providing strategies for creating a positive home environment, such as focusing on maintaining positive relationships and having quality time, building happy family memories, parenting with a focus on positive attention, care, kindness, love, trust, respect, appreciation, praise, and encouragement. Almost 1 in 5 parents also described Toolbox as providing strategies to improve or promote positive communication in their family, including developing better listening skills.

In terms of the limitations with the Toolbox course or topics that parents felt were missing, there were four clear themes that were most frequently mentioned. Just over 1 in 4 of the respondents to this question felt Toolbox needed more specific information and strategies for managing children’s challenging behaviour. Second, participants felt that Toolbox needed to be more inclusive, providing parenting education that was adapted for diverse family structures (e.g., single-parent or blended families), recognising cultural variations in parenting approaches, or information for parenting children with special needs (e.g., autism or ADHD). Third, almost 10% of respondents to this question requested more information to help them address technology issues in their family (screen time, internet use, gaming), and 10% of respondents also requested information on specific social issues, such as bullying, sexuality, and alcohol and drug use. Finally, 10% of respondents felt that their Toolbox course needed more time (went too fast or felt too rushed), less content, and needed more opportunity for participant discussion. For the specific themes identified for each question and illustrative quotes from participants, please see the full report.

In summary, this study provided good preliminary evidence that Toolbox participants enjoy the course and believe it has a positive impact on their parenting and family life. The responses to the outcome measures also provide preliminary evidence for the areas of parenting, family life, and child behaviour where Toolbox may facilitate greater change compared to other areas. Taken together, this preliminary evidence provides excellent justification for doing further research with a more rigorous methodology to further test how participants and their families may, or may not, experience change over time, and how long any change is sustained.

How to cite this report

Friesen, M.D. (2018). Evaluating the Toolbox Parenting Courses: A Retrospective Survey of Participants from 2013 to 2017. Parenting Place. <https://doi.org/10.26021/12101>

Acknowledgments

Myron Friesen was awarded an independent research contract to assist the Parenting Place in the evaluation and redevelopment of their programmes from 2018 to 2020. Many thanks to the members of the Parenting Place Research, Evaluation, and Development team for their assistance with data collection, data entry, coding qualitative data, and feedback on an early draft of this report. Graphic design by Mahi Pai Media – Aotearoa.

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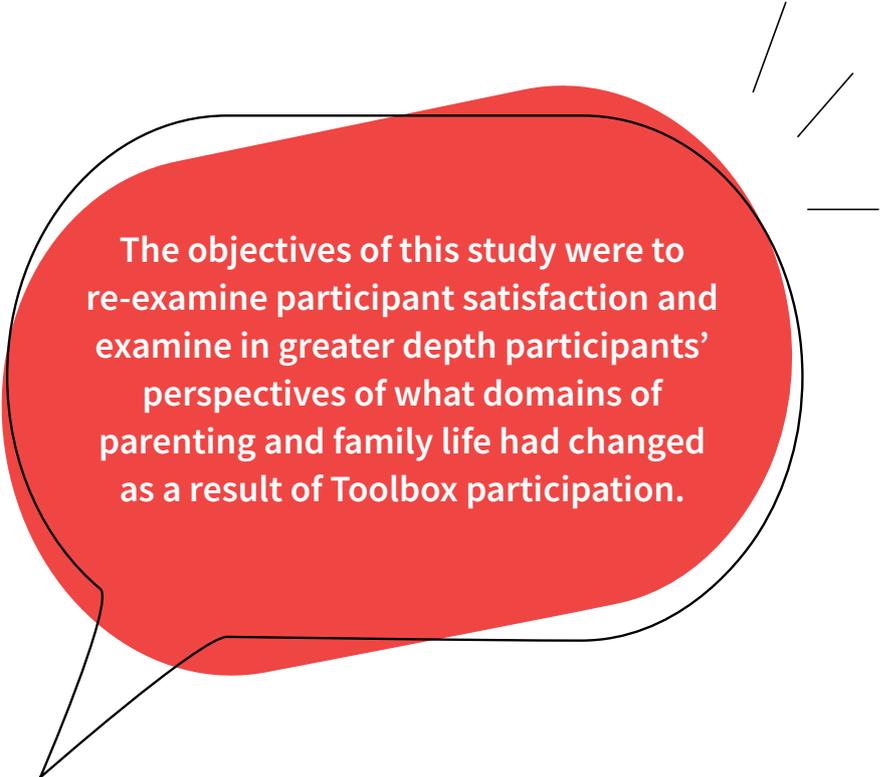
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Introduction

Parents in Aotearoa New Zealand have access to a wide variety of parenting resources to assist them with their parenting strategies, improve the social-emotional climate of their home, and manage challenging behaviours in their children. A popular avenue for accessing parenting resources and improving parenting strategies are psycho-educational courses, and here too, New Zealand parents have access to a variety of options. Well known international parent education courses developed by academic researchers include Triple P, Incredible Years, and Tuning in to Kids. There are also a variety of New Zealand community-based parenting courses, specifically designed for the culture and needs of parents in Aotearoa New Zealand, or to reach specific segments of the population, such as Plunket's parenting education program (PEPE). While these homegrown courses might be more tailored for Aotearoa culture, often their evidence-base is questionable and they lack a track record of evaluation.

The suite of parenting courses offered by the Parenting Place (Toolbox Early Years, Middle Years, Tweens & Teens, and Building Awesome Whanau) is a good example of homegrown, community-lead parenting courses which have broad reach and appeal, but could be criticized for lacking an evaluation track-record. To address this need for better and more rigorous evaluation of their suite of courses, Parenting Place began working with researchers at the University of Canterbury (UC) in 2017 and formalized a 2-year research collaboration starting in January of 2018. The most recent evaluation of Toolbox had been in 2012-2013 and involved Toolbox participants completing two surveys prior to ($N = 4018$) and after completing the Toolbox course ($N = 3237$; Woodley, 2013). Both of these surveys were cross-sectional, as participant ID was not tracked, thus no analyses were possible evaluating changes in participants' parenting, relationships, or child behaviour over time. In addition, while both questionnaires included a number of questions targeting both formative and outcome forms of evaluation, most of the measures relied on single items and none were comparable to validated scales from the research literature. Nevertheless, the results of the post-course survey strongly suggested that Toolbox participants felt the needs they had prior to the course were met through Toolbox (77%), and over 75% of parents felt the course had helped change some aspect of their parenting. The vast majority (>80%) also felt they were coping better, had more confidence, learned new parenting skills or strategies, and were enjoying their parenting more. In summary, the 2013 surveys documented high participant satisfaction, and a consistent belief that parenting strategies and home life environment had changed for the better as a result of Toolbox participation.

As a first step in this next round of Toolbox evaluation, the UC research team and Toolbox course leaders decided to begin with a single retrospective evaluation study for all participants from 2013 to 2017. The objectives of this study were to re-examine participant satisfaction and examine in greater depth participants' perspectives of what domains of parenting and family life had changed as a result of Toolbox participation. Finally, a subsection of the survey also explored more formative aspects of evaluation in terms of participant perceptions of course curriculum and group facilitation. This study was reviewed and approved by the University of Canterbury Human Ethics Committee and all participants first reviewed an information sheet and completed a consent form before moving on to complete the questionnaire.



The objectives of this study were to re-examine participant satisfaction and examine in greater depth participants' perspectives of what domains of parenting and family life had changed as a result of Toolbox participation.

Method

Sample Description

Recruitment and participation

Survey participants were recruited from emails sent to all Toolbox course participants from 2013 to 2017 who had asked to remain on the Parenting Place mail list. The survey opened 1 March 2018 and closed 7 April 2018. Over that time the survey was accessed 838 times. However, only 377 (45.4%) accessed 100% of the survey, with considerable missing data across individual items within this cohort that more fully participated (this is partly due to the reduced number of scales that were required from participants from 2013 to 2016). A preliminary scan of frequencies across individual items suggested the sample size with usable data ranged from approximately 150 (18%) to 563 (67%). For some scales (especially child behaviour), it was clear that asking parents to make comparisons from before to after the Toolbox course was too difficult or perceived as taking too much time and were largely skipped. Upon completing the survey, only 266 participants (70.5% of those who accessed the full survey) requested to enter the prize draw ($n=265$) and/or receive a summary of the results ($n=212$).

Participant demographics

Of the 563 participants who completely responded to one or more of the measures, only between 369 and 376 (65.5 – 66.8%) of the participants responded to the demographic questions. These participants ranged in age from 16 to 66 years with an average age of 38.6 years (median = 39; $SD = 9.54$), and the vast majority were women (86%). The age of first becoming a parent ranged from 15 to 55 years with an average of 28.11 years (median = 28; $SD = 7.02$), and parents had between 1 and 10 children with an average of 2.4 (median = 2, $SD = 1.34$). The vast majority of participants were parenting their own biological or adopted children (90%), with only a small group of step-parents (4%), dual parents (biological and step/foster; 3.5%), or extended family parents (2.7%). Most participants reported being married (58%) or single (25%), with smaller groups of parents reporting as cohabiting (12.4%), or separated/divorced (4.8%). The vast majority of parents reported a European New Zealand ethnicity (70%), followed by Māori (16%), Pacific (7%), and Asian (6%). The majority of participants had some level of post-secondary education (diploma/certificate = 19%, bachelor's degree = 34%, postgraduate qualification = 21%), and were in managerial or professional occupations (40.5%), followed by trade/technical vocations (19.5), caregivers (including full-time parents, 19%), and non-technical workers/manual labourers (15%).

Toolbox participation. As can be seen in Table 1 below, while almost a half of participants had last attended the Early Years course, there were still reasonable sample sizes for participants who last attended the Middle Years and Teens and Tweens courses. As would be anticipated, most participants last completed their Toolbox course in 2017, with steadily decreasing frequencies for the four subsequent years. Finally, over one third of participants completed their last Toolbox course in Auckland, followed by the Canterbury region, with roughly a tenth from Bay of Plenty and Wellington, and much smaller participation rates from the rest of the country.

Table 1: Frequencies of Toolbox course participation across the sample

Course completed	Frequency	Location	Frequency (%)
Early Years	258 (46.7%)	Auckland	185 (36.2%)
Middle Years	169 (30.6%)	Canterbury	84 (16.4%)
Teens and Tweens	126 (22.8%)	Bay of Plenty	51 (10%)
		Wellington	49 (9.6%)
Year completed	Frequency (%)	Manakau	30 (5.9%)
2017	248 (44.4%)	Northland	26 (5.1%)
2016	132 (23.7%)	Otago	26 (5.1%)
2015	88 (15.8%)	Nelson	16 (3.1%)
2014	61 (10.9%)	Hawke's Bay	16 (3.1%)
2013	29 (5.2%)	Southland	13 (2.5%)
		Manawatu/Whanganui	10 (2%)
		New Plymouth	5 (1%)

Note: *n* ranged from 511 to 558 across the three questions.

The Survey

The Toolbox 2018 Retrospective Survey consisted of both formative evaluation measures and outcome evaluation measures. The majority of the measures consisted of quantitative scales which asked participants to reflect on their Toolbox course experience and report on any changes that they noticed about their parenting and family life since completing their most recent Toolbox course. Most quantitative measures employed 5-point Likert scales, rankings, or frequencies. In addition, a number of qualitative questions were included to provide more detailed descriptive information to supplement the quantitative measures. An overview of the scales across each of these categories is presented in Table 2 below. It is important to note that only participants who most recently participated in a Toolbox course from 2017 were asked to complete the full questionnaire.

Table 2: Measures included in the Toolbox 2018 retrospective survey

Outcome Measures			Formative Measures		
Cohort	Measure	Items	Cohort	Measure	Items
All	Parenting efficacy, relationship quality, family communication, and reflective functioning	17; 5pt scale	All	Open-ended: Toolbox topics listed; please describe how they have helped	13
All	Home life descriptors before and after Toolbox (2x)	6 pos 6 neg	All	Open-ended: What did you learn at Toolbox that has been most helpful?	1
2017	Arnold (1993) Parenting Scale before and after Toolbox	20; 2pt scale	All	Open-ended: Limitations and missing topics	1
2017	Child Behaviour Issues before and after Toolbox	34; 5pt scale	All	Ranking: Toolbox learning experience and resources	6
All	Open-ended: Description of parenting strategy last time child became angry or upset)	1			

Outcome measures

Parenting efficacy, family relationships, and parental reflective functioning

All participants first responded to a series of questions that queried their experience of change in their parenting and family life across three subscales: (a) Parenting efficacy included six items that measured parents' beliefs in their growing confidence and efficacy in meeting their children's needs, managing their behaviour, and preventing problems. (b) Family communication and relationship satisfaction included seven items that assessed parents' beliefs in improved communication (e.g., reduced arguments, easier communication) and improved family relationship satisfaction (e.g., more connected, closer relationships) since taking a Toolbox course. (c) Parental reflective functioning included four items that assessed parents' improved tendencies to reflect on their parenting strategies, remove distractions and be more focused when interacting with their children, and consider their children's perspective. All three subscales had excellent internal reliability (α s = .89 for efficacy, .91 for communication and relationship satisfaction, and .82 for reflective functioning), and individual items were averaged together to create composite subscale scores.

Home atmosphere

All participants were also asked to complete a brief measure that assessed their perception of the social and emotional atmosphere of their home prior to and then after the Toolbox course (i.e., the measure was completed twice). Twelve adjectives, six positive and six negative, were listed and participants were asked to select any that they felt described their family home life. Selected items were summed together across the positive and negative domains respectively. If participants failed to select one or more items across both the pre-course and post-course measure, it was judged as missing data and removed from the analysis. Adjectives included: close, loving, peaceful, safe, stable, supportive, broken, chaotic, fighting, lonely, out of control, and stressful.

Parenting behaviours

Only 2017 Toolbox participants were asked to complete measures assessing changes in specific parenting behaviours and child behaviour from pre- to post-Toolbox course (i.e., participants completed both measures twice). Parenting behaviours were assessed with a modified version of Arnold's Parenting Scale (Arnold, O'Leary, Wolff, & Acker, 1993). The Parenting Scale is a unique questionnaire in that it does not use standardized anchors for the response scale (e.g., Agree to Disagree). Instead, short introductory phrases are paired with opposing anchors and participants must choose if their behaviour reflects one parenting practice more than another. For example, several questions start with the phrase, "When my child misbehaves..." and for one of those items parents must decide between, "we often get into long arguments", or "we can address it without an argument". Items are usually scored on a 5-point scale, and the original scale had 32 items. For this survey, 20 items were chosen and parents were forced to choose between the two options without any additional scale points (i.e., a dichotomous or binary response option). Response options identified by Arnold and colleagues as indicating more maladaptive parenting strategies were scored -1, with adaptive parenting strategies scored as 1. All items were summed together to create an overall measure of parenting strategies with higher scores indicating more adaptive and supportive parenting practices. Both scales had acceptable internal consistency reliability (α s = .83 for the pre-course measure and .70 for the post-course measure).

Child behaviour problems

Before completing the measure of child behaviour problems, parents with more than one child were asked to focus only on the child whose emotions or behaviour were most challenging and identify that child's age and gender. Child behaviour problems were then assessed with 34 items scored on a 5-point Likert scale (end points = "never" to "consistently") adapted from a number of other scales (e.g., Conners, 1970; Eyberg & Ross, 1978; Goodman, 1997; Rutter, Tizard, & Whitmore, 1970). Similar to the measures above, parents were asked to complete the inventory twice, once for child behaviour problems prior to the Toolbox course and a second time reflecting on behaviour problems after the course. Individual items were averaged together to create composite scores. Both assessments showed good internal reliability (α s = .95 for both the pre-course and post-course measures).

Finally, a single open response (qualitative) item was used to query participants reflections of a challenging parenting event. All parents were asked, "Think back to the last time your child became really angry or upset. Was there anything you learned from the Toolbox course that you applied to this situation? Please describe." A textbox allowed participants to write a response of any length.

Formative measures

At the end of the survey, a series of open-response (qualitative) questions were used for a formative evaluation of participants' judgments concerning Toolbox course content. The instructions for the first set of items were, "Below is a list of topics that you may remember from the Toolbox course. Please select any of these that have had an impact on your parenting or family relationships and briefly describe how you have applied this to your family." Following this instruction was a list of 13 topics taken from the Toolbox curriculum which participants could select, including: (a) Different ways of communicating love, care, and affection (i.e., love languages); (b) Enjoying our children and creating a childhood to remember; (c) Gaining a better understanding of my children and their development; (d) Learning strategies to change my reactions to challenging behaviour; (e) Learning to look after myself as a parent or caregiver; (f) Learning what type of parent or caregiver I am (i.e. Sergeant Major, Jelly fish, Absent, Coach); (g) Listening and responding to emotions; (h) Open communication; (i) Parental authority - becoming a back-bone parent coach; (j) Parenting with love, warmth and care; (k) Seeing children's challenging behaviour in a different way; (l) Setting limits and boundaries; and (m) Understanding the importance of my role as a parent or caregiver. Parents could select any number of items and write a short response reflecting on how they have applied that topic.

Two final open response questions simply asked parents, "Overall, what did you learn at the Toolbox course that has been the most helpful for your parenting?" and "Reflecting back on the Toolbox course, do you feel there were any important topics that were missing or not covered well enough?" Similar to the questions above, a textbox allowed participants to write any response of any length for each question. The last formative aspect of the survey was a ranking exercise of the Toolbox pedagogical practices. The instructions were, "Please think back to your experience participating in the Toolbox course. What do you feel most contributed to your learning and enjoyment of the course? Please rank the following items by dragging them from the top (most helpful) to the bottom (least helpful)." The six items included (a) curriculum manual and videos, (b) group discussion, (c) role play, (d) facilitator competency and advice, (e) support and encouragement from other group members, and (f) other (with an open-response option).

Results

Outcome Measures

Descriptive Statistics

Table 3 below provides the descriptive statistics for all of the quantitative outcome variables in this study. The first three variables (parenting efficacy, family communication and relationship satisfaction, and parental reflective functioning) questioned parents' perceptions about how Toolbox had helped improve family functioning in each of these areas. The mean scores all suggest that on average study participants believed the Toolbox courses to be very helpful, particularly for improving their sense of confidence in managing their children's behaviour, preventing problems, and anticipating their children's needs (parenting efficacy). On average participants also largely agreed that the Toolbox courses had helped them be more intentional in their parenting, and they were making a greater effort to see their children's perspective and reflect on their parenting strategies (reflective functioning; mean scores were close to the 5-point maximum). On average participants also agreed that Toolbox helped improve family communication and relationship satisfaction, but this was not as strong as parenting efficacy and reflection.

Another way to look at these descriptive statistics is by examining the percentages across the distributions of these variables. For parental efficacy and reflective functioning, 75% of the sample had an average score of four or higher, while only 3% and 2% of the sample, respectively, had an average score below the midpoint (3) of the scale on these variables. There was greater variability in the percentages for communication and satisfaction with 45% of the sample scoring four or above, but only 10% of the sample scoring below three. Taken together, the descriptive statistics across these three variables suggest that when participants were asked to reflect back on their experience with the Toolbox course, the vast majority believed the course contributed to improving the quality of their parenting and their ability to relate to their children.

Perceived change pre- to post-Toolbox. Three outcome measures (family atmosphere, parenting, and child behaviour problems) were assessed twice, with participants reflecting on their family situation before participating in the Toolbox course and then after the Toolbox course. As can be seen from the mean scores in Table 3, participants only identified with one or two of the positive and negative family atmosphere items before the Toolbox course. Participants then reported that after the course the positive atmosphere in the home increased and the negative atmosphere

decreased. In terms of parenting behaviours; before Toolbox, participants felt they were at the midpoint of the scale (employing both positive and negative parenting strategies). In contrast, participants felt that after Toolbox they were now employing mostly positive parenting strategies. Finally, across the wide range of child behaviour problems assessed, on average, parents felt the consistency of these problems was just above the midpoint of the scale prior to Toolbox, and then was reduced slightly after the Toolbox course.

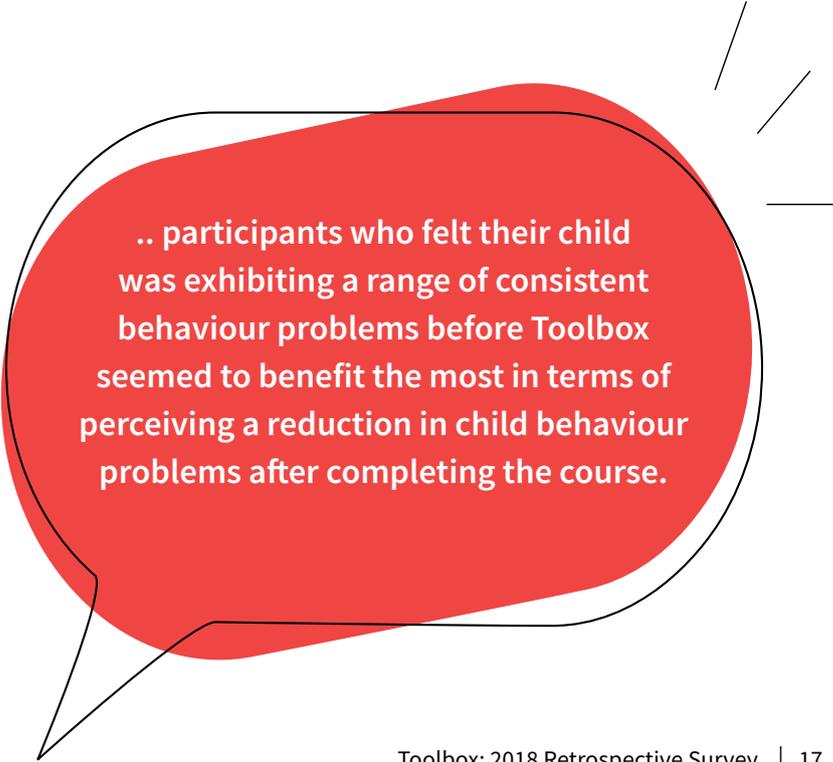
Paired-sample *t*-tests assessed the statistical significance of the differences in the measures that we re assessed pre- to post-Toolbox, and estimates of effect size were calculated with Cohen's *d*. Each analysis showed that the differences in the mean scores were highly statistically significant (absolute *t* values ranged from 10.19 to 21.83, and all *p* values were below .001). Estimates of effect size, showed a moderate effect for decreases in child behaviour problems (*d* = 0.66), and large to very large effect sizes for the increase in positive home environment (*d* = 0.88), decrease in a negative home environment (*d* = 1.02), and improved parenting behaviour (*d* = 2.00).

Table 3: Descriptive statistics of study outcome measures

Outcome measure	Mean (St. Dev)	Range	<i>n</i>
Parenting efficacy	4.23 (0.63)	1 to 5	561
Family communication and relationship satisfaction	3.81 (0.76)	1 to 5	561
Parental reflective functioning	4.23 (0.64)	1 to 5	556
Family atmosphere before Toolbox	α	α	
Positive	2.17 (1.91)	0 to 6	556
Negative	1.81 (1.44)	0 to 6	
Family atmosphere after Toolbox			
Positive	3.77 (1.73)	0 to 6	556
Negative	0.58 (0.98)	0 to 6	
Parenting behaviours	α	α	
Before Toolbox	0.84 (8.89)	-20 to 20	217
After Toolbox	14.74 (5.03)	-6 to 20	
Child behaviour problems			
Before Toolbox	2.75 (0.73)	1 to 5	155
After Toolbox	2.35 (0.61)	1 to 5	

One way to visualize the magnitude and extent of participants' perceived changes from before to after participating in the Toolbox course is to plot each participant's pre and post score for a single measure on a scatterplot (see the figures below). If participants' pre and post scores are identical, their point on the scatterplot would fall along a 45-degree axis, called a line of no change. Points above the line of no change show an increase from pre to post, and points below the line of no change show a decrease from pre to post. The parallel lines in blue on either side of the line of no change provide a threshold for determining if the change in participants' scores are greater than change that might be found due to measurement error (called a reliable change index). It should be noted that the data points in the figures represent all participants in the analysis; however, due to item overlap, a single data point may represent one participant or multiple participants.

Figure 1 below shows the scatterplot for participants' scores for parenting behaviour (which had the largest effect size for change). As can be seen, the majority of data points are shifted to the top of the graph representing a perceived improvement in parenting behaviour. Many of these points are well outside the reliable change index, with some showing rather dramatic shifts (e.g., those who scored at or below -5 before Toolbox, but scored at or above 10 after Toolbox). Figure 2 below shows the scatterplot for participants' scores for child behaviour problems (which had a moderate effect size). As can be seen, the vast majority of data points are shifted below the line of no change, but many of the data points are within the area of reliable change. Participants with the greatest degree of change shifted from an average score between 3 and 4 before Toolbox, to less than 3 after Toolbox. This suggests that participants who felt their child was exhibiting a range of consistent behaviour problems before Toolbox seemed to benefit the most in terms of perceiving a reduction in child behaviour problems after completing the course.



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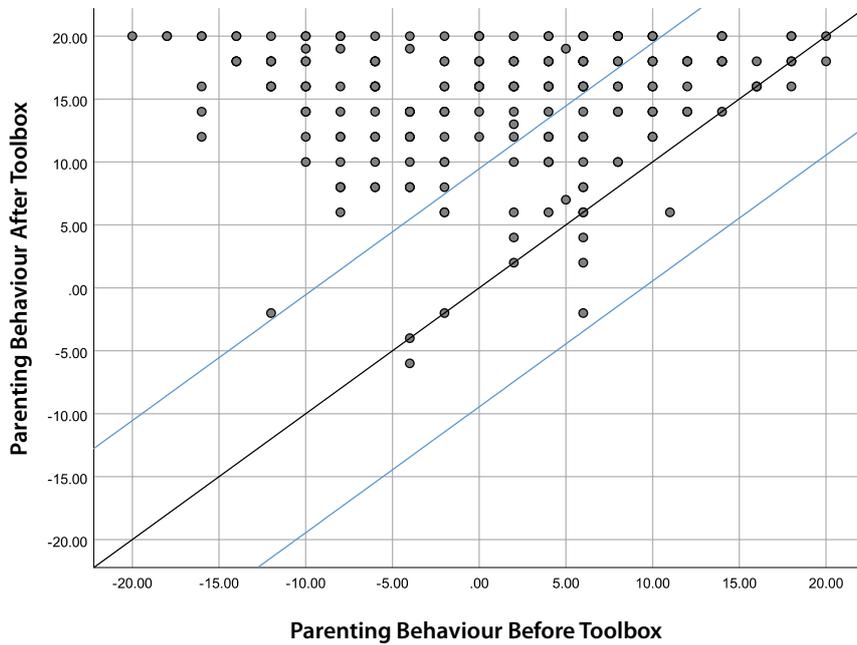


Figure 1. Modified Brinley plot with reliable change index showing participants' perceived parenting behaviour before and after the Toolbox course.

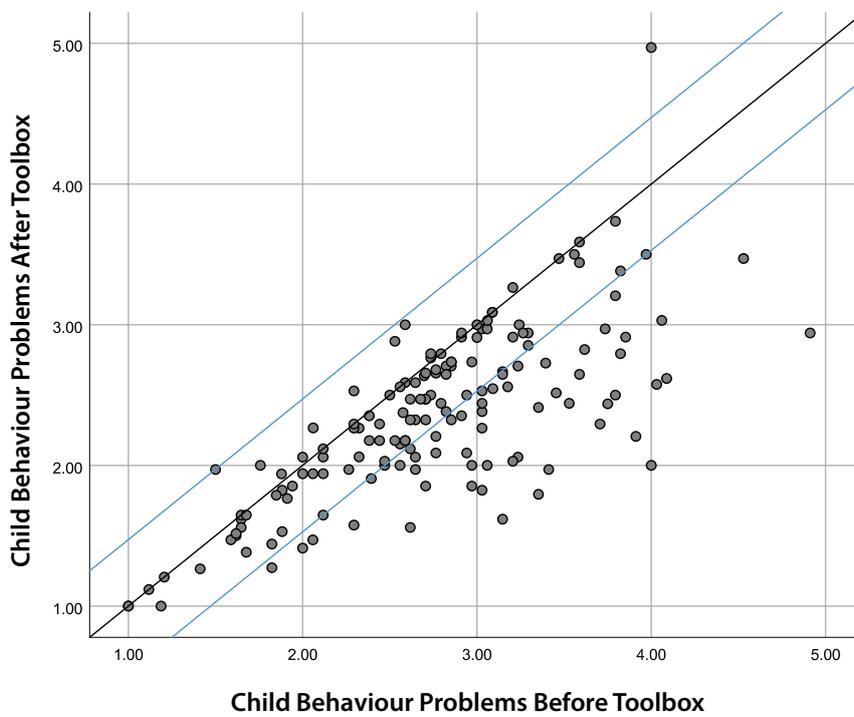


Figure 2. Modified Brinley plot with reliable change index showing participants' perceived child behaviour problems before and after the Toolbox course.

Associations with demographic characteristics and course participation

An important question regarding these outcome variables is the possibility of significant associations with participants' demographic characteristics or which course they completed (Early Years, Middle Years, or Tweens & Teens). For example, perhaps parents from the Early Years course felt the course was more beneficial for parental efficacy, but parents from the Middle Years course felt it helped them address child behaviour problems better. Similar questions could be asked about potential differences across different ethnic groups or associations with socioeconomic status or age of first parenthood. To explore these questions, a series of mean comparisons (e.g., one-way ANOVA and ANCOVA) tested for significant differences between each of the outcome variables and course category and participant ethnicity. Bivariate correlations were used to test associations between the outcome variables and socioeconomic status (a combination of parent education and occupational status; $r = .51, p < .001$), and the age participants first became a parent.

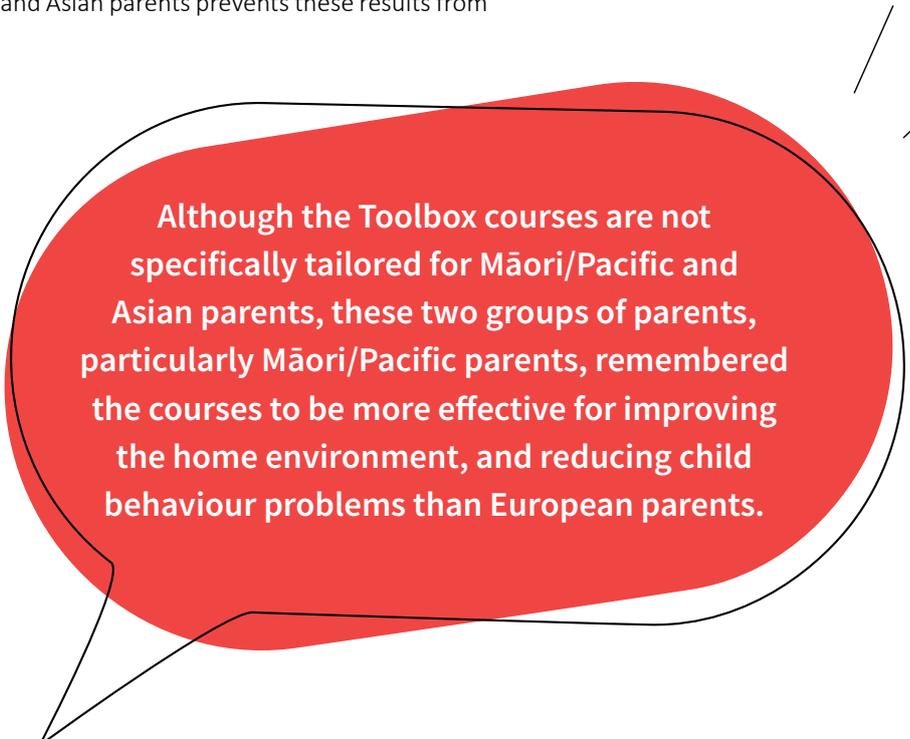
First, one-way ANOVAs with post-hoc comparisons tested for significant differences across course categories for each of the outcome variables (pre-course and post-course variables were tested individually). The results showed only a single significant difference. Parents who last participated in the Early Years Toolbox course reported significantly more positive characteristics in their home environment after the course than parents from the Tweens & Teens Toolbox course (mean difference = 0.64, $p = .002$; 95%CI = 0.20 – 1.09). There were no significant differences between the means for Early Years and Middle Years or Middle Years and Tweens & Teens in this analysis. Thus, across 10 of 11 variables, on average participants in all three groups reported similar outcomes. This suggests good consistency across the three types of Toolbox courses for these retrospective outcomes.

Second, these analyses were repeated with participant ethnicity as the group variable. Due to small numbers of participants in some of the ethnicity groups, a three category variable was created with European New Zealand/Pakeha ($n = 296$), Māori/Pacific ($n = 86$), and Asian ($n = 23$) groups. These analyses revealed ethnic differences across the majority of the variables, except for the two parenting behaviour measures (pre- and post-course), and child behaviour problems pre-course. Examining the mean scores showed a consistent pattern across several of the variables which can be seen in Table 4 below. Table 4 shows the descriptive statistics (means and standard deviations) for all the outcome variables across the three ethnic groups. The 'a' and 'b' superscript next to the values denote where there were significant group differences. For example, European New Zealand parents scored significantly lower than Māori/Pacific and Asian parents for parental efficacy and relationship

satisfaction and communication. Although there were no significant differences between Māori/Pacific and Asian parents for either of these variables. In contrast, for parental reflective functioning, again European parents scored significantly lower than Māori/Pacific parents, but this time the Asian parents had an average score between the two groups and not significantly different from either.

A similar pattern is repeated for the pre-/post-course variables of positive and negative home environment. In these analyses, before the Toolbox course on average European parents remembered a less negative home environment than Māori/Pacific parents (but not significantly different than Asian parents), and a more positive home environment than both of the other groups. However, after the Toolbox course this pattern is reversed and European parents remembered a home environment with slightly less positivity and more negativity than both the Māori/Pacific and Asian parents. This suggests that the perceived change from pre- to post-course for home environment was greater for Māori/Pacific and to a lesser extent Asian parents when compared to European parents. Finally, for child behaviour problems, while there were no significant group difference in memories of child behaviour problems prior to the course, after the course Māori/Pacific parents remembered significantly lower consistency in behaviour problems than both European and Asian parents (with no significant differences between these two groups).

Taken together, these results document a consistent and very interesting finding. Although the Toolbox courses are not specifically tailored for Māori/Pacific and Asian parents, these two groups of parents, particularly Māori/Pacific parents, remembered the courses to be more effective for improving the home environment, and reducing child behaviour problems than European parents. While the effect sizes are not reported for every statistical comparison, the majority of these were small to moderate (e.g., Cohens' *d* did not exceed 0.60), and it should also be noted that the small sample sizes of Māori/Pacific and Asian parents prevents these results from being generalized beyond the sample.



Although the Toolbox courses are not specifically tailored for Māori/Pacific and Asian parents, these two groups of parents, particularly Māori/Pacific parents, remembered the courses to be more effective for improving the home environment, and reducing child behaviour problems than European parents.

Table 4. Descriptive statistics (mean, standard deviation) of study outcome measures across three ethnic groups and tests of significant group differences.

Outcome measure	European/ Pakeha	Māori/Pacific	Asian
Parenting efficacy	4.18 (0.57) ^a	4.41 (0.63) ^b	4.44 (0.41) ^b
Family communication and relationship satisfaction	3.71 (0.67) ^a	4.14 (0.79) ^b	4.06 (0.6) ^b
Parental reflective functioning	4.16 (0.56) ^a	4.46 (0.65) ^b	4.35 (0.56) ^{ab}
Family atmosphere before Toolbox	^a	^a	^a
Positive	2.44 (1.86) ^a	1.73 (1.93) ^b	2.09 (2.11) ^{ab}
Negative	1.61 (1.28) ^a	2.02 (1.37) ^b	1.96 (1.4) ^b
Family atmosphere after Toolbox			
Positive	3.65 (1.69) ^a	4.27 (1.7) ^b	4.26 (1.76) ^b
Negative	0.71 (0.95) ^a	0.26 (0.6) ^b	0.22 (0.42) ^b
Parenting behaviours	^a	^a	^a
Before Toolbox	0.5 (7.81) ^a	3.23 (10.09) ^a	4.22 (4.52) ^a
After Toolbox	14.49 (5.18) ^a	15.51 (4.24) ^a	13.11 (5.01) ^a
Child behaviour problems			
Before Toolbox	78 (0.65) ^a	2.51 (0.94) ^a	2.51 (0.45) ^a
After Toolbox	2.45 (0.54) ^a	2.10 (0.8) ^b	2.39 (0.11) ^a

Note: Different superscripts (^{ab}) denote significant group differences.

A third set of analyses examined how the parenting outcome measures were associated with socioeconomic status (SES) and age at first birth through bivariate correlations. The results showed a surprising pattern of significant associations which were all quite small in magnitude. Increased SES or later age at first childbirth was associated with significant but small trends in lower communication and relationship satisfaction and lower parental reflective functioning (*r*s ranged from $-.13$ to $-.20$; $p < .01$). This suggests that parents from lower socioeconomic families found the courses more helpful on these two outcomes. Participants with higher SES also tended to report lower scores for a negative home environment ($r = -.20$) and higher scores for a positive home environment ($r = .23$) before Toolbox, but there were no associations with SES after Toolbox. Finally, participants who were older when they had their first child recalled higher child behaviour problems both before and after Toolbox ($r = .28$ & $.39$, respectively). This could be explained by the fact that these parents had younger children, less experience with parenting, and were still in the process of learning to manage their children’s behavioural challenges.

Qualitative outcomes

Recent parenting strategy

The final outcome measure asked parents to reflect on a recent occasion when their child had become “really angry or upset” and describe if and how they had applied any of the strategies learned from their Toolbox course. A large percentage of the sample left this question blank (42.8%). For those participants who did adequately respond to the question, there were a wide variety of responses both in content and in length, but in general responses were short (mean word count = 17.2 words, standard deviation = 18.8, median = 13, and over 80% of participants wrote less than 25 words). A few participants provided only a single word (e.g., “patience”), and at the other end of the spectrum a few participants wrote a short paragraph (i.e., >100 words). Of those who responded to the question ($n = 322$), 6% wrote a response that did not answer the question. Another 6% responded with ‘no’ (or similar), they had not used a Toolbox strategy. Two of these ‘no’ responses were also critical of the Toolbox curriculum and said that the course curriculum was “too light on content” or “too light on specific strategies”, and three participants indicated they had used a parenting strategy learned from another parenting course or seminar. Due to the brief nature of many of the responses, it was difficult to identify how the parenting behaviour described was linked with a Toolbox strategy. Therefore, as an initial step in coding participants’ responses, they were categorized between those that were generic and those that were specific to Toolbox. Generic responses included phrases such as “remain calm”, “taking time out”, and “stand your ground and be patient”. In contrast, a response with similar content, but was more specific to Toolbox included, “I am the one to set the mood/tone, staying calm as to not fuel the fire.” Only those responses that were identified as specifically related to Toolbox content were thematically coded by two research assistants ($n = 150$; 46%). The rest were deemed generic ($n = 134$, 42%) and were not coded as their relevance to the Toolbox curriculum was in doubt.

The thematic coding strategy was based on qualitative descriptive analysis (Sandelowski, 2000; 2010), and proceeded in three stages. In the first stage, the focus was on coding the key ideas in participants’ responses, succinctly consolidating these ideas while retaining the essence of participants’ responses in their own language. Often a participant’s response could address more than one theme and these were separated according to the order of their appearance. For example, a father of a 5 year old wrote, “*Just being more calm, more empathetic to the child point of view, and being constant and firm.*” In this one sentence there are four different ideas that all needed to be coded. This coding strategy resulted in 231 codes across the 150 responses. The second stage involved arranging these key ideas (codes) into rather distinct categories. The final stage explored the underlying themes that cut across categories. Thus, the 231 codes were categorised into 23 different categories, including an “other” category that contained idiosyncratic responses, and four broader themes. Together, these four themes accounted for over 70% of all the coded items. The paragraphs below describe each of these four themes.

Finding the calm

Rather unsurprisingly given the nature of the question (i.e., the last time your child became upset), the theme that parents discussed the most (found in 30% of responses) were calming strategies, which were applied broadly to the circumstances of the upsetting situation, the child, and to the parent themselves (i.e., self-calming strategies). Parents wrote about giving their child space, letting things calm down, speaking calmly and quietly, and not allowing themselves to become emotional or upset. Several parents, wrote about using a “time-out” either for themselves or for their child or both. However, this was not communicated as a punitive use of time-out, but rather as an opportunity to allow one or both parties to calm down. The following examples illustrate the variety of responses related to this broader theme:

- *Leaving her alone to calm down in her own time and discussing the issue when she is calm, not when she is still angry. (Mother of 7 year old)*
- *Was able to keep calm and using this, I am able to calm him down and to talk through things so we both see how to get a positive outcome. (Father of 9 year old)*
- *Timeout with parent sitting and talking them through the problem. (Mother of 2 year old)*
- *Breathe ... take a few minutes to go with it ...I am the thermometer gauge, I set the temperature. (Mother of 13 year old)*

Perspective taking

The second most common theme identified by parents was perspective taking (found in 16% of responses). This manifest itself in three ways. First, parents emphasized the importance of trying to see the child’s perspective concerning the situation at hand, which several parents described as trying to listen and discern any underlying issues that might be causing an outburst. To a lesser extent, parents also emphasized the importance of communicating at a child’s level, both so that the child could understand, but also physically “getting down to their level” to talk. The examples below nicely illustrate each of these ideas under the perspective taking theme:

- *Remembering that children are good observers and poor interpreters helps me understand that my child's interpretation of situations can be quite different from mine, and I need to try and understand from her perspective rather than applying grown up logic. (Mother, no child demographics provided).*
- *I listened and took notes on their feelings and how I could learn more about why they were feeling like this. Made us closer and bond more. (Mother, no child demographics provided)*
- *Take time, sit quietly, understand their position, listen, hear and understand. (Mother, no child demographics provided)*
- *Go down to their eye level and talk calmly asking if they are angry or upset. (Mother of 3 year old)*

Emotion coaching

The next most frequent category of responses focused more specifically on emotional management of the situation (found in 13% of responses). Within this category parents focused mostly on the importance of acknowledging, identifying, and reflecting emotions, and then to a lesser extent on empathising with the child's emotions, and assisting the child with emotional regulation. The following examples illustrate this theme:

- *Acknowledged the feeling – didn't try and fix straight away. (Mother of 7 year old)*
- *Empathise more with their situation and acknowledge / verbalise how they feel. (Mother of 6 year old)*
- *I've learned to acknowledge her emotions, rather than ignoring the emotions and trying to fix the problem. As she gets more independent the Toolbox course has helped me understand my role is to help her self-manage, not to fix her problems. (Mother, no child demographics provided)*

Boundaries, consequences and parental authority

A fourth broad category of responses (also found in 13% of responses) focused on a variety of topics around boundaries/limits, consequences, and the importance of maintaining parental authority. A trio of three key words were used together by several parents in this category, firm, fair, and friendly (or an emphasis on consistency). In this regard, parents described the importance of setting consequences that are fair or appropriate for the behaviour and sticking to these consequences. A few parents also spoke of the boundaries/limits being guided by a family contract and the importance of reminding their child of that agreement. The following examples illustrate each of these ideas and also show how ideas around boundaries, consequences, and parental authority were combined with other categories:

- *Stick to the consequences I set. Set consequences that are in line with the behaviour. (Mother of 13 year old).*
- *Using calm approach and carry through with the discipline, while my child was misbehaving. (Mother of 8 year old)*
- *To put myself in my child's place and tried to understand how they could feel. If it was rational I would deal with it in a way that was fair - but if it was something that I needed to enforce, there are rules in place and I would stick by them. (Father of 4 year old)*
- *Explaining what the rules are and sticking to it. Getting down to eye level, and always being kind, loving, and caring. (Father of 5 year old)*

Although the themes described by participants above are found in the Toolbox curriculum, they are also common to several other parenting programmes and are frequent topics across popular parenting literature. However, there are some topics in the Toolbox curriculum that are rather distinct, and it was interesting to note that these were not mentioned as frequently as the others above. For example, Toolbox has topics on understanding children's love languages and children's personality styles. These two themes were not mentioned by many participants (personality styles was mentioned 11 times; love languages was only mentioned once) but may not have been as relevant to the question.

Formative Measures

Two qualitative questions for formative measures asked participants to (a) identify the topic or experience from the Toolbox course that was most helpful for them, and (b) identify any limitations or omissions from the Toolbox course content. For each of the questions below, a coding and categorisation scheme was completed by a research assistant in collaboration with the first author, similar to the approach described above (although for the two questions below we did not distinguish between responses that were generic and those specific to an aspect of the Toolbox curriculum). An iterative strategy was employed in which both coders initially reviewed the data and developed a preliminary set of codes and categories. These were subsequently reviewed, discussed, and re-assessed repeatedly until an agreed set of categories were established, although a formal assessment of interrater reliability was not performed for either question. Please see Appendix A for a full list of all the categories for the two formative questions described below.

As a general indication of the sample's positive response to Toolbox, of the 563 participants that accessed the study website, 40% left both questions blank, 36% answered the question about what was most helpful, but did not answer the question about limitations/omissions, 23% answered both questions, and only 1% answered the question about limitations/omissions but skipped the question about what was most helpful (McNemar's chi-square = 182.81; $p < .001$).

Most helpful

We received 350 responses to the question about what Toolbox topic or experience had been most helpful for participants in their parenting, with 322 responses that adequately answered the question. Similar to the other qualitative question above about a recent parenting strategy, many of these responses were short (mean length = 21.7 words, standard deviation = 20.6, median = 16), with 80% of responses less than 30 words. The coding scheme identified 500 codes across the 322 responses that were related to 18 different categories. Nine of these categories were mentioned by more than 20 participants (> 5% of the sample that responded) and together accounted for 82% of all the codes.

Parenting strategies

Five of these ten categories fit into a broader theme we labelled Parenting Strategies (accounting for 49% of all codes). Within this theme the most frequently mentioned category (23% of the sample) were parenting strategies for creating a positive family home environment. This included a diverse range of specific topics such as focusing on maintaining positive relationships and having quality time, building happy family memories, parenting with a focus on positive attention, care, kindness, love, trust, respect, appreciation, praise, and encouragement. Illustrative examples include the following:

- *To enjoy the journey of parenting and its ups and downs. It is so short that they are home with you that [it is] important to have perspective of how amazing these years are for our family and to really prioritise time with them. Love is spelt time. (Mother, no child demographics provided)*
- *The concept that kids who feel right will act right, and that a family should feel positive, and if it's not then as the parent reflecting on what needs to shift, rather than just seeing the kids as 'naughty' in that moment. (Mother, no child demographics provided)*
- *I loved the overall loving approach to parenting that seeped through the instruction. I have dipped back into my resource book on a number of occasions to affirm some teachings. I liked the reinforcement of creating memories and family values. (Mother, no child demographics provided)*

The remaining four categories in this theme included (a) strategies to improve or promote positive communication, including developing better listening skills (19% of responses); (b) strategies for better behaviour management including establishing boundaries, structure, being firm but fair, and consistency in enforcing rules (13%); (c) strategies for challenging/stressful situations or challenging behaviour/emotions, including both personal (i.e., parent) self-regulation and child regulation (12%); and (d) a range of general strategies which included, perseverance, patience, being proactive rather than reactive, cooperative problem solving, promoting independence, and being less controlling (11%). These four categories of parenting strategies were often combined in parents' responses and often included Toolbox topics like love languages, the 'V' of love, and parenting styles. However, these were placed into other categories (described below). The following quotes are good examples of each of these four categories, respectively.

- *Communication is key. How I communicate is key. Identifying each other's love language and treating each other with respect. (Mother, no child demographics provided)*
- *Realizing that, as the parent, I really set the tone in my household. I was letting my [children] get away with stuff, then getting angry when everything fell to pieces. We now have some house rules, and I address things sooner rather than letting them grow into a festering monster. So many gems, I really appreciated this course. (Mother of a 9 year old)*
- *I've learnt that emotions can get in the way of effective parenting. Reacting to misbehaviour immediately without thinking it through causes a lot of tension and miscommunication. Not reacting and taking the time to evaluate before deciding what to do has a much better outcome. (Mother of a 6 year old)*
- *Be patient. Give options. Don't yell. Understand my child & their needs before overreacting. (Mother of a 3 year old)*

Perspective taking

The next theme mentioned most by participants as the aspect of Toolbox they found most helpful for their parenting was around perspective taking and developing a better understanding of their children and their development (mentioned in 19% of responses), similar to the same theme from the previous question. This included learning to understand their child's individual differences from their siblings, behaviour patterns, wishes, character traits, points of view, and motivations. This theme also included Toolbox's topics on personality styles (mentioned 14 times) and love languages (mentioned 15 times), which were often included together. The following quotes nicely illustrate this theme:

- *It was a big thing to learn how to figure out what each child's love language is and helps us to make them feel understood and loved. And also learning what type of personality they have. (Mother, no child demographics provided)*
- *Understanding the differences in personalities of my daughter and I, and that I can't expect her to respond the same way that I do. Adapting my parenting to her personality and understanding what makes her tick. (Mother of a 7 year old)*
- *The most important thing I learned was understanding how teenagers' brains worked and why they behaved like they do. This gave me a better understanding of what to look for in my children and how I can handle things with them differently. (Mother of a 12 year old)*

Parental role and responsibility

A third theme that was frequently mentioned (over 16% of responses) included parents' growing understanding of their role in the family system, their need to take responsibility and be a good role model, and learning about parenting styles and how these are linked with child behaviour and development. When describing their appreciation for learning about parenting styles, parents often included personality styles and love languages as well, which nicely illustrates how parents felt Toolbox helped improve participants' understanding of themselves and their children together.

- *Be a parent coach and remember you are the adult and need to model behaviour you want to see in your child. (Mother, no child demographics provided)*
- *Not to be as controlling as my father was, and talk with a softer tone...Most of all I learnt not to be a Jelly fish or a Sergeant major when it comes to parenting style. (Father, no child demographics provided)*

Parents are human too

The fourth theme most frequently described by parents as the most helpful aspect of Toolbox was a recognition and appreciation that their experiences (both positive and negative) were similar to many other parents, that they were not alone (mentioned in 14% of responses). For some this provided a sense of validation and efficacy in their parenting strategies. The Toolbox curriculum reinforced that their approach to parenting was adaptive and appropriate for their children. On the other hand, for other parents it was important for them to hear that all parents make mistakes, that many parents face very challenging behaviour from their children and are at times at a loss for how to manage, and that parenting is a long journey with many twists and turns along the way. The following response nicely illustrates all of these perspectives:

- *I think we both agreed that the most helpful takeaway from the course was the sense that we're actually doing a reasonably ok job as parents! That is, we spend so much time feeling so inadequate due to our limited experience and perspective, but sitting there hearing from experienced parents and even others in our shoes with similar challenges, really encouraged us that we WERE getting a lot right, even if there were also lots of areas still to work on...definitely a renewed hope that we could actually have a positive family life. (Mother, no child demographics provided)*

Limitations and omissions

We received less than half the amount of responses regarding limitations or topic omissions in the Toolbox course ($n = 122$ responses) compared to the previous question on what was most helpful. Most participants left this question blank ($n = 277$), or commented that they had no suggestions or nothing was missing ($n = 136$), and a handful of participants expressed their satisfaction with the course ($n = 36$). The results of the coding and categorisation scheme identified 150 unique codes across the 122 responses, which were categorized into 13 different categories. On average, participants' responses were a bit longer than the previous question ($M = 28$ words per response, $st. dev. = 24.48$, $median = 19$), but still reasonably short (80% were less than 44 words).

Missing/limited topics

Rather unsurprisingly in light of the question, the majority of the responses identified curriculum topics that participants felt were missing or where more information and discussion was required. Six of these topics were identified by 10 (8%) or more participants. The theme mentioned most frequently in this group (26% of responses) were suggestions for more information on managing children's challenging behaviour, and when/how to take disciplinary action, how to establish and enforce family rules/values in the face of opposition or defiance (strong-willed children were mentioned several times), and requests for spending more time addressing very specific behavioural difficulties such as sleep and tantrums in the early years. Three examples that nicely illustrate this category include:

- *I would have liked a little bit longer spent on practical ways to set boundaries and how to [manage] when those boundaries are crossed. (Mother, child demographics not provided)*
- *It [Toolbox] probably didn't cover things well if you were dealing with a particularly challenging child/behaviour, but it did provide broad parenting skills. (Mother, child demographics not provided)*
- *Tantrum taming for toddlers. Having a sibling and how to deal with regressions. How to deal with fussy eating. How to deal with sleep issues. (Mother, child demographics not provided)*

Increasing inclusiveness

The next theme most frequently identified by participants included three categories, with each addressing a different aspect of inclusiveness. The first was a desire to see the Toolbox topics be more inclusive of the needs across diverse family structures (14% of responses), the second included participants' requests for Toolbox to address specific relationship dynamics within the family (e.g., siblings, parents with different backgrounds or perspectives; 10%), and the third category included participants' desire for Toolbox to address issues when parenting children with special needs (e.g., children on the autism spectrum, ADHD, etc.; 8%). For the first of the categories in this theme (family structures), participants wanted specific topics for step-/blended families, single parent families, and families from different cultural backgrounds. Whereas for the second category, the major focus was on getting parents (and occasionally the wider family) to work together and develop the same boundaries and expectations, and also a need for topics addressing issues between siblings. The third theme came from parents who were facing challenges with children who "didn't fit the norm" and wanted strategies that recognized and helped them to adapt their parenting for their distinct situations. The responses below capture each of these ideas:

- *The situations in solo parent or separated family. How to help children when family situations change. (Mother of 12 year old)*
- *[The] multi-cultural realities of Aotearoa. It [would] be great to have tools for parents who moved to NZ from another country and culture. (Mother, child demographics not provided)*
- *Managing siblings very close in age. (Mother of a 2 year old)*
- *Relationships between parents – both within a couple and when parenting in group situations. (Father, child demographics not provided)*
- *It would be great to have a section in there about how to know what may or may not be "normal" behaviour in children. And tools to figure out whether your child may have learning difficulties/ADHD/autism, etc. and if you feel like there is a possibility that they have something like this then it would be great to know what to do next or who to go to, etc. (Mother, child demographics not provided)*

Technology and social issues

Just under 10% of participants requested more information helping them address technology issues in their family (screen time, internet use, gaming), and the same number of parents requested information on specific social issues, such as bullying, sexuality, and alcohol and drug use. One mother was very succinct, “More on sex, alcohol, drugs, and tricky stuff.” Another parent captured both of these issues with the following response:

- *Addiction to phones etc is a huge area of concern as well as the bullying etc. The impacts of the constant distraction and time wasting is creating problems with mental and physical health. (Mother of a 16 year old).*

Toolbox facilitation

The last theme for Toolbox limitations was not related to course topics, but was more concerned with the facilitation of the course. Ten percent of the sample felt that the course needed more time (went too fast, was too rushed) and needed more opportunity for discussion amongst participants, while nine percent of the sample felt their course facilitator was not effective, was unable to connect the curriculum to real life situations, or adapt the content and discussion to fit the needs of the group.

- *It always seemed very rushed. Sometimes the discussion was the most enlightening and that always had to be cut short. (Mother, child demographics not provided)*
- *There is not enough time for parents to discuss freely topics of interest outside the course content. Our facilitator was rigid in sticking to her schedule and worried we would not complete the entire course content if we strayed. Many wanted to talk about social media, which wasn't covered in the course. (Mother of 15 year old)*
- *The content was fine but the delivery was poor. Our facilitator prevented any discussion between parents, did not learn our names, and made no effort to help parents talk over the issues they were facing. (Mother, child demographics not provided)*

Toolbox andragogy: Ranking exercise

During a Toolbox programme participants are exposed to a number of different teaching practices. These include providing participants with a detailed curriculum manual, teaching videos, small group discussion exercises, opportunities for mutual support and encouragement through sharing personal experiences, the facilitator's competency and advice, and the use of role plays. Participants were asked to rank these teaching resources (curriculum manual and teaching videos were combined, and an 'other' category was also added) according to which they found most helpful (1) to least helpful (6) for their learning. The results showed significant differences across all six categories ($ps < .01$ using both parametric and nonparametric tests), with participants ranking the curriculum manual and teaching videos highest ($M = 2.25$; $SD = 1.28$) followed closely by group discussion ($M = 2.31$; $SD = 1.08$), then facilitator competency and advice ($M = 2.76$; $SD = 1.33$). After the top three categories, there was a substantial gap to the next three categories of resources, including mutual support and encouragement ($M = 3.53$; $SD = 1.22$), role plays ($M = 4.28$; $SD = 1.17$), and finally the other category was ranked last ($M = 5.87$; $SD = 0.60$).

Participants could write a comment to explain their selection of 'other'. Of the 24 participants that wrote a comment, most of these were idiosyncratic comments or suggestions (e.g., importance of group size being not too large or too small), and several others provided a comment that reinforced one of the categories already listed. For example, four participants wrote about the unique composition of their group (e.g., fathers only, friends, partners in same course), which gave added value to the mutual support and encouragement from sharing with others.

In some regards, these results are not surprising. Toolbox invests considerable resources into publishing a quality curriculum manual and creating teaching and illustrative videos that are well produced. Group leaders are trained as facilitators of the programme and not experts, thus they are likely to heavily rely on the curriculum. Finally, as the Toolbox course covers a variety of topics for parenting and improving the general quality of family life, role plays are not as strongly emphasized as they are in other parenting programmes that focus on behavioural techniques.

Discussion & Summary

The results of this study show that the vast majority of participants felt that their involvement in the Parenting Place Toolbox course improved their parenting skills and efficacy, improved their family communication and relationship satisfaction, helped them create a more positive home environment, and reduced their children's behaviour problems. The present results also replicate and extend the results from the 2012/13 study that also showed high participant satisfaction, and a consistent belief that parenting strategies and home life environment had changed for the better as a result of Toolbox participation. Nevertheless, there are a few issues about this study that should be discussed briefly before wrapping up this report.

First, in contrast to other parenting programmes that are primarily focused on managing children's behaviour (e.g., Triple P, Incredible Years) or increasing emotional intelligence (Tuning in to Kids), Toolbox takes a much broader approach and considers healthy parenting within the overall family system. On one hand, this could be seen as a limitation as this makes it difficult to identify specific outcome measures, and one of the more consistent criticisms by participants was that Toolbox did not provide sufficient parenting strategies for managing children's difficult behaviour. On the other hand, parenting is more than just behaviour management, and Toolbox does seem to have filled a void for parents who need to see their role in the bigger picture of their family. Participants rated changes in parenting efficacy and reflective functioning the highest of the outcome measures (significantly higher than changes to child behaviour), and the two themes most frequently identified as being the most helpful aspect of Toolbox was inspiring positive change to parenting and family life, and a greater understanding and appreciation of their children's perspective.

This is closely related to a second point from the qualitative results that is important to mention. Not only did participants believe Toolbox provided a better understanding and appreciation of their children's perspectives and how to relate to them, but participants also felt that the course provided a better understanding of how to see oneself as a parent, and the importance of parental self-regulation alongside effective scaffolding of children's regulation. This is two important sides of parenting that could be easily overlooked when the focus is on behavioural management. The ability to see one's need for self-regulation and from there assist or guide the regulation of children, supports recent developments in parenting research around emotion regulation, reflective functioning, and mentalizing (Camoirano, 2017; Havighurst & Kehoe, 2017; Rostad & Whitaker, 2016).

The analyses of group differences in the outcome variables based on course completion (Early Years, Middle Years, and Tweens & Teens) and ethnicity revealed interesting results that should be considered carefully. First, when looking at group differences based on course completion, across 11 variables there was only one significant difference. Parents from the Early Years Toolbox course reported more positive improvement in the home environment after the course than parents from the Tweens & Teens course (there was no significant differences between parents from the Middle Years course and the other courses). This consistency across groups suggests that in general the course curriculum is generating similar results in spite of the different target audiences. The one area where there was a significant difference could be explained by the fact that in families with young children, the family systems and interaction patterns are not as engrained and are more open to change. Furthermore, during the infancy and toddler years, families are in many ways forced to be more flexible due to the rapid nature of child development and need to shift parenting strategies and routines in adaptive ways.

The analyses on ethnic differences across the study variables showed that the Māori/Pacific parents and Asian parents felt the Toolbox course was more effective in improving parenting practices, the home environment, and reducing child behaviour problems than European/Pakeha parents. While this result is interesting in that the Toolbox course is not explicitly adapted for these cultures, it should also be treated with caution. It is possible that the Māori/Pacific and Asian parents who participated in Toolbox and this study are already comfortable with European New Zealand culture. Thus, these small samples of parents from these groups in this study may represent those parents who are most receptive to a parenting programme from a Western cultural perspective (a sample bias). In a similar fashion this is also a limitation of the study in general. It is likely that parents who received the email invitation and chose to be a part of the study could represent those parents who were most satisfied in their experience with Toolbox, as those who were not satisfied or ambivalent may have been less likely to participate.

The correlational analyses with socioeconomic status (SES) and age at first childbirth also produced some interesting results. Across many studies a general finding is that families and children with higher SES have a more positive home environment, better parenting, and lower child behaviour problems. A review by Reyno and McGrath (2006) also showed that lower family income was significantly and strongly associated with poorer responses to parenting treatment effectiveness. However, in this study, there was a small but significant trend for parents from lower SES families to report that Toolbox was more helpful for their family relationship satisfaction and communication and reflective functioning. These results are very encouraging, but need to be tested with more behavioural measures and longitudinal analyses.

Another limitation that is important to mention is the analyses assessing change from pre- to post-course. It is important to remember that these were retrospective and cross-sectional analyses. Participants first completed a retrospective measure on parenting, family life, and child behaviour from their memory of life before Toolbox, and then immediately completed the measure a second time assessing the outcomes after the Toolbox course. This type of forced comparison is inherently vulnerable to bias, self-deceptive optimism, and memory limitations. Thus, the results from these analyses should be treated with caution until replicated with pre-/post-course analyses that are longitudinal.

The qualitative analyses for the formative questions on (a) what aspect of Toolbox participants found most helpful for their parenting, and (b) what were the limitations and omissions in the Toolbox course provide helpful guidance on areas of Toolbox that should be maintained or strengthened, but also present some challenges. As described above, many participants (almost 1 in 4) felt that the Toolbox course helped them to create a more positive family environment, helped them understand their children better (almost 1 in 5), helped improve their ability to communicate and connect with their children (almost 1 in 5), and provided them with a better understanding of their role as a parent and strategies for how to adaptively fulfil that role (1 in 6). Each of these strengths reflect the major emphasis of Toolbox as a broad parenting course for shaping family life and socializing children. However, this strength also presents a challenge as less time, resources, and opportunities for discussion are focused on specific strategies for managing children's challenging behaviour (identified as a limitation in 1 out of every 4 responses), which is often one of the motivating reasons for why parents attend a parenting course in the first place. It is impossible for any single parenting course to meet all the needs for every family, but participants' suggestions around limitations/omissions do suggest that parents need to be well informed of the focus and scope of the Toolbox course when they register so they can make an informed decision around the course's ability to address their needs. There could also be an opportunity to create supplementary modules to the Toolbox curriculum that facilitators could choose to include if the majority of parents were interested in a specific topic outside of the core curriculum.

Finally, this study provides good preliminary evidence that Toolbox participants enjoy the course and believe it has a positive impact on their parenting and family life. The responses to the outcome measures also provide preliminary evidence for the areas of parenting, family life, and child behaviour where Toolbox may facilitate greater change compared to other areas. Taken together, this preliminary evidence provides excellent justification for doing further research with a more rigorous methodology to further test how participants and their families may (or may not) experience change over time, and how long any change is sustained.

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Appendix A: Coding categories for open-response questions

Categories of participants' responses to formative questions on aspects of the Toolbox course that were most helpful and limitations and omissions in the Toolbox course.

Category	Frequency	% of responses
<i>What did you learn at Toolbox that has been most helpful for your parenting? (n=322)</i>		
Strategies to create a positive family atmosphere/culture including	75	23.3
Learning to understand their child's/children's individual personality, behaviour, wishes, character traits/individual differences, point of view and motivations	61	18.9
Communication strategies to improve/promote communication (including listening skills)	61	18.9
Recognising the role of the parent in the family dynamic and understanding the different parenting styles (coach and role model included)	59	18.3
Strategies to create structure, boundaries and deliver discipline	43	13.4
Strategies for challenging/stressful situations or challenging behaviour/emotions; including personal self-regulation and child-regulation	40	12.4
General strategies and approaches to parenting (perseverance, patience, proactive, cooperative, problem solving, promoting independence, staying calm, relax more and control less)	36	11.2
Encouragement/validation that participant is doing a good job; provided confidence in what they are already doing	24	7.5
Idiosyncratic; variety of distinct responses not related to any categories	24	7.5
Parents are humans too; no one is perfect; it's ok to make mistakes and get things wrong	15	4.7
Struggling is ok/normal, other parents are facing similar challenges, they are not alone	15	4.7
Learning from others in the group; group dynamics & "comradery"; hearing others ideas; meeting other parents	11	4.0
Information on child development	9	2.8
Co-parenting; parents working as a team	9	2.8
Participant stated that everything was helpful	9	2.8
Need to look after yourself as a parent	5	1.6
Participant stated that nothing was helpful	3	0.9
Resources provided	2	0.6

Category	Frequency	% of responses
<i>What were the limitations and omissions with the Toolbox course and curriculum? (n=122)</i>		
Managing behaviour and boundaries	75	23.3
Different/diverse family arrangements	61	18.9
Family structure and relationships	61	18.9
Timing: too fast, too much info, not enough time for discussion	59	18.3
Social issues (sex, drugs, mental health, bullying)	43	13.4
Technology	40	12.4
Facilitation	36	11.2
Special needs	24	7.5
Administration issues	24	7.5
Communication	15	4.7
Idiosyncratic; variety of distinct responses not related to any categories	15	4.7
Parental self-care, self-regulation	11	4.0
Emotions	9	2.8
Child development research/science	9	2.8

Notes: Frequency and percentage columns will exceed total number of responses as a single response could be related to more than one category.