Evaluation of Triple P as a web-based intervention for parents of children with early onset conduct problems

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Acknowledgments

Research and development teams:

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- University of Auckland
  Cassy Dittman, Louise Keown, Sue Farruggia, Melanie Palmer
- Triple P International
  Des McWilliam, John Brett, Lynnette Haas, Bruce Cooper, John Robins
- Oregon Research Institute
  Carol Metzler, Julie Rusby
- Families International (video footage)
- InVision Media (video editing)
- Liquid Interactive (website development)
Using the power of the internet

- Internet is a widely used information source for parents
  - increased risk awareness and decreasing support from family
- Second only to TV as preferred method for receiving parenting information (Metzler et al., 2012)
- Internet use widespread and increasing (World Internet Project 2011, 2012)
  - UK 73%; Europe ~ 60%; USA, Australia, New Zealand ~ 82%
  - Households with children under 15 more likely to have broadband (77%) compared to those without (56%)
- Mixed information re socio-economic and educational divide
- Increasing number of vulnerable families have internet access
  - 78% disadvantaged low income parents in a Los Angeles sample (Love et al., in press)

What support is out there?

- Virtual environments for parents
  - Netmums UK: over 1.2 million members, 5 million visitors
  - Babyworld UK: 67% of parents surveyed visited at least once/week
- Google search:
  - ‘parenting’ yields 216 million results
  - ‘parenting tips’ yields 233 million results
  - ‘positive parenting’ yields over 38 million results
- Primarily health-related and medical information
- Gender bias
- Advice and information vs interactive, evidence-based programs
- Risk that information is unreliable and inaccurate
Technology-assisted interventions

• Online adult psychological interventions have been shown to be effective
• Mean effect size of internet interventions show effect sizes similar to face-to-face therapy
  \(d = .53\), medium; Barak et al., 2008)
• No RCT evidence concerning any parenting programs
  (Plantin & Daneback, 2009)

Why an online variant of Triple P?

• Potential to vastly increase population reach (e.g., rural and remote, lack of services available, waiting lists, working parents, fathers)
• Less expensive than face-to-face delivery
• Eliminates barriers (e.g., scheduling issues, transport time and costs, child care, stigma)
• Allows more tailored program and feedback than self-help books
• Structured format (content, modelling and skills practice) of behavioral family interventions well-suited to web-based delivery
• Potential to be combined with therapist contact
Building on the Triple P evidence

- Self-help parenting interventions are effective (Morawska & Sanders, 2008; Markie-Dadds & Sanders, 2005)

- Lifestyle, reality and infotainment style TV series on parenting have shown promise (Sanders, Montgomery & Brechman-Toussaint, 2000; Sanders et al., 2008)

Aims

- Develop an effective variant of Triple P as an online intervention
- Evaluate the efficacy of Online Level 4 Triple P intervention
- Two foundational trials to examine feasibility, effectiveness and consumer acceptability
  - Brisbane Australia
  - Auckland New Zealand
**Triple P Online**

- 8-module Level 4 Triple P intervention (Turner and Sanders, 2011)
- Key features:
  - mentor introduces and summarises modules
  - video clips of families in action
  - interactive exercises
  - individual goal setting, feedback and weekly check in
  - downloadable worksheets
  - personalised and printable parent workbook
    (email or Word file; full text and bullet point versions)
  - downloadable podcasts
  - review and reminder strategies
    (text messages, emails)
  - self-regulatory focus with decreasing support

**Modules are completed sequentially**

**Resources**

Use this page to fast track to resources that you have collected. Select a module title to access the resources you have collected so far. Select **Quick start** to go to the next part of your program.

- Introduction
- House 1: What is positive parenting?
- House 2: Encouraging behavior you like
- House 3: Teaching new skills
- House 4: Managing misbehavior
- House 5: Dealing with disobedience
- House 6: Preventing problems by planning ahead
- House 7: Making shopping fun
- House 8: Raising confident capable kids
Mentor introduces module content

What is positive parenting?
Introduction

Strategies are demonstrated in video clips

What is positive parenting?
Activities are interactive

Raising confident, capable kids

Program close
Please read this question carefully and select the one response you think would be the most effective action to take.

Question 1
You are singer clothes and your child comes to show you something. What is the best way to respond?

- Say you are busy and ask about haita;
- Ignore them and getting;
- Stop what you are doing, give your attention, and then continue informing.
- Say you will look when you have finished he cleaning.

Resources open on module completion

Resources

Module 1: What is positive parenting?

In this module:

What is positive parenting?
- A safe, interesting environment
- A positive learning environment
- Assertive discipline
- Realistic expectations
- Taking care of yourself

Common parent traps
Get active

Download these worksheets for extra information on this module.
Download an audio only podcast of this module to listen away from your computer.
Send yourself a summary of this module for you or your partner to read later.
Send yourself the key points of this module as a quick reminder to look at any time.
Example workbook page

Module 8: Raising confident capable kids

Check in
How did you go with your practice shopping trip or trip out? Did you manage to cover all the steps you set?

1. What went well, what didn’t? If something stopped you, how can you plan for that to make sure you can use your chosen strategies in future?

2. What better things to do next time, and things to do now?

3. How often have you done shopping or normal daily activities with your child yet? When would you have a good time to do the next few days? If you have, when are you going to do it again?

Next Saturday: Weekly shop

It's about time to put away your monitoring forms now we're coming to the end of the program, but before you do it, it can be really helpful to compare how things are now with how they were when you started Triple P. What changes have you noticed in yourself and in your child?

Write all your ideas now. Show is better.

Compare the first week and the last week. Have you noticed any changes?

• Yes

Feedback: Congratulations on working so hard on your goals throughout the program and getting these results.

If you haven't been keeping track for a while, it's a good idea to do so one more week so you can see what has changed since you started the program. Go back to the behavior you started monitoring in Module 2.

Arguments

Talking back

Did you get a goal about your own needs or looking after your relationship?

Get that book I wanted from the library.

Example worksheet

Planned Activities Checklist

Situation:

Instructions: Whenever this situation happens on a weekend or Saturday, check if for each of the steps below:

1. Prepare to listen
2. Talk about rules
3. Practice setting limits
4. Avoid emotionally charged
5. Think consequences for child
6. Expect challenges and mistakes

NUMBER OF STEPS COMPLETED:
Example summary email

Here is a quick overview of Triple P Module 5. Dealing with disturbances.

This week we looked at applying your positive parenting strategies to help prevent problem behaviors, and also to deal with a disturbance if it ever happens. The aim is to help your child and those around you.

- Make your home safe to avoid having to say no and don’t touch all the time you have limits for your child to do so. Don’t pretend to be what you do. Don’t forget your positive behavior you like. It is more likely to happen.
- Make a child only make one thing at a time. Get their children involved and give a clear, simple instruction that helps them move what to do. Provide your child with something they will enjoy.
- Add immediately when your child is involved. Block up instructions with consequences. Give them time to undo.
- Don’t repeat a step instruction, just repeat your voice in your head.
- Catch them being good and praise them as soon as you can.
- Keep your voice calm. Have realistic expectations. Look after yourself too.

Next time we’ll look at planning ahead to help you manage difficult situations. We’ll look at what your limits and plans are for each parent to prepare for times when it is necessary to use your positive parenting strategies.

Bye!

Professor Watt Sanders and the Triple P Team

Example sms reminder

Triple P hints:
Keep kids safe and busy. Catch them being good. Keep your voice calm.
Have realistic expectations. Look after yourself too.
See you next time.
Australian trial: Design

- RCT involving a two-group comparison:
  - online treatment condition vs computer-use-as-usual control
  - over 3 time points: pre, post (12 weeks), 6-month follow up
- Eligibility criteria
  - Child 2-9 years of age
  - Clinical range for child behaviour problems (ECBI)
- Recruitment
  - Radio, TV, online parenting forums, schools and child care settings

Hypotheses

- Compared to computer-use-as-usual, Triple P Online would be associated with greater improvements in:
  - child behaviour and emotional problems
  - dysfunctional parenting
  - parenting confidence
  - parental anger
  - parental adjustment
  - conflict over parenting
Participant flow

Sample characteristics

- 67% of children were male
- Mean child age 4.7 years
- Mean parent age 37.37 years (range 23-50 years)
- 66% employed, 76% income at or above Australian median
- 80% accessed the internet every day
  15% several times a week
- Hours per week online:
  - 29% more than 10 hours
  - 29% 5-10 hours
  - 29% 2-5 hours
- 81% very or totally computer and internet confident
Results: ECBI Problem Scale

Results: ECBI Intensity Scale
### Intent-to-treat effect sizes

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Post (d)</th>
<th>Follow-up (d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child behavior</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECBI – Problem</td>
<td>0.71 (medium)</td>
<td>0.60 (medium)</td>
</tr>
<tr>
<td>ECBI – Intensity</td>
<td>0.89 (large)</td>
<td>0.74 (medium)</td>
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<tr>
<td>Observed child behavior</td>
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<td></td>
</tr>
<tr>
<td>(completer analysis only)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child disruptive</td>
<td>ns</td>
<td>0.14 (small)</td>
</tr>
<tr>
<td>Parenting style</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laxness</td>
<td>0.53 (medium)</td>
<td>0.80 (large)</td>
</tr>
<tr>
<td>Over-reactivity</td>
<td>0.61 (medium)</td>
<td>0.84 (large)</td>
</tr>
<tr>
<td>Verbosity</td>
<td>0.57 (medium)</td>
<td>0.69 (medium)</td>
</tr>
<tr>
<td>Parenting confidence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Behavior</td>
<td>0.84 (large)</td>
<td>0.98 (large)</td>
</tr>
<tr>
<td>Setting</td>
<td>0.64 (medium)</td>
<td>0.76 (medium)</td>
</tr>
<tr>
<td>Parent anger</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Problem</td>
<td>0.27 (small)</td>
<td>0.52 (medium)</td>
</tr>
<tr>
<td>Anger intensity</td>
<td>0.29 (small)</td>
<td>0.35 (small)</td>
</tr>
<tr>
<td>Parent conflict</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Problem</td>
<td>ns</td>
<td>0.36 (small)</td>
</tr>
<tr>
<td>Extent</td>
<td>ns</td>
<td>0.33 (small)</td>
</tr>
<tr>
<td>Parent adjustment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Anxiety</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Stress</td>
<td>ns</td>
<td>0.59 (medium)</td>
</tr>
</tbody>
</table>

### User patterns

- Users who complete take an average of:
  - 9.75 log ons
  - 11 weeks
  - 5.9 hours
  - 56 mins per module

<table>
<thead>
<tr>
<th>Module</th>
<th>Completed (%)</th>
<th>Average time (mins)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What is positive parenting?</td>
<td>95</td>
<td>74</td>
</tr>
<tr>
<td>2. Encouraging behaviour you like</td>
<td>91</td>
<td>47</td>
</tr>
<tr>
<td>3. Teaching new skills</td>
<td>78</td>
<td>73</td>
</tr>
<tr>
<td>4. Managing misbehaviour</td>
<td>67</td>
<td>74</td>
</tr>
<tr>
<td>5. Dealing with disobedience</td>
<td>57</td>
<td>48</td>
</tr>
<tr>
<td>6. Preventing problems by planning ahead</td>
<td>53</td>
<td>41</td>
</tr>
<tr>
<td>7. Making shopping fun</td>
<td>50</td>
<td>40</td>
</tr>
<tr>
<td>8. Raising confident, capable kids</td>
<td>47</td>
<td>53</td>
</tr>
</tbody>
</table>
Exploring dosage

![Graph showing ECBI Intensity Score (frequency of problems) for Module 4-8, Module 0-3, and Control groups with pre-intervention, post-intervention, and 6-month follow-up data.]()

Consumer satisfaction

High consumer satisfaction (CSQ):

- $M=5.48$ (1 very dissatisfied - 7 very satisfied)
- Mean total score: 68.55 (out of 91)
  - Slightly lower than face-to-face trials (e.g. Standard Triple P: $M=74.58$)
  - Better than Self-directed Triple P ($M=57.65$)
- 91% rated the quality of the service they received as at least “good”
- Would you be willing to pay to receive a program like this?
  - Yes: 30 (69.8%), NO: 10 (30.2%)
Feedback

• Helpfulness of the inbuilt features

![Bar chart showing helpfulness of inbuilt features](chart.png)

Summary of main findings

• Most hypothesis were confirmed:
  - Improved child behavior
  - Improved parenting
  - Improved parenting confidence
  - Reduced parental anger
  - Improved parental adjustment
  - Reduced conflict over parenting

• The effect sizes observed for key variables are similar to those for face-to-face interventions
New Zealand trial: Design

- RCT comparing Triple P Online to the Every Parent’s Self-Help workbook
- Effects on child behaviour, parenting, and parental and family adjustment evaluated at post-intervention and 6-month follow up
- Also interested in potential differences in program adherence and completion and consumer acceptability

Sample

- $N = 193$ children: Online = 97, Workbook = 96
- Target child
  - 3 to 8 years (mean = 5.64 years)
  - 67% male
  - 90% Pakeha (NZ European), 4% Maori, 4% Pacific Islander
- Families
  - 77% two-parent biological; 14% sole-parent; 7% step-family
  - Most had completed high school; 48% university educated
  - 54% family income >$70,000
- Frequent and confident internet users
Results

- Equivalent consumer satisfaction
- No significant differences between the internet and workbook groups on any outcome measure at post-test or 6-month follow up
- Both interventions produced significant and clinically meaningful change in:
  - Disruptive child behaviour
  - Dysfunctional parenting
  - Parenting confidence
  - Risk of child maltreatment
  - Inter-parental conflict
  - Parental adjustment

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Triple P Online (d)</th>
<th>Self-help Workbook (d)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Child behavior</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECBI – Problem</td>
<td>1.44 (very large)</td>
<td>1.35 (very large)</td>
</tr>
<tr>
<td>ECBI – Intensity</td>
<td>1.54 (very large)</td>
<td>1.36 (very large)</td>
</tr>
<tr>
<td><strong>Parenting style</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laxness</td>
<td>1.00 (large)</td>
<td>0.94 (large)</td>
</tr>
<tr>
<td>Over-reactivity</td>
<td>1.29 (very large)</td>
<td>1.20 (very large)</td>
</tr>
<tr>
<td>Verbosity</td>
<td>1.06 (large)</td>
<td>0.95 (large)</td>
</tr>
<tr>
<td><strong>Parenting confidence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Behavior</td>
<td>1.38 (very large)</td>
<td>1.38 (very large)</td>
</tr>
<tr>
<td>Setting</td>
<td>1.27 (very large)</td>
<td>1.35 (very large)</td>
</tr>
<tr>
<td><strong>Parent anger</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abuse Potential</td>
<td>0.49 (medium)</td>
<td>0.36 (small)</td>
</tr>
<tr>
<td>Anger Intensity</td>
<td>0.46 (medium)</td>
<td>0.63 (medium)</td>
</tr>
<tr>
<td><strong>Inter-parent conflict</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Problem</td>
<td>0.66 (medium)</td>
<td>0.83 (large)</td>
</tr>
<tr>
<td>Extent</td>
<td>0.58 (medium)</td>
<td>0.80 (large)</td>
</tr>
<tr>
<td><strong>Parent adjustment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>0.27 (small)</td>
<td>0.28 (small)</td>
</tr>
<tr>
<td>Anxiety</td>
<td>0.38 (small)</td>
<td>0.13 (negligible)</td>
</tr>
<tr>
<td>Stress</td>
<td>0.66 (medium)</td>
<td>0.54 (medium)</td>
</tr>
</tbody>
</table>
Conclusions

• Results support web-based program delivery as an effective option for parents of children with significant conduct problems.
• Comparable effectiveness of programs (e.g., group, individual, workbook, online) = choice for parents.
• Given outcomes at < 4 modules, and preference for non-linear module completion, potential for less intensive intervention (Level 3).
• Potential for combination with therapist contact (e.g., telephone consultations, social network).