

# The Positive Parenting Program around the world: Moderators of intervention efficacy

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# Why a(nother) meta-analysis?

- The important mediating role of parenting for child behavior problems is well established and has led to the development of a variety of parenting interventions.
- A systematic review of parenting programs targeting child conduct disorders by Dretzke et al. (2005) found different programs to be generally effective and comparable in outcomes.
- Two recent meta-analyses investigated specifically the efficacy of Triple P:
  - Thomas & Zimmer-Gembeck (2007): compared Triple P to PCIT; included 11 RCTs
  - De Graaf, Speetjens, Smit, de Wolff, & Tavecchio (in press): analyzed Triple P studies (Level 4 only), included 14 RCTs

# Why a(nother) meta-analysis? (II)

- Both studies report small to large positive effects for Triple P with a considerable range (0.04 – 1.14) with a moderate mean effect.
- Not surprising: Triple P is a system of support operating on various levels of intervention intensity
  - Is it helpful to report a mean effect size?
- The current meta-analysis extends these previous meta-analyses by
  - a) including all outcome studies investigating Triple P, both controlled and uncontrolled;
  - b) applying a more sophisticated method of analysis (hierarchical linear modeling);
  - c) incorporating different outcome variables to capture the range of intervention effects commonly measured in outcome studies;
  - d) by investigating the impact of potential moderator variables on the effectiveness of Triple P.

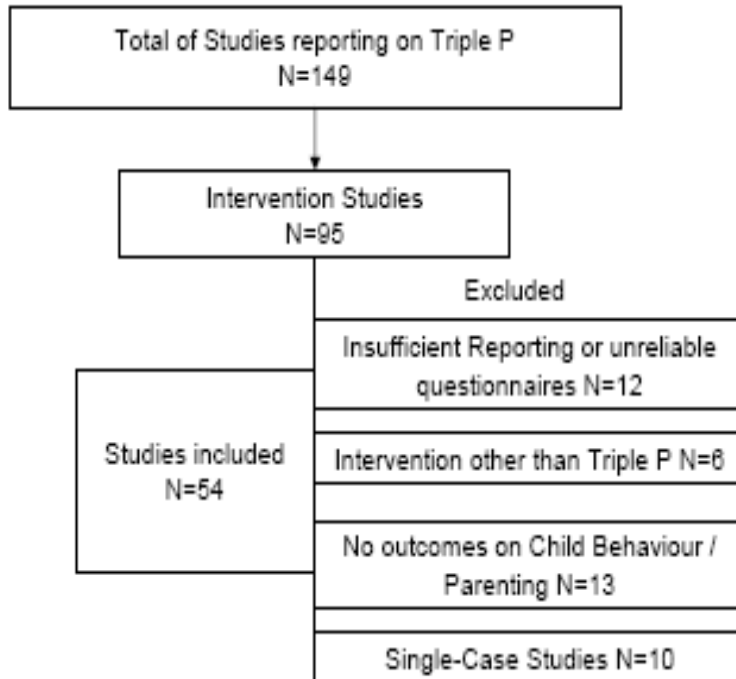
# Hypotheses

- (1) Similar mean effect sizes for parenting and child problem behavior
  - Based on previous findings, it was assumed that Triple P would be generally efficacious in improving parenting and child problem behavior
- (2) Smaller but significant positive impact on other dependent variables
  - Parental Relationship Quality (e.g., DAS)
  - Parental Mental Well-Being (e.g., BDI, DASS)
  - Child Mental Well-Being (e.g., child self-esteem, depression, anxiety)
- (3) Higher levels of parent-reported child behavior problems would be associated with larger effect sizes
  - due to both, a general tendency for extreme values to regress towards the mean and to the greater responsiveness of severely distressed parents coping with difficult to manage children
- (4) More intensive levels of Triple P (i.e. Level 4 or 5) which target parents with more severe problems yield larger effects.
  - Further moderators: delivery format, source, quality of studies, age & gender of children, country, study design, attrition, length of follow-up

# Method

- Literature search for articles published between 1970 – 2007
- Inclusion/Exclusion criteria:
  - The intervention tested had to be a form of Triple P
  - Trials which were cited as evidence but did not directly follow any of the published standardized Triple P formats were excluded
  - Studies had to report measures of parenting skills and/or child problem behavior and/or parent/child well-being on a metric scale for which reliability and validity estimates were given
- Studies investigating cost effectiveness, consumer satisfaction, recruitment rates, or practitioner outcomes were not included
- Studies had to be in English or German
- All included studies' methodological quality was double-rated with a scale developed by Downs and Black (1998):
  - Four subscales (Reporting, Confounding, Bias, and External Validity)
  - 26 questions are rated as 'yes' or 'no/unable to determine' resulting in an overall score (ranging from zero to twenty-six)

# Study Inclusion and Data Analysis



- We used hierarchical linear models (HLM) to account for the nested data structure encountered in meta-analyses; i.e. two individuals within the same study are expected to be more alike each other than two subjects in different studies
- Between group effect sizes (BGES) for randomized studies including a control group ( $N = 39$ )
- Within group effect sizes (WGES) for all other studies and for follow-up

# Descriptives

- Total N = 10,922 (6054 in RCTs)
- 61% of studies conducted in Australia
- Level
  - 66% Level 4
  - 18% Level 5
  - 16% Levels 1-3
- Delivery Format
  - 38% Group
  - 30% Self-Directed (2/3 minimum therapist support)
  - 29% Individual
  - 3 Studies: Information Campaign
- Initial Child Problem Scores (Means)
  - 49% Normal
  - 22% Borderline
  - 29% Clinical

# The „Boring“ Results: Mean Effect Size



- Parenting and child problem behavior:
  - ES = 0.35 – 0.48 (between-groups)
  - ES = 0.45 – 0.57 (within-group)
- Parental Well-Being: ES = 0.17
- Relationship Quality: no sign. effect

• Thomas & Zimmer-Gembeck (2007): 0.38-0.70

• De Graaf et al. (in press): .42 (post-intervention), .65 (FU)

- Post-intervention WGESs could be sustained at follow-up for Child Problems, **Parenting, Parental Well-Being, and Relationship Quality**, with a tendency to increase slightly for the latter three

# The „Thrilling“ results: Moderators of Mean Effect



- The following moderators impact outcome significantly:
  - Intervention intensity (Level of Triple P)
  - Delivery format
  - Source of assessment
  - Study design/quality
- The following variables did not impact outcome significantly:
  - Gender of child (e.g., % of boys)
  - Publication year
  - The country in which the study was conducted
  - Follow-up length (mean 6.3 months)
  - Attrition rate (mean: 19.5%)

# Moderators of Mean Effect in Parenting

Outcome Category	Predictor	Post BGES	Post WGES	FU WGES
Parenting	<b>Level 5</b>	0.197 (0.114) *	0.419 (0.105) **	0.382 (0.126) **
	Father	-0.251 (0.082) **	-0.322 (0.057) **	-0.330 (0.051) *
	Behavioural Observation	-0.355 (0.076) **	-0.688 (0.098) **	-0.319 (0.138) *
	Mean Child Age	-0.050 (0.018) *	-0.040 (0.015) *	-0.040 (0.018) *

# Moderators of Mean Effect in Child Problem Behavior

Outcome Category	Predictor	Post BGES	Post WGES	FU WGES
Child Problem Behavior	<b>Level 5</b>	0.288 (0.118) *	0.511 (0.183) **	0.409 (0.144) **
	Group Format		-0.304 (0.167) †	-0.207 (0.114) †
	Father	-0.239 (0.030)**	-0.205 (0.037) **	-0.204 (0.054) **
	Behavioral Observation	-0.444 (0.080)**	-0.348 (0.143) *	
	Study Quality	-0.020 (0.011) †	-0.055 (0.017) **	-0.037 (0.013) **
	Initial: <b>Borderline</b>		0.204 (0.107) †	
	Initial: <b>Clinical</b>		0.181 (0.104) †	0.306 (0.122) *
	Mean Child Age		-0.038 (0.018) *	-0.028 (0.013) †

# Estimated Effect Sizes for Controlled Comparisons

		Child Problem Behavior (N=33) <sup>1</sup>	Parenting (N=33) <sup>1</sup>	Parental Well-Being (N=26) <sup>1</sup>	Parents' Relationship Quality (N=15) <sup>1</sup>
<b>Triple P Intensity</b>	<b>Level 1-3</b>	0.21	0.38	0.19	0.13
	<b>Level 4</b>	0.34	0.36	0.16	0.09
	<b>Level 5</b>	0.56	0.49	0.20	0.30
<b>Triple P Delivery Format</b>	<b>Individual</b>	0.43	0.41	0.16	0.09
	<b>Group</b>	0.20	0.38	0.15	0.12
	<b>Self-Administered</b>	0.03	0.35	0.25	0.14
<b>Source of Assessment</b>	<b>Mother</b>	0.42	0.45	0.20	0.13
	<b>Father</b>	0.26	0.25	0.07	0.07
	<b>Behavioral Observation</b>	0.18	0.18	-	-
<b>Study Design</b>	<b>RCT</b>	0.48	0.42	0.20	0.16
	<b>nonRCT</b>	0.10	0.32	0.10	0.04

# Discussion

- It makes little sense to calculate mean ES across studies without considering the Level of Triple P and the initial severity of child problem behavior
- The effects of Triple P seem to generalize well outside of Australia (potentially due to the program and the well looked after dissemination procedure)
- Effects well established in parenting and misbehavior, few studies on positive child behavior
- Informant discrepancies (mothers > fathers > BO) have frequently been observed in the assessment of children (at least interparental disagreement)
  - BO has led to clear effects in single-case studies with Triple P, and in early group studies (both were excluded)
  - Floor effects
  - The Coding System (FOS)
- The lack of association between the proportion of non-completers and effect sizes illustrate that Triple P seems not to selectively favor parents responding especially well

# Thank you for your attention

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