Toward Improved Parenting Interventions for Disruptive Child Behavior

Engaging Disadvantaged Families and Searching for Effective Elements

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Engaging Disadvantaged Families and Searching for Effective Elements

Op Weg naar Effectievere Oudercursussen voor Gedragsproblemen bij Kinderen

Achtergestelde Gezinnen Bereiken en Effectieve Elementen Identificeren

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Chapter 1

General Introduction

Parenting interventions are a promising strategy to prevent antisocial behavior in society. Evidence accumulates that parenting interventions can reduce disruptive child behavior (e.g., McCart et al., 2006; Scott, 2008; Weisz & Kazdin, 2010) and insight rapidly increases into which families they benefit most (e.g., Lundahl et al., 2006; Reyno & McGrath, 2006). At the same time, however, several high risk populations are hardly reached by current interventions (e.g., families with low socioeconomic status and ethnic minority backgrounds; Eyberg, Nelson, & Boggs, 2008; Miranda et al., 2005; Reyno & McGrath, 2006), effect sizes of parenting interventions remain small to moderate (Kazdin & Weisz, 2010; Piquero, Farrington, Welsh, Tremblay, & Jennings, 2009; Weisz, Jensen-Doss, & Hawley, 2006), and about a quarter to a third of families fail to show improvement from parenting interventions (Scott, Spender, Doolan, Jacobs, & Aspland, 2001; Shelleby & Shaw, 2012; Webster-Stratton et al., 2001). Accordingly, important challenges lie ahead for research and society to use parenting interventions in their most optimal form.

One of the main challenges parenting interventions face is to reach and retain families who most need parenting help. Families with cumulative risk factors for the development of child behavior problems (e.g., disadvantaged socioeconomic status, ethnic minority status, and elevated levels of disruptive child behavior) are often hardly reached by parenting interventions in current practice (Miranda et al., 2005; Reyno & McGrath, 2006). So although we now have empirically supported parenting interventions that are able to successfully improve parenting practices and child behavior (e.g., Dishion & Stormshak, 2007; Eyberg, 1988; Forgatch & Patterson, 2010; Sanders, 1999, Webster-Stratton, 2001), our abilities to engage disadvantaged families in these interventions, and knowledge on whether these families benefit from parenting interventions as much as society might hope for, are lacking (Eyberg, Nelson, & Boggs, 2008; Miranda et al., 2005; Weisz, Sandler, Durlak, & Anton, 2005). It is therefore important to reach families who most need parenting support, and to examine the effectiveness of parenting interventions among these families.

Another main challenge for parenting interventions is to improve the effectiveness of established programs. Established parenting intervention programs are generally moderately effective for increasing positive parenting behavior and reducing children's behavior problems and calls are rising to increase this effectiveness (e.g., Piquero, Farrington, Welsh, Tremblay, & Jennings, 2009; Weisz et al., 2006). However, there is a lack of research strategies for improving parenting intervention effectiveness. One way to improve the effectiveness of parenting

interventions may be to optimize the composition of elements included in these programs. Established interventions typically entail about 12 to 18 sessions (e.g., Forgatch & Patterson, 2010; Sanders, 1999; Webster-Stratton, 2001), in which parents are taught dozens of parenting techniques. Not every technique may contribute equally to program effectiveness: some techniques may be essential for program effectiveness, whereas others may be ineffective or superfluous in the light of other techniques. Moreover, the effectiveness of techniques may depend on parent and child characteristics such as parental cognitive capacities and children's sensitivity to environmental influences and rewards (e.g., Belsky, Bakermans-Kranenburg, & van IJzendoorn, 2007). Ideally, parenting interventions would include only those elements that are evidence-based. However, there is a dearth of knowledge on which techniques taught in parenting interventions are effective and actually contribute to program effectiveness—and for whom (Chorpita & Daleiden, 2009; Embry & Biglan, 2004; Forgatch, 1991; Piquero et al., 2009). In other words, we know that packaged-deal programs containing multiple techniques tend to work, but we do not know which specific techniques work best.

Outline of This Thesis

This thesis aims to address these two challenges for evidence-based parenting intervention. First, it strives to increase insights into how families with low socioeconomic status and/or ethnic minority backgrounds can be reached for and benefit from parenting interventions. Second, it proposes a research approach to examine the extent to which discrete parenting intervention elements are effective.

In part one, we focus on the effectiveness of parenting interventions for families that have cumulative risk factors for the development of disruptive child behavior disorders, but are hard to reach for mental health services. We start with a meta-analysis on the extent to which parenting interventions are effective for immediate reduction and sustained improvement of disruptive child behavior in families with low socioeconomic status (Chapter 2). We then focus on parental problem perception as one of the presumed key barriers to treatment for ethnic minority families, and test whether ethnic differences in problem perception also exist in families that engage in a parenting intervention (Chapter 3). We then study the effectiveness of the empirically supported parent training program Incredible Years for reducing disruptive child behavior in low educated and ethnic minority families in the Netherlands, and how family ethnic background, educational level, and referral status (i.e., self-referred or actively recruited) may affect intervention

effectiveness (Chapter 4). Finally, we study the extent to which the Family Check-Up intervention is able to increase the engagement of hard to reach indigent families in community services (Chapter 5).

In part two, we suggest that, besides a continued need to evaluate comprehensive interventions, the field of parenting intervention research may benefit from a complementary approach that tests the effectiveness of discrete parenting intervention elements (Chapter 6, theoretical chapter). To illustrate our suggested research approach, we examine the empirical merit of the advice given in most established parenting interventions to use labeled praise over unlabeled praise. In a first experimental study (Chapter 7), we examine whether labeled is superior to unlabeled praise at yielding child compliance in a community sample. In a second experimental study (Chapter 8), we build on the findings and limitations of the first experiment and examine the relative effectiveness of labeled and unlabeled praise in children with elevated levels of disruptive behavior and the effectiveness of a two-week practice period with labeled or unlabeled praise to reduce disruptive child behavior. This thesis ends with a general discussion in which we summarize our main findings, reflect on our studies' strengths, limitations, and implications, and look forward to future research needed to improve parenting interventions.

Chapter 2

Does Socioeconomic Status Matter?

A Meta-analysis on Parent Training Effectiveness for Disruptive Child Behavior

Leijten, P., Raaijmakers, M. A. J., Orobio de Castro, B., & Matthys, W. (2013). Does socioeconomic status matter? A meta-analysis on parent training effectiveness for disruptive child behavior. *Journal of Clinical Child and Adolescent Psychology, 42,* 384–392.

Abstract

Disadvantaged family socioeconomic status (SES) is often assumed to diminish parent training program effectiveness. In examining effects of SES, influences of initial problem severity have been largely ignored. In the present meta-analysis, we examined whether (1) there is a differential influence of SES on parent training effectiveness at immediate post-treatment and at one-year follow-up—controlling for levels of initial problem severity, and whether (2) SES interacts with initial problem severity in its effect on program effectiveness. Seventy-five studies on parent training program effectiveness to reduce disruptive child behavior were included. Separate analyses were conducted for immediate post-treatment and approximately one-year follow-up assessments. Immediately post-treatment, disadvantaged samples benefited less from parent training, but only when they had low levels of initial problem severity. At follow-up, disadvantaged samples benefited less from parent training regardless of initial problem severity. Initial problem severity was a strong predictor of effect sizes both immediately post-treatment and at follow-up. Parent training programs are equally effective for disadvantaged and nondisadvantaged families immediately post-treatment, at least when initial problems are severe. Maintenance of treatment gain, however, seems harder for disadvantaged families, suggesting that more sustained family support may be needed.

Introduction

Meta-analyses show that parent training programs are an effective method to reduce disruptive child behavior (e.g., McCart, Priester, Davies, & Azen, 2006; Serketich & Dumas, 1996). For some families, that is—not all families benefit equally from parent training programs (e.g., Lundahl, Risser, & Lovejoy, 2006). One factor that is often assumed to influence parent training effectiveness is family socioeconomic status (SES). In particular, socially and economically disadvantaged families are assumed to benefit less from parent training programs than nondisadvantaged families. These families' financial, psychological, or social stressors may limit their potential for positive change (Conger et al., 1992). Although there are some exceptions showing opposite results (e.g., Deković et al., 2011; Gardner, Hutchings, Bywater, & Whitaker, 2010; MacKenzie, Fite, & Bates, 2004), studies have generally supported the view that disadvantaged families benefit less from parent training programs (e.g., Lundahl et al., 2006). In addition, there are indications that effects of SES are influenced by program characteristics such as that disadvantaged families benefit more from individual than group delivery (Lundahl et al., 2006).

A well-known strong predictor of parent training effectiveness that has been largely ignored in previous meta-analyses on effects of SES on parent training effectiveness, is the severity of children's disruptive behavior problems at baseline (i.e., before the start of the intervention). Treatment studies in clinical samples generally obtain stronger effects than preventive studies in nonclinical, community samples (Weisz, Sandler, Durlak, & Anton, 2005). This same pattern of results can be found in single studies, in which families with high initial levels of behavior problems typically benefit more from parent training programs than families with low initial levels of behavior problems (e.g., Hautmann et al., 2010). Parents may be more motivated to get the best out of the training when they experience their child's behavior as more problematic. Parental motivation and "readiness to change" strongly influence the positive impact that parent training programs can exert, for example through higher attendance and adherence rates (Baydar, Reid, & Webster-Stratton, 2003; Miller & Rollnick, 2002). In addition, more severely troubled children have a larger scope for improvement. As a result, larger intervention effects can more easily be obtained in children with higher levels of initial problem severity.

Although perhaps of influence for all families, initial problem severity may

be especially important for parent training effectiveness in disadvantaged families. Disruptive problem behaviors are more strongly associated with problematic parenting practices in disadvantaged families, who often have smaller social networks and less access to resources to provide them with parenting assistance and advice (Bradley, Corwyn, Burchinal, McAdoo, & Garcia-Coll, 2001; Evans, Boxhill, & Pinkava, 2010; Schonberg & Shaw, 2007; Wadsworth & Achenbach, 2005). Therefore, parent training programs directly targeted at the improvement of parenting skills may be able to obtain especially large improvements in disadvantaged families with high levels of initial problem severity.

Previous meta-analyses suggest that SES may differentially impact parent training effectiveness measured at immediate post-treatment (i.e., within a few weeks after the end of the program, e.g., McCart et al., 2006) than at follow-up (i.e., months or even years later, e.g., Deković et al., 2011). In particular, although disadvantaged families may already show less improvement immediately post-treatment, their limited treatment responsiveness may become especially salient at follow-up, when participants are thrown back on their own resources to maintain and further enhance positive changes. SES operates on families' lives for a large part via chronic stressors that accompany low SES, such as poor parental mental health, social isolation, and deprived neighborhoods (Baum, Garofalo, & Yali, 1999; Pinderhughes, Nix, Foster, & Jones, 2001). So even though disadvantaged families may be able to reduce disruptive child behavior during the intervention, it may be an especially hard and enduring battle to maintain and extend improvements after the end of the program, in the light of the chronic stressors they face, and when support from trainers is no longer available. In the present meta-analysis, we therefore compared influences of SES and initial problem severity on the reduction of children's disruptive behavior problems immediately post-treatment (i.e., directly after preventive or treatment intervention) and at follow-up approximately one year later.

Methods

Literature Search

Computer searches of PsychInfo and ERIC were conducted for all published studies until January 31, 2010. We used the following search terms in varying combinations: parent training, parenting program, disruptive, behavior problems, effectiveness, and efficacy. Studies were first filtered based on information in the abstracts. Only studies including an effectiveness study on reducing disruptive

behavior problems were included for further examination. The 150 studies resulting from this selection were studied more closely and judged on the inclusion criteria (see below).

Selection of Studies

Studies were selected for inclusion if they (a) reported on the effectiveness of parent training programs targeting disruptive child behavior (up to the age of 12 years maximum), (b) had at least one treatment and one control group drawn from the same population, (c) had treatment and control groups larger than $N = 5$, (d) involved multiple-session parent training (interventions consisting of only one session were excluded), (e) included families in which the targeted children were not developmentally or cognitively delayed, (f) reported means and standard deviations of disruptive behavior on a standardized measure, (g) were written in English, and (h) were published in peer-reviewed journals. These inclusion criteria resulted in 75 final studies. Thirteen studies included multiple intervention conditions that shared the same control condition, which may have resulted partially dependent data. However, multilevel meta-analytic analyses were not possible because the sample size of thirteen studies with nested data was too small (Maas & Hox, 2005).

Effect Size

The outcome measure of our meta-analysis was the effect size of reduced parent-reported disruptive child behavior. We used intergroup Cohen's *d* as the measure of effect size immediately post-treatment, where *d* represents the difference in disruptive behavior reduction between intervention and control conditions expressed in standard deviation units (cf. Lipsey & Wilson, 2001). For studies that reported multiple parent-reported measures of disruptive child behavior, the mean *d* was computed. Because most studies with follow-up assessments used a wait list control design (88%) and therefore did not report follow-up data for the control condition, follow-up effect sizes were computed based on reduction of disruptive behavior within the intervention condition (i.e., *intra*group effect sizes). Because not corrected for improvements in the control group, intragroup effect sizes typically are inflated. To illustrate, the eight studies for which intergroup effect sizes at follow-up could be calculated had a mean intergroup effect sizes of $d = .28$, compared to a mean intragroup effect size at follow-up of $d = .85$. Intragroup follow-up effect sizes can therefore only be compared with each other, and not with immediately post-treatment intergroup effect sizes. If studies included multiple follow-up assessments,

the assessment closest to twelve months was selected, because the majority of studies used a twelve months follow-up period.

Moderators

Socioeconomic Status. Categorization was done by the studies' original authors. All authors were emailed with the request to define their study's sample as either disadvantaged or nondisadvantaged, based on local and (if applicable) historical, national standards of SES. Dichotomous categorization was used because there was no continuous measure (e.g., income, educational level) that was used in all studies alike. In addition, dichotomization is in line with several previous meta-analyses (e.g., Lundahl et al., 2006), which enables direct comparison of our results with previous findings. Seventy-eight percent of all authors sent in their categorization, which was based on their samples' educational level (63%), income (43%), Hollingshead index (21%), occupational status (21%), financial aid (12%), Daniels Scale (11%), reduced lunch (4%), and other measures (e.g., subsidized housing). Studies of which authors did not send in their categorization were categorized based on characteristics of SES as reported in the articles, such as educational level (43%), income (27%), Hollingshead index (23%), employment rates (13%), and other measures (e.g., subsidized housing). Two coders categorized all studies independently of the original authors categorization, which showed sufficient reliability with the original authors' categorization (Cohen's Kappa = .74).

Initial problem severity. Initial problem severity scores for each study were based on pre-treatment scores of disruptive behavior. To make study findings comparable, we indexed levels of initial problem severity by the number of standard deviations that the initial problem severity score reported in a particular study deviated from existing norms for the instrument used. More specifically, we computed norm-deviation scores by subtracting from each study's pre-treatment score the instrument's normative score, and dividing this difference by the instrument's normative standard deviation. For example, Funderburk et al. (1998) reported a baseline disruptive behavior score on the Eyberg Child Behavior Inventory of 169.90. The Eyberg Child Behavior Inventory norm score for this age range (2–7) and gender (100% boys) is 109.82, with a standard deviation of 27.38 (Burns & Patterson, 2001). The Funderburk et al. (1998) norm-deviation score is therefore (169.90 – 109.82) / 27.38 = 2.19 standard deviations from the normative mean. Questionnaires used for calculation of norm-deviation scores are the Eyberg Child Behavior Inventory (77% of studies; Burns & Patterson, 2001), Child Behavior

Checklist (21% of studies; Achenbach, 1991), Strengths and Difficulties Questionnaire (7% of studies; NCHS, 2001), Parent Daily Report (6% of studies; Chamberlain & Reid, 1987), and Behavior Problem Checklist—Peterson-Quay (1% of studies; Speer, 1971). Gender and age-specific norm scores were used when available. For example, if a norm score was 12 for males and 10 for females, and a sample included 60% males and 40% females, the norm score we used was [(60*12) + (40*10)] / 100 = 11.20. If studies used multiple instruments of disruptive behavior, a mean norm-deviation score of the individual instruments' norm-deviation scores was computed. Calculations of norm-deviation scores for individual studies are available from the authors on request.

Reliability

All studies were coded by the first author. A random sample of twenty percent of the studies was coded by a trained graduate student. Intra-class correlation alphas and Cohen's Kappa's were computed for continuous and dichotomous data, respectively. Interrater-reliability was good with alpha's ranging from .86 to 1 (*M* = .96) and Kappa's ranging from .76 to 1 (*M* = .89).

Results

Meta-analytic Strategy

Table 1 shows an overview of the studies in the present meta-analysis. Hierarchical analyses were conducted following the method of Lipsey and Wilson (2001), with studies weighted by their inverse variance (comparable to sample size). In Step 1 of the analysis, we entered SES and initial problem severity as predictors of effect size. In Step 2, we added the initial problem severity × SES interaction. Both steps were separately conducted for immediate post-treatment and follow-up assessment.

Immediate Post-treatment Effects of SES

SES—controlled for initial problem severity did not predict effect sizes of parent training effectiveness immediately post-treatment (β = -.04, *n.s.*). Thus directly after the end of the intervention, disadvantaged samples and nondisadvantaged samples benefited equally from parent training.

Table 1. Study Descriptives.

Study	*N*	Program	RCT	SES	Initial problem severity (norm-deviance expressed in *SD*)	Cohen's *d* (immediate post-treatment; intergroup)	Cohen's *d* (follow-up; intragroup)
Barkley et al. (1996)	81	BPT	RCT	ND	1.61	-.07	
Bodenmann et al. (2008)	100	Triple-P	RCT	D	.49	.25	.10
Bor et al. (2002)	42	Triple-P	RCT	ND	2.08	.89	
Bor et al. (2002)	48	Triple-P	RCT	ND	1.98	1.00	
Braet et al. (2009)	49	BPT	RCT	ND	2.1	-.01	.37
Brotman et al. (2003)	30	IY	RCT	D	.31	.71	
Connell et al. (1997)	23	BPT	RCT	ND	.86	1.61	1.85
Connolly et al. (2001)	45	IY	Q-E	ND	1.45	.16	.49
Cunningham et al. (1995)	78	BPT	RCT	ND	.87		.07
Cunningham et al. (1995)	77	BPT	RCT	ND	.87		-.02
Edwards et al. (2007)	116	IY	RCT	D	1.16	.57	
Eyberg et al. (1995)	16	PCIT	RCT	D	1.99	1.50	
Firestone et al. (1980)	18	BPT	RCT	ND	1.31	.82	.69
Funderburk et al. (1998)	84	PCIT	Q-E	ND	2.19	1.32	
Gallart & Matthey (2005)	33	Triple-P	RCT	D	.50	.57	
Gallart & Matthey (2005)	32	Triple-P	RCT	D	.64	.57	
Gardner et al. (2006)	71	IY	RCT	D	1.72	.52	.73
Gross et al. (2003)	134	IY	RCT	D	-.17	-.05	.05
Hahlweg et al. (2009)	63	Triple-P	RCT	ND	1.06	.58	
Hamilton & MacQuiddy (1984)	18	BPT	RCT	ND	1.29	1.56	2.02
Hamilton & MacQuiddy (1984)	18	BPT	RCT	ND	1.32	.77	.95
Helfenbaum-Kun & Ortiz (2007)	39	IY	RCT	D	-.51	.83	
Hutching et al. (2007)	153	IY	RCT	D	1.22	.61	
Larsson et al. (2009)	75	IY	RCT	ND	1.31	.58	1.36

Lavigne et al. (2008)	91	IY	RCT	ND	1.71	.15	
Leung et al. (2003)	88	Triple-P	RCT	ND	1.00	.67	
Markie-Dadds & Sanders (2006a)	25	Triple-P	RCT	ND	1.29	1.64	1.95
Markie-Dadds & Sanders (2006a)	43	Triple-P	RCT	ND	1.63	.75	1.38
Markie-Dadds & Sanders (2006b)	27	Triple-P	RCT	ND	.98	.88	1.14
Matsumoto et al. (2007)	50	Triple-P	RCT	ND	.02	.61	
McNeil et al. (1991)	20	PCIT	Q-E	ND	2.37	.90	
McNeil et al. (1999)	32	PCIT	Q-E	ND	2.21	1.79	
Morawska & Sanders (2006)	31	Triple-P	RCT	ND	.33	.60	.75
Morawska & Sanders (2006)	30	Triple-P	RCT	ND	.30	.63	.35
Mullin & Quigley (1994)	79	EHB	Q-E	ND	.00	.25	
Myers et al. (1992)	81	EBPP	Q-E	D	1.06	.51	-.11
Niccols (2009)	71	COPEa	RCT	ND	.21	-.02	.17
Nicholson & Sanders (1999)	42	BPT	RCT	ND	-.15	.67	
Nicholson et al. (2002)	26	STAR	RCT	D	1.02	.30	.49
Nixon (2001)	34	PCIT	RCT	ND	.57	.77	2.04
Nixon et al. (2003)	41	PCIT	RCT	ND	.37	.46	.78
Nixon et al. (2003)	40	PCIT	RCT	ND	.28	.66	1.02
Ogden & Hagen (2008)	112	PMTO	RCT	ND	1.32	.19	
Packard et al. (1983)	18	BPT	RCT	ND	-.34	.00	
Packard et al. (1983)	18	BPT	RCT	ND	-.33	.00	
Patterson et al. (1982)	19	BPT	RCT	ND	-.69	.00	
Patterson et al. (2002)	116	IY	RCT	ND	.48	.24	.37
Sanders et al. (2000a)	56	Triple-P	RCT	ND	.58	.77	.83
Sanders et al. (2000b)	136	Triple-P	RCT	ND	1.34	.65	1.00
Sanders et al. (2000b)	132	Triple-P	RCT	ND	1.17	.34	.70
Sanders et al. (2000b)	129	Triple-P	RCT	ND	1.30	.85	.94
Sayger et al. (1988)	43	BPT	RCT	ND	2.16	.91	43
Schuhmann et al. (1998)	64	PCIT	RCT	D	2.09	1.09	
Scott & Stradling (1987)	56	SPP	Q-E	D	1.25	1.14	

Scott et al. (2001)	110	IY	Q-E	ND	2.32	.89	
Scott et al. (2010)	112	IY	RCT	D	.32	.39	
Sheeber & Johnson (1994)	41	BPT	RCT	ND	1.22	.53	.72
Spaccarelli et al. (1992)	32	IY	RCT	ND	.91	.70	
Spaccarelli et al. (1992)	37	IY	RCT	ND	.91	1.13	
Taylor et al. (1998)	64	IY	Q-E	ND	1.26	.50	
Thorell (2009)	82	COPEb	Q-E	ND	-.15	.39	
Turner & Sanders (2006)	30	Triple-P	RCT	ND	.80	.44	
Turner et al. (2007)	51	Triple-P	RCT	D	1.28	.50	.71
Webster-Stratton (1982)	35	IY	RCT	ND	.18	.45	.65
Webster-Stratton (1984)	24	IY	RCT	ND	1.58	.99	1.50
Webster-Stratton (1984)	22	IY	RCT	ND	1.76	1.15	1.79
Webster-Stratton (1988)	54	IY	RCT	ND	1.60	.54	
Webster-Stratton (1988)	54	IY	RCT	ND	1.60	.74	
Webster-Stratton (1988)	51	IY	RCT	ND	1.62	.55	
Webster-Stratton (1990)	33	IY	RCT	ND	1.66	.47	
Webster-Stratton (1990)	33	IY	RCT	ND	1.48	.46	
Webster-Stratton (1992)	100	IY	RCT	ND	1.59	.55	1.16
Webster-Stratton (1997)	48	IY	RCT	ND	1.65	1.01	1.27
Wiggins et al. (2009)	60	Triple-P	RCT	ND	1.52	.50	.73
Zangwill et al. (1983)	11	PCIT	RCT	D	1.90	2.03	

Note. BPT = Behavioral Parent Training, no official program name reported; Triple-P = Triple-P Positive Parenting Program; IY = Incredible Years; PCIT = Parent-Child Interaction Therapy; EHB = Eastern Health Board Parenting Program; EBPP = Effective Black Parenting Program; COPEa = COPEing with Toddler Behaviour; STAR = STAR Parenting Program; PMTO = Parent Management Training—Oregon Model; SPP = Scott Parent Programme; COPEb = Community Parent Education Program; RCT = randomized allocation to conditions; Q-E = quasi-experimental design with non-random allocation to conditions; D = disadvantaged sample; ND = nondisadvantaged sample.

However, SES did interact with initial problem severity in predicting effect sizes of parent training effectiveness (β = -.36, p < .001), such that disadvantaged samples benefited less from parent training, but only when they had low levels of initial problem severity (see Figure 1). So when initial problems were severe, disadvantaged and nondisadvantaged families benefited equally, but when initial problems were mild, disadvantaged families benefited less. As expected, there was a direct link between initial problem severity and parent training effectiveness, with higher effect sizes in samples with more severe initial problems (β = .47, p < .001).

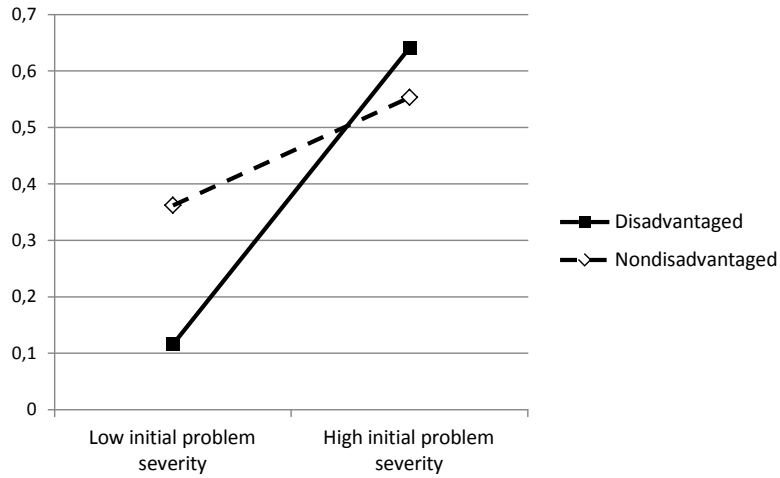

Figure 1. Effects of Initial Problem Severity on Immediate Post-treatment Effectiveness are Especially Meaningful in Disadvantaged Samples.

Follow-up Effects of SES

SES—controlled for initial problem severity did predict intragroup effect sizes of parent training effectiveness at follow-up (β = .30, p < .001). Approximately one year after the end of treatment, disadvantaged samples benefited less than nondisadvantaged samples from parent training. There was no significant SES × initial problem severity interaction effect (β = -.13, *n.s.*) at follow-up, meaning that approximately one year after parent training, disadvantaged families benefited less regardless of initial problem severity (Figure 2). Much like the finding at immediate post-treatment, there was a direct link between initial problem severity and parent training effectiveness at follow-up, with higher effect sizes in samples with more severe initial problems (β = .41, p < .001).

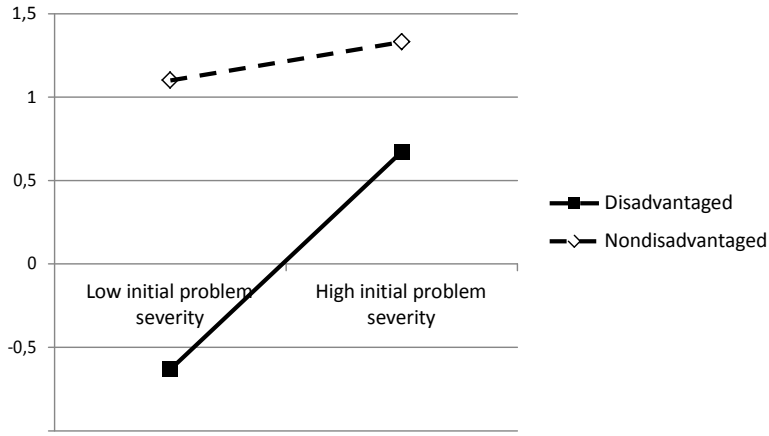

Figure 2. Effects of SES are not Moderated by Effects of Initial Problem Severity on Parent Training Effectiveness at Follow-up.

For all analyses, results were not influenced by design of random or non-random assignment to conditions, drop-out rates, absolute dose of treatment (i.e., number of sessions in the program), relative dose of treatment (i.e., attendance rates), or questionnaire type used for computing the norm-deviation scores (e.g., Eyberg Child behavior Inventory, Child Behavior Checklist). Descriptives of these characteristics are shown in Table 2. Effects of initial problem severity, the SES × initial problem severity interaction immediately post-treatment, and SES at follow-up remained significant (*p*s < .05). Effects of SES immediately post-treatment and the SES × initial problem severity interaction at follow-up remained non-significant (*p*s > .05).

Table 2. Means and Standard Deviations for the Variables that did not Influence the Effects of SES and Initial Problem Severity on Parent Training Program Effectiveness.

	Range	*M (SD)*
Percentage of drop-out families	0–77.78	16.16 (16.02)
Number of program sessions	2–60	11.58 (7.16)
Average number of attended sessions	2–21.23	10.16 (3.59)

Discussion

Although disadvantaged SES is assumed to diminish parent training effectiveness, hardly anything is known on how effects of SES are influenced by effects of initial problem severity—a well-known predictor of parent training effectiveness (e.g., Deković et al., 2011), and related to SES (e.g., Wadsworth & Achenbach, 2005). In the present meta-analysis, we examined whether SES—controlled for initial problem severity, influenced parent training effectiveness at immediate post-treatment, and at follow-up approximately one year later. In addition, we examined whether SES interacted with initial problem severity such that effects of initial problem severity were especially meaningful in disadvantaged families.

Our results show that when controlling for initial problem severity, disadvantaged SES diminishes immediate post-parent training effectiveness *only* when initial problem behaviors are mild. When initial problem behaviors are severe (i.e., reach clinical norms), disadvantaged and nondisadvantaged samples benefit equally. The absence of a direct effect of SES immediately post-treatment is in line with some previous meta-analytic work (e.g., Serketich & Dumas, 1996), and in contrast with others (e.g., Lundahl et al., 2006).

In contrast, SES does predict parent training effectiveness at follow-up. Disadvantaged samples show less improvement one year after the end of treatment, regardless of initial problem severity. This finding indicates that disadvantaged samples experience more trouble maintaining positive treatment outcomes. Chronic stressors that accompany their disadvantaged SES, such as limited economic resources and neighborhood poverty, may become especially salient after the end of parent training programs when guidance from trainers on daily parenting situations is no longer available (e.g., Baum et al., 1999; Pinderhughes et al., 2001).

Initial problem severity predicts parent training effectiveness both immediately post-treatment and at follow-up, which is in accordance with previous findings (e.g., Deković et al., 2011; Hautmann et al., 2010). Parent training programs are most effective for families with highly disruptive children at the start of intervention, which may be explained by more motivation to change in these families and larger scopes of improvement (Baydar et al., 2003). Treatment studies in clinical samples generally obtain stronger effects than preventive studies in nonclinical, community samples (Weisz et al., 2005). Our findings build on this work, and show that the difference between treatment and prevention effects

becomes especially salient in disadvantaged samples. It may be that families' readiness to change—an important predictor of treatment effectiveness (e.g., Miller & Rollnick, 2002), is lower in disadvantaged families with mild child behavior problems than in nondisadvantaged families with mild child behavior problems. In contrast, when child behavior problems are severe, disadvantaged and nondisadvantaged families benefit equally from parent training, at least immediately after the end of the intervention.

Strengths, Limitations, and Implications

Our meta-analysis builds on previous meta-analytic work by integrating effects of SES and initial problem severity, and by directly comparing immediate post-treatment and follow-up parent training effectiveness. In doing so, we were able to show that immediately post-treatment, SES diminishes parent training effectiveness only when initial problems are mild, whereas at follow-up SES diminishes parent training effectiveness regardless of initial problem severity.

Several limitations should be taken into consideration when interpreting our results. The quality of all meta-analyses depends on the characteristics of the available empirical studies. Ours was no exception. Follow-up measures were not available in all studies included in our meta-analysis (see Table 1), and therefore we cannot exclude the possibility that there is some selection bias in the follow-up results. This said, no differences were found between follow-up and non-follow-up studies on the key study variables (i.e., SES, initial problem severity, and immediate post-treatment effect size), suggesting that selection bias was not a major problem. Also, the need to use *intra*group effect sizes at follow-up (instead of *inter*group effect sizes, because most studies had no follow-up assessment of the control group) resulted in inflated effect sizes for follow-up effectiveness. Follow-up effect sizes can therefore only be compared with each other, and not with immediate post-treatment effect sizes.

Our results have implications for future research and clinical practice. Parent training programs seem beneficial for both disadvantaged and nondisadvantaged families, at least immediately post-treatment, and especially for families with high levels of initial problem severity. However, the finding that disadvantaged families benefit less immediately post-treatment when initial behavior problems are mild, asks for future research to examine possible explanations for this effect. Perhaps motivation to change is more problematic in disadvantaged families with mild initial problems, and if so, this would suggest that

in clinical practice more attention for 'readiness to change' might needed in parent training programs for disadvantaged families (e.g., Miller & Rollnick, 2002). Moreover, the finding that disadvantaged families benefit less from parent training one year later raises the question for future research why disadvantaged families are less able to maintain treatment effects. For clinical practice, this finding may suggest that more sustained support after the intervention might be needed for disadvantaged families.

Chapter 3

Ethnic Differences in Problem Perception of Mothers Starting Parent Training

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Abstract

Ethnic minority families are underrepresented in mental health care—a profound problem for clinicians and policy makers. Ethnic minority families tend to be less likely than families from the ethnic majority to perceive child behavior indicative for behavior disorders as problematic. We tested whether these ethnic differences in problem perception are more than differences in reported frequency of behavior and whether they also exist once families overcome their barriers to treatment and engage in help. One-hundred-thirty-one mothers of 3 to 8 year olds (37% girls) from the three largest ethnic groups in the Netherlands (36% Dutch; 43% Moroccan; 21% Turkish) participated in the Incredible Years parenting program. Mothers reported on their child's behavior, perception of child behavior as problematic, perceived impact on various life domains (e.g., home and school), and personal burden. We contrasted maternal perceptions to teacher perceptions of the same children. Moroccan and Turkish mothers, compared to Dutch mothers, perceived equal levels of child behavior indicative for behavior disorders as less problematic, and causing less impairment and burden. Teacher problem perception did not vary across children from different ethnic groups. Our finding that ethnic differences in problem perception also exist once families engage in treatment suggests cultural differences in the perception of child behavior as problematic and burdensome. Despite persistent lower levels of problem perception, ethnic minority families do engage in parent training if key barriers to treatment are overcome. Future research should shed light on possible influences of ethnic differences in problem perception on parent training effectiveness.

Introduction

Ethnic minority families are hard to reach for the prevention and treatment of child behavior disorders (e.g., Prinz & Miller, 1991; Zwirs, Burger, Buitelaar, & Schulpen, 2006). For example, Latin-American and Asian-American families are underrepresented in mental health care in the United States (Abe-Kim et al., 2007), and Moroccan and Turkish families are underrepresented in mental health care in the Netherlands (Zwirs, Burger, Buitelaar et al., 2006). Stigmatization, prior disappointing experiences, language and cultural differences, and limitations in time and payment tend to be barriers for ethnic minority families to search for and accept help for child behavior problems (Scheppers, Van Dongen, Dekker, Geertzen, & Dekker, 2006; Tolan & McKay, 1996). Even prior to these barriers, ethnic minority families tend to be less likely than families from the majority to define child behavior indicative for behavior disorders as problematic. These ethnic differences in *problem perception* should be distinguished from ethnic differences in reported *frequency* of behavior (e.g., externalizing and/or internalizing behavior), in which the latter reflects the mere presence of behavior rather than an interpretation of this behavior as problematic (Zwaanswijk, Verhaak, Van Der Ende, Bensing, & Verhulst, 2006). Ethnic minority families in the general population report overall lower frequencies of behavior indicative of behavior disorders (Hillemeier, Foster, Heinrichs, & Heier, 2007). When they do report frequent behavior, ethnic minority families in the general population across countries tend to be less likely to indicate this behavior as problematic (Bevaart et al., 2012; Roberts, Alegria, Roberts, & Chen, 2005; Weisz et al., 1988; Zwirs, Burger, Schulpen, & Buitelaar, 2006).

Research on parental problem perception generally focuses on problem perception prior to help seeking (e.g., Bevaart et al., 2012; Zwirs, Burger, Schulpen et al., 2006). This is not surprising, given than ethnic minority families are underrepresented in mental health care. Parental search for and engagement in help is described as a stage-like process in which different barriers or filters must be overcome before help is reached, and problem perception or recognition is considered the first step in this process (e.g., the Levels and Filters Model; Goldberg & Huxley, 1980, 1992; Verhulst & Koot, 1992). Ethnic differences in this first stage of problem perception are presumed to reflect differences in the definition of what parents actually perceive as problematic child behavior as well as differences in the threshold to openly express concerns about problematic child behavior. Both seem to be in accordance with religious or traditional values (Ali, Liu, & Humedian, 2004;

Weisz et al., 1988).

It is unclear whether ethnic differences in problem perception are primarily related to ethnic differences in the engagement in help, or whether ethnic differences in problem perception reflect more persistent cultural differences in the perception of child behavior. Possibly, some ethnic minority families *do* seek help despite lower problem perception. If so, lower problem perception might not be the barrier to treatment it is often suggested to be. To test whether ethnic differences in problem perception exist beyond the pre-help seeking process, we need to study ethnic differences in problem perception in families who are actually engaged in treatment. In the present study, we aimed to assess problem perception in families with different ethnic backgrounds in mental health services by overcoming families' key barriers to treatment. To this end, we engaged notoriously hard to reach parents of children with disruptive behavior in a parent training program. We built on theory and empirical findings of barriers to treatment in ethnic minority parents, and on the experiences of earlier studies that were successful at engaging ethnic minority families in mental health services (please see *procedure* for our detailed recruitment strategy; Kazdin, Holland, & Crowley, 1997; Scheppers et al., 2006; Scott, O'Connor, & Futh, 2010; Tolan & McKay, 1996).

This study extends previous work by examining ethnic differences in problem perception in mothers that are engaged in a parent training program, rather than in the general population. This study may increase insight into whether ethnic differences in problem perception are primarily related to lower engagement of ethnic minority families in help, or reflect more ingrained cultural differences in families' perception of child behavior regardless of engaging in help. If ethnic differences in problem perception are no longer present once families are engaged in help, then previously found ethnic differences in community families might primarily be related to lower engagement in help services of ethnic minority families. However, if the same ethnic differences in problem perception also exist once families are engaged in help, than ethnic differences in problem perception might reflect more ingrained cultural differences in how families across cultures differ in their perception and expressed concern for child behavior.

Problem perception can vary across life domains and settings (Goodman, 1999). For example, parents of some children may observe inattentive or disruptive behavior to negatively impact especially school learning, whereas parents of other children may observe inattentive or disruptive behavior to negatively impact especially daily family routines. Disentanglement of problem perception as a whole

into perceived problematic impact on different life domains such as school, home and leisure time can shed light on where precisely differences in perceived problems arise between families from different ethnic backgrounds. For example concerning school, ethnic minority families often place firm emphasis on their child's academic achievement, hoping for the child to reach high educational standards (Davis-Kean, 2005). Ethnic minority families may therefore be extra sensitive to behavior that interferes with reaching high educational standards and may more easily perceive problems that interfere with school learning. Because both theory and empirical findings are limited on how families' ethnic or cultural background influences the impact families perceive of their child's behavior on different life domains, our examination of ethnic differences in perceived impact on different life domains is mainly exploratory.

Teacher problem perception is the most important precursor for parental help seeking for child behavior after parental problem perception (Sayal, Taylor, & Beecham, 2003). Differences between parent and teacher report of the frequency of child behavior may reflect true differences in child behavior across settings—in addition to possible perceptual bias (De Los Reyes, 2011; Epstein et al., 2005). Teacher reported frequency of behavior indicative for behavior disorders sometimes differs across ethnic groups, but teachers typically do not perceive behavior of ethnic minority children as more problematic once the frequency of externalizing and internalizing child behavior is taken into account (Bevaart et al., 2012). In other words, whereas teachers might suggest that behavior indicative of behavior disorders is more prevalent in ethnic minority children (Zwirs, Burger, Schulpen et al., 2006; Stevens & Vollebergh, 2008), they do not perceive equal levels of certain behavior to be more problematic in these same children (Bevaart et al., 2012). However, no previous studies disentangled teacher problem perception into perceived impact of child behavior on different domains such as classroom learning and relationships with peers. We tested the influence of children's ethnic background on teacher's problem perception, perceived impact and burden, and contrasted these findings to maternal perception of the same children.

The Present Study

Aim of the present study was to examine ethnic difference in problem perception of mothers engaged in a parent training program. We (1) tested whether Turkish and Moroccan mothers perceived fewer problems with their child's equally frequent behavior than Dutch mothers, (2) examined ethnic differences in perceived impact

of behavior across life domains and on maternal and family burden, and (3) contrasted maternal perceived problems, impact and burden to teacher perceived problems, impact and burden.

Methods

Participants

In total, 131 families participated in this study. Children were aged 4 to 8 (*M* = 5.61, *SD* = 1.35; 37% girls) and their mothers' ethnic background was classified as Dutch (36%), Moroccan (43%), or Turkish (21%) based on country of birth. Demographic characteristics per ethnic group are presented in Table 1.

Procedure

Participants of this study were enrolled in a larger study on the effectiveness of the Incredible Years parent training program (Webster-Stratton, 2001) for ethnic minority families in the Netherlands (Chapter 4, this thesis). Two recruitment strategies were used to ensure sufficient variability in families' ethnic backgrounds. First, families from two mental health care organizations who were referred for disruptive child behavior were invited to participate. Of the 51 families that were invited, 43 families participated. Sixteen percent of these families were ethnic minority families. Second, to reach ethnic minority families, we built on the experiences of earlier successful studies and on theory and empirical findings to engage ethnic minority families in treatment (Kazdin et al., 1997; Scheppers et al., 2006; Scott et al., 2010; Tolan & McKay, 1996).

We held welcoming coffee meetings at elementary schools in disadvantaged, multicultural neighborhoods to inform parents about the project. In line with being approachable, parent training groups in these neighborhoods were held at schools and community centers, rather than in buildings of mental health organizations.

Second, parent training groups were held during school hours and we offered free child care during the meetings. Third, parent training groups aimed to meet the cultural norms of Moroccan and Turkish families by organizing training groups for mothers only (in addition to mixed groups for mothers and fathers). Fourth, we used interpreters when needed during coffee meetings, parent training meetings, and when filling in questionnaires, to overcome possible language barriers.

Table 1. Family Descriptives per Ethnic Group.

	Dutch (*N* = 37)	Moroccan (*N* = 47)	Turkish (*N* = 27)
	M (SD)	*M (SD)*	*M (SD)*
Child gender (% girl)	37%	35%	33%
Child age	5.62 (1.34)	5.68 (1.37)	5.44 (1.46)
Mother age	34.57 (5.39)	34.95 (6.60)	32.74 (4.32)
Maternal educational level[a]	3.59 (1.67)	2.69 (1.55)	4.26 (1.49)
Two parent family (%)	91%	91%	100%
Child externalizing and internalizing behavior (SDQ)			
Mother report	17.09 (4.55)	13.57 (6.15)	9.63 (4.73)
Teacher report	13.69 (6.10)	15.13 (7.31)	7.35 (4.50)

Note. SDQ = Strengths and Difficulties Questionnaire; [a]Maternal educational level was scored into 6 levels (1 = elementary school, 2 = lower level of high school, 3 = higher level of high school, 4 = vocational degree, 5 = higher education degree, 6 = university degree).

Because fear for stigmatization is typically one of the main barriers to treatment, no selection criteria based on severity of child behavior problems were used. Instead, families who showed interest for the parent training program were individually interviewed and invited to participate if they indicated that they perceived parenting difficulties due to disruptive child behavior. Also, because we aimed to include those families that are most notoriously hard to reach for treatment, mastering the Dutch language was not a requirement for participation and interpreters were used when needed. Families from all ethnic backgrounds were invited to participate in the project. Eighty-seven percent of these families were ethnic minority families. Families from ethnic backgrounds other than Dutch, Moroccan or Turkish (*N* = 18) were excluded for this particular study on problem perception to ensure sufficient sample size for each ethnic group. Of the circa 265 families that were invited via elementary schools, 106 families participated.

Research assistants responsible for data collection were predominantly Caucasian Dutch (in 83% of the cases) and collaborated with interpreters when necessary. Questionnaires were filled in prior to the start of the Incredible Years parenting intervention. Almost all mothers actually participated in this 14 to 18 session parenting intervention (93%) and attended on average 78% of the sessions. Dutch, Moroccan, and Turkish mothers showed the same attendance rates (p = .33). Mothers received €15 for filling in the questionnaire. All mothers gave informed

consent. The study was approved by the Medical-Ethical Committee of University Medical Center Utrecht.

Measurements

Frequency of Behavior. Parent and teacher versions of the total problem scale of the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) were used to measure frequency of children's behavior indicative of behavior disorders. The total problem scale of the SDQ is a reliable and valid 20-item screening measure to identify emotional and behavioral problems in children on a 3-point scale (0 = not true, 1 = somewhat true, 2 = certainly true; Goodman, 2001; Van Widenfelt, Goedhart, Treffers, & Goodman, 2003). The total problem scale includes sum scores of the subscales conduct problems, inattention-hyperactivity, emotional problems, and peer problems. Overall internal consistency of the total problem scale was α = .77 for mothers (α = .65 for Dutch mothers, α = .77 for Moroccan mothers, and α = .65 for Turkish mothers) and α = .83 for teachers.

Perception of Problems, Impact, and Burden. Maternal and teachers' problem perception and perceived impact and burden were measured using the impairment items of the extended SDQ (Goodman, 1999; Van Widenfelt et al., 2003). First, for problem perception, mothers and teachers reported the extent to which they perceived their child as showing problematic behavior difficulties on the item "do you think the child has difficulties in one or more of the following areas: emotions, concentration, behavior or the ability to get on with other people?" Second, mothers reported the impact they perceived of their child's behavior on four different life domains: at home, in friendships, in learning, and in leisure activities. Teachers reported the impact of the child's behavior they perceived on two life domains: the child's peer relationships and classroom learning. Third, mothers reported whether the difficulties put a burden on her or on her family as a whole and teachers reported whether the difficulties put a burden on him/her or on the class as a whole. All impairment items were answered on the same 4-point scale (0 = no, 1 = yes, minor difficulties, 2 = yes, definite difficulties, 3 = yes, severe difficulties). Impairment items across domains correlated low to moderately (between r = .18 and r = .58) and were therefore analyzed separately.

Data-analysis

We used univariate analysis of covariance (ANCOVA) to test whether Dutch, Moroccan and Turkish mothers had different levels of problem perception.

Including frequency of child behavior as a covariate in this analysis of variance enabled us to specifically test the extent mothers perceive the behavior they observe in their children as problematic while controlling for the frequency of this behavior. For mothers who perceived at least minor problems (i.e., a score of at least 1 on the 0-4 scale of problem perception), we used additional ANCOVAs to examine whether ethnic differences in perceived impact of child behavior varied across life domains (home, friendships, school, leisure time) and perceived maternal or family burden. To control for inflation of error rate due to multiple significance tests, we used (alpha × *i* / *m*) as the significance level for each of these tests, where alpha was the target error rate of .05, *i* was the ordered position of the *i*th largest *p*-value associated with an individual test, and *m* was the number of significance tests (Benjamini & Hochberg, 1995). Third, we repeated the same analyses for teacher problem perception, perceived impact on different life domains (classroom learning and peer relations) and perceived teacher or classroom burden. In these latter analyses we controlled for teacher reported frequency of child behavior and again used the Benjamini and Hochberg (1995) method to control for inflation of error rate due to multiple significance tests.

Results

Preliminary Analyses

Mother reported frequency of children's behavior varied across ethnic groups ($F(2;128) = 16.40$, $p < .001$). Dutch mothers reported highest frequencies, followed by Moroccan mothers. Turkish mothers reported lowest frequencies of behavior. Teacher reported frequency of children's behavior also differed across children from different ethnic backgrounds ($F(2;106) = 9.64$, $p < .001$). Teachers reported higher frequencies in Dutch and Moroccan children than in Turkish children. Almost all teachers were Dutch (> 90%), we therefore did not include teacher ethnicity in our analyses.

Of the relevant family characteristics, only maternal educational level varied across ethnic groups (see Table 1). Dutch and Turkish mothers had on average higher educational levels than Moroccan mothers ($\beta = .34$, $p < .01$ and $\beta = .43$, $p < .001$, respectively). This variable was therefore included as a covariate—in addition to frequency of child behavior—in all further analyses. Assumptions of homogeneity of variances and homogeneity of regression slopes were met (*p*s > .52) and allowed us to use ANCOVA for our primary analyses.

Primary Analyses

Dutch, Moroccan, and Turkish mothers differed in the extent they perceived children's behavior indicative of behavior disorders as problematic, even when controlling for the frequency of these behaviors ($F(2;106) = 3.88$, $p < .05$, $d = .55$, see Table 2). Moroccan and Turkish mothers, compared to Dutch mothers, perceived equally frequent behavior as less problematic. There was no difference in problem perception between Moroccan and Turkish mothers.

Table 2. Perceived Problems, Impairment, and Burden per Ethnic Group—Corrected For Frequency of Child Behavior and Maternal Educational Level.

	Dutch ($N = 37$)	Moroccan ($N = 47$)	Turkish ($N = 27$)
	M (SD)	*M (SD)*	*M (SD)*
Maternal perception			
Problem perception	1.77 (.80)	.95 (.82)	.92 (.86)
Impairment at home	1.51 (.91)	.88 (.88)	.50 (.71)
Impairment on friendships	1.21 (.86)	.56 (.75)	.40 (.70)
Impairment on learning at school	1.41 (.91)	1.15 (.96)	.60 (.97)
Impairment on leisure activities	1.21 (.73)	.79 (.88)	.40 (.70)
Burden for mother/family	1.89 (.82)	1.21 (.82)	.82 (1.03)
Teacher perception			
Problem perception	1.54 (.85)	1.25 (1.09)	1.18 (.66)
Impairment on learning at school	1.54 (.94)	1.13 (1.08)	1.64 (.89)
Impairment on peer contact	1.52 (1.06)	1.48 (1.00)	1.14 (.63)
Burden for teacher/class	1.27 (1.00)	1.28 (1.07)	1.51 (.83)

Note. All items were answered on a 0–4 Likert scale.

For mothers who perceived at least minor problems in their child's behavior (i.e., a score of at least 1 on the 0–4 scale), we examined ethnic difference in perceived impact of the child's behavior on specific life domains (home, friendships, school, leisure time) and maternal and family burden. Dutch, Moroccan, and Turkish mothers differed in the extent they perceived negative impact of their children's behavior on two out of four life domains (home and friendships), and on perceived maternal and family burden. Moroccan and Turkish mothers perceived equally frequent behavior to have less impact on children's

functioning at home and in friendships ($F(2;78) = 4.28$, $p < .05$, $d = .66$, and $F(2;78) = 3.88$, $p < .05$, $d = .63$, respectively), and perceived less maternal and family burden as a result of their child's behavior ($F(2;78) = 3.86$, $p < .05$, $d = .63$). There were no differences in perceived impact of the child's behavior at home and in friendships, or in perceived maternal and family burden, between Moroccan and Turkish mothers. Also, there were no differences in perceived impact of child behavior on children's school learning and leisure time between mothers from different ethnic backgrounds ($p > .19$).

In contrast to maternal perception, teacher perception of problems, impact, and burden did not depend on children's ethnic backgrounds. Teachers perceived equally frequent behavior to be equally problematic across children from different ethnic groups ($F(2;90) = 1.56$, *n.s.*), and to equally impact children's classroom learning, relations with peers and teacher or class burden equally across children from different ethnic groups ($p > .14$).

Discussion

Ethnic minority families are hard to reach for the prevention and treatment of child behavior disorders. One of the reasons for their lack of engagement in mental health services is presumed to be that they tend to be less likely than families from the ethnic majority to perceive behavior indicative of behavior disorders as problematic (Bevaart et al., 2012; Zwirs, Burger, Schulpen et al., 2006). Knowledge is lacking on whether these ethnic differences in problem perception are limited to the pre-help seeking process, or also exist once families engage in help. In this study we therefore examined ethnic differences in problem perception in families engaged in a parent training program.

Moroccan and Turkish mothers perceived behaviors with similar frequencies as less problematic than Dutch mothers. More specifically, compared to Dutch families, Moroccan and Turkish mothers perceived less negative impact of their child's behavior at the home and in friendships, and perceived less personal and family burden as a result of their child's behavior. This finding is in accordance with studies on ethnic differences in problem perception in families that are not in treatment (Bevaart et al., 2012), and shows that also when ethnic minority families engage in treatment, they report their child's behavior as less problematic, and bringing along less impact and personal burden. This suggests that ethnic differences in problem perception reflect cultural differences in the perception or

expressed concern for child behavior, regardless of families' openness to help. Religious or traditional values may play a role in how parents perceive atypical child behavior and the extent to which they feel personally impacted by this behavior (Ali et al., 2004; Weisz et al., 1988). For example, families that fear stigma might be reluctant to acknowledge that their child has behavioral difficulties. Also, families across cultures may have different beliefs about when atypical child behavior is problematic. If cultures are more tolerant to atypical child behavior, this may affect the extent to which parents feel personally burdened by the child's behavior.

There were no differences across mothers from different ethnic backgrounds in perceived impact of child behavior on children's learning in school and leisure time. Thus, for equally frequent child behavior, mothers across ethnic groups perceived equal impact on children's learning in school. Ethnic minority families are known to place strong emphasis on children's academic achievement (Davis-Kean, 2005). Although this did not led to more perceived impact in this study, it may explain why ethnic minority families perceived equal (instead of less) impact of child behavior on school learning.

Teacher's level of perceived problems did not depend on children's ethnicity. Teachers perceived equally frequent behavior to result in equal problems, impact and burden for children across ethnicities alike. These findings are in accordance with previous studies that indicate that despite findings that teachers tend to report more frequent externalizing and internalizing behavior in ethnic minority children (Stevens & Vollebergh, 2008; Zwirs, Burger, Schulpen et al., 2006), they perceive equal levels of behavior to be equally problematic for children from different ethnic groups (Bevaart et al., 2012).

Some limitations of this study require further consideration. First, we were able to show that ethnic differences in problem perception go beyond the pre-help seeking phase and persist once parents engage in treatment. We were not able to explain *why* ethnic differences in problem perception and observed impact and burden existed. We studied ethnic differences cross-sectionally and interpreted these findings in the light of earlier (also cross-sectional) studies on community samples. For a more stringent test of the stability of ethnic differences in problem perception before and after help seeking, and possible change in problem perception in the process of help seeking and accepting, studies are needed in which families are followed-up through the different levels of the help seeking process. Second, our sample sizes were relatively small, especially of mothers of

Turkish children. This is not surprising as our focus was on including families in parent training that typically do not seek for or accept mental health treatment, and we were successful to the extent that we were able to reach families with on average subclinical levels of child behavior of whom many hardly mastered the Dutch language (30% indicated no mastering at all or only reasonable mastering of Dutch). However, our small groups limited the possibility to find more subtle differences between and within ethnic groups, such as how differences in educational level or level of integration into Dutch society within ethnic groups might affect problem perception. Third, we cannot exclude the possibility that the lower levels of problem perception in ethnic minority families are related to our recruitment strategy (86% of the ethnic minority families were actively recruited, as opposed to 15% of the Dutch families) and that actively recruited families had different motivations for participation (e.g., learning more about daily parenting struggles) than referred families (e.g., receiving help to reduce problematic behavior). This said, in the Netherlands—and many western countries alike—there hardly is a true referred population of ethnic minority families because these families often do not engage in mental health services. Also, teachers reported subclinical levels of externalizing and internalizing behavior in most children, suggesting that at least some problems were present in the actively recruited families. Importantly, we controlled for differences in frequency of behavior indicative of behavior disorders. Thus, in so far as there was a systematic difference in referral status between groups, this may perhaps be considered a reflection of differences in problem perception rather than a confound.

Parental problem perception is an essential first step for engagement in help for child behavior problems (Goldberg & Huxley, 1980, 1992; Verhulst & Koot, 1992). Our study indicates that even when key barriers to treatment (e.g., fear for stigma) are overcome and ethnic minority families engage in a parenting intervention, mothers still perceive equal frequency levels of child behavior as less problematic than families from the ethnic majority, and perceive less impact and burden of this behavior. Our results suggest that ethnic differences in parental problem perception may reflect ingrained cultural differences in the perception of child behavior. This is important for clinical practice, as clinicians' awareness of possible cultural differences in problem perception may increase understanding individual families' perceptions of child behavior and the influences of these cultural differences on participation in interventions. Importantly, future research is needed to indicate whether lower levels of problem perception may influence treatment

effectiveness and the extent to which whether parenting interventions can reduce problem perception across families from different cultures. These future studies would contribute to a comprehensive view on the persistence of cultural differences in problem perceptions and the extent to which these differences matter for intervention effectiveness.

Chapter 4

Effectiveness of the Incredible Years Parent Training to Reduce Disruptive Behavior in Ethnic Minority and Socioeconomically Disadvantaged Families

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Abstract

Ethnic minority and socioeconomically disadvantaged families are hard to reach for the prevention and treatment of disruptive child behavior problems. We examined whether the Incredible Years parent training program is equally effective across families with different ethnic backgrounds, socioeconomic status, and referral status (i.e., referred or recruited). One hundred fifty four families were randomly assigned to the Incredible Years parent training or a waiting list control condition. Children were 3–8 years old (*M* = 5.59; *SD* = 1.35; 62% boys; 66% ethnic minorities) and 65% met DSM-IV criteria for ODD, CD and/or ADHD. Incredible Years reduced parent reported disruptive behavior and teacher reported hyperactive and inattentive behavior, parental use of harsh and inconsistent discipline, and increased parental use of praise and incentives. Incredible Years did not reduce teacher reported conduct problems and parent reported hyperactive and inattentive behavior, did not increase parental use of appropriate discipline techniques and clear expectations, and did not reduce physical punishment and parenting stress. Importantly, Incredible Years was equally effective across families with different ethnic backgrounds, socioeconomic status, and for referred and recruited families. Effects were maintained at three month follow-up. This study shows that although engaging ethnic minority and socioeconomically disadvantaged families in parent training programs can be challenging, these families can benefit from parent training programs as much as clinically referred Caucasian families.

Introduction

Disruptive behavior problems in childhood set children at risk for behavior disorders in later childhood, adolescence, and adulthood (Loeber, Capaldi, & Costello, 2013; Moffitt, 1993), and bring about high burden and costs for the children and their families, and for society at large (Scott et al., 2001). Parent training is considered to be the key strategy for prevention and treatment of disruptive child behavior disorders (e.g., Dretzke et al., 2009; McCart et al., 2006; Weisz & Kazdin, 2010), and is able to reduce oppositional (e.g., Nixon, Sweeney, Erickson, & Touyz, 2003), aggressive (e.g., Gardner, Shaw, Dishion, Burton, & Supplee, 2007; Sanders, Baker, & Turner, 2012), and hyperactive child behavior (e.g., Chronis, Chacko, Fabiano, Wymbs, & Pelham, 2004; Jones, Daley, Hutchings, Bywater, & Eames, 2008).

Ethnic minority and socioeconomically disadvantaged families are among the families for whom prevention and early treatment of disruptive behavior problems is considered most important (Tolan & Dodge, 2009; U.S. Department of Health and Human Services, 2001). Children from these families tend to have more risk factors for the development of behavior disorders later in life, such as maternal depression and living in disadvantaged neighborhoods (e.g., Bengi-Arslan, Verhulst, & Crijnen, 2002; Bradley & Corwyn, 2002; Fergusson & Lynskey, 1993). Despite consensus on the need to engage ethnic minority and socioeconomically disadvantaged families in early intervention programs, these families are hardly reached in most western countries. Certain ethnic minority populations, such as Latin-Americans and Asian-Americans in the United States and Moroccans and Turks in the Netherland families tend to be especially hard to reach (e.g., Abe-Kim et al., 2007; Bellaart & Chrifi, 2008; U.S. Department of Health and Human Services, 2001; Zwirs, Burger, Buitelaar et al., 2006). Challenges to effectively reach ethnic minority families can lie both within families and within interventions. Barriers to treatment families experience include limited resources to find and finance help, negative experiences with professional agencies, fear of stigma, and language and cultural discrepancies (Scheppers, van Dongen, Dekker, Geertzen, & Dekker, 2006; Tolan & McKay, 1996). Even if programs provide available help free of charge, families can be reluctant to engage if earlier experiences damaged their trust and increased their fear of stigma (Scheppers et al., 2006). These barriers make it challenging to engage disadvantaged ethnic minority families who need help. Challenges within interventions include concerns about the transportability of interventions to other cultures and the tensions that may arise between program

fidelity and cultural adaption (Castro et al., 2004; Kumpfer et al., 2002; Lau, 2006). However, current practice encourages the use of empirically supported programs for ethnic minority families over the use of adapted programs for several reasons. First, adapting parent training programs typically increases retention rates, but often does not improve, and sometimes even reduces positive outcomes, perhaps because cultural adaptations might come at the cost of program integrity (Castro et al., 2004; Griner & Smith, 2006; Kumpfer, Alvarado, Smith, & Bellany, 2002). Second, evidence cumulates that empirically supported parent training programs originally designed for Caucasian populations tend to be effective for families across different cultures (Bjørknes, Kjøbli, Manger, & Jakobsen, 2012; Gardner, Knerr, & Montgomery, 2013; Huey & Polo, 2008; Lakes et al., 2009; Miranda et al., 2005; Reid, Webster-Stratton, & Beauchaine, 2001; Scott et al., 2010a, 2010b).

One established parent training program that seems especially suitable across families with different ethnic and socioeconomic backgrounds is the Incredible Years parent training program (Webster-Stratton, 2001). In terms of theoretical background, multiple principles of Incredible Years enhance its cultural sensitivity, such as (1) using a group format that emphasizes parents' common issues, rather than their individual difficulties, (2) respecting cultural differences (e.g., parent groups determine their own rules, parents determine their own weekly goals), (3) exploring, understanding and addressing possible cultural barriers to the intervention content (e.g., discussing barriers to child-directed play or praise is part of the program), (4) working together with interpreters (Webster-Stratton, 2009). In terms of empirical evidence, the Incredible Years program has proven to be effective in the improvement of parenting behavior and the reduction of child behavior problems in a wide range of ethnically and socioeconomically diverse samples (see Menting, Orobio de Castro, & Matthys, 2013a, for a meta-analysis). For example, in the United States, African-American (Gross, Fogg, Webster-Stratton, Garvey, Julion, & Grady, 2003; Reid et al., 2001), Asian-American (Kim, Cain, & Webster-Stratton, 2008; Reid et al., 2001), Hispanic-American families (Gross et al., 2003; Reid et al., 2001), and socioeconomically disadvantaged European-American families (Reid, Webster-Stratton, & Baydar, 2004) have shown to benefit from Incredible Years, and in the United Kingdom, Black African, African Caribbean, and socioeconomically disadvantaged Caucasian families (Hutchings et al., 2007; Scott et al., 2010a, 2010b) have shown to benefit from Incredible Years.

Importantly, the referral or recruitment processes for participation in parenting interventions are often different for ethnic minority and

socioeconomically disadvantaged families, compared to non-disadvantaged Caucasian families. Because many ethnic minority and socioeconomically disadvantaged families are hard to reach for interventions, they typically need to be actively recruited to participate in parent training programs (e.g., Kim et al., 2008; Scott et al., 2010a). However, the extent to which active recruitment methods affect program effectiveness is understudied. We therefore not only study the effectiveness of Incredible Years for actively recruited ethnic minority and socioeconomically disadvantaged families, but also directly compare the effectiveness for these families to the effectiveness for clinically referred families. Our study is among the first to explicitly include such a mixed sample in terms of ethnicity, socioeconomic status, and referral status. It therefore enables the unique direct comparison within one study of program effectiveness between ethnic groups, families with different levels of socioeconomic status, and between recruited and referred families. These comparisons may increase insight into which families benefit most from parent training programs, and into how families' process of engagement may affect parent training effectiveness.

Aims of the Present Study

We examined whether the Incredible Years parent training program is equally effective across families with different ethnic backgrounds, socioeconomic status, and referral status (i.e., referred or recruited). First, we examined whether the Incredible Years parent training is effective at improving child behavior and parenting practices in a multi-ethnic sample of referred and recruited families. Second, we tested whether effectiveness depends on families' ethnic background, socioeconomic status, or referral status (referred versus recruited). Third, we examined the extent to which families are able to maintain positive change up to three months after intervention termination.

Methods

Design

We used a waiting list control design (Figure 1). Families were randomly assigned to the intervention condition (i.e., immediate Incredible Years) or the waiting list control condition (i.e., Incredible Years after 3-months). Two reasons justify our choice for a waiting list control condition over a treatment as usual condition (TAU). First, hardly any TAU exists for disadvantaged ethnic minority families.

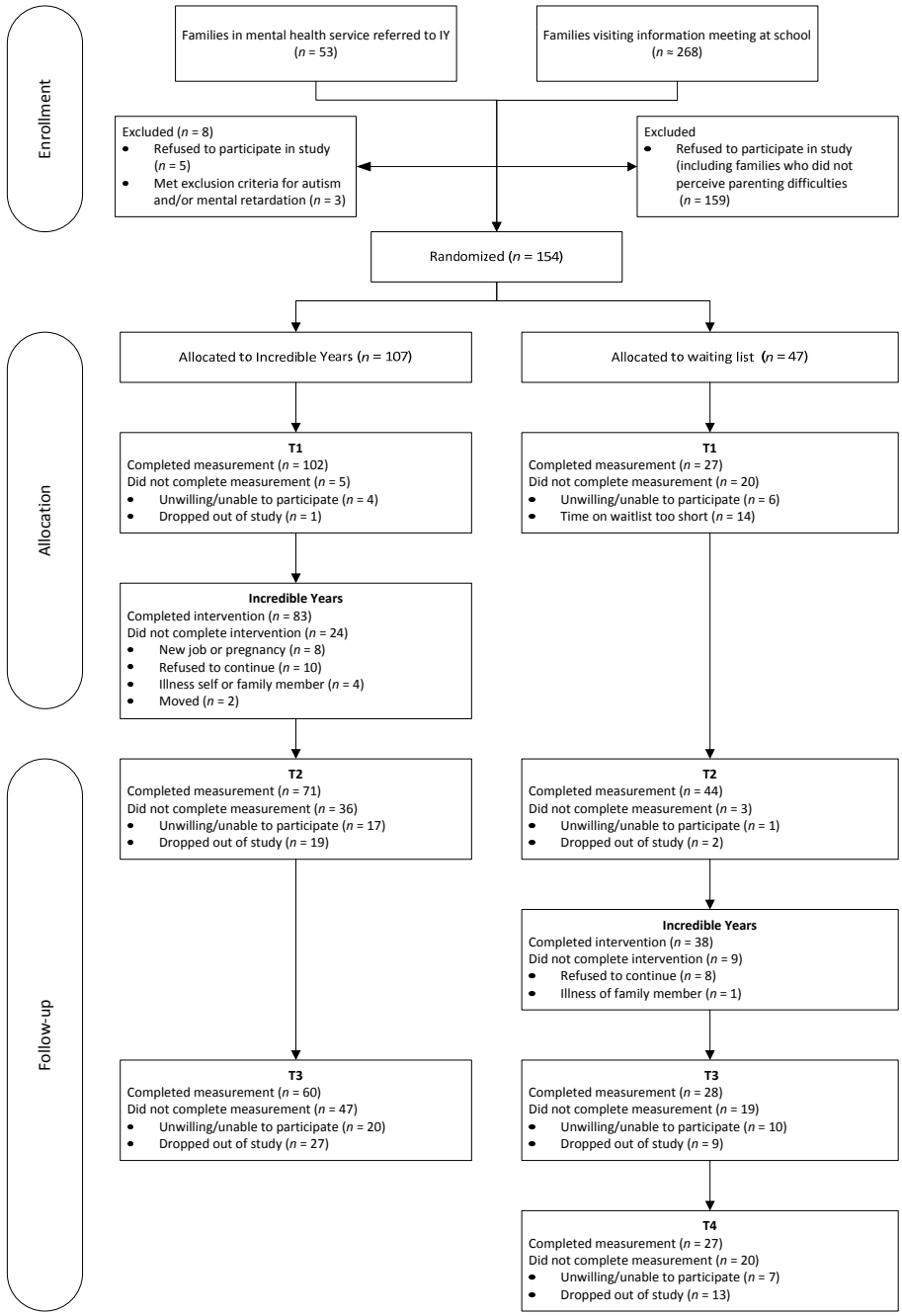

Figure 1. Participant Flow Diagram.

Most families receive medical support (e.g., general practitioners and maternity centers to monitor children's growth and vaccination), but are not involved in any form of mental health support. Second, participating families indicated that they experienced parenting difficulties due to disruptive child behavior, but hardly engaged in any other form of mental health support. It would have been unethical to withhold them from the Incredible Years program that we offered them for this study.

We used a 2:1 ratio to randomize families in the intervention or waiting list control condition, in order to have a minimal control group while giving immediate parenting program access to as many participants as possible (Friedman, Furberg, & DeMets, 1998; Kim et al., 2008). The 2:1 allocation also enabled us to start groups faster as we offered the program in the families' own neighborhood and needed at least 8 mothers to start a group. Loss of power due of the unequal groups was acceptable. G*Power calculations showed that power to detect moderate effects (ES = .40, which corresponds to effect sizes often found in parent training studies, e.g., McCart et al., 2006) decreased from .99 to .94 when using a 2:1 ratio instead of a 1:1 ratio (Faul, Erdfelder, Lang, & Buchner, 2007).

Families filled in questionnaires a few weeks or days prior to the start of the intervention, immediately after termination of the intervention, and three months later. Families in the waiting list control condition also filled in questionnaires three months prior to the start of the intervention. Parents received up to €45 for filling in the questionnaires. All parents signed informed consent. The study was approved by the Medical-Ethical Committee of University Medical Center Utrecht.

Participants

Participants were 154 mothers experiencing parenting difficulties due to disruptive child behavior. Children were 3 to 8 year old (*M* = 5.59; *SD* = 1.35). About one third (*N* = 45) was referred for disruptive child behavior to an outpatient clinic for child and adolescent psychiatry; the other two third (*N* = 109) was actively recruited for this study's purposes. Characteristics of referred and recruited families are presented in Table 1. Mothers were categorized as having ethnic minority background when they themselves and/or one or both of their parents were born outside the Netherlands. Largest ethnic minority groups were Moroccans (41% of all families) and Turks (19%), who also compromise the largest ethnic minority

groups in the Netherlands. Most ethnic minority mothers were not born in the Netherlands (78%) and had lived in the Netherlands for between 1 and 36 years (*M* = 16; *SD* = 8). Two third of the ethnic minority mothers reported at least some problems understanding or speaking Dutch, 28% reported severe problems understanding or speaking Dutch. Although most referred families were Caucasian and many recruited families were ethnic minority families, our sample included a small sample of referred disadvantaged ethnic minority families (15.6% of the referred families) and recruited disadvantaged Caucasian families (17.4% of the recruited families). Mothers had on average 13 years of education, which in the Dutch education system reflects elementary school and high school. However, variation between families was large (*SD* = 4.41), ranging from a mother who had never attended high school (1%) to mothers with a university college degree (7%).

Procedure

Participants were either referred for disruptive child behavior, or actively recruited for the purposes of this study. Mothers of children who were referred for disruptive behavior were contacted via outpatient clinics for child and adolescent psychiatry. Mothers of children in the appropriate age range and who had a DSM-IV diagnosis of either oppositional defiant disorder (ODD), conduct disorder (CD), attention-deficit hyperactivity disorder (ADHD) or parent-child relational problems were invited to participate in the study. Of the 53 families that were invited, 45 families participated (Figure 1). Sixteen percent of these families were ethnic minority families (Table 1).

To recruit ethnic minority and socioeconomically disadvantaged families who suffered from parenting problems due to disruptive child behavior, we built on the experiences from earlier studies and on theory and empirical findings to engage ethnic minority families in treatment (Kazdin et al., 1997; Scheppers et al., 2006; Scott et al., 2010a; Tolan & McKay, 1996). We organized welcoming coffee meetings at elementary schools serving disadvantaged, multicultural neighborhoods to inform parents about the project. During these meetings, we announced the start of a parent training in the neighborhood and explained what this training would look like by showing and discussing a brief video of a mother-child interaction comparable to those shown in the Incredible Years program. By inviting parents to participate, we used specific strategies to overcome several key barriers to treatment. First, parent training groups in these neighborhoods were held at schools and community centers, rather than in buildings of mental health organizations.

Table 1. Family Characteristics and Problem Severity in Referred and Recruited Families.

	Referred Families	Recruited Families
	M (SD)	*M (SD)*
Child age	6.09 (1.35)	5.39 (1.42)
Child gender (% boys)	71%	58%
Maternal age	35.55 (5.53)	33.10 (5.75)
Maternal years of education	14.03 (3.67)	12.33 (4.60)
Ethnic background		
Caucasian	84.4%	25.7%
Moroccan	11.1%	38.6%
Turkish	0%	18.3%
Other	4.5%	17.4%
Meets DSM-IV criteria		
ODD	56%	19%
CD	11%	8%
ADHD	81%	38%
ECBI intensity score	146.65 (20.97)	112.09 (31.84)
SDQ mother-report		
Conduct problems	3.75 (1.88)	2.68 (1.87)
Hyperactivity/Inattention	7.83 (2.09)	4.55 (2.33)
SDQ teacher-report		
Conduct problems	2.24 (2.25)	1.74 (1.96)
Hyperactivity/Inattention	6.36 (2.81)	4.48 (3.02)

Second, parent training groups were held during school hours and we offered free child care during the meetings. Third, parent training groups met the cultural norms of Moroccan and Turkish families by organizing training groups for mothers only. Fourth, we used interpreters when needed to overcome possible language barriers during coffee meetings, parent training meetings, and filling in questionnaires. Fifth, we did not impose criteria that might be considered stigmatizing, such as referral by general practitioner or presumed behavior disorder. Families who showed interest for the parent training program were individually interviewed and invited to participate if they verbally indicated that they perceived parenting difficulties due to disruptive child behavior. Also, because we aimed to include families that are most notoriously hard to reach for treatment, mastering the Dutch language was not a requirement for participation and interpreters were used when needed. Of

the circa 268 families that were recruited via elementary schools, 109 families participated. Seventy-four percent of these families were ethnic minority families.

Measures

Eyberg Child Behavior Inventory (ECBI). Mothers reported children's disruptive behavior on the ECBI (Eyberg & Ross, 1978), a widely used 36-item measure of disruptive child behavior. Each behavior is rated on two scales: a seven-point Intensity scale to indicate the frequency of behaviors, and a *yes* or *no* Problem scale that indicates whether the parent perceives the behavior to be a problem. The ECBI has shown good reliability (Robinson, Eyberg, & Ross, 1980) and good convergent (Achenbach & Edelbrock, 1986) and discriminant validity (Eyberg & Ross, 1978; Baden & Howe, 1992). Internal consistency was $\alpha = .94$ for the Intensity scale and $\alpha = .92$ for the Problem scale.

Strengths and Difficulties Questionnaire (SDQ). Mothers and teachers reported children's problem behavior on the SDQ (Goodman, 2001; Van Widenfelt, Goedhart, Treffers, & Goodman, 2003), a 25 item measure of problem behavior and prosocial behavior. We used the Conduct Problems scale (5 items), Hyperactivity and Inattention scale (5 items), and Total Difficulties scale (20 items). Items were rated on a scale ranging from 0 (*not true*) to 2 (*certainly true*). Internal consistency of parent and teacher report on the scales ranged between $\alpha = .72$ and $\alpha = .84$ ($M = .78$).

Parent Rating of Aggression. Mothers reported children's aggressive behavior toward children on the adapted parent version of the 6-item Teacher Rating of Aggression (Dodge & Coie, 1987; Hendrickx, Crombez, Roeyers, & Orobio de Castro, 2003). Items on reactive aggression (e.g., 'when s/he is teased or threatened, s/he reacts angry and strikes back') and proactive aggression (e.g., 's/he uses physical force to dominate other children') were rated on a scale ranging from 1 (*never*) to 5 (*always*). Internal consistency was $\alpha = .80$.

Parent Practices Interview (PPI). We used the PPI to measure mothers' parenting practices. The PPI is an 80-item questionnaire to measure seven parenting constructs: appropriate discipline, harsh and inconsistent discipline, positive verbal discipline, monitoring, physical punishment, praise and incentives, and clear expectations (Webster-Stratton, 1998; Webster-Stratton, Reid, & Hammond, 2001). Items were rated on a 7 point scale that ranged either from 1 (*completely disagree*) to 7 (*completely agree*) or from 1 (*most unlikely*) to 7 (*most likely*). Due to unreliability ($\alpha s < .60$), the constructs positive verbal discipline and monitoring were

excluded from analyses. Internal consistency for the other five constructs ranged between α = .60 to α = .84 (*M* = .72).

Parenting Stress Index (PSI). We used the reliable and valid PSI (Abidin, 1983; De Brock, Vermulst, Gerris, & Abidin, 1992) to assess maternal parenting stress. We used two subscales from both the parent domain (restricted role and isolation) and the child domain (acceptability and reinforces parent) which resulted in 33 items. All items were rated on a scale ranging from 1 (*completely disagree*) to 6 (*completely agree*). Sample items include "I'm less interested in people than I used to be" and "sometimes it feels as if my child does not like me". Internal consistency was α = .89.

Diagnostic Parent Interview on Child Behavior. Parent interviews indicated the extent to which children met DSM-IV criteria for Oppositional Defiant Disorder, Conduct Disorder, and Attention Deficit Hyperactivity Disorder (American Psychiatric Association (2000). We used the Kiddie-Disruptive Behavior Disorder Schedule (K-DBDS; Keenan, Wakschlag, & Danis, 2001; Keenan et al., 2007; Bunte, Schoemaker, Hessen, van der Heijden & Matthys, 2013) for children between 3 and 5, and the Diagnostic Interview Schedule for Children version IV (DISC-IV; Shaffer, Fisher, Lucas, Dulcan, & Schwab-Stone, 2000) for children between 6 and 8. The K-DBDS and DISC-IV are semi-structured interviews specifically designed to match the DSM-IV criteria.

The Intervention

The BASIC Incredible Years videotape modeling parent program (Webster-Stratton, 2001) entails groups of 8 to 15 parents for weekly two hour sessions. The program consisted of 12 to 18 sessions (during our project between 2010 and 2012, the number of sessions for the official Incredible Years program was extended). For all groups one booster session was delivered between one or two months after termination of the program. The BASIC Incredible Years parenting program covers the topics play, coaching of social, emotional and academic skills, praise and rewards, effective limit setting, and handling misbehavior (e.g., ignore and time-out techniques). Videotaped scenes showing examples of parent-child interactions form a central part of the sessions, together with discussions about set and parent-initiated topics (e.g., how to handle fights between siblings), brainstorms, and role-plays in which parents practice newly learned behavior. Group leaders use a collaborative approach in which parents are seen as the expert on their own children. Parents are guided to set weekly goals, to read the book, and are

encouraged to practice at home and have weekly telephone contact with another parent from the group.

Program fidelity was monitored by videotaping all sessions and discussing them in biweekly supervision meetings. Group leaders completed protocol checklists after each session, and parents filled out evaluation forms every week, and at the end of the program. At least one of the two group leaders of each group was IY certified; all were Master's or doctorate-level clinicians and participated in supervision meetings. Most group leaders had a native Dutch background, one was Turkish and one partly Moroccan. Because groups were offered in families' own neighborhood, most groups consisted predominantly of either disadvantaged ethnic minority or Caucasian families. Dominant language during parent training sessions was Dutch, but interpreters were used in most sessions to help parents who did not sufficiently master the Dutch language. The program was used in its original form (i.e., not culturally adapted). Only pictures were added to the homework assignments to make them easier to understand for mothers with limited Dutch language skills (e.g., a picture of a telephone accompanying the assignment "call your buddy").

Missing Data Management

Twenty-three percent of our data were missing. Main reasons for missing data were families' unavailability for measurement due to illness or family crisis, drop-out of the study because families were no longer willing or able to participate, and a too short waiting list period. Short waiting list periods occurred when parents signed up for participation in their neighborhood when the final group started within three months, as participants were allowed sign up until the group reached its minimum number of mothers needed to start.

We used Multiple Imputation procedures in SPSS 20.0 to estimate missing parameters, presuming that data were missing at random (MAR; IBM Corp, 2011; Little & Rubin, 2002). We were able to significantly predict missing data by our demographic variables (ethnic minority status, lower educational level, and less severe initial problems, reflecting the presence of missing data in particular families in our recruited population). Multiple imputation is the preferred technique to handle missing data and produces maximally unbiased parameter estimates (Allison, 2002; Graham, Schafer, & Hoyle, 1999; Little & Rubin, 2002; Schafer, 1999). Demographic variables (referral status, ethnic minority status, educational level, children's age and gender, mother's age, initial problem severity) and measures of

the same constructs (e.g., ECBI, SDQ, PPI) at different time points were entered as predictors of missing data. We created five imputed data sets (cf. Carpenter & Kenward, 2008). Following standard practice, we used the variations across these five imputed data sets by conducting our analyses on all five data sets and combining the results as a single estimate of treatment effect (Rubin, 1987). Finally, we compared the results of our analyses on imputed data sets with the results on our complete-data-only data sets.

Analyses

First, MANOVA was used to test whether the Incredible Years and waiting list control condition differed on demographic characteristics and baseline levels of outcome variables. In addition, ANOVAs were used to examine possible differences in family characteristics and baseline scores between referred and recruited families. Second, ANCOVAs were used to test the effect of Incredible Years versus waiting list condition on the outcome measures on T2 with T1 baseline scores on the outcome measures as covariates. Third, Paired Samples T-Tests were used on immediate posttest and follow-up scores to test the extent to which immediate post-test change was maintained at three-month follow-up. We used an intention to treat framework for all analyses by including data from all families who were allocated to Incredible Years or waiting list condition, regardless of actual participation.

Results

Preliminary Analyses

Conditions did not differ on demographics, baseline levels of parenting or child behavior, or percentage of referred or recruited families, as indicated with MANOVA ($F(22;130) = .68$, *ns*). Program attendance rates were satisfactory and similar to those in other Incredible Years studies (Hutchings et al., 2007; Webster-Stratton, 1998). Mothers of referred children attended on average 72% of all sessions (*SD* = 24%); mothers of recruited children attending on average 66% of all sessions (*SD* = 29%).

Baseline Problem Severity in Referred and Recruited Families

Referred children had higher levels of disruptive behavior than non-referred children, as indicated with ANOVA (Table 1). Referred children scored on average around the 90th percentile on the ECBI intensity scale; non-referred children scored on average less than 1 standard deviation above the population mean (Burns &

Patterson, 2001). More specifically, 89% of the referred children met criteria for at least one type of disruptive behavior disorder, versus 51% of the children from recruited families.

Mothers of referred children did not show higher levels of dysfunctional parenting than mothers of non-referred children. Overall, baseline levels of parenting were in the clinical range for four out of seven scales of the PPI (harsh & inconsistent discipline and physical punishment, and little positive verbal discipline and monitoring). Many children from recruited families thus did not show clinical levels of behavior problems, but many of their mothers did show clinical levels of dysfunctional parenting (e.g., harsh & inconsistent discipline and physical punishment). This finding is comparable to other studies on non-referred families (e.g., Leijten, Overbeek, & Janssens, 2012) and underscores the high risk nature of our recruited sample.

Immediate Effects

Incredible Years reduced mother reported disruptive child behavior (Table 2). Mothers who had participated in Incredible Years, compared to mothers in the waiting list control condition, reported lower levels of disruptive child behavior on the Eyberg Intensity and Problem scales ($F(2;153) = 8.59$, $p < .05$, $d = .47$ and $F(2;153) = 12.36$, $p < .001$, $d = .57$, respectively), and on the SDQ's conduct problems ($F(2;153) = 7.79$, $p < .05$, $d = .45$). Effectiveness of Incredible Years to improve children's behavior at home seemed specific for oppositional disruptive behavior, as mothers did not report improvement of aggressive behavior ($F(2;153) = .64$, *ns,* $d = .13$), hyperactivity and inattention ($F(2;153) = 3.96$, *ns,* $d = .31$), or overall difficulties ($F(2;153) = 1.31$, *ns,* $d = .19$).

Incredible Years reduced teacher reported hyperactivity and inattention. Teachers reported less hyperactive and inattentive behavior in children whose mothers had participated in Incredible Years ($F(2;153) = 5.34$, $p < .05$, $d = .38$). Teachers did not report a reduction of conduct problems or overall difficulties ($F(2;153) = 2.63$, *ns,* $d = .29$ and $F(2;153) = 3.22$, *ns,* $d = .26$, respectively).

Incredible Years improved parenting behavior. Mothers who had participated in Incredible Years, compared to mothers in the waiting list control condition, reported less use of harsh and inconsistent discipline, and more use of praise and incentives (respectively $F(2;153) = 13.40$, $p < .05$, $d = .59$ and $F(2;153) = 15.42$, $p < .001$, $d = .64$). Mothers did not report an increase of appropriate discipline, reduced physical punishment, or more use of clear expectations (*F*s(2;153) ranging from .24 to 1.56, *ns, d*s ranging .08 to .20), nor did mothers report reduced parenting stress ($F(2;153) = .27$, *ns,* $d = .09$; Table 2).

Table 2. Immediate Effects of Incredible Years.

	Incredible Years (*n* = 107)				Control (*n* = 47)				
	Pretest		Posttest		Pretest		Posttest		
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*d*
Child Behavior									
ECBI									
Intensity	121.86	31.91	109.03	28.27	122.95	36.44	121.24	35.93	.47*
Problem	14.35	9.12	9.46	8.66	16.35	8.89	15.19	9.89	.57***
Aggression Scale	2.11	.79	1.96	.69	2.26	.79	2.09	.69	.13
SDQ-mother									
Total	5.69	12.47	6.38	13.64	6.26	13.02	6.03	.19	5.69
Conduct	1.84	2.21	1.79	3.14	2.26	3.11	2.07	.45*	1.84
Hyper/Inattention	2.76	5.12	2.81	5.28	2.58	5.35	2.72	.31	2.76
SDQ-teacher									
Total	6.32	9.82	6.52	10.88	7.55	11.10	6.32	.29	6.32
Conduct	1.98	1.80	2.11	1.90	2.38	2.25	2.14	.26	1.98
Hyper/Inattention	3.04	4.73	3.40	4.74	3.31	5.45	3.13	.38*	3.04
Parenting (PPI)									
Appropriate Discipline	4.18	.89	4.30	.96	4.19	.91	4.13	.87	.20
Harsh & Inconsistent Disc.	3.22	.74	2.74	.74	3.13	.62	3.12	.74	.59*
Physical Punishment	1.63	.83	1.49	.69	1.28	.53	1.54	.79	.18
Praise & Incentives	4.60	.69	5.16	.78	4.51	.81	4.59	.84	.64***
Clear Expectations	4.05	1.03	4.19	1.00	3.86	.83	4.08	.93	.08
Parenting Stress (PSI)	2.23	.66	2.26	.68	2.28	.72	2.31	.68	.09

Note. *$p < .05$; ***$p < .001$.

Moderation by Ethnicity, Educational Level, and Referral Status

We compared the effectiveness of Incredible Years for families with various ethnic backgrounds and educational levels, and for referred versus non-referred families using two-way ANOVAs on all outcome measures presented in Table 2. No moderation effects were found on reduced mother or teacher reported disruptive behavior, (*p*s > .10) nor on improved parenting behavior (*p*s > .30). Ethnic minority status (as well as specific ethnic background) and socioeconomic status as measured with educational level did not affect families' improvement as a result of Incredible Years, and recruited families showed similar improvements to referred families. Please see Figure 2 for the change over time for Caucasian versus ethnic minority families, low versus moderately educated parents, and referred versus recruited families. Solid lines represent families in the intervention condition who received Incredible Years between T1 and T2 and dotted lines represent families in the waiting list control condition who received Incredible Years between T2 and T3. To illustrate, the upper figure shows that although Dutch children had higher initial levels of problem severity than ethnic minority children, families across ethnic groups who were allocated to the intervention condition show immediate and equally strong reductions in disruptive child behavior between T1 and T2, as measured with the ECBI intensity scale—the most often used instrument to measure parent training program effectiveness, while families across ethnic groups who were allocated to the waiting list control condition did not show significant reductions in disruptive child behavior between T1 and T2. Families across ethnic groups who were allocated to the waiting list control condition do show reductions in disruptive child behavior once they receive Incredible Years, between T2 and T3.

Because the number of sessions was extended during our project and not all families attended an equal amount of sessions, we checked our analyses for possible dose-response effects. No dose-response effects were found: neither absolute dose (i.e., number of sessions attended), nor relative dose (i.e., percentage of sessions from the total program attended) influenced families' improvement in parenting or child behavior (*p*s > .29 and *p*s > .50, respectively).

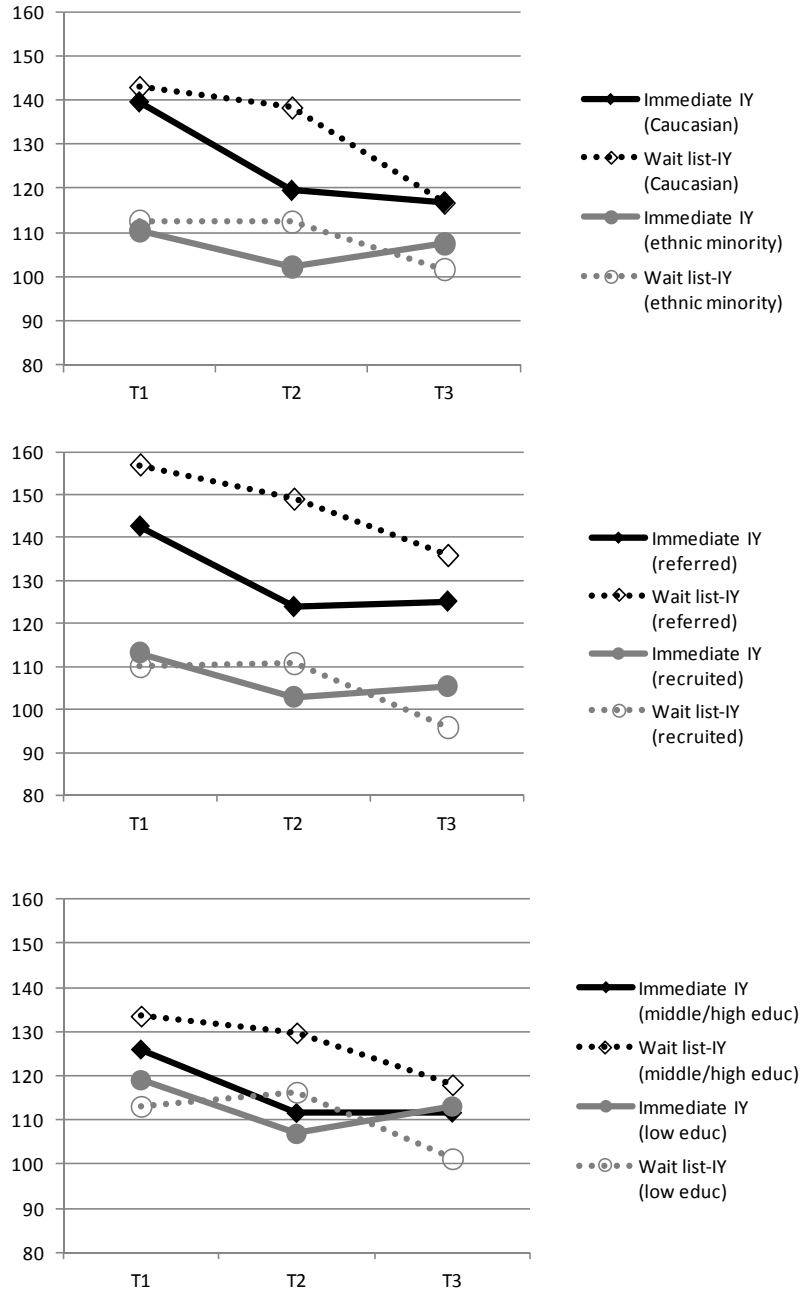

Figure 2. Change in Children's Disruptive Behavior (ECBI Intensity Scale) in the Immediate Incredible Years Intervention Condition (IY Between T1 and T2) and Waiting List Control Condition (IY Between T2 and T3).

Comparison of Imputed and Complete-data Only Analyses

Following standard guidelines for reporting multiple imputation (Sterne et al., 2009), we compared the results from imputed data analyses with results from complete-data only analyses. All significant effects of Incredible Years based on imputed data remained significant when analyzing complete data. However, several non-significant effects on disruptive child behavior based on imputed data became significant when analyzing complete data: Parent reported reduced aggression and hyperactive/inattentive behavior ($F(2;89) = 8.08$, $p < .01$ and $F(2;89) = 6.55$, $p < .05$, respectively), and teacher reported reduced conduct problems and overall problem behavior ($F(2;82) = 7.32$, $p < .05$ and $F(2;82) = 8.39$, $p < .01$, respectively). All effects on parenting behavior and stress remained the same. Overall, results were highly similar for imputed data analysis and complete data analysis, but imputed data analysis seemed more conservative in this study.

Discussion

We examined the effectiveness of the Incredible Years parent training to reduce disruptive child behavior in actively recruited ethnic minority and socioeconomically disadvantaged families, and compared this effectiveness to the effectiveness for families referred to an outpatient mental health clinical for child behavior problems. Our main finding was that Incredible Years was equally effective across families with different ethnic backgrounds, socioeconomic status, and referral status.

Incredible Years reduced parent reported disruptive child behavior, reduced teacher reported hyperactivity and inattention, reduced parental harsh and inconsistent discipline, and increased parental use of praise and incentives. These findings replicate earlier studies that the Incredible Years parenting program can change family practices and improve child outcomes (e.g., Gardner et al., 2006; Menting et al., 2013a, 2013b; Webster-Stratton, 1998). Our effect sizes were moderate (mean Cohen's *d* including non-significant findings was .34 for child effects and .30 for parenting effects), and compare to effect sizes found in other parent training studies (e.g., McCart et al., 2006; Weisz et al., 2010).

We found significant effects of Incredible Years on parent reported overall disruptive behavior and conduct problems. Incredible Years did not reduce parent reported child aggression. The Parent Rating of Aggression instrument includes mainly items on children's aggression towards other children (e.g., 'uses physical force to dominate other children). Incredible Years thus seems to affect primarily children's oppositional and aggressive behavior towards parents, rather than

children's aggressive behavior towards other children, which is also less targeted by the Incredible Years parent program. For teachers, we found significant effects of Incredible Years on teacher reported hyperactivity and inattention, but not on teacher reported conduct problems. Hyperactivity and inattention may be especially worrisome for teachers. Notwithstanding the negative effects of children's conduct problems at school (e.g., Hinshaw, 1992), hyperactivity and inattention immediately disrupt children's academic achievement and classroom atmosphere (e.g., Biederman et al., 2004; Loe & Feldman, 2007). Therefore, teachers might be most—and more than parents—sensitive to improvements in hyperactivity and inattention. Another reason for the discrepancy between teacher and parent report is that teachers, unlike parents, did not participate in the program. Parental perception of child behavior may have changed over the course of the intervention, but teacher perception of child behavior most likely has not. That both parents and teachers perceived improved child behavior, but in different domains, underscores the importance of including data from multiple informants and across settings when studying parent training effectiveness (De Los Reyes, 2011).

Incredible Years reduced harsh and inconsistent parental discipline and increased parental use of praise and incentives, but did not affect parental use of physical punishments, appropriate disciplining techniques (e.g., time-out), clear expectations, and parenting stress. Incredible Years thus improved some parenting practices, but not all targeted practices. The use of positive parenting practices like praise, incentives and consistency is considered critical in the Incredible Years program (Webster-Stratton, 2001), may have been most rewarding for parents to use, and more feasible to adopt than for example time-out procedures. This might explain why we found significant effects of Incredible Years specifically for these techniques. Because our waiting list control design did not allow for follow-up data of a true control condition, we were unable to test possible mediation effects within parenting practices, nor were we able to test which change in parenting practices mediated change in child behavior.

Our finding that ethnic minority families showed similar improvements as ethnic majority families adds to the growing literature on the suitability of the Incredible Years parent training across ethnic groups (e.g., Reid et al., 2001; Kim et al., 2008; Scott et al., 2010a; 2010b) and disadvantaged populations (Brotman et al., 2003; Menting, Orobio de Castro, Matthys, 2013a). The cultural sensitivity of Incredible Years might contribute to the program's equal effectiveness across families with different ethnic backgrounds. The program emphasizes a collaborative approach by using group discussions to come up with parents' own solutions to problems, and encourages parents to use the program's techniques in a way that

matches their own cultural and personal norms (Webster-Stratton, 2009). Also, the group setting of Incredible Years may contribute to parental feelings of support and acknowledgement, regardless of ethnic background. Incredible Years further encourages interpersonal support by assigning families to a buddy with whom they speak on a regular basis about their progress. These feelings of community and equality might be particularly important for ethnic minority families with fear of stigma (Scheppers et al., 2006; Tolan & McKay, 1996).

More generally, there is a growing evidence for the effectiveness of established parent training programs across western and non-western cultures (e.g., Bjørknes et al., 2012; Jalali, Shaeeri, Tahmasian, & Pourahmadi, 2009; Lakes et al., 2009; Leung, Sanders, Leung, Mak, & Lau, 2003, and see Gardner et al., 2013 for a review). Parent training programs that are sensitive and open to differences between families across cultures seem able to establish positive family change in different cultures. This might suggest certain universality in effective methods to improve parenting practices and subsequent child outcomes across cultures. However, although research increasingly includes families with non-western backgrounds, programs are mainly provided in western countries and by western therapists. More research on evidence-based parent training programs provided in non-western countries and by non-western therapists is needed to draw final conclusions about effective transportability across cultures.

That reductions of disruptive behavior problems in recruited children were equal to those in referred children is somewhat surprising, given that the initial levels of behavior problems were substantially higher in referred children. Higher initial levels of behavior problems typically predict more improvement (Chapter 2, this thesis; Hautmann et al., 2010; Menting et al., 2013b), which might be explained by a larger scope of improvement and more motivation to change. Several characteristics of our recruited sample might explain this equal effectiveness. First, clinical impressions suggested most families from our recruited sample do not typically engage in mental health treatment, and that many mothers had no previous professional help to change parenting practices and child behavior. Thus, they may have much to gain from parenting support that has not reached them in other ways. In contrast, many of the families with referred children indicated that they had a history of at least one previous professional attempt to improve child behavior. Consequently, the disruptive behaviors in recruited children may have been less persistent and easier to change than the disruptive behaviors in referred children. Second, almost all recruited families initially experienced serious barriers to treatment and often multiple meetings with families were necessary before families participated. There might have been a selection effect in that recruited families who overcame their barriers to treatment were families that were

especially motivated to change.

Limitations, Implications, and Suggestions for Future Research

We emphasized the importance of studying a hard to reach population ethnic minority and socioeconomically disadvantaged families, who are typically reluctant to engage in mental health services. Despite this importance, studying these families brought along several limitations. First, we do not have observational data on disruptive child behavior and parenting practices. Most Moroccan and Turkish mothers had Islamic backgrounds and many of these families did not want to be videotaped based on religious beliefs. Although we have multi-informant data in which teacher report partly confirm parent reported change in child behavior, bias may exist in mother reports of child behavior. This bias can go two ways. On the one hand, some suggest that parent training can increase mothers' awareness of negative child behavior (e.g., Posthumus et al., 2012), which may lead to an underestimation of true change. On the other hand, some parents might be eager to see positive results because of the time and effort invested in the program, which may lead to an overestimation of true change. Second, despite extensive efforts to include all families in each of the waves of data collection, we had relatively much missing data. We used the preferred approach of multiple imputation to account for these missing data as much as possible, and followed standard guidelines by comparing our results to the results of complete data-analysis, which had similar outcomes (Sterne et al., 2009). Nevertheless, we cannot exclude the possibility that some bias still exists in our imputed data and subsequent results. However, given the aims of our study we deemed it necessary to maintain some flexibility in the waiting list period, even at the cost of missing data. Third, due to the waiting list design, we had a follow-up of only three months and no longer had a control condition at this point. Multiple studies show that Incredible Years reduces disruptive behavior up to several years after termination of the intervention (Posthumus et al., 2012; Jones, Daley, Hutchings, Bywater, & Eames, 2008). In this study, we were not able to contribute to this research and can only conclude that parent and child behavior did not change significantly between immediate termination and three months after the intervention.

Our study is among the few to study the effectiveness of an established parent training program for ethnic minority families that are hard to reach for intervention and research purposes. Yet, many questions remain unanswered. We compared program effectiveness for ethnic minority and majority families that differed from each other in more ways than just ethnicity, the main difference being recruitment method. This was inevitable. There is no true referred population of disadvantaged ethnic minority families in the Netherlands, and in many western

countries alike. However, studies with more and larger sub-samples (e.g., including more hard to reach and actively recruited Caucasian families) would be able to answer more refined research questions, and are needed to disentangle possible confounding or counter-balancing effects of different possible influences (e.g., specific role of ethnic minority status, socioeconomic status, and referral status).

This study indicates that ethnic minority and socioeconomically disadvantaged families can be reached to engage in the Incredible Years parent training program. Our study also confirms that reaching ethnic minority and socioeconomically disadvantaged families may require outreaching strategies such as providing interventions in non-stigmatizing locations (such as schools) and avoiding strict inclusion criteria (such as psychiatric diagnosis) that might be considered stigmatizing. An important task for policy makers and clinicians might be to implement these outreaching strategies into regular mental health practice, in order to reach ethnic minority and socioeconomically disadvantaged families and provide them with parent training programs in their most optimal form. In other words, successful implementation of evidence-based parent training programs into regular mental health services requires the implementation of outreaching strategies to actually reach, retain, and benefit ethnic minority and socioeconomically disadvantaged families.

Chapter 5

The Family Check-Up and Service Use in High-risk Families of Young Children

A Prevention Strategy With a Bridge to Community-based Treatment

Leijten, P., Shaw, D. S., Wilson, M. N., Gardner, F., Matthys, W., & Dishion, T. J. (2013). The Family Check-Up and service use in high-risk families of young children: A prevention strategy with a bridge to community-based treatment. *Manuscript accepted for publication in Prevention Science.*

Abstract

Integration of empirically supported prevention programs into existing community services is a critical step toward effecting sustainable change for the highest risk members in a community. We examined if the Family Check-Up—known to reduce disruptive behavior problems in young children—can provide a bridge to the use of community treatment services among high-risk indigent families. The study's 731 income-eligible families with a 2-year-old child were screened and randomized to the Family Check-Up (FCU) intervention. Families were provided yearly FCUs from age 2 through age 5. Regression analyses on families' service use at child age 7.5 revealed increased service use, compared with that of the control group. Child disruptive behavior and socioeconomic status moderated the effect of the intervention on service use. Families who reported higher levels of child disruptive behavior and lower socioeconomic status also showed more service use, suggesting the intervention increased service use among the highest risk families. Greater use of community services did not mediate the effect of the FCU on reduced oppositional–defiant child behavior. Implications of these findings for the design and ecology of community family services in the context of evidence-based practices are discussed.

Introduction

To reduce the prevalence of child and adolescent mental health and substance use problems in communities, it is critical to effectively reach and engage those most in need of support (Biglan, Glasgow, & Singer, 1990). High-risk families with few economic resources are typically less apt to engage in child mental health services and prevention programs (e.g., Prinz & Miller, 1991; Zwirs, Burger, Buitelaar et al., 2006). Aside from the cost of engaging in interventions, socioeconomically disadvantaged families with children showing problem behavior may avoid community treatment agencies because of prior disappointing experiences, stigmatization, language and cultural barriers, and time limitations (Scheppers, van Dongen, Dekker, Geertzen, & Dekker, 2006; Tolan & McKay, 1996). Fortunately, empirically supported family intervention programs have become increasingly successful in engaging families within an epidemiologically defined community (e.g., Dishion et al., 2008; Webster-Stratton, 1998). For some families, however, it may be unrealistic to assume that involvement in a single intervention program will sustain long-term improvements in outcomes, because of structural vulnerabilities in the families and the contexts families live in. In families with lower socioeconomic status (SES), short-term gains of parenting interventions tend to be maintained less well (Chapter 2, this thesis). An important next step for empirically supported family interventions is to consider how the intervention program fits within the ecology of available community treatment services. Addressing the issue of person–treatment fit would help overcome the science-to-service gap in evidence-based practice (Herschell, McNeil, & McNeil, 2004; Whittaker et al., 2006).

The Family Check-Up (FCU) is an empirically supported intervention that may bridge this gap. This brief intervention is designed to support caregivers' appraisal of existing strengths and challenges in their family management practices and to motivate families to engage in appropriate treatment services related to parenting (Dishion & Stormshak, 2007). The FCU has repeatedly been shown to decrease youth problem behavior during multiple developmental periods, such as adolescence (Connell & Dishion, 2008; Dishion & Connell, 2008) and early childhood, including oppositional behavior in young children (Dishion et al., 2008; Shaw, Dishion, Supplee, Gardner, & Arnds, 2006). In this study, we built on this work by examining the extent to which participation in the FCU effectively engaged high-risk indigent families with services in their community when FCU services became unavailable between child ages 6 and 7.5. Moreover, we specifically

examined the extent to which the FCU motivated the highest risk families to use services that were appropriate to their assessed needs.

Service Use in High-risk Families

Although these high risk families may need the assistance of social services more often, their engagement in these services is typically lower (Bussing, Zima, Gary, & Garvan, 2003). Key principles that support the engagement process are brevity, embedding services in service contexts such as schools or other agencies (Hoagwood & Koretz, 1996; Szapocznik & Kurtines, 1989), providing services in the family's native language (Castro, Barrera, & Martinez, 2004; Kumpfer, Alvarado, Smith, & Bellamy, 2002), and using a collaborative approach (Miller & Rollnick, 2002). Empirically supported family programs, such as Head Start in the United States and Sure Start in the United Kingdom, can have positive side effects on families' use of services outside the program, such as immunization (Love et al., 2005; Melhuish, Belsky, Leyland, & Barnes, 2008). These spillover effects might contribute to the cost effectiveness of family interventions if they improve children's physical and mental health (Scott, Knapp, Henderson, & Maughan, 2001).

The Family Check-Up as a Bridge to Service Use

The FCU was developed to overcome barriers to seeking family support, such as fear of stigmatization, language and cultural barriers, and limited time and finances (Dishion & Stormshak, 2009). In two randomized trials with community samples, 25% to 50% of the caregivers of middle school students who were not seeking services, engaged in the FCU (Stormshak et al, 2011). In two randomized studies of ethnically diverse, income-eligible families with toddlers enrolled in a national food supplement program, 75% to 92% of the families randomized to the FCU engaged when the child was age 2 years (Dishion et al., 2008; Shaw et al., 2006). In the most recent and larger cohort of boys and girls from three distinct communities (i.e., rural, suburban, and urban), when followed from age 2 through 5 years, 50% of the families randomized to the FCU engaged in the intervention at child ages 2, 3, and 4 (Dishion et al., in press).

The FCU model involves two phases. The first is a three-session intervention involving an initial interview, a family assessment, and a feedback session (Dishion & Stormshak, 2007). In the feedback session, caregivers are engaged in a motivational interviewing process during which assessment results are shared, including a focus on both strengths and difficulties, and motivation to

change and to receive additional services is discussed. The second phase, which is grounded in the Everyday Parenting curriculum (Dishion, Stormshak & Kavanagh, 2011), involves support for specific family management practices, including positive behavior support, limit setting, monitoring, and relationship building. Families and therapists decide together which elements of the curriculum will be emphasized, depending on identified family strengths and challenges. Overall, the goal of the FCU is to identify strengths and challenges, enhance parents' motivation for change, and specifically tailor parent training to meet the individualized needs of the child and family.

The FCU directly addresses several of the barriers to service use that high-risk families may experience. The first of these barriers is caregivers' experience of criticism and judgment from mental health professionals when engaging with services (Owens et al., 2002; Starr, Campbell, & Herrick, 2002). The FCU's collaborative approach, motivational interviewing techniques, explicit identification of client strengths, and attention to the individual client's needs (Miller & Rollnick, 2002; Smith, Knoble, Zerr, Dishion, & Stormshak, in press) all work together to establish a strong therapist–client relationship. The FCU's assessment approach, during which families receive feedback about their family management skills, is known to contribute to clients' positive thoughts and feelings about the therapist–client relationship (Ackerman, Hilsenroth, Baity, & Blagys, 2000; Hilsenroth, Peters, & Ackerman, 2004). A positive therapist–client relationship is a known strong predictor of engagement and successful outcomes of new services, and for effecting enduring change (Forgatch, Patterson, & DeGarmo, 2005; Kerkorian, McKay, & Bannon, 2006; Lambert & Barley, 2001). Second, the FCU's flexible and adaptive approach facilitates the therapist's ability to adapt services to the caregiver's culture (ethnicity and SES; Boyd-Ball & Dishion, 2006; Stormshak et al., 2011). Third, the FCU uses home visiting to reduce barriers to engagement for disadvantaged families (Szapocznik & Kurtines, 1989).

Service Use for Those Who Most Need It

Families targeted by the Family Check-Up are a community sample of high-risk indigent families. As such, the service needs of a percentage of the families far exceed those that the Family Check-Up can address within the context of this study. Examples include severe mental health difficulties of caregivers, siblings or close relatives living in the home (e.g., schizophrenia, incapacitating depression, substance abuse, domestic violence, criminal offending, and post-traumatic stress

disorder). In addition, these families are often low income, during a time in the United States that was particularly challenging due to lack of health care, jobs, and social services because of the recession starting in 2008. From an ecological perspective, we are aware that such 'disruptors' affect caregivers parenting practices, which in turn, influence children's social and emotional development. Thus, engagement in community treatment services would be a hopeful remedy to some family disruption.

Because of its specific emphasis on increasing families' awareness of their strengths and difficulties and possible need for help, the FCU may be especially effective for connecting high-needs families with a wide array of services in the community. Three primary risk factors for unfavorable child outcomes in early childhood are disruptive child behavior (Tremblay et al., 1992), maternal depression (Cummings & Davies, 2004; Gross, Shaw, Burwell, & Nagin, 2009; Kim-Cohen, Moffitt, Taylor, Pawlby, & Caspi, 2005), and low SES (Bradley, Corwyn, Burchinal, McAdoo, & Garcia-Coll, 2001; Eamon, 2001). Increased services use among families with high levels of these risk factors would be especially relevant, both in terms of improving the lives of families that need services the most and in terms of cost effectiveness of community treatment services. In this study we not only examined the extent to which the FCU leads to more engagement in services, but also the extent to which the FCU specifically increases the engagement of families with the highest levels of child disruptive behavior, maternal depression, and/or socioeconomic risk in these services.

To identify the most efficient use of the FCU intervention, we examined possible dose–response effects of the FCU. Each year, families in the intervention condition decide whether or not they will participate in the feedback session. Dose–response effects are repeatedly shown in family interventions (Wilson & Lipsey, 2001), and effects of the FCU on families' engagement in other services may be stronger if families participate more frequently in the FCU. In other words, the effect of the FCU on families' engagement in services may depend on the FCU "dosage" that families receive.

Service Use as a Mechanism of FCU Effectiveness

If the FCU increases families' engagement in community services, then this increased use may in turn lead to more favorable child outcomes. As noted earlier, the FCU, implemented beginning at child age 2, has been established as an intervention for reliably reducing child oppositional and aggressive behavior and parental

depression; these effects have been shown through early childhood and through the early school-age period, according to both parent and teacher reports (Dishion et al., in press; Gardner et al., 2009; Shaw, Connell, Dishion, Wilson, & Gardner, 2009). We examined if families' use of community services as a result of the FCU intervention mediates the effect of the FCU on reduced oppositional-defiant child behavior.

This Study

We sought to determine if the FCU is effective for engaging families in community treatment services. First, we hypothesized that families randomly assigned to the FCU would use more community services than would families in the control condition. Second, because the FCU may help parents identify their own and their child's problematic behaviors, we hypothesized that maternal depression and disruptive child behavior would moderate the effects of the FCU on service use. Third, because the FCU targets many of the barriers to service engagement experienced by disadvantaged families, we hypothesized that family socioeconomic status would moderate the effects of the FCU on service use. Fourth, we examined the possibility of a dose–response effect in which more frequent participation in the FCU would lead to stronger effects of the FCU on service use. Finally, we examined whether i ncreased engagement in community services as a result of the FCU mediates improvements in children's oppositional-defiant behavior from early childhood to early middle childhood.

Methods

Participants

Participants were 731 families with a two-year-old. Children (49% female) had a mean age of 29.9 months (*SD* = 3.2) at the time of the age 2 assessments. Of the 731 families, 272 (37%) were recruited in Pittsburgh, 271 (37%) in Eugene, and 188 (26%) in Charlottesville. Across sites, 50.1% of the children were European American, 27.9% were African American, 13.4% were Hispanic American, 13.0% were biracial, and 8.9% represented other ethnicities (e.g., American Indian or Native Hawaiian). More than two thirds of the enrolled families had an annual family income of less than $20,000 during the 2002–2003 screening period. Forty-one percent of the mothers had a high school diploma or GED equivalence, and an additional 32% had 1 to 2 years post–high school education.

Recruitment

Families were contacted at Women, Infants, and Children Nutritional Food Supplement (WIC) sites in Pittsburgh, Pennsylvania; Eugene, Oregon; and Charlottesville, Virginia. Families with a 2-year-old child were asked to fill out a brief screening questionnaire to measure eligibility for an intervention program. Families were invited to participate if they scored at or above 1 standard deviation above the normative average scores on several screening measures on (a) child behavior (conduct problems, high-conflict relationship with adults), (b) family problems (maternal depression or substance-use problems, daily parenting challenges, teen parent status), and (c) low SES (low education achievement, low family income). In total, 1666 families were screened. Of the 879 families that were qualified, 731 (83%) participated in this study (Dishion et al., 2008).

Procedure

Primary caregivers were visited yearly at home at child ages 2 to 5 years and again at age 7.5. Families in the FCU condition and the control condition received the same assessment visits, which involved questionnaires and structured interaction activities that were videotaped and later coded. After the assessment visit, only families in the FCU condition were offered a get-to-know-you (GTKY) session and a feedback session. The GTKY typically occurs prior to the assessment in clinical practice of the FCU, but was offered after the assessment in this research study so control and intervention families' first contact was the same. The GTKY allows therapists to establish rapport with families and find out what issues are important to them. Therapists use this information in conjunction with data obtained from the formal assessment, which includes questionnaires and observed play activities, to provide feedback to families at the feedback session. At child age 2, 80% of the families participated in the feedback session. Participation decreased over time, with 55% participating in the feedback session at child age 5.

The feedback session of the FCU was offered to all families in the intervention condition at child ages 2, 3, 4, and 5 years. At age 6, families were notified that intervention services would not be available because of lack of funding for the study. At age 7.5, families' engagement in services between child age 6 and 7.5 was assessed. Families received payment for participating in the 2- to 3-hour-long assessments (i.e., $100 at age 2 and as much as $180 at age 7.5) and a $25 gift certificate for participating in the feedback session. Data were collected between 2003 and 2010. Parental written consent was obtained for all participants.

Institutional review board approval was received.

Instruments

***Service Use*.** Primary caregivers reported their families' use of formal and informal helping services. Formal services included mental health counseling, substance abuse treatment, help from doctors or nurses, and agency help specifically for their children. Informal services included community support agencies, help from religious groups, and assistance from other parents or relatives. Primary caregivers responded with "yes" (coded as 1) or "no" (coded as 0) to report if their family had engaged in this form of service between child age 6 and 7.5. Responses were then summed separately into scores for formal and informal services use and together for total service use.

***Disruptive Child Behavior*.** The intensity score of the Eyberg Child Behavior Inventory (ECBI; Robinson, Eyberg, & Ross, 1980) was used to measure the child's initial level of disruptive behavior at age 2, including symptoms of oppositional and aggressive behavior. Primary caregivers reported the extent of child disruptive problem behavior on a scale ranging from 1 (*never*) to 7 (*always*). The ECBI has been highly correlated with independent observations of children's behavior, differentiates clinic-referred and nonclinic populations (Robinson et al., 1980), and shows high test–retest reliability (0.86) and internal consistency (0.98; Webster-Stratton, 1985). Internal consistency of the ECBI was $\alpha = .86$.

***Child Oppositional-defiant Behavior*.** A measure of child oppositional-defiant and defiant behavior was created from the Child Behavior Checklist for ages 1.5–5 and ages 6–18 to measure parent-reported oppositional-defiant behavior at age 7.5 (CBCL; Achenbach & Rescorla, 2001). As was accomplished in earlier reports from this study (Dishion et al., in press), we computed a mean factor score for oppositional-defiant child behavior that mapped onto DSM-IV criteria for oppositional-defiant disorder and DSM-IV items about aggression relevant to conduct disorder and that was developmentally meaningful across the study's age range (2 to 7.5 years). The oppositional-defiant items in this score include the following: is cruel to animals, destroys own things, destroys others' things, gets into many fights, physically attacks people, is defiant, is disobedient, and has temper tantrums. Internal consistency of the CBCL was $\alpha = .78$.

***Child Oppositional-defiant Behavior at School*.** The DSM-oriented Oppositional Defiant Problems scale from the Teacher Report Form (TRF; Achenbach & Rescorla, 2001) was used to measure teacher-reported oppositional behavior at age 7.5.

Internal consistency of the TRF was α = .90.

***Maternal Depressive Symptoms*.** The Center for Epidemiological Studies on Depression Scale (CES-D; Radloff, 1977) was used as a measure of maternal depression at child age 2. The CES-D is a well-established, 20-item measure of depressive symptomology. Participants reported how frequently they had experienced listed depressive symptoms during the past week by using a scale ranging from 0 (*less than 1 day*) to 3 (*5–7 days*). Internal consistency of the CES-D was α = .74.

Socioeconomic Status. A demographics questionnaire was administered to the primary caregivers that included questions about parental education, ranging from 1 (*no formal schooling*) to 9 (*graduate degree*); annual income, ranging from 1 (< *$5.000*) to 13 (> *$90,000*); financial aid, in which 0 = no, 1 = yes, reversed; overcrowding in the house, in which 1 = live with a relative, 4 = own your own home. SES was computed as a composite measure of the standardized scores of these five demographics. We used SES measured at both age 2 and age 7.5, because meaningful changes in families' levels of SES were expected, for two principle reasons: a substantial number of teen mothers in the sample (23%) were expected to finish their education and subsequently increase their SES from child age 2 to 7.5, and the economic recession that took place in the United States starting in 2008 may have substantially affected families' levels of SES during that age span.

Analytic Strategy

Our analyses consisted of four steps. First, we used regression analysis to test if families in the FCU condition compared with the control condition predicted greater service use. Second, we used hierarchical regression analyses to test if early disruptive child behavior, maternal depression, and SES moderated the effect of the FCU on service use. Third, to test dose–response effects, we used regression analysis in the intervention condition to test if the number of times families participate in the FCU predicted service use. Finally, we used regression analyses to test if increased service use predicts reduced child oppositional-defiant behavior and is a mediator of the effect of the FCU on reduced child oppositional-defiant behavior.

Results

Preliminary Analyses

Caregivers reported that on average, they had engaged in 1 or 2 different forms of community services (M = 1.52, SD = 1.26) in the year that the FCU was not offered (between child age 6 and 7.5). Seventy-five percent of the families across conditions had engaged in at least one form of community service. Services that families used most were agencies serving children (35% of the families), assistance from other parents or relatives (34%), and mental health or counseling services (31%). Family SES at age 2 and at age 7.5 was modestly correlated (r = .13, *ns*), indicating low stability of family SES over time, regardless of treatment condition. More specifically, 18% of the families increased at least 1 standard deviation in their SES between child age 2 and 7.5, and 13% of the families decreased at least 1 standard deviation in their SES between age 2 to 7.5. Change in family SES was not affected by intervention status (β = .04, *ns*).

The FCU feedback session was offered yearly to families in the intervention condition between child age 2 and 5, resulting in four opportunities to participate. On average, intervention families participated 3 to 4 times (M = 3.55, SD = 2.03). Participation was related to families' SES, such that families with lower SES participated more often (r = −.41). SES was therefore included as a covariate in analysis of the dose–response effect. Families' service use was not related to children's gender, age, ethnicity, or project site (*p*s > .11; see Table 1).

Primary Analyses

Consistent with the hypothesis, the FCU resulted in greater service use in the year the FCU was not offered (β = .11, p < .05, d = .21). Random assignment to the FCU was positively linked to more often seeking mental health counseling in the community (β = .09, p < .05 d = .18) or chemical dependency treatment (β = .11, p < .05 d = .22) and seeking assistance from religious groups (β = .10, p < .05 d = .19) or from community support agencies (β = .08, p < .05 d = .17). The next step was to examine family characteristics that moderate the covariation observed between random assignment to the FCU and caregivers seeking community treatment services. Disruptive child behavior moderated the effect of the FCU on families' service use. The effect of the FCU on service use was strongest in families with more-disruptive children, as shown by the significant Condition × Disruptive Behavior interaction effect (β = .43, p < .05, d = .33).

Table 1. Families' Service Use is Higher in the FCU Condition Than in the Control Condition, and Unrelated to Children's Gender, Age, Ethnicity, or Urbanicity of Living Location.

	Total services	Formal services	Informal services
Gender			
Boys (51%)	1.46	.85	.61
Girls (49%)	1.60	.90	.70
Age (*r)*	−.05	−.01	−.07
Ethnicity			
European American (46%)	1.63	.90	.73
African American (28%)	1.37	.88	.48
Other/biracial (13%)	1.51	.82	.69
Living location			
Large urban (31%)	1.57	.94	.63
Small urban (21.5%)	1.56	.86	.69
Suburban (21.5%)	1.51	.85	.66
Rural (26%)	1.50	.82	.68
*Intervention condition**			
FCU	1.68	.94	.72
Control	1.40	.80	.59

Note. * $p < .05$.

Whereas in the control condition families with higher levels of disruptive child behavior engaged in services at comparable rates to families with lower levels of disruptive child behavior, in the FCU condition families with higher levels of disruptive child behavior engaged in services more often than did families with lower levels of disruptive behavior (Figure 1). The Johnson-Neyman regions of significance approach (cf. Hayes & Matthes, 2009) showed that the effect of the FCU on families' service use became significant when children scored 120 or higher on the ECBI, which reflects a score of approximately 0.5 standard deviation above the population norm (Burns & Patterson, 2001) and 57% of this study's sample. In contrast to disruptive child behavior, maternal depression was unrelated to families seeking treatment in the context of the FCU (β = .03, *ns*).

Families' SES at age 7.5 moderated the magnitude of the association between FCU group status and services use, but only for the use of formal services. The effect of the FCU on formal service use was strongest in families with lowest SES, as shown by the significant Condition × SES at age 7.5 interaction effect (β = −1.88, $p < .05$, $d = .25$). In the control condition, families with the lowest SES engaged less often in services than did families with somewhat higher SES. The FCU

diminished this engagement gap, resulting in equal engagement in services for families with low and moderate SES. This effect was unique to families' SES at age 7.5, which reflects families' SES in the year of the assessed services. Family SES at age 2, which reflects families' SES before the start of the intervention, was not related to the effect of the FCU on families' service use in the year of the assessed services.

There was a dose–response effect in the intervention condition. Families who participated more often in yearly FCU feedback sessions engaged more often in services during the intervention hiatus (β = .13, $p < .05$ $d = .27$). This effect was mainly attributable to the finding that families obtaining more feedback sessions used more formal services (β = .15, $p < .05$, $d = .30$) than informal services (β = .05, *ns*, $d = .10$).

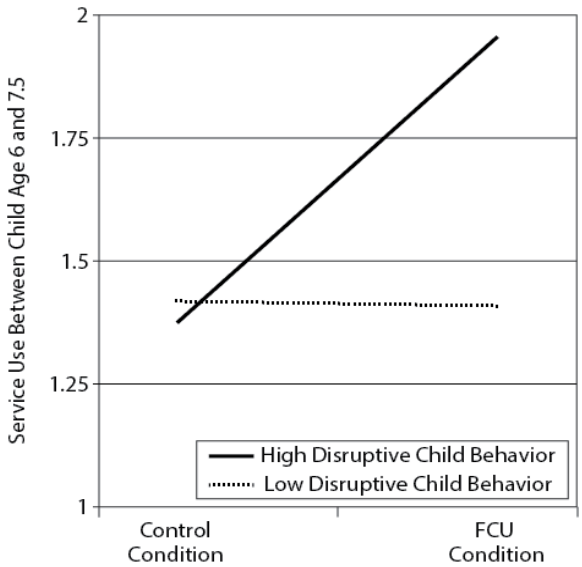

Figure 1. The FCU Motivates Families with High Levels of Disruptive Child Behavior to Use More Community-based Services.

Increased engagement in services as a result of the FCU did not mediate effectiveness of the FCU on reduced oppositional-defiant child behavior. Increased service use was unrelated to oppositional-defiant behavior as rated by teachers (β = .05, *ns, d* = .13) and related to more (rather than less) oppositional-defiant behavior as rated by caregivers (β = .15, $p < .05$ *d* = .30). In other words, caregivers who used more community services between child age 6 and 7.5 reported more oppositional-defiant behavior in their children at age 7.5 than did caregivers who used less community services after participating in the FCU.

Discussion

We examined whether the empirically supported FCU intervention can provide a bridge to the use of community treatment services among high-risk indigent families. Our results confirm that the FCU enhances families' service use; families in the FCU condition used more community services than did families in the control condition. In particular, they engaged more often in mental health counseling, chemical dependency treatment, assistance from religious groups, and community support agencies. This effect may be explained by the specific emphasis of the FCU on increasing family awareness of strengths and difficulties in family management and possible need for help (Dishion & Stormshak, 2007). The FCU seems to contribute to families' motivation to search in their own community for the help they need.

We found evidence that the FCU led to more service use especially for those families most in need of assistance. Families with children who had higher initial levels of disruptive behavior and those with the lowest SES showed the greatest use of community services as a result of engagement in the FCU. The finding that families with highly disruptive children engaged in more service use after the FCU is in line with findings that families with more disruptive child behavior engage more in the FCU (Connell, Dishion, Yasui, & Kavanagh, 2007), and with both theory and empirical findings that perception about family challenges is an important precursor of help-seeking behavior (e.g., Goldberg & Huxley, 1980; Sayal, 2006; Teagle, 2002). The finding that families with the lowest SES engaged in community services more often after the FCU, relative to those in the control group, supports the notion that the FCU addresses several of the barriers that may prevent low-SES families from seeking help. The FCU addresses caregivers' experience of criticism and judgment from mental health professionals in that it

fosters strong and collaborative therapist–client relationships and emphasizes adaptation of services to caregivers' culture (Miller & Rollnick, 2002; Smith et al., in press).

Among study findings was a dose–response effect: families that engaged more often in the FCU showed greater engagement in community services during the year the FCU was not offered. Existing literature about dose–response effects is inconsistent. Although many studies on family interventions do not show dose–response effects (e.g., Nix, Bierman, & McMahon, 2009), others suggest that dosage of treatment might play a role in the effectiveness of interventions (e.g., Baydar, Reid, & Webster-Stratton, 2003; Wilson & Lipsey, 2001). The FCU differs from many other intervention programs with respect to its time frame. The FCU is relatively brief and repeated yearly, whereas most family interventions consist of multiple meetings that are typically offered weekly or biweekly (e.g., Sanders, 1999; Webster-Stratton, 2001). It may be that dose–response effects become more salient in this brief but annual framework, much like models for pediatric check-up visits or preventive dental exams. Granted, we cannot rule out the possibility that the dose–response effect in our study reflects caregivers' general tendency to engage in help and was not uniquely caused by engagement in the FCU. However, additional analyses in which we controlled for parents' engagement in community services during the first years of the FCU showed that initial levels of community service use did not affect the dose–response effect of the FCU on families' engagement in community services in the year the FCU was not offered. The dose–response effect therefore suggests that yearly repeated FCUs help optimize change in families' engagement in community services.

Increased use of community services did not mediate the effects of the FCU on oppositional-defiant child behavior as rated by caregivers and teachers at age 7.5. In fact, engagement in community services was related to more (rather than less) oppositional-defiant child behavior in the following year, as reported by caregivers. The absence of a direct link between engagement in community services and better child adjustment is not all that surprising. It is well established that direct treatment effects on child behavior for regular community-based services for children and families are negligible (Weiss, Catron, Harris, & Phung, 1999). Many factors limit the effectiveness of community-based services, which are likely to be compromised by limited use of empirically based practices and poor resources available for implementing interventions with fidelity. Thus, engaging families and establishing empirically supported family intervention programs is only half the

battle; there is a need to design community-based mental health delivery systems that are empirically based, efficient, and implemented with fidelity. The brief and feasible FCU intervention shows that mental health services do not need to be expensive to be effective. In contrast, much of what is currently done in community treatment service is more expensive, often not effective, and has in some cases even iatrogenic effects (Dodge, Dishion, & Lansford, 2006).

The finding that randomization to the FCU mobilizes caregivers' efforts to change and seek services builds on studies of the Drinker's Check-Up. For example, randomization to the Drinker's Check-Up was related to long-term changes in problem drinking, and those in the experimental condition often sought other types of addiction treatment services (Miller & Sovereign, 1989). If one assumes a self-regulatory perspective on behavior change, providing caregivers with respectful and helpful feedback about their child's behavior and their family management prompts an individualized behavior change process that will likely involve use of resources available within the ecology of each family. It is particularly interesting that the hiatus in the delivery of FCU intervention services was the time when intervention families showed an increased level of service use, compared with that of controls. A certain wisdom is suggested on the part of caregivers, in that they shopped for services that fit their perceived needs when help from the FCU was not available.

This is not the first study that suggests that those families most in need are those that engage the most in the FCU and also benefit. In a study involving middle school youths, Connell and colleagues (Connell et al., 2007) found that the highest risk families and youths were the most likely to engage in the school-based FCU, and correspondingly, the most likely to benefit in terms of long-term outcomes. In an earlier report about the current sample, we found that caregivers reporting high levels of disruptive behavior in their 2-year-old children were most likely to benefit from randomization to the FCU (Dishion et al., 2008). The often neglected corollary of this finding is that low-risk families often opt out of the FCU, and their children continue to show long-term positive adjustment outcomes. These patterns of self-selection suggest that caregivers' appraisal of their family's needs, coupled with the availability of nonpejorative, initially brief, and high-quality services, is critical when considering the prevention strategies that have high levels of reach and that potentially reduce the public health prevalence of mental health problems in children and families.

The results of our study should be interpreted in the context of its

limitations. We used the naturally occurring hiatus in availability of the FCU to study its effect on families' service use. We cannot test whether this hiatus caused families in the FCU to engage more in community services or if the same pattern of services use would appear if the FCU had been offered yearly without a hiatus. Also, because we lack information about exactly which specific programs or treatment families received in their community—and the extent to which they are empirically supported—we were unable to test the effect of the use of community services on various child outcomes, including oppositional behavior. Finally, the finding that increased use of community services did not have beneficial effects on disruptive child behavior does not exclude the possibility that community services might play an important role in mobilizing families' efforts to change and seek the help they need or in decreasing risk factors such as depression and parenting stress. Although in our study community services were not associated with positive change in child behavior, they may still be important for encouraging families to engage in treatment. This issue reiterates the importance of having community-based mental health delivery systems that are empirically based, efficient, and implemented with fidelity.

Ours is among the first randomized studies of an empirically developed family intervention that examined the impact of an intervention on caregivers' use of services within the ecology of the community. Our results indicate that the brief, family-based FCU intervention is effective for motivating families to engage in treatment services, especially those families with the highest needs for help, but we did not find evidence that engagement in services leads to more favorable outcomes. Future research is needed to examine which community services might be effective and which services might be ineffective or even iatrogenic. This strategy is critical to ensure that if we are to bridge the chasm between empirically supported prevention and community-based treatment, the community services families receive add to, rather than diminish, the potential for positive change.

Chapter 6

Bringing Parenting Interventions Back to the Future

How Randomized Controlled Microtrials May Benefit Parenting Intervention Effectiveness

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Abstract

We propose that a new generation of research is needed to promote the effectiveness of parenting interventions designed to improve the behavior and mental health of children. The approach suggested combines developmental and intervention science in an effort to critically evaluate to what extent discrete intervention elements (e.g., parenting techniques for positive reinforcement, limit setting, monitoring, and parent-child communication) contribute to, are irrelevant to, or, in fact, erode overall intervention effectiveness. In a way, the suggested approach would influence the field to move 'back to the future'. When parenting intervention research started, it was more common than it is nowadays to stringently evaluate discrete and narrowly defined behavioristic principles such as praise and time-out using experimental techniques. It is argued that iterative randomized controlled microtrials are needed to: (1) distinguish the elements of parenting interventions that are most effective from those that are less effective, (2) illuminate for whom and under what conditions elements are most effective, and (3) explore the potential for empirically supported tailoring of interventions to families' specific needs.

Introduction

In the latter decades of the past century, medical scientists faced the challenge of finding a cure for a new immune disease called HIV. After some years, they found that a "drug cocktail," a combination of different types of drugs, yielded better results than any single drug had yielded before (Gulick et al., 1998). The cocktail treatment was invaluable to the effort of saving lives of millions of people infected with HIV across the world. Still, the original cocktail was a 'best guess' strategy, and presumably sub-optimally effective, in that a thorough understanding of what each individual drug contributed to the cocktail effectiveness (let alone how the individual drugs interacted) was lacking. Today, medical scientists are modeling individual drug effects and use these models to guide the development of future drug combinations that are ever more effective, adapted to the needs of individual patients, and robust under various conditions (e.g., Rosenbloom, Hill, Rabi, Siliciano, & Nowak, 2012).

Current parenting interventions are not unlike cocktails. They consist of multiple potentially effective elements (e.g., discrete parenting techniques that parents are taught), and tend to be delivered as a comprehensive intervention package. However, little is known about the relative effectiveness of discrete techniques that are taught within and across interventions. For example, the Everyday Parenting curriculum teaches parents 18 different parenting techniques, and another 27 additional sub techniques on how to make these techniques work (Table 1; Dishion, Stormshak, & Kavanagh, 2011). Most techniques taught in this curriculum are similar to those in other established parenting programs (e.g., *Parent Management Training—Oregon Model*, Forgatch & Patterson, 2010; *Triple-P Positive Parenting Program,* Sanders, 1999; *Incredible Years*, Webster-Stratton & Reid, 2010; *Parent–Child Interaction Therapy*, Zisser & Eyberg, 2010). Despite the apparent consensus on what techniques should be taught in parenting interventions, only a few of these techniques actually have been studied individually to establish their effectiveness. The provision of time-out is among those few exceptions—several behavioral analytic studies have shown the effectiveness of time-out procedures for improving child behavior (e.g., Flanagan, Adams, & Forehand, 1979; Roberts, Hatzenbuehler, & Bean, 1981), but even for these exceptions, many of the sub techniques that parents are taught (e.g., the amount of time children should be placed in time-out) are understudied.

Table 1. Parenting Techniques Taught in the Everyday Parenting Curriculum.

Parenting techniques	Sub techniques
Pinpoint positive behaviors	
Make positive requests	Be specific
	One request at a time
	Focus on what you want (not what you don't want)
	Neutral and engaged nonverbal attitude (pleasant but firm tone, neutral face expression, eye-contact, polite and respectful, notice when child cooperates)
	Follow thorough
Track daily behavior	
Praise	Simple
	Contingent Specific
	Simple
Incentives	Realistic
Parent time Activities Privileges	Measurable
Incentives	Under your control Start with daily plan
Parent time Activities Privileges	Realistic
Make behavior change plan	Review plan daily
	Check each step
	Praise positive behavior
	Give incentives immediately after they are earned
Self-statements	
Active listening	Show understanding
	Summarize
	Practice patience
	Emphasize positive behavior and choices
	Repeat; ask if you understood correctly
	Ask close-ended, direct questions
Monitoring	
Consequences	
Corrective actions	
Loss of privileges	
Work chores	
Time-out	
Ignore misbehavior	
Negotiation	1: make neutral problem statements, 2: generate solutions, 3: evaluate solutions, 4: choose solution, 5: follow-up
Proactive parenting and planning	Pay attention and identify troublesome situation
	Look realistically at child abilities
	Adjust difficult activities to maximize success and minimize negative emotions
	Prompt, suggest, and reward success

There is a dearth of knowledge on the extent to which discrete parenting intervention elements are effective, and actually contribute to program effectiveness.

To be sure, our proposition that more insight into the effectiveness of discrete parenting intervention elements is needed is not new. Similar arguments have been made for understanding the basic "kernels" or principles of change among evidence based intervention packages (e.g., Chorpita & Daleiden, 2009; Embry & Biglan, 2004; Forgatch, 1991; Piquero, Farrington, Welsh, Tremblay, & Jennings, 2009). Yet, a systematic program of research on this matter is lacking. In this paper we outline a framework for a research approach that should help to fill this gap. We provide a model on how the effectiveness of discrete intervention elements can be tested using randomized controlled microtrials, and how knowledge of the effectiveness of discrete elements can inform parent-child interaction and intervention theory—a model that should ultimately lead to the optimization of parenting intervention effectiveness.

From Behavioral Theory to Parenting Advice

Parenting interventions are the key strategy to improve children's behavior and mental health (Weisz & Kazdin, 2010). Their design is thoroughly based on theory and clinical experience. For example, positive behavior support techniques (e.g., praise, rewards) are based on social learning theory (Bandura, 1964; Patterson et al, 1968; Skinner, 1953), limit setting and other techniques to handle misbehavior (e.g., house rules, time-out) are based on social learning theory and research on the coercion process (e.g., Patterson, 1982; Patterson, Reid & Dishion, 1992; Skinner, 1953), and family communication techniques (e.g., listening, conflict negotiation) are consistent with learning principles of behavior, and directly derived from family systems theory (e.g., Haley, 1971; Minuchin, 1974).

Despite their strong theoretical underpinnings, the actual compilation of elements used in parenting interventions is based on expert clinical judgment. There is good reason to assume, both theoretically and empirically, that each of the techniques taught in parenting interventions may be helpful, and that certain synergistic combinations of techniques (e.g., positive and negative reinforcement) are critical for parenting intervention effectiveness. However, it is possible that some elements of program packages are superfluous and do not contribute to overall program effectiveness, or worse, that they might sometimes even have iatrogenic effects and mitigate the effectiveness of other elements. Moreover, most

established programs generally suggest a 'one size fits all' approach in which the same parenting intervention elements are taught to all children and families alike. This approach is at odds with important basic psychological findings about how child characteristics influence the effectiveness of different parenting techniques like rewards and punishment (Belsky, Bakermans-Kranenburg, & van IJzendoorn, 2007; Matthys, Vanderschuren, Schutter, & Lochman, 2012). Although there is an increase in use of tailored and module-based interventions (Noar, Benas, & Harris, 2007), empirical evidence for which elements are most effective for which families is limited.

Dominance of Comprehensive Randomized Controlled Trials

Research on the theoretical models that form the basis of today's parenting interventions started with studies that tested the effectiveness of discrete and narrowly defined behavioristic techniques, such as praise and time-out, to yield child compliance (e.g., Bernhardt & Forehand, 1975; Roberts, Hatzenbuehler, & Bean, 1981; Parpal & Maccoby, 1985). Later, the field of parenting intervention research developed toward testing the effectiveness of comprehensive programs (e.g., Eyberg et al., 2001, McMahon & Forehand, 1984, Webster-Stratton, 1984, 1998). Slowly but surely, the emphasis shifted away from testing theory-based assumptions on how to best intervene in children's lives, toward the development and subsequent evaluation of programs designed to be effective for the widest range of child behavior problems, even across family characteristics. By no means do we wish to challenge the importance of these large scale randomized effectiveness trials (see for example Weisz & Kazdin, 2010, for an elaborate account of the value of such trials). Yet, their dominance in the field may have come at the expense of advancement in knowledge on discrete intervention element effectiveness. We suggest that, besides a continued need to evaluate intervention packages, the field of parenting intervention research may benefit from a complementary approach that experimentally tests discrete intervention elements on their effectiveness: an approach that goes back to the roots of the field, but with today's knowledge on theory, design and measurement.

An Iterative Model for Improving Parenting Intervention Effectiveness

The model in Figure 1 shows how research on the effectiveness of discrete program elements can play a central role in optimizing parenting intervention effectiveness. The model represents a continuous feedback loop between its six steps: theory,

disentanglement of program elements, microtrials studying element effectiveness, microtrials studying synergistic element effectiveness, adaptation of programs, and program effectiveness trials. The model reflects an iterative research process in which the steps complement and enrich each other in their effort to increase the effectiveness of parenting intervention programs.

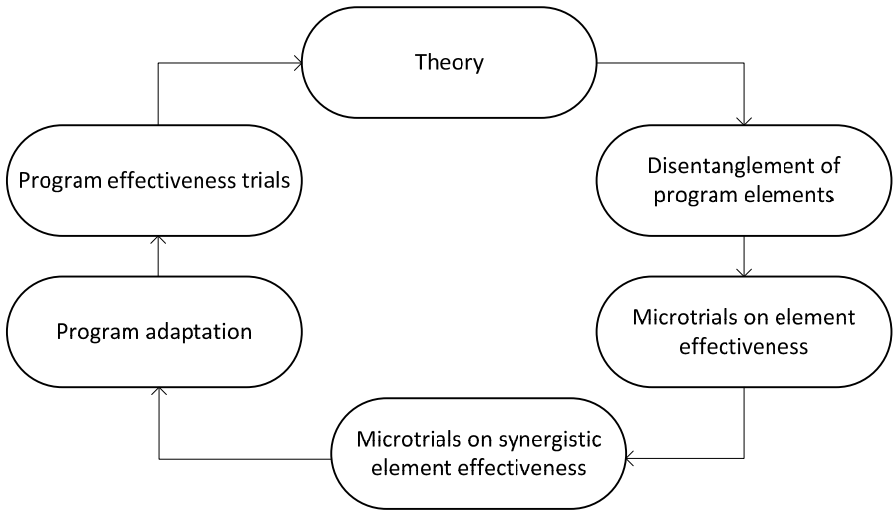

Figure 1. Using Randomized Controlled Microtrials to Illuminate Effective Intervention Elements and Optimize Parenting Intervention Effectiveness.

Identification of relevant program elements for effectiveness evaluation should be based on theoretical and empirically-based developmental models that point to the importance of certain intervention techniques (cf. Dishion & Patterson, 1999). For example, longitudinal research on parent-child interaction identifies key dynamics that predict growth in antisocial behavior (e.g., Hoeve et al., 2009; Rothbaum & Weisz, 1994). These insights may inform the identification of program elements that are likely candidates to substantially affect parenting intervention effectiveness. Identified elements can be general parenting techniques, such as praising and ignoring, as well as sub techniques to optimize these general techniques, such as phrasing praise in a way that labels the rewarded behavior and making directives positive and specific.

The disentanglement of parenting interventions into discrete elements sets the stage for the evaluation of these elements on their empirical merit. Systematic

empirical tests can identify which elements are most effective. This step of the model encourages stringent comparisons of effectiveness between currently used elements and relevant alternatives. Alternatives can be based on new insights from basic research, and on generative research on the effectiveness of natural parenting practices. For parental reinforcement of positive child behavior, for example, findings on what forms of praise parents typically use, and their effects on children's motivation, emotions, and behavior, continuously inform which techniques are most promising for parenting interventions (e.g., Brummelman et al., 2013; Henderlong & Lepper, 2002; Kamins & Dweck, 1999). Similarly, findings on children's differential sensitivity to techniques like praise and rewards may help improve how parenting advice can be tailored to best fit individual families' needs (e.g., Matthys et al., 2012).

Importantly, parenting interventions are more than the sum of their parts. Most empirically supported programs follow a set sequence of sessions and teach specific techniques (e.g., daily parent-child play and praise) before others (e.g., ignore and time-out; the Hanf-model two stage model, Hanf, 1969; Eyberg, 1988; Webster-Stratton, 2001). This is not without reason. There is empirical evidence that the effectiveness of certain intervention elements may depend upon whether other elements are taught well (Bernhardt, Fredericks, & Forebach, 1978; Roberts, 1981; Eisenstadt, Eyberg, McNeil, Newcomb, & Funderburk, 1993; Walle, Hobbs, & Caldwell, 1984). In this sense, it might be problematic to examine the effectiveness of discrete elements in isolation. We propose that if there are theoretical or empirical reasons to believe that the effectiveness of individual intervention elements may depend on the presence of other elements, then the study of synergistic effects of program elements deserves priority above and beyond the study of individual element effectiveness. Experimental designs can be used to test the relative effectiveness of two discrete elements (e.g., A and B) versus the effectiveness of the combined elements in a different order (e.g., A-B and B-A). These experimental designs increase insight into the relative effectiveness of discrete elements, synergistic effectiveness, and possible superfluity of one element in the presence of another element.

Despite continued efforts to develop the best possible parenting interventions, the actual effects of current parenting interventions still tend to be moderate (McCart et al., 2006; Weisz, Sandler, Durlak, & Anton, 2005). Insight into which discrete and synergistic elements are most effective might be able to form foundation for optimizing parenting intervention program. These adapted, re-

packaged programs can then form the basis for renewed program effectiveness trials and can inform parent-child interaction and developmental theory.

Randomized Controlled Microtrials

The effectiveness of discrete and synergistic intervention elements can be tested in randomized controlled microtrials (cf. Howe, Beach, & Brody, 2010). These experiments test the effects of relatively brief and focused environmental manipulations designed to suppress risk mechanisms or enhance protective mechanisms, but not to bring about full treatment or prevention effects in distal outcomes (Howe et al., 2010). There is a variety of questions that can be addressed with the randomized controlled microtrial strategy: one can examine the conditions under which a parenting strategy such as parental reinforcement for positive child behavior is most effective, and how families with different needs uniquely respond to discrete strategies for parental positive reinforcement.

Randomized controlled microtrials differ from comprehensive, full-scale randomized controlled trials in that they implement a single part of an intervention into the families' lives. They are more versatile than full-scale randomized controlled trials: instead of examining the effectiveness of a packaged parenting program, randomized controlled microtrials isolate and examine the effectiveness of discrete elements (Howe et al., 2010). Randomized controlled microtrials therefore provide unique opportunities to gain insight in which elements of parenting interventions are effective and which elements or parenting interventions are not.

For example, a common assumption in parenting interventions is that labeled praise is superior to unlabeled praise in effecting positive change in children's behavior. However, a recent randomized controlled microtrial on the relative effectiveness of labeled and unlabeled praise (Chapter 7, this thesis) showed that labeled praise was not more effective at reducing disruptive child behavior than unlabeled praise. A recent follow-up study on children showing clinically relevant disruptive behavior revealed that labeled and unlabeled praise were equally effective in achieving reductions in disruptive child behavior, and parents reported an inclination towards using unlabeled praise because this feels more 'comfortable' (Chapter 8, this thesis). Studies like these increase insight in which techniques taught in parenting interventions are effective and which may be not.

Randomized controlled microtrials also shed light on which intervention elements may be most effective for which families. Theory driven replication of studies of effective elements in different samples with different child and family

characteristics and moderator analyses on which families benefit most from certain elements can show the extent to which the effectiveness of intervention elements differs across families. This work can build on meta-analytic work of determinants of the effectiveness of parenting interventions as a whole (e.g., Kaminski et al., 2008; Lundahl, Risser, & Lovejoy, 2006), and refine this knowledge into determinants of the effectiveness of discrete intervention elements. Knowledge on which elements work for which families can then be used to tailor interventions to the strengths and needs of individual families. In the case of labeled and unlabeled praise, we found that labeled praise was less effective for families that hardly used labeled praise in their daily parenting routine prior to the intervention (Chapter 7, this thesis). Findings such as these indicate the importance of tailoring techniques to families' current parenting practices, and to parent and child characteristics.

Besides knowledge on effective elements, randomized controlled microtrials also have the potential to answer more fundamental questions on successful malleability of child behavior and family processes. For example, are elements most effective when they directly target families' difficulties and expressed needs? Or is it more beneficial to use elements that increase existing families' strengths? The answer to these two questions addresses either a repair or empowerment approach to improve parenting practices, and can inform the design of tailored interventions that base their choice of intervention elements on assessed family strengths and difficulties (e.g., Dishion & Stormshak, 2007). Knowledge on which families benefit most from discrete intervention elements, and insight into the starting points (e.g., empowerment or repair) that are most fertile for establishing sustained change will enable us to move beyond a 'one size fits all' approach where all families are provided with generally the same curriculum to individually tailored interventions—based on solid empirical evidence.

For an optimal test of the effectiveness of discrete or synergistic elements of parenting interventions, it is critical that (1) the element as it is tested is identical to the elements as used in parenting interventions in terms of content and methods used, (2) the trainer skills in the experimental test meet those of the trainers in the original intervention, (3) the population in which the element is tested is comparable to the target population of parenting interventions, and (4) the expected outcome of the manipulation is defined (e.g., only proximal outcomes such as immediate compliance in the experiment versus distal outcomes such as generalization of improved behavior outside the experimental setting).

Discussion

Current intervention research typically focuses on evaluating the effectiveness of parenting intervention programs as a whole. Although this program-oriented approach has led to important insights into which programs are effective and, to a lesser extent, for whom these programs are effective, it has compromised our understanding of the elements within and between programs that account for program effectiveness. There is a need for knowledge on which elements of parenting interventions cause their effectiveness (Chorpita & Daleiden, 2009; Embry & Biglan, 2004; Forgatch, 1991; Piquero, Farrington, Welsh, Tremblay, & Jennings, 2009). We respond to this need by proposing a research approach of studying the effectiveness discrete parenting intervention elements. We advocate, in a way, to go "back to the future" as a field, and revive the behavioral analytic research questions that were posed in intervention research from the 1970s and 1980s, but now using state of the art research methods to address those questions.

We have proposed a model in which randomized controlled microtrials (i.e., the study of discrete intervention elements) and traditional randomized controlled trials (i.e., the study of comprehensive programs) inform, enhance, and enrich each other, and in this way contribute to the optimization of parenting intervention effectiveness. Randomized controlled microtrials should function to test the effectiveness of current and alternative elements of parenting interventions in a stringently controlled way, and to unravel the underlying mechanisms that account for their effectiveness. Parenting intervention effectiveness can then be optimized by omitting ineffective or superfluous elements and by building on effective elements. In addition, knowledge on which elements are effective for which families can potentially provide an empirical basis for tailoring interventions to address the specific needs of individual families.

Some of the key effective elements of parenting interventions will transcend the specific techniques taught in programs and reflect more general therapeutic principles such as therapist-client relationship quality (e.g., Ackerman & Hilsenroth, 2003; Chatoor & Krupnick, 2001; Forgatch, Patterson, & DeGarmo, 2005; Kerkorian, Bannon, & McKay, 2006; Lambert & Barley, 2001). Similarly, the effectiveness of parenting techniques might depend on the methods used to teach parents new techniques (e.g., positive reinforcement) or motivate them to adopt new parental attitudes (e.g., monitoring). For example, feedback on video-taped interactions is an effective method to increase positive parenting and enlarges

reductions of coercive parent-child interactions, and might account at least partly for the effectiveness of techniques taught by this method (Smith, Dishion, Moore, Shaw, & Wilson, 2013). We propose that microtrials for studying the effectiveness of discrete techniques can also be applied to studying which specific therapeutic principles (e.g., therapist skills) and methods (e.g., a particular way to provide video feedback) contribute to parenting intervention effectiveness.

It may well be that various parenting techniques are equally effective and achieve the same child adjustment outcome (i.e., equifinality). For example, parents who focus primarily on setting limits on a restricted range of problem behaviors, and tend to be less contingent with the use of positive reinforcement (but are generally highly positive), may do equally well as parents who focus on the contingency of positive reinforcement, and avoid misbehavior primarily through skillful use of reinforcement. Moreover, it is likely that future research will identify new effective parenting techniques. Third generation cognitive behavior therapies such as acceptance and commitment therapy or mindfulness-based therapy are leading to novel parenting techniques that were rarely practiced in most cultural practices or community practices (e.g., Coatsworth et al., 2010; Coyne, 2011). We simply do not have the developmental research yet to demarcate a narrow range of parenting styles to positive adjustment outcomes in children. Randomized controlled microtrials can test the effectiveness of these new techniques, to evaluate their contribution to established parenting interventions.

For three reasons, findings of equifinality (i.e., different parenting techniques leading to the same child outcomes) should result in the use of more simple methods over their equally effective counterparts. First, maximization of parsimony is a basic rule of good scientific practice. Second, simpler methods increase the efficiency and cost-effectiveness of parenting interventions as they require less time and costs. Third, choosing simpler methods increases feasibility of interventions, which benefits dissemination and replication. A profound problem in disseminating empirically supported parenting interventions is that many interventions fail to show effectiveness once implemented outside of their original setting (e.g., De Graaf, Onrust, Haverman, & Janssens, 2009; Eisner, Nagin, Ribeaud, & Malti, 2012; Kazdin, 2010; McConnell, Breitkreuz, Savage, & 2012; Patterson, 1985; Petrosino & Soydan, 2005). This might be due in part to the complex nature of most current parenting interventions. Boiling interventions down to their essential elements will increase feasibility, in that simpler interventions require less policy maker, less trainer expertise, and less parental capabilities to meet optimal

effectiveness. In that sense, our proposed research strategy may help increase the effectiveness of parenting intervention in itself and across different settings.

Conclusion

We have suggested a research approach of stringent tests of which elements or parenting techniques in parenting interventions matter for program effectiveness. This microtrial approach should be able to increase effectiveness and efficiency of intervention programs, and provide a scientific basis for tailoring intervention to individual families' needs. This new generation of research should bridge traditional experimental research with modern intervention research to optimize interventions for the prevention and treatment of child behavior problems.

Chapter 7

What Good is Labeling What's Good?

A Field Experiment on Labeled and Unlabeled Praise

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Abstract

Although parents in parent training programs are advised to use labeled rather than unlabeled praise to reinforce positive behavior in children, this advice has not been tested empirically. This field experiment tested whether labeled praise is superior to unlabeled praise. In a community sample of 161 children ages 4–8 years and their parents, who served as naive confederates, we tested the effects of labeled and unlabeled praise on children´s compliance to a parental directive. A no-praise control condition was included. Results do not support the assumption that labeled praise is superior to unlabeled praise. In fact, labeled praise was less effective than unlabeled praise when provided by parents who routinely use unlabeled praise in daily parenting.

Introduction

The benefits of positive reinforcement to promote positive behavior are universally recognized. It is standard practice in parenting programs to promote positive reinforcement by encouraging parents to provide their children with consistent praise (e.g., Eyberg, 1988; Webster-Stratton, 2001). Yet, not all forms of praise are considered equally effective (Henderlong & Lepper, 2002; Owen, Slep, & Heyman, 2012), and parents are typically advised to label the positive behavior that they praise their children for (e.g., Dishion et al., 2012; Eyberg, 1988; Sanders, 1999; Webster-Stratton, 2001). Is using "labeled praise" actually more effective at promoting positive child behavior than using other forms of praise? We investigated this question in a field experiment in which parents, who served as naive confederates, were instructed to provide their children with different forms of praise, after which we measured the effects on subsequent child compliance.

Labeled and Unlabeled Praise

Established, widely used parenting programs are increasingly implemented in nonclinical populations to prevent behavior problems among typically developing children (e.g., *Parent Management Training—Oregon Model*, Forgatch & Patterson, 2010; *Triple-P Positive Parenting Program,* Sanders, 1999; *Incredible Years*, Webster-Stratton & Reid, 2010; *Parent–Child Interaction Therapy*, Zisser & Eyberg, 2010). One key strategy that parents learn is to consistently reinforce their children's positive behavior by providing praise (e.g., Eyberg, 1988; Webster-Stratton, 2001). This strategy is based on operant learning theory (Skinner, 1950), which holds that when parents verbally approve their children's positive behavior, it will increase the likelihood that the children will show positive behavior again in the future.

Most parenting programs also provide recommendations for how parents should praise their children. These recommendations focus on the expressiveness and the wording of praise. In terms of expressiveness, parents are typically advised to provide praise enthusiastically and to accompany praise with eye contact and gentle physical contact (e.g., Eyberg, 1988; Webster-Stratton, 2001), the latter because positive nonverbal responses are effective at improving children's behavior (Owen et al., 2012). More important for the purposes of this study was the wording of praise. One key distinction is made between "labeled" and "unlabeled" forms of praise (Hanf, 1970). *Labeled praise* (also known as *descriptive praise* or *behavior-*

specific praise; Chalk & Bizo, 2004; Sanders, 1999) explicitly refers to the behavior for which the child receives praise (e.g., "well done, you cleaned up your room"). Explicit reference is absent in unlabeled praise (e.g., "well done"). The importance of this distinction is almost invariably emphasized in parenting programs, and parents are advised to use labeled rather than unlabeled praise to teach children new behavioral skills (e.g., potty training) and to promote positive behavior (e.g., compliance; Eyberg, 1988; Forgatch, 1994; Sanders, 1999; Webster-Stratton, 2001). It is assumed that when children are provided with explicit information about exactly what behavior they are praised for, they will more easily associate that behavior with approval and more likely show that behavior again in the future (Brophy, 1983; Hanf, 1970).

Although the superiority of labeled over unlabeled praise may seem plausible, there is no empirical evidence that labeled praise is actually a more powerful impetus toward children's positive behavior in daily parenting situations. The existent empirical evidence for the superiority of labeled over unlabeled praise pertains to the domains of children's motivation, task performance, and the acquisition of new skills. For example, teachers' use of labeled praise was found to be more effective than unlabeled praise at improving children's on-task behavior and academic self-concept (Chalk & Bizo, 2004), and parents' use of labeled praise was found to be more effective than unlabeled praise at influencing children's performance in the context of a marble-in-the-hole game (Bernhardt & Forehand, 1975; but see Bernhardt, Fredericks, & Forebach, 1978, for boundary conditions of this effect). Thus, the outcomes of labeled praise measured in these studies differs from the outcomes on which parenting interventions focus, such as improving children's compliance to parental requests and, ultimately, reducing disruptive behavior.

The limited evidence for the superiority of labeled praise over unlabeled praise in parenting situations is especially unfortunate because teaching parents to use labeled praise rather than unlabeled praise may sometimes backfire. Most parents use relatively little labeled praise in their routine parenting practice (e.g., Bernhardt & Forehand, 1975; Raaijmakers, 2008). When parents are instructed to provide the relatively unfamiliar form of labeled praise over unlabeled praise, they are implicitly instructed to deviate from their natural routine of praising their child. This may be consequential. When parents provide praise that feels unauthentic to them, they may provide it in less sincere or less enthusiastic ways, which may diminish its effectiveness (e.g., Henderlong & Lepper, 2002; Kanouse, Gumpert, &

Canavan-Gumpert, 1981). Also, when children experience praise as unfamiliar, insincere, or awkward, they are less likely to comply with parental directives (Henderlong & Lepper, 2002; Patterson, 1976). Finally, the explicit reference to desired behavior that characterizes labeled praise automatically makes the message lengthier and can therefore be experienced by children as verbose—another factor known to diminish child compliance (Arnold, O'Leary, Wolff, & Acker, 1993; Hakman & Sullivan, 2009). Thus, it is possible that expert parenting advice to use labeled praise may, at times, actually compromise rather than benefit children's compliance.

This Experiment

This experiment examined the widespread view that instructing parents to use labeled praise is more effective than instructing parents to use unlabeled praise to increase child compliance.. In a between-subjects experimental design, parents randomly provided labeled praise, unlabeled praise, or no praise for children's initial compliance with a reasonably easy compliance task. Next, children's compliance with a more challenging compliance task was measured (cf., Stifter, Spinrad, & Braungart-Rieker, 1999). We also examined whether the effectiveness of labeled praise (versus unlabeled or no praise) at promoting compliance might depend on its fit with parents' routine use of praise. To optimize ecological validity, we observed children´s compliance in its natural context: at home and interacting with their own parent. The age range of children in our sample was limited to 4 to 8 years to ensure relevance to parenting intervention research, in that most parenting programs are designed for families with children in this age range (e.g., Forgatch & Patterson, 2010; Webster-Stratton & Reid, 2010).

Methods

Participants

Participants were 161 children recruited from elementary schools that served middle-class neighborhoods in the Netherlands. Children ranged in age from 4 to 8 years (M = 5.67, SD = 1.11), and 55% of the group were girls. Most participants were Caucasian, and 12% had other (e.g., Turkish, Moroccan) or mixed ethnic or cultural origins. For each participating child, one parent (89% mothers) participated as a confederate in the experiment. Confederates were naive to the extent that they were unaware of our goal to study differential effects of labeled and unlabeled

praise. Participants were randomly assigned to the labeled praise, unlabeled praise, or no praise control conditions.

Procedure

Parents were recruited via letters distributed by elementary schools that invited parents to participate in a research project on "the effects of praise." In a telephone call a few weeks prior to the experiment, we told parents that our study examined "how praise influences children's behavior" and asked them to be a confederate in our study. We told them that they would be asked to adhere as closely as possible to our instructions about how to provide directives and praise to their child. Parents were also informed that they were free to quit their (and their children's) participation in the experiment at any time.

The experiment was conducted in the kitchen of participating families' homes. Experimenters were research assistants who were blind to the hypotheses of the study. Just before the start of the experiment, parents were asked to complete a survey that included measures of their child's disruptive problem behavior (Eyberg Child Behavior Inventory; Eyberg & Pincus, 1999), their own positive parenting practices (Alabama Parenting Questionnaire; Frick, 1991; these measures served as control variables), and the frequency with which they use labeled and unlabeled praise in daily parenting situations (this measure was created for the purposes of this study and served as a moderator variable). Next, at the start of the experiment, children were told that the experimenter visited them to examine "how children your age behave". Children and parents first played a memory game for 5 minutes to get accustomed to interacting in the presence of the experimenter. The actual experiment entailed two analogous compliance tasks: first a relatively easy task to ensure that the majority of participants would comply and receive praise, and then a more challenging task to ensure sufficient variability in compliance. For the first task, the experimenter took a plastic box containing 20 slices of cucumber out of her bag, casually saying that she felt hungry. The experimenter offered one slice of cucumber to the child (to insure sampling of the taste), took one herself, and then placed the open box on the table within reach of the child. Meanwhile, the parent was unobtrusively given a note that asked him or her to instruct the child "[Name child], I want you to leave the food in the box", immediately after the experimenter would announce that she and the parent would leave the kitchen for a moment. Cucumber was chosen because it is relatively neutral in taste to most children—it should be typically possible for

children to comply with the parental request at this task and deservedly receive praise.

The child was left alone at the kitchen table for a period of 180 seconds, with the box of cucumbers remaining on the table. In the other room, the parent was instructed to praise the child upon returning to the kitchen by saying either (1) "well done, you left the food in the box" (i.e., labeled praise condition) or (2) "well done" (i.e., unlabeled praise condition), or (3) not saying anything at all (i.e., control condition). To adhere as closely as possible to instruction techniques that are standard in parent training programs (e.g., Webster-Stratton, 2001), parents had been instructed to provide praise with enthusiasm and to make eye contact with the child before providing praise. Moreover, as is typically done in parent training programs, both video instruction (i.e., a video clip of a parent providing labeled or unlabeled praise) and modeling techniques (i.e., the trained experimenter showing the parent how to provide labeled or unlabeled praise) had been used to teach parents how to provide praise. Then, the parent and experimenter returned to the kitchen, where the parent provided the (manipulated) praise.

For the second task, the experimenter took a box that contained 40 M&Ms out of her bag and casually said that she actually felt much more like eating chocolate than eating cucumber. M&Ms were chosen because most children strongly like chocolate and it would therefore pose a greater challenge to comply with the request. She offered the child one M&M and took one herself, and left the kitchen again with the parent, allegedly because there was something she forgot to tell the parent. The parent then again said to the child "[Name child], I want you to leave the food in the box," and left. The child was left alone at the kitchen table, now with the temptation of an open box of M&Ms within reach. After 180 seconds, the research assistant and parent returned to the kitchen, and the experiment was ended.

Children received a small gift (i.e., the game of memory) to thank them for their participation. Parents were informed about the goals of the study and the rationale underlying its procedural details.

Instruments

Eyberg Child Behavior Inventory (ECBI). Disruptive child behavior was measured using the ECBI (Eyberg & Pincus, 1999), a 36-item parent-report scale that is used to measure the frequency of children's problem behavior by using a 7-point scale ranging from 1 (*never*) to 7 (*always*). Sample items include "has temper tantrums"

and "argues with parents about rules." In this experiment, the alpha coefficient was .89.

Alabama Parenting Questionnaire (APQ). Positive parenting practices were measured using the 6-item Positive Parenting subscale of the APQ (Frick, 1991). This subscale is used to measure the frequency of positive parenting behavior with a 5-point scale ranging from 1 (*never*) to 5 (*always*). Sample items include "I tell my child that he is doing a good job" and "I reward or give something extra to my child for obeying me or behaving well." In this experiment, the alpha coefficient was .75.

Parents' Routine Use of Praise. Parents' routine use of labeled and unlabeled praise in everyday parenting situations was measured with items created for the purposes of this study. Parents read four prototypical forms of labeled praise and four prototypical forms of unlabeled praise. They reported how often they used each form of praise on a typical day spent with their child, using a 5-point scale ranging from 1 (*probably not at all*) to 5 (*probably more than 10 times*). The alpha coefficient was .75. To obtain an index of parents' relative use of unlabeled versus labeled praise, we regressed the frequency of unlabeled praise onto the frequency of labeled praise (r = .56) and saved standardized residual values. Positive values reflect a relatively frequent use of unlabeled praise, and negative values reflect a relatively frequent use of labeled praise.

Results

Preliminary Analyses

Table 1 presents the descriptive statistics for the study variables. The extent to which the experimental condition was implemented with fidelity was evaluated by the first author by examining videotapes of all experimental sessions. Cases were excluded from analysis if parents did not give exact instructions (n = 6; e.g., instead of providing a directive, some parents asked if children were willing to cooperate) or did not offer exact praise (n = 10; e.g., some parents provided unlabeled praise while they were instructed to provide labeled praise), or when children had been unable to proceed with the experiment from start to end (n = 5; e.g., because they wet their pants). Data were analyzed from the 140 families from whom we obtained valid data (labeled praise, n = 52; unlabeled praise, n = 42; control, n = 46). Children and parents from excluded families did not differ from those of included families on any of the study variables (ps > .08).

Table 1. Means and Standard Deviations in the Labeled Praise, Unlabeled Praise, and No Praise Control Conditions.

		Labeled praise (*N* = 52)	Unlabeled praise (*N* = 42)	No praise (*N* = 46)
	Range	*M (SD)*	*M (SD)*	*M (SD)*
Disruptive behavior	56–158	97.82 (19.59)	95.64 (20.28)	97.86 (21.88)
Positive parenting	18–30	24.37 (2.60)	23.97 (2.44)	24.03 (2.62)
Routine use of unlabeled praise	8–21	14.80 (2.76)	14.97 (3.35)	14.68 (2.78)
Routine use of labeled praise	6–22	14.13 (3.24)	15.02 (2.80)	14.67 (3.05)
Relative use of unlabeled vs. labeled praise (residual score)	−2.61–2.52	.09 (.94)	−.04 (1.16)	−.08 (.88)
Age (years)	4–8	5.63 (1.20)	5.71 (1.10)	5.68 (1.05)

MANOVA indicated successful randomization. There were no significant baseline differences between conditions for children's age, gender, parent gender, and level of disruptive behavior, parents' positive parenting strategies, and routine use of labeled and unlabeled praise. ECBI scores were similar to those typically found in community samples of children this age (*M* = 98.89; *SD* = 22.48; Burns & Patterson, 2001). Children's compliance was assessed by the number of M&Ms they left in the box in the period of 180 seconds. This number was log transformed to correct for its nonnormal distribution—most children ate no or few M&Ms, some children ate many M&Ms (nontransformed compliance: *M* = 38.81, *SD* = 2.95, skewness = −3.65, kurtosis = 15.11, range = 21 to 40; transformed compliance: *M* = 39.83, *SD* = .31, skewness = −1.78, kurtosis = 2.27). Children's gender and age were unrelated to the number of M&Ms they ate (*p*s > .70).

A minority of children was not fully compliant in the cucumber task: 24% of participants ate at least one piece of cucumber. The experiment was continued for all children (i.e. all children received condition specific praise) and we controlled for a possible moderation effect of children's level of compliance in the cucumber task in all analyses.

Primary Analyses

To examine our main research question, we used hierarchical multiple regression analysis. The dependent variable was children's compliance. In Step 1 of the analysis, dichotomous condition contrast variables (labeled–unlabeled contrast: 1 = labeled praise, 0 = unlabeled praise; labeled–control contrast: 1 = labeled praise, 0 = no praise; unlabeled–control contrast: 1 = unlabeled praise, 0 = no praise) and parents' relative use of labeled versus unlabeled praise (centered; Aiken & West, 1991) were entered. In Step 2, the interactions between these variables were entered.

Contrary to widespread notions about how praise should be phrased to promote positive child behavior, we found that labeled praise was less effective than unlabeled praise at yielding child compliance ($\beta = .21$, $p < .05$). In fact, children in the labeled praise condition ate almost 3 times as many M&Ms as children in the unlabeled praise condition ate: children in the labeled praise condition ate on average more than 1 M&M ($M = 1.29$) and children in the unlabeled praise condition less than half an M&M ($M = .43$). Only 65% of children in the labeled praise condition were completely compliant (i.e., ate no M&Ms), versus 88% of children in the unlabeled praise condition. Labeled praise was not more effective at yielding child compliance than was no praise ($\beta = .03$, $p = .63$), and unlabeled praise was more effective at yielding child compliance than was no praise ($\beta = .27$, $p < .05$). Children in the control condition ate on average almost 2 M&Ms ($M = 1.94$) and 76% was completely compliant by eating no M&Ms.

The predicted Condition × Relative Use of Unlabeled Versus Labeled Praise interaction effect was also significant ($\beta = .32$, $p < .05$). Labeled praise was less effective than unlabeled praise for parents who were relatively unfamiliar with providing labeled praise—that is, for parents who routinely provide unlabeled praise relatively frequently (see Figure 1). To be able to interpret the interaction in great detail, we used the Johnson-Neyman regions of significance approach (cf. Hayes & Matthes, 2009). This analysis showed that labeled praise was significantly less effective than unlabeled praise for parents who scored above the value of .09 along the residual value dimension reflecting relative use of unlabeled versus labeled praise. Positive residual values reflect above average use of unlabeled praise relative to labeled praise. Thus, starting among parents who routinely favor the use of unlabeled praise only slightly more than parents do on average, labeled praise was inferior at promoting compliance. Among parents who routinely favor the use of unlabeled praise less than parents do on average, labeled and unlabeled praise

were equally effective at promoting child compliance.

To test the specificity of the moderating effect for differential use of unlabeled versus labeled praise, we conducted a series of three similar regression analyses in which parents' overall tendency to provide praise (i.e., aggregated over labeled and unlabeled forms of praise), positive parenting practices, and children's trait disruptive behavior served as moderating variables. No significant effects were found (*p*s > .28). Thus, the extent to which unlabeled praise was more effective than labeled praise at yielding child compliance was specifically dependent upon parents' differential routine use of unlabeled and labeled praise. Also, note that none of the effects we found were moderated how much cucumber children ate prior to receiving praise. Thus, we have no evidence that the impact of praise depended upon how warranted it was.

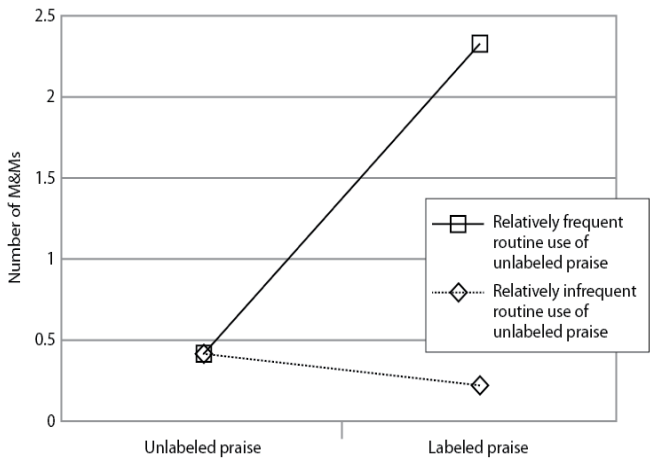

Figure 1. Children in the Labeled Praise Condition ate more M&Ms (i.e., were less compliant) when their Parents Routinely used mainly Unlabeled Praise.

Discussion

In empirically supported parenting interventions, parents are typically advised that when they praise their children, they should make explicit exactly which behavior is being praised. Such labeled praise is assumed to be more effective than unlabeled praise at promoting child compliance, because it provides an explicit association between the reward and the desired behavior. Unfortunately, however, empirical

evidence for this association is limited. Our study does not support the assumption that labeled praise is superior to unlabeled praise at yielding child compliance. In fact, labeled praise was as much as 3 times less effective than unlabeled praise. We also found that the effectiveness of different forms of praise at promoting child compliance depended on parents' routine use of praise at home. Labeled praise was least effective among parents who routinely provide unlabeled praise relatively frequently. Labeled praise was equally effective as unlabeled praise among parents who routinely provide unlabeled praise relatively infrequently.

Clinicians' professional experience suggests that parents often feel awkward or phony when they first start to provide labeled praise, and that practice is needed for labeled praise to become a habit and to feel more natural (e.g., Webster-Stratton, 2007, p. 316). In addition, basic psychological research shows that when praise is perceived by children as awkward or unnatural, it often reduces positive behavior (Henderlong & Lepper, 2002). In that sense, it may not be surprising that providing labeled praise in this experimental setting turned out to be least effective among parents who are routinely inclined to phrase their praise in unlabeled ways. One might be inclined to suggest that these findings simply reflect parents' "starting problems" with using labeled praise. Note, however, that even among parents who routinely use labeled praise relatively frequently, labeled praise was only as effective as (not more effective than) unlabeled praise. Thus, although we did not directly test possible practice effects, our data are inconsistent with the belief that labeled praise becomes a superior form of praise when parents are familiarized with it.

We do not want to argue, based on this single study, that the current practice of recommending the use of labeled praise as the preferred form of praise should be discarded. On the other hand, we do want to argue that in the absence of a firm body of empirical evidence, at least insofar as it concerns parent–child interaction, the widespread assumption that labeled praise is superior to unlabeled praise may be premature. Our findings illustrate that there are instances in which unlabeled praise is more effective than labeled praise at promoting compliance, especially among parents who are used to providing unlabeled praise. Yet, parents' routine use of praise may not be the only relevant moderating factor. For example, the effectiveness of different forms of praise may also depend on children's temperamental characteristics (e.g., sensitivity to reward; Matthys, Vanderschuren, Schutter, & Lochman, 2012; Thomaes, Bushman, Orobio de Castro, & Stegge, 2009), as well as on the situational context in which praise is given (e.g., the extent to

which it is self-evident which behavior a child is praised for). Clearly, more research is needed on the optimal wording of praise, its moderating factors, and its boundary conditions. This knowledge would enable professionals to move beyond "one size fits all" recommendations for how to provide praise and instead provide empirically supported and perhaps individually tailored recommendations.

This experiment contributes to the literature in several ways. It provides the first direct and stringent empirical test of the presumed superiority of labeled over unlabeled praise at yielding child compliance in parenting situations. In doing so, we used a novel experimental approach developed with the goal of maximizing real-world relevance and generalizability. The experiment was conducted in the natural setting of the participating families' homes, and parents (rather than experimenters or professionals) provided the praise. Parents rarely serve as naive confederates in experiments, yet this study shows the feasibility and promise of such an approach. Finally, our study fits well with recent calls in the field for effectiveness evaluations of intervention components, which should complement effectiveness evaluations of complete intervention programs (e.g., Piquero, Farrington, Welsh, Tremblay, & Jennings, 2009). Our study is a first attempt to evaluate the empirical merit of advising parents to use labeled praise, a core element of established parenting intervention programs.

Limitations and Future Research

First, our study was conducted in a community sample of children from the general population. Thus, our findings inform parenting programs only insofar as they are used as universal prevention efforts, not as indicated intervention efforts to treat children with (sub)clinical levels of behavior problems. This is important, given that children with clinical levels of behavior problems often are less sensitive to rewards and may react differently to unlabeled and labeled praise than would typically developing children (e.g., Matthys et al., 2012). Future research must be conducted among clinical samples of children (e.g., children who meet criteria for oppositional defiant disorder) to inform indicated parent training interventions in (sub)clinical samples. Second, our study examined the effectiveness of praise when provided immediately after parents received an initial instruction to do so. In parent training programs, parents are often asked to practice the use of labeled praise over longer time periods (e.g., for periods of 10 to 12 weeks). Future research is needed to establish how such practice periods influence the effectiveness of labeled praise compared with other forms of praise. Moreover, we studied the effectiveness of

labeled praise when instructed as a sole intervention technique. Instructing parents to use multiple techniques—like parenting interventions typically do—can sometimes have synergistic effects (e.g., Bernhardt et al., 1978). Future studies in which parents are taught to use labeled praise along with other techniques, such as techniques to handle noncompliance should explore potential synergistic effects. Third, we used an inhibitory compliance task, in which children were not allowed to do something they are inclined to do (i.e., eating M&Ms). Many day-to-day situations in which children are asked to comply with a parental request involve behavioral inhibition (e.g., being quiet, not interrupting parents). Yet, other such situations involve behavioral initiation (e.g., cleaning up one's room). Future will need to establish to what extent our findings replicate to children's compliance with requests to initiate behavior.

Conclusion

In well-established parenting programs, parents are generally advised to use labeled rather than unlabeled praise to improve children's behavior. Unfortunately, there is no solid empirical evidence that teaching parents to use labeled praise is indeed more effective than teaching them to use unlabeled praise in parent–child interactions. Our study shows that teaching parents labeled praise is not necessarily effective at promoting child compliance and may at times be less effective than teaching parents to use unlabeled praise. We hope this study will contribute to a theory-based and empirically based understanding of optimal ways to teach parents how to praise their children.

Chapter 8

How Effective are Labeled and Unlabeled Praise for Reducing Disruptive Child Behavior?

A Two-staged Field Experimental Study

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Abstract

Parents are typically advised to use labeled praise (e.g., “that’s great you cleaned up your toys”) over unlabeled praise (e.g., “great job”) to improve their children’s behavior. Labeled praise is one of the key techniques parents learn in most established parenting interventions. However, there is a dearth of empirical evidence to support this common advice. We used a two-staged field experimental design to examine the immediate and sustained (i.e., 2-week) effectiveness of labeled and unlabeled praise at reducing disruptive child behavior. Parents of 132 children aged 3–9 (73% boys) with elevated levels of disruptive behavior participated. Labeled and unlabeled praise were equally effective, and significantly more effective than no praise, at yielding immediate compliance with a parental request (as indexed by a behavioral index of compliance in the home setting) and at reducing disruptive child behavior over a two-week period (as indexed by parent report). These effects were independent of children’s initial levels of disruptive behavior. Parents experienced the advice to use unlabeled praise as more feasible than the advice to use labeled praise, which might suggest against the conventional practice in parenting interventions to recommend labeled over unlabeled praise.

Introduction

When parents seek professional help in raising their children, they are typically advised to use praise to reinforce positive child behavior. For example, encouraging parents to increase their use of praise is a key component of established parenting interventions (Forgatch & Patterson, 2010; Sanders, 1999; Webster-Stratton, 2001; Zisser & Eyberg, 2010). In terms of exactly how to phrase their praise, parents are often advised to explicitly label the positive behavior they praise their child for (e.g., Eyberg, 1988; Webster-Stratton, 2001). Yet, little is known about whether such "labeled praise" is indeed superior to other forms of praise at influencing children's behavior. This is important, especially given the growing body of empirical evidence that suggests that seemingly slight differences in the wording of praise can have markedly different psychological and behavioral consequences (Brummelman et al., 2013; Henderlong & Lepper, 2002; Mueller & Dweck, 1998; Owen et al., 2012). This study examined the extent to which parental labeled praise is more effective than unlabeled praise at reducing disruptive child behavior.

Labeled and Unlabeled Praise

Labeled praise (also known as descriptive praise or behavior-specific praise; Chalk & Bizo, 2004; Sanders, 1999) can be defined as praise that explicitly refers to the behavior for which the child receives praise (e.g., "You cleaned up your toys very well"). Such explicit reference to positive behavior is absent in unlabeled praise (e.g., "Well done"). The presumed superiority of labeled over unlabeled praise is based on the notion that when children are provided with information about exactly what behavior they are praised for, they will more easily associate that behavior with approval and more likely show that behavior again in the future (Brophy, 1983; Hanf, 1970). However, empirical evidence for the superiority of labeled over unlabeled praise in parenting contexts is thin. The few studies that have been conducted included outcome measures of learning new skills or improving on-task behavior in school, but did not target improved behavior in daily parenting situations, which is the outcome of main interest from the perspective of parenting interventions (Bernhardt & Forehand, 1975; Bernhardt, Fredericks, & Forebach, 1978, Chalk & Bizo, 2004). Moreover, existent research has focused somewhat narrowly on the immediate effectiveness of labeled praise, not on its longer-term effectiveness, with inconsistent findings for the superiority of either labeled (Bernhardt & Forehand, 1975; Bernhardt et al., 1978) or unlabeled praise

(Chapter 7, this thesis). The present study was specifically designed to fill these two gaps of knowledge: we examined the extent to which labeled praise is superior to unlabeled praise at reducing disruptive child behavior using a two-staged design that measures both immediate effects (i.e., compliance with a parental request) and sustained effects (i.e., reduced disruptive behavior).

Three Key Questions on Labeled Praise

Three key questions surround the use of labeled praise and its effectiveness, and they will be explored in the present study.

Do Parents Perceive Labeled Praise as Less Comfortable?

Labeled praise often does not come as natural to parents as does unlabeled praise. Research shows that parents typically use more unlabeled praise than labeled praise in day to day parenting situations (Bernhardt & Forehand, 1985; Raaijmakers, 2012). Accordingly, it has been suggested that labeled praise might at first feel awkward or phony to both parents and children (e.g., Webster-Stratton, 2007). The question of whether parents might feel uncomfortable using labeled praise is important in that parental satisfaction with the parenting strategies they are taught in interventions might determine how much they actually benefit from them (e.g., Sanders, Markie-Dadds, Tully, & Bor, 2000), or at least how much more equipped they feel to raise their children (e.g., Lambert et al., 1998). Moreover, one might argue that if strong empirical reasons to recommend the one form of praise over the other are lacking, it may be best to stay closest to parents' natural routines and recommend the use of unlabeled over labeled praise. Our study is the first to examine whether parents actually perceive the use of labeled praise as less comfortable than the use of unlabeled praise.

Does Labeled Praise Need Practice?

Parent-child interaction patterns are formed over years. In the case of disruptive child behavior, parent-child interaction patterns can lead to coercive cycles in which parents and children negatively reinforce each other (Patterson, 1976). Changing coercive cycles obviously requires effort and perseverance from parents, and it may take some time before systematic negative parental reinforcement of child behavior is replaced by systematic positive parental reinforcement. Newly learned forms of praise thus might need some time to be able to affect daily parent-child interaction patterns and subsequent child behavior. This might be especially true

for the newly learned use of labeled praise, to the extent it does not come natural to parents (Bernhardt & Forehand, 1975; Raaijmakers, 2012): it might initially be provided with less authenticity or sincere enthusiasm, which may compromise its effectiveness in the short run (e.g., Henderlong & Lepper, 2002). Yet, when parents practice with labeled praise, its effectiveness might increase over time. This notion is also emphasized in many parenting interventions: persistent practice is needed for labeled praise to become a habit and feel more natural (e.g., Webster-Stratton, 2007, p. 316). Research that has tested the possible influence of practice is lacking, however. Studies have typically focused on the immediate effects of praise only, and did not examine how the effectiveness of praise might change once families become more accustomed to praise (Bernhardt et al., 1978; Bernhardt & Forehand, 1975; Leijten et al., 2013; Roberts, 1981, 1985). In this study, we tested the effectiveness of labeled and unlabeled praise both immediately and after an intensive two-week practice period for parents.

Do Children Differ in Their Sensitivity to Labeled and Unlabeled Praise?

Strategies on how to praise children are typically taught to all families alike. However, the effectiveness of praise might not be the same for all children. Some children tend to be more sensitive than others to positive parenting practices (Belsky, Bakermans-Kranenburg, & van IJzendoorn, 2007), and to rewards in particular (Matthys, Vanderschuren, Schutter, & Lochman, 2012). One of the assumptions underlying the presumed superiority of labeled over unlabeled praise is that children who are less sensitive to praise might benefit most from labeled praise. It might be that they process the positive emotional content inherent to praise less well, and that the exact message that praise conveys therefore becomes more important. In this study we therefore examined the extent to which the relative effectiveness of labeled and unlabeled praise is influenced by children's level of disruptive child behavior.

The Present Study

We used a two-staged field experimental between-subjects design to examine immediate and short-term effectiveness of labeled and unlabeled praise, and to test three key assumptions on labeled praise. We tested if (1) labeled and unlabeled praise yield more child compliance than no praise, (2) labeled praise is more effective at yielding child compliance than unlabeled praise, (3) parents feel less comfortable using labeled praise than unlabeled praise, (4) a two-week practice

period increases the effectiveness of labeled praise relative to that of unlabeled praise, (5) labeled praise is particularly beneficial among children with more disruptive behavior.

Methods

Participants

Participants were 132 parent-child dyads who were recruited via primary schools. Children were 3 to 9 years old (*M* = 6.39; *SD* = 1.31; 73% boys). Children were eligible to participate in the study when parents and/or teacher indicated that they experienced noncompliant behavior in the child. ECBI and CBCL baseline scores confirmed that children in this study showed elevated levels of disruptive behavior (Table 1; Achenbach & Rescorla, 2000, 2001; Burns & Patterson, 2001) and that the present sample involves families that might be likely to participate in parenting interventions. Exclusion criterion was current treatment for behavior problems (six children were excluded for this reason). The majority of the families were Caucasian (91%). Parents' educational level ranged from uncompleted high school to university degree, with higher educated families being overrepresented when compared to the general population (40% of the parents had a college degree). Families were randomly assigned to the labeled praise, unlabeled praise, or no praise control conditions. All families signed informed consent.

Procedure

Families were recruited through advertisements in elementary schools announcing a study on the effectiveness of praise for children with disruptive behavior problems. Families were invited to participate if parents or teachers experienced difficulties with their child's disruptive behavior. Our sample is therefore similar to indicated preventive samples typically targeted in preventive parent training programs. All parents signed informed consent prior to participation.

Day 1: Home visit. Families were visited at home to test the immediate effectiveness of labeled and unlabeled praise. First, parents completed questionnaires about disruptive child behavior and demographics. Next, children and parents played a game of memory for 5 minutes to get accustomed to interacting with each other in the presence of the experimenter. The experimenter then used two compliance tasks for which children received either labeled, unlabeled, or no praise (cf. Chapter 7, this thesis). Subsequently, children's

compliance on a third, new task was used as a measure of general compliance (rather than an increase of specifically praise behavior). In the first task, the experimenter took a plastic box containing 20 slices of cucumber out of her bag, casually saying that she felt hungry. The experimenter offered one slice of cucumber to the child, took one herself, and then placed the open box on the table within reach of the child. Meanwhile, the parent was unobtrusively given a note that asked him or her to instruct the child "[Name child], I want you to leave the food in the box", immediately after the experimenter would announce that she and the parent would leave the kitchen for a moment. The child was left alone at the kitchen table for a period of 180 seconds, with the box of cucumbers remaining on the table. In the other room, the parent was instructed to praise the child upon returning to the kitchen by saying either (1) "well done, you left the food in the box" (i.e., labeled praise condition) or (2) "well done" (i.e., unlabeled praise condition), or (3) not saying anything at all (i.e., control condition). To adhere as closely as possible to instruction techniques that are standard in parent training programs (e.g., Webster-Stratton, 2001), parents had been instructed to provide praise with enthusiasm and to make eye contact with the child before providing praise. Moreover, as is typically done in parent training programs, both video instruction (i.e., a video clip of a parent providing labeled or unlabeled praise) and modeling techniques (i.e., the trained experimenter showing the parent how to provide labeled or unlabeled praise) had been used to teach parents how to provide praise. Then, the parent and experimenter returned to the kitchen, where the parent provided the (manipulated) praise. In the second task, the experimenter took a box that contained 40 M&Ms out of her bag and casually said that she actually felt much more like eating chocolate than eating cucumber. The same procedure as with the slides of carrot was repeated, again leaving the child alone for 180 second with the food, and receiving condition specific praise once the parent and experimenter returned. After these initial tasks, parents were instructed to instruct their child to clean up the memory game. The time children took to clean up the game was indexed as a measure of their compliance.

Days 2 to 14: Practice period. Parents were encouraged to practice with paying attention to positive child behavior and praise (i.e., either labeled or unlabeled). All parents used a daily diary to write down three examples of positive child behavior. Parents in both praise conditions also wrote on the exact words of praise they had given for their child's behavior. Parents in the control condition daily wrote down three examples of positive child behavior, but not about praise.

Conform the methods of many parenting programs (e.g., Webster-Stratton, 2007), parents also received a hand-out sheet with (condition-specific) advice that was hung up at a prominent place (e.g., the fridge) in their home as a reminder. In all three conditions, the advice for parents was 'Be attentive to good behavior: be aware of your child's good behavior and pay attention observing this behavior'. In both praise conditions, this advice was followed by the advice to praise positive child behavior 'Give praise enthusiastically: Effective praise is energetic, involved and sincere'. In the labeled praise condition this advice was followed by the advice to use labeled praise 'Give praise that refers to the desired behavior: Effective praise tells children which behavior they are being praise for'. The sheet in both praise conditions ended with some examples of unlabeled or labeled praise. Unlabeled praise examples included well done, thank you, great and fantastic. Labeled praise examples included you did your chores very well, I appreciate it that you clean up your toys, and you are a very good listener/helper/etcetera. All parents received daily text messages and a surprise call after one week to remind them of study procedures.

Day 14: Measurement of child behavior. Parents completed questionnaires about disruptive child behavior. Parents were then debriefed about the study design and aims and all parents received both the labeled and unlabeled praise instructions. Children received a small gift (i.e., the game of memory) to thank them for their participation.

Instruments

Child Compliance (clean-up task). The extent to which children complied with a parental request was indexed by the time (in seconds) children used to clean up the game of memory after their parent requested them to do so.

Eyberg Child Behavior Inventory (ECBI). Our first measure of disruptive child behavior was the ECBI (Eyberg & Pincus, 1999), a 36-item parent-report scale that is used to measure the frequency of children's disruptive behavior using a 7-point scale ranging from 1 (*never*) to 7 (*always*). Sample items include "has temper tantrums" and "argues with parents about rules". Parents reported the frequency of the disruptive behaviors using a scale ranging from 1 (not true) to 7 (very true or often true. Alpha coefficients in this experiment were $\alpha = .92$ at pretest and $\alpha = .91$ at posttest.

Child Behavior Checklist (CBCL)—Aggression. Our second measure of disruptive child behavior was the Aggression subscale of the Child Behavior Checklist

(Achenbach & Rescorla, 2000, 2001). We used the 20-item preschool version of for children aged 3 to 5 and the 18-item school-aged version for children aged 6 to 9. Sample items include "gets into many fights" and "defiant". Parents reported the extent to which the aggressive behavior described their child using a scale ranging from 0 (not true) to 3 (very true or often true. Alpha coefficients of both versions at pre- and posttest ranged from $\alpha = .86$ to $\alpha = .95$.

***Parental Comfort with Labeled and Unlabeled Praise*.** We measured the extent to which parents felt comfortable with the advice to give labeled or unlabeled praise with the following items: *this advice fits with my personal parenting style*, *I find this advice useful*, and *I find this advice feasible*. Items were measured on a scale ranging from 1 (*definitely no*) to 5 (*definitely yes*) and were summed into a composite score. Alpha coefficient of the composite score was $\alpha = .89$.

Results

Preliminary Analyses

ANOVAs showed that randomization to conditions was successful. Families across conditions did not differ on any of the demographics or baseline ECBI scores (*p*s > .12). Clean-up time correlated with children's age, such that older children cleaned up faster ($r = -.38$, $p < .001$). Children's age was therefore included as a covariate in all analyses that included clean-up time as dependent variable.

Parents' daily diaries were coded to quantify the extent to which parents had used labeled and unlabeled praise during the two-week practice period. Each individual instance of praise was coded as labeled praise if it included specific reference to the behavior the child was being praised for. For example, "fantastic, darling, you ate all your veggies" was coded as labeled praise, and "great job, darling!" as unlabeled praise. A random selection of 25% of the diaries was double coded by two trained master level coders with almost perfect agreement (Cohen's Kappa = .94). Manipulation-validation check confirmed that parents in the labeled praise condition more frequently used labeled praise (78% of all reported praise) than families in the unlabeled praise condition (50% of all reported praise; $\beta = .39$, $p < .01$, $d = .85$). Proportions of labeled praise were relatively high in both conditions, compared to earlier findings on typical use of labeled and unlabeled praise (Bernhard & Forehand, 1975, Raaijmakers, 2011).

Table 1. Two-week Effects of Labeled and Unlabeled Praise on Disruptive and Aggressive Child Behavior.

	Labeled Praise (*n* = 42)				Unlabeled Praise (*n* = 47)				Control (*n* = 43)				Effect Size
	Pretest		Posttest		Pretest		Posttest		Pretest		Posttest		
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*d*
ECBI Intensity	125.67	23.37	117.00	24.91	118.34	29.56	108.28	23.06	112.50	28.87	116.63	29.21	.52
CBCL Aggression	14.46	6.11	12.40	5.73	11.54	6.16	7.15	5.01	10.76	6.61	10.94	6.52	.68

Twenty-four percent of the parents did not send in the final questionnaire on child behavior after the two week practice period, mainly because they did not fill in the questionnaire on time (i.e., on Day 14). Importantly, families for which we did not have the final questionnaire data did not differ from other families on any of the relevant variables (e.g., disruptive behavior at pretest, demographics). Missing data were imputed using Multiple Imputation in SPSS version 20 (IBM Corp, 2012) and all analyses were checked on possible differences between imputed and incomplete data. We created 5 imputed dataset and report for all analyses the pooled statistics.

Immediate Effectiveness of Labeled and Unlabeled Praise

ANCOVA revealed a main effect of condition on child compliance. Children in the labeled and unlabeled praise conditions were more compliant (i.e., cleaned up the memory game faster) than children in the control condition ($F(130) = 4.05$, $p < .05$, $d = .54$). Children who had received either labeled or unlabeled praise in the previous compliance tasks used on average 59 and 56 seconds to comply with their parents' request and clean up the memory game, whereas children who had not received any praise in the previous compliance tasks used on average 83 seconds to clean up the memory game. Follow up analysis found that labeled praise was not more effective than unlabeled praise at yielding child compliance: children in the labeled praise and unlabeled praise conditions cleaned up the memory game equally fast (post-hoc comparison mean difference was about 2 seconds, *ns*).

Next, we used a two-way ANCOVA to explore whether the effectiveness of labeled praise, relative to that of unlabeled praise, on children's clean-up time was stronger for children who showed higher levels of disruptive behavior at baseline. This was not the case. The superiority of labeled and unlabeled praise over no praise and the equality of labeled and unlabeled praise were the same for children with different levels of disruptive behavior ($F(130) = 1.09$, *ns*).

Short-term Effectiveness of Labeled and Unlabeled Praise

As predicted, ANOVA indicated that practicing with providing praise for a two week period reduced disruptive child behavior. Children showed stronger reductions in disruptive behavior when their parents had practiced with providing labeled and unlabeled praise for two weeks, as compared to when their parents had not, as indexed by both the ECBI and CBCL ($F(131) = 4.44$, $p < .05$, $d = .52$ and $F(131) = 7.63$, $p < .01$, $d = .68$, respectively; Table 1). Again, no difference between the

effectiveness of labeled and unlabeled praise was found (*p*s > .18). Advising parents to use either labeled or unlabeled praise thus was equally effective at improving child behavior.

Additional questions that surround the use of labeled praise

The first question was whether parents might feel less comfortable using labeled than using unlabeled praise. We found support for this assumption. ANOVA comparing labeled and unlabeled praise on perceived comfort indicated that parents perceived the advice to give labeled praise, compared the advice to give unlabeled praise, as less feasible, less useful, and fitting their own parenting style less ($F(131) = 5.28$, $p < .05$, $d = .54$). Thus, both forms were equally effective and parents preferred unlabeled over labeled praise.

The second question was whether the effectiveness of labeled praise (relative to the effectiveness of unlabeled praise) increased after parents practiced with this new form of praise. We found no support for this assumption. Post-hoc comparison mean differences between labeled and unlabeled praise were non-significant both immediately and after the two-week practice period (*p*s > .18). Both forms of praise thus were more effective than no praise, but it did not matter which form of praise parents gave.

The third question was whether labeled praise benefits children with high initial levels of disruptive behavior in particular. We found no support for this possibility. The effectiveness of labeled and unlabeled praise did not depend on children's baseline levels of disruptive child behavior, neither immediately, nor after the two-week practice period (*p*-values for the two-way ANOVAs were > .54). The effectiveness of labeled and unlabeled praise to increase immediate compliance and reduce disruptive behavior after a two-week practice period thus were the same for children with different levels of initial disruptive behavior.

Analyses on Robustness of Findings

Because children were not invariably compliant in the earlier compliance tasks (i.e., about one third of children still ate carrots and/or M&Ms in those tasks, whereas they were requested not to), we re-analyzed the effectiveness of labeled and unlabeled praise on clean-up time controlling for compliance on the earlier tasks (i.e., the number of pieces of carrots and M&Ms eaten; log transformed to correct for non-normality). Controlling for earlier compliance did not affect any of our results. All analyses were conducted using the complete data set including imputed

missing data. A re-run of our analyses on the original, incomplete data showed similar results. The findings of the present study thus do not hinge on imputed data.

Discussion

In a two-staged field experiment, we examined the widespread but understudied notion that labeled praise is more effective than unlabeled praise at inducing positive child behavior. We examined both the immediate and sustained (i.e., over a period of two weeks) effectiveness of labeled praise, unlabeled praise, and no praise on reduced disruptive child behavior.

Labeled and unlabeled praise appeared to be equally effective. Both forms of praise, relative to no praise, increased immediate child compliance and reduced disruptive child behavior after a period of two weeks. This finding is consistent with social learning theory (Skinner, 1950; Patterson, 1976) and with behavioristic experiments showing that praise reinforces child behavior (e.g., Wahler & Meginnis, 1997). This finding also underscores the importance of recommending parents to use praise to influence their children's behavior, a key component of current parenting intervention practice (Dishion et al., 2012; Sanders, 1999; Webster-Stratton, 2001; Zisser & Eyberg, 2010).

Importantly, we did not find support for the presumed superiority of labeled over unlabeled praise, even if parents had practiced using labeled praise for a 2-week period. Labeled and unlabeled praise were equally effective at improving child behavior, both in terms of immediate and sustained outcomes. Thus, when parents made explicit reference to the positive behavior for which they praised their children, this did not add to the effectiveness of their praise. This finding lends no support for current practice in parenting intervention to recommend parents to use labeled rather than unlabeled praise (e.g., Dishion et al., 2012; Webster-Stratton, 2001; Zisser & Eyberg, 2010). Our findings dovetail with findings of a previous study on the effectiveness of labeled and unlabeled praise (Chapter 7, this thesis), which also found that labeled praise was not superior to unlabeled praise. Findings from the earlier study differ from the current findings in that the other findings suggested superiority of unlabeled praise over labeled praise, whereas the current findings suggest equal effectiveness of both forms of praise. The present study differs from the first study in two ways. First, it includes children with clinically relevant levels of disruptive child behavior, rather than a convenience sample of

children who showed no disruptive behavior. Second, it examines the effectiveness of labeled and unlabeled praise on more general disruptive behavior, rather than on the exact behavior as the child was praised for. Because the level of disruptive child behavior did not moderate our findings within this study, differences in mean levels of disruptive child behavior are not likely to explain the different outcomes across studies. In contrast, the focus on general disruptive behavior rather than on the exact behavior the child is praised for could be essential. Because labeled praise is different from unlabeled praise in that it includes explicit reference to the desired behavior, it might have its strongest effects (either positive, Chalk & Bizo, 2004, or negative, Chapter 7, this thesis) on the same behavior for which the child is praised for. For more general disruptive child behavior, however, our study implies that both forms of praise are equally effective. The effectiveness of praise to improve disruptive child behavior might therefore not depend on the verbal part of praise, but rather on the emotional significance of the positive message that both forms of praise share.

In addition to overall effectiveness, we tested three key assumptions on labeled praise. First, we found support for the assumption that parents feel less comfortable using labeled praise. Parents perceived the advice to use labeled praise as less feasible, less useful and fitting their parenting styles less, a finding that suggests that the current practice to inform parents that the use of labeled praise might feel phony or awkward is well-placed (e.g., Dishion et al., 2012; Webster-Stratton, 2007).

Second, we found no support for the assumption that effective use of labeled praise needs to some time to settle in, and that labeled praise becomes more effective than unlabeled praise after a practice period. Both forms of praise equally improved child behavior, both immediately and after a two-week practice period. This finding, based on a two-week practice period, lends no support for the conventional practice in parenting interventions to inform parents that if labeled praise is not effective immediately, it will likely become more effective over time (e.g., Webster-Stratton, 2007). One might perhaps argue that a two week period is too short to detect practice effects Importantly, however, the two-week period matches the average time devoted to praise in parenting interventions, before the attention is shifted toward other parenting techniques (e.g., Dishion et al., 2012; Webster-Stratton, 2001). If anyting, our findings suggest that it might not be reasonable to expect superior effects of labeled praise given the time that parents typically get to practice with using labeled praise.

Third, we found no support for the assumption that labeled praise improves behavior among children with high levels of disruptive child behavior in particular. The short-term and sustained effectiveness of labeled praise was independent of children's initial disruptive behavior (like other family or child characteristics). Our sample included children who showed a relatively wide range of disruptive child behavior, and so possible alternative explanations that refer to restriction of range do not seem plausible. That said, only a relatively small group of children in our sample (10%) met clinical levels of disruptive and aggressive behavior. Therefore, the potential of this study to detect possible threshold effects, such as that labeled praise may be particularly effective among those individuals who show strongly elevated levels of disruptive behavior, is limited.

We deliberately chose to examine the effectiveness of labeled and unlabeled praise to reduce incompliant and disruptive behavior, rather than to boost the specific behavior (e.g., leaving the food on the table) that participants were praise for. In doing so, we included outcome measures as often used in parenting intervention evaluation studies (i.e., ECBI and CBCL). As such, our study informs the field of parenting intervention research.it should be noted, however, that labeled praise might be more effective than unlabeled praise at influencing other domains of behavior, such as learning children new behavioral skills (e.g., potty training) and on task behavior at school (e.g., Chalk & Bizo, 2004). The conclusions of this study pertain specifically to the reduction of disruptive and non-compliant behavior.

That we did not find a surplus effect of labeled over unlabeled praise also raises broader questions about the factors that influence the effectiveness of praise. Is praise mainly conditioning? If so, then how exactly praise is phrased will matter less than the mere fact that children receive positive parental attention for what they did. Of course, our findings do not preclude the possibility that the wording of praise may be important. Indeed, previous research has repeatedly shown that subtle differences in the wording of praise can substantially influence the effects of praise (e.g., Brummelman et al., 2013; Henderlong & Hepper, 2002; Mueller & Dweck, 1998). In our study, that focuses on the distinction between labeled and unlabeled praise, the way in which praise was phrased did not influence its effectiveness.

Effect sizes of the two-week practice period on the reduction of disruptive child behavior were moderate (d = .52 and d = .68) and comparable to effect sizes typically found for comprehensive parenting intervention programs designed to

reduce disruptive child behavior (e.g., see McCart et al., 2006, and Weisz, Sandler, Durlak, & Anton, 2005, for reviews). This might seem striking, as this study's intervention included only one training session (i.e., the home visit), and focused on only one parenting technique (i.e., labeled or unlabeled praise). It should be noted, though, that our finding is in line with recent evidence that "small" (i.e., brief, focused, and theory-driven) interventions can sometimes have relatively powerful and sustained effects, as long as they are targeted at influencing a key psychological process known to impede children's optimal adjustment (for a review, see Yeager & Walton, 2011). Previous findings suggest that praise is a marker of a more complex positive parenting process that is characterized by increased responsiveness (Wahler & Meginnes, 1997). An intervention specifically designed to increase parental use of praise might thus be effective at inducing a more positive parenting style in general. Our findings build on work on small interventions by showing that even when applied with parents (rather than children themselves), small interventions can have relatively powerful effects on children's behavior.

This study bridges traditional intervention research on the effectiveness of comprehensive parenting intervention programs and basic developmental science on the effectiveness of discrete parenting behavior. We tested the empirical merit of one of the most profound techniques parents learn in parenting interventions: to use labeled over unlabeled praise. Our study is one of the first to critically evaluate a discrete component of established parenting interventions. As such, it informs basic developmental science, by showing that that specific reference to positive behavior does not increase the effectiveness of praise. It raises questions about what matters in praise, and which characteristics in praise can increase its effectiveness for improving child behavior. In addition to labeling praise, parental enthusiasm and gentle physical contact accompanying praise are likely candidates (e.g., Dishion et al., 2012; Matthys et al., 2012), but are understudied. Our study also informs intervention science by underscoring the promise of including praise as a key component in parenting interventions, but not the promise of teaching parents the use of labeled over unlabeled praise.

Several limitations of our study merit consideration. First, reduced disruptive child behavior over the two-week practice period was based on parent-report only. Although parent training effectiveness studies often reply on parent-report only, the use of single informant is suboptimal. Our findings on the sustained (not the immediate) effectiveness of praise may partially reflect that parents perceptions of child behavior have been changed. Second, family characteristics

such as parents' prior experiences with different forms of praise (Chapter 7, this thesis) and child characteristics other than disruptive behavior (e.g., child intelligence, Matthys et al., 2012, or temperament, Belsky, Bakermans-Kranenburg, & van IJzendoorn, 2007) may influence the effectiveness of labeled and unlabeled praise.

Replication in other samples and settings and related research on different parenting techniques is needed to draw more definite conclusions about the optimal praise techniques to be taught in parenting interventions. For now, our results suggest that the effectiveness of praise does not seem to depend on the extent to which it specifically refers to the child's positive behavior. Instead, labeled and unlabeled praise were equally effective at improving immediate compliance reducing disruptive child behavior over a two week period. Moreover, parents perceived unlabeled praise as more user-friendly. Based on our findings, therefore, there seem to be no pressing reasons to favor labeled praise over unlabeled praise to try to improve children's disruptive behavior.

Chapter 9

Summary and General Discussion

This thesis aimed to advance knowledge and research on how the effectiveness of parenting interventions can be improved. It aimed to meet two key challenges for evidence-based parenting intervention in particular: (1) to increase our understanding of how parenting interventions can reach and benefit disadvantaged families, and (2) to optimize the effectiveness of established parenting intervention programs.

Part I: Parenting Interventions for Disadvantaged Families

We started this thesis with a meta-analysis on the extent to which socioeconomically disadvantaged families benefit from parenting interventions (Chapter 2). We conducted this meta-analysis because low family socioeconomic status (SES) is often assumed to negatively affect parent training effectiveness, but findings are inconsistent (Deković et al., 2012; Gardner et al., 2009; Leijten, Overbeek, & Janssens, 2012; Lundahl et al., 2006). We suggested that levels of initial problem severity may interact with effects of SES on parenting intervention effectiveness, and that SES may play different roles immediately post treatment and at follow-up. We found that parenting interventions were moderately effective at reducing disruptive child behavior. Low SES diminished the reduction of disruptive child behavior immediately after parenting interventions, but only when children's initial problem behaviors were mild. When children's initial problem behavior was severe, families with varying levels of SES benefited equally. At follow-up, families with low SES were less able to maintain positive change, regardless of initial problem severity. These findings confirm that initial problem severity is a strong predictor of parenting intervention effectiveness and nuance the view that families with low SES benefit less from parenting interventions (e.g., Lundahl et al., 2006). Instead, results from this study implicate that families with low SES can benefit from parenting interventions, especially when problems are severe, but that they might need more sustained support to maintain positive change.

In Chapter 3, we focused on the limited engagement of ethnic minority families in mental health services. One of the presumed reasons why ethnic minority families engage less in mental health services is that they perceive behavior indicative for behavior disorders as less problematic (e.g., Bevaart et al., 2012; Weisz et al., 1988; Zwirs, Burger, Schulpen et al., 2006). We examined the extent to which these ethnic differences in problem perception are limited to the typically studied pre-help seeking process, or whether these differences also exist once families engage in help. Our study replicated ethnic differences found in the

pre-help seeking process in families that are actually engaged in parent training. Moroccan and Turkish mothers perceived, compared to Dutch mothers, similar levels of behavior indicative for behavior disorders as less problematic. Our study suggests that differences in problem perception are persistent, but that despite lower levels of problem perception, ethnic minority families can be motivated to engage in parenting interventions if some of their key barriers to treatment are overcome (e.g., fear of stigma).

Chapters 4 and 5 built on the knowledge we gained from Chapters 2 and 3, by studying the effectiveness of two parenting interventions for families with low socioeconomic status and ethnic minority backgrounds. Both studies used outreaching strategies to overcome families' barriers to treatment and to include socioeconomically disadvantaged and ethnic minority families. For example, families were visited at home, clinicians emphasized a collaborative approach, and interpreters were used. In Chapter 4, we evaluated the effectiveness of the Incredible Years parenting program to reduce disruptive child behavior in families from different socioeconomic and ethnic backgrounds in the Netherlands with a randomized wait-list design. We specifically focused on differential effectiveness for families from different socioeconomic status or ethnic backgrounds. Incredible Years was effective at improving parenting behavior and reducing disruptive child behavior, regardless of family socioeconomic status and ethnic background, immediately after termination and three months later.

In Chapter 5, we built on our findings from Chapter 2 that families with low SES might need sustained support. We used existing data from the USA to evaluate the effectiveness of the yearly Family Check-Up intervention for reducing disruptive behavior and engaging families in formal and informal mental health services in their community. The Family Check-Up is known to positively affect parenting and child behavior (Dishion et al., 2008; Gardner, Shaw, Dishion, Burton, & Supplee, 2007). We found that the Family Check-Up also increases families' engagement in regular mental health services. Families who had received the Family Check-Up engaged more in services in their community than families who had not received the Family Check-Up. Moreover, the Family Check-Up benefited highest risk families most: especially families with high initial disruptive child behavior and low socioeconomic status engaged more in regular mental health services as a result of the Family Check-Up. Increased service use, however, did not lead to further reductions of disruptive child behavior and we therefore discussed the importance of implementing evidence-based interventions (like Incredible Years) into community

services, and the importance of bridging segregated intervention fields (e.g., parental mental health and parenting practices).

Together, these chapters highlight that (1) families with low SES and ethnic minority backgrounds can be motivated for parenting interventions if outreaching strategies are used, (2) the Incredible Years parenting program can reduce disruptive child behavior across families with different levels of SES and different ethnic backgrounds, and (3) the Family Check-Up program can motivate high risk indigent families to engage in mental health services.

Part II: Toward Optimizing Parenting Intervention Effectiveness

In part two of this thesis, we strived to move the field of intervention research forward by proposing a line of research on the extent to which discrete parenting intervention elements contribute to program effectiveness. In Chapter 6, a theoretical chapter, we proposed a framework for continued improvement of parenting interventions, in which traditional randomized controlled trials on the effectiveness of comprehensive programs are complemented by randomized controlled microtrials on the effects of discrete parenting intervention elements. Randomized controlled microtrials implement a single element of an intervention directly into the families' lives and can illuminate which elements are effective—and for whom. As such, they may be able to inform the design and adaptation of parenting interventions, and form a scientific basis for tailoring interventions to individual families' needs.

We put this suggested approach into practice in Chapters 7 and 8 by conducting two randomized controlled microtrials on the effects of labeled praise. Labeled praise is considered a key parenting strategy to improve child behavior, and parents in most established parenting interventions are encouraged to use labeled over unlabeled praise (e.g., Dishion, Stormshak, & Kavanagh, 2011; Eyberg, 1988; Sanders, 1999; Webster-Stratton, 2001). Our first trial compared the immediate effectiveness of labeled, unlabeled, and no praise for yielding child compliance. Instead of being superior, labeled praise was inferior to unlabeled praise for yielding child compliance, and did not yield more child compliance than no praise. Labeled praise was less effective than unlabeled praise particularly among families who hardly used labeled praise in daily parenting situation prior to the intervention, possibly because they have less experience providing labeled praise naturally.

Our second trial built on the findings and limitations of our first trial and

studied both immediate and short-term effectiveness after practice of labeled and unlabeled praise in children with clinically relevant levels of disruptive behavior. The results of our second trial partly confirmed those of our first trial, in that labeled praise was not superior to unlabeled praise. Instead, in this second trial, both forms of praise were equally effective at yielding immediate compliance and at reducing disruptive behavior over a two-week practice period in children with clinically relevant levels of disruptive behavior.

Together, these chapters suggest that (1) complementing current randomized controlled trials by randomized controlled microtrials sheds light on which parenting interventions elements contribute to their effectiveness, (2) praise is an effective parenting intervention element to reduce disruptive child behavior, and (3) labeled praise seems not overall superior to unlabeled praise, and more research is needed to illuminate the contribution of specific praise techniques to parenting intervention effectiveness. Limitation, implications, and suggestions for future research based on the studies in this thesis will be discussed per overarching topic.

Socioeconomic Status (SES)

SES is an important construct in this thesis. Children who grow up in families with low SES have a higher risk for developing behavior disorders (Bradley & Corwyn, 2002). Parenting interventions therefore often aim to target families with low SES to prevent or treat child behavior problems, but—at least in the Netherlands—hardly reach this population. SES is often also assumed to negatively affect children's development by diminishing parenting intervention effectiveness (e.g., Lundahl et al., 2006). Our meta-analysis showed that effects of SES on intervention effectiveness can change over time, with stronger negative effects of low SES at follow-up than immediately post-treatment. Our study on Incredible Years showed that parents across a wide range of SES can benefit from Incredible Years, and our study on the Family Check-Up showed that the Family Check-Up increases service use especially in families with low SES.

However, several important questions about SES remain unanswered. First, SES is a broad, overarching term to indicate families' social and economic position in society, and tends to be measured and interpreted from different perspectives, such as family income and financial aid, parental educational degrees, or occupational status. We did not examine the roles of these discrete aspects of SES. We indexed SES either by a composite measure (Chapters 2 and 5) or a single

indicator (educational level, Chapter 4). Despite findings that educational level might be a part of SES that particularly impacts parenting intervention effectiveness (e.g., Gardner et al., 2009), our approach leaves several important issues concerning SES open. The most important issue is what causes the effects of SES on parenting intervention effectiveness. For example, why exactly are low SES families less able to maintain positive change? We hypothesized that the stressors that often accompany low SES undermine families' efforts to maintain positive change. However, it is unknown what these stressors exactly are; is it financial stress, deprivation of resources, or negative neighborhood influences that cause this effect. The complexity of SES is widely acknowledged (e.g., Braveman et al., 2005), and more research is needed on the specific mechanisms through which discrete SES indicators operate in their influence on parenting intervention effectiveness.

Second, we studied the effectiveness of SES in different countries. In our meta-analyses we even combined studies across countries. It is not unlikely that the effects of SES differ across countries, by economic situation and social policy. For example, countries like the United States and United Kingdom have larger economic inequalities than countries like the Netherlands or Germany. Consequently, being at the lowest 5% of SES in the United States might be qualitatively different from being at the lowest 5% in the Netherlands in terms of financial stress, social status, and access to resources and services. Caution is therefore warranted in generalizing our (or any) findings on SES to other countries, and future research on the effects of SES on intervention effects should consider possible country level effects of SES.

Ethnic Minority Families

Ethnic minority families are among the hard to reach populations for the prevention and treatment of child behavior problems (Prinz & Miller, 1991; Zwirs, Burger, Buitelaar, & Schulpen, 2006). Besides the barriers to treatment socioeconomically disadvantaged families experience (e.g., negative prior experiences), ethnic minority families often experience additional barriers (e.g., fear of stigma and language differences) that tend to make them reluctant to engage in mental health services. Fortunately, clinicians are increasingly successful in engaging and retaining ethnic minority families in parenting interventions, by using outreaching strategies specifically designed to overcome families' barriers to treatment, such as providing interventions in non-stigmatizing locations like schools, visiting families at home, and collaborating with interpreters (e.g., Dishion et al., 2008; Reid et al., 2001; Scott

et al., 2010a, 2010b). These outreaching strategies are critical, as they seem essential for reaching and retaining ethnic minority families. These strategies therefore are an important promise for social policy makers, in that implementing these strategies into regular mental health services might help engage ethnic minority families in regular mental health services.

But it takes two to tango. Interventions can reach out and help families overcome their barriers to treatment, but the ultimate decision to participate in an intervention lies with the families. Decisions to participate in mental health interventions depend for a large part on the extent to which parents perceive their child's behavior as problematic (e.g., the Levels and Filters Model; Goldberg & Huxley, 1980, 1992; Verhulst & Koot, 1992). Our study in Chapter 3 on problem perception adds to the growing literature that ethnic minority families tend to experience behavior indicative of behavior disorders as less problematic. Despite these consistent findings of differential problem perception, there is a dearth of knowledge on the mechanisms behind these differences. One explanation could be report bias, in that families might know that something is wrong, but are reluctant to acknowledge this toward clinicians and researchers or even toward themselves. Another explanation could be cultural differences in definitions of typical and atypical behavior, and the extent to which atypical behavior is considered problematic. More research is needed on this topic, such as longitudinal qualitative or quantitative studies following ethnic minority families through different phases of the help seeking process. This knowledge is needed to help research move forward from studying the problem of low engagement toward solutions for this problem, and to help clinicians to reach families in need for help.

Incredible Years and the Family Check-Up

We studied the effectiveness of parenting interventions for socioeconomically disadvantaged and ethnic minority families using the Incredible Years parenting program (Webster-Stratton, 2001) and the Family Check-Up (Dishion & Stormshak, 2007). Incredible Years is among the two evidence-based parenting interventions in the Netherlands for the reduction of disruptive behavior in children (the other one is VIPP-SD; Juffer, Bakermans-Kranenburg, & Van IJzendoorn, 2007). We found that Incredible Years was equally effective across families with different socioeconomic and ethnic backgrounds, and for referred and recruited families. Our results therefore support further dissemination of Incredible Years to different cultural groups and settings in the Netherlands.

The Family Check-Up has repeatedly been shown to be effective at improving parenting practices and child behavior in high risk socioeconomically disadvantaged families (Dishion et al., 2008). We showed in this thesis that the Family Check-Up also increases families' engagement in community services, with might be a hopeful remedy to the many stressors high risk families targeted by the Family Check-Up experience. However, we found no evidence that engagement in community services leads to further improvement of child development. This is a critical finding: we increasingly know how to motivate families to engage in help they might need for the difficulties they experience, yet community services seem unable to effectively provide the care these families need to improve child outcomes. This finding underscores the often issued need for evidence-based and integrative mental health care (e.g., Drake et al., 2001).

Incredible Years and the Family Check-Up share an important characteristic that makes them particularly suitable for socioeconomically disadvantaged and ethnic minority families: they emphasize a collaborative approach with parents. The Incredible Years parent program emphasizes empowerment, encourages parents to match newly learned skills to their own cultural norms, to come up with their own solutions and parenting goals, and uses a group format to motivate interpersonal support and encouragement. The Family Check-up emphasizes a collaborative approach by deciding together with families which intervention modules are included in the program (e.g., parenting support; parent mental health treatment), and by paying deliberate attention to families' motivation to change using motivational interviewing techniques (Dishion et al., 2008; Miller & Rollnick, 2002). The collaborative approaches of Incredible Years and the Family Check-Up seem to help overcome key barriers to treatment that socioeconomically disadvantaged and ethnic minority families experience. This approach may explain why they are able to successfully reach and retain families, and to improve parenting and child behavior in families across cultural backgrounds (Dishion et al., 2008 Gardner et al., 2009; Kim, Cain, & Webster-Stratton, 2008; Reid et al., 2001).

We do not know how the effectiveness of Incredible Years and the Family Check-Up for socioeconomically disadvantaged and ethnic minority families compare to the effectiveness of other programs such as Parent-Child Interaction Therapy (Eyberg, 1988) and the Triple-P Positive Parenting Program (Sanders, 1999) for these families. Some comparisons between programs have been made in meta-analyses (e.g., Thomas & Zimmer-Gembeck, 2007), but programs are typically presented as different alternatives for the same goal of improving family dynamics

and child outcomes (e.g., Weisz & Kazdin, 2010). More important than the question of which program is most effective, however, might be questions like which elements of programs determine their effectiveness (Chapter 6, this thesis), and which interventions are most effective at which developmental periods. For example, the Family Check-Up is a yearly check-up to track development, provide help for family difficulties and screen for possible addition help families might need. For most at risk families, this might be sufficient to help them with common parenting struggles and to prevent their children from developing behavior disorders. For some families, however, this might not be sufficient to treat problems like child behavior disorders. These families might then benefit from additional interventions like Incredible Years.

Families in our (and many other) parenting intervention studies were actively recruited to participate, and extensive efforts were made to retain families in the program. This outreaching approach was successful in terms of engaging socioeconomically disadvantaged and ethnic minority families in a parenting intervention. For the Incredible Years program, however, we are not sure about the extent to which we actually reached the families that were at highest risk for the development of severe behavior disorders, as there may still have been a selection effect in the families that visited our coffee meetings. Also, the outreaching approach in both the Incredible Years and Family Check-Up studies may have affected our findings. Because of these outreaching strategies, parents may have attended more meetings and perhaps felt more involved with the program than if programs were provided in regular mental health care settings that did not use these outreaching strategies. Also, especially our Incredible Years study included families that not always felt a need for help, which might have diminished their motivation to change. Outreaching strategies might therefore possibly increase program effectiveness (if families become more involved), but might also decrease program effectiveness (if families have less internal motivation to change). Further implementation of programs that engage socioeconomically disadvantaged and ethnic minority families into regular mental health settings is needed to get a more comprehensive view on the effectiveness of parenting interventions for socioeconomically disadvantaged and ethnic minority families across settings. This will obviously not just be a matter of implementing a specific parenting program like Incredible Years, but will also require changes in the Dutch mental health system in order to be successful. Two changes seem particularly critical. First, evidence cumulates that outreaching strategies are needed to engage ethnic minority and

socioeconomically disadvantaged populations that are underrepresented in mental health services. Schools seem particularly suitable to reach these populations (Gross et al., 2003; Scott et al., 2010a; Chapter 4, this thesis), and increased cooperation between mental health services and schools may help to bridge families with parenting difficulties to parenting interventions. Second, but related to the first, is the accessibility of interventions. In current practice, referral by a general practitioner and a psychiatric diagnostic process are required before families can benefit from the parenting interventions offered by outpatient psychiatric clinics. These referral and diagnostic processes tend to be profound barriers to treatment for many socioeconomically disadvantaged and ethnic minority families. Lower thresholds for participation (e.g., without formal referral and a required psychiatric diagnosis) may increase families engagement in parenting interventions.

Child Outcomes and Child Characteristics

The main goal of parenting interventions is to positively change child development. Throughout this thesis we focused on the reduction of disruptive child behavior as the main goal of parenting interventions. We chose to focus on disruptive behavior problems as our main outcome measure because this behavior is the strongest predictor of adolescent and adult antisocial behavior—one of the main challenges for society (e.g., Scott et al., 2001). However, there is of course more to child development than the presence or absence of disruptive behavior. Children's general well-being, academic achievement, quality of peer relations, and prosocial behavior are just a few other child outcomes that predict adequate child development (e.g., Duncan et al., 2007; Parker & Asher, 1987; Pollard & Lee, 2003). The extent to which effects of parenting interventions generalize to other developmental domains is understudied.

Related to our narrowly defined child outcomes is our limited inclusion of child characteristics that may affect the effectiveness of parenting interventions. We showed that severity of child behavior problems consistently affects the effectiveness of parenting interventions as a whole (Chapters 2 and 5). However, we largely ignored other child characteristics that may affect the effectiveness of parenting interventions such as children's intelligence (e.g., van Nieuwenhuijzen, Orobio de Castro, Wijnroks, Vermeer, & Matthys, 2009), temperament (e.g., Belsky, Bakermans-Kranenburg, van IJzendoorn, 2007), or personality traits (e.g., Stoltz et al., 2013). We were therefore limited in drawing conclusions on which children benefited most from Incredible Years and the Family Check-Up, and which

mechanisms underlie possible differential effectiveness.

Disentangling Parenting Intervention Element Effectiveness

This thesis suggested a research approach that meets one of the key questions on parenting interventions of today: what are the effective elements of parenting interventions? Our approach complements traditional randomized controlled trials to evaluate comprehensive programs by randomized controlled microtrials to evaluate discrete intervention elements. We set some first steps toward bringing this approach into practice by studying the effectiveness of labeled praise as a key parenting technique in many established parenting interventions. More research is needed on praise and other key parenting intervention techniques (e.g., social rewards, ignore, and time-out) to illuminate which of these elements are effective and for whom, and the extent to which knowledge on the effectiveness of discrete and synergistic elements enables us to actually improve the effectiveness of parenting interventions.

In addition to studying discrete parenting intervention elements like techniques parents are taught, there might be much to gain from studying elements that exceed programs, such as client-therapist relationships and a collaborative approach. These often called 'non-specific' factors might in fact be as specific in their influence on program effectiveness as elements such as the techniques that are taught. We just have not yet disentangled these 'non-specific' factors into researchable elements. Future research should show the extent to which the mictrotrial approach is useful in studying these more general intervention elements. Importantly, a combined approach of studying program specific and program exceeding elements might increase our limited insight into the proportions of effectiveness that is determined by either the techniques parents are taught, or by program exceeding factors such as quality of the client-therapist relationship. These insights in turn can guide our research programs by suggesting which elements within or across parenting interventions are most promising to target for the improvement of parenting intervention effectiveness.

Praise to Improve Child Behavior

Praise is a critical parenting intervention element, because of its key role in most established parenting interventions (e.g., e.g., *Parent Management Training—Oregon Model*, Forgatch & Patterson, 2010; *Triple-P Positive Parenting Program,* Sanders, 1999; *Incredible Years*, Webster-Stratton & Reid, 2010; *Parent–Child Interaction Therapy*, Zisser & Eyberg, 2010), and findings that not all children are

equally sensitive to praise (e.g., Matthys et al., 2012). Our finding that labeled praise might not be as superior to unlabeled praise for yielding child compliance as is often assumed adds to the growing body of research showing that the effects of praise on children's motivation, behavior, and emotions are not as straightforwardly positive and consistent as one might intuitively expect. Research increasingly shows that praise can sometimes backfire (e.g., Brummelman et al., 2013; Mueller & Dweck, 1998), and emphasizes the highly inconsistent effects of praise on child behavior (e.g., Owen et al., 2012). Effects of praise thus are complex. Both verbal and non-verbal characteristics of praise can affect its effectiveness (Henderlong & Lepper, 2002) and much of the mechanisms through which various forms of praise operate are unknown (Owen et al., 2012). To optimize the effectiveness of praise as taught in parenting interventions, we need more research on parent and child characteristics that influence the effectiveness of praise on children's behavior.

Also, there seems to be a gap, or at least a lag, between insights from basic developmental and psychological science on the effects of praise, and the use of praise techniques in parenting interventions. For example, findings that praising children's personal qualities can backfire stem from the 1990's (Mueller & Dweck, 1998), but this distinction is not explicitly taught to parents in most established interventions (e.g., Dishion et al., 2012; Webster-Stratton, 2007). In contrast, clinicians may have developed techniques to enhance the effectiveness of their treatments, but some of these techniques may not have been studied yet on their empirical merit. Here lies a challenge for both researchers and clinicians, who should work toward bridging basic developmental research and intervention practice by using findings from basic developmental research to optimize intervention practice.

Additional Clinical Implications

Our studies support further implementation of the Incredible Years and Family Check-Up interventions: both interventions were effective at improving family dynamics in socioeconomically disadvantaged and ethnic minority families. Our studies confirm that reaching and retaining socioeconomically disadvantaged and ethnic minority families may require special attention to families' potential barriers to change. An important task for policy makers and clinicians is to implement these outreaching strategies in their intervention programs and policies. This might help to reach and retain families that might not actively approach mental health services themselves because of fear of stigma, cultural and language differences, and

possible different problem perception.

Our microtrials on the effectiveness of labeled and unlabeled praise suggest that labeled praise might not be as superior to unlabeled praise as often assumed in parenting intervention programs. Despite the fact that we were unable to draw final conclusions based on our two trials, our findings do indicate that caution is warranted in stimulating parents to use labeled over unlabeled praise to improve child behavior. That unlabeled praise was more effective than labeled praise particularly in families who routinely used more unlabeled praise suggests the importance of matching parenting intervention techniques to families' personal parenting styles (i.e., empowerment). This would plead for a more flexible and tailored approach in mental health prevention and treatment to adapt intervention elements to the needs of individual families. However, more research on empirically supported tailoring is needed before interventions should be adapted to fit the needs of individual families, as tailoring without sufficient empirical support may come at the cost of program fidelity, if elements essential for program effectiveness are changed or omitted.

Conclusion

Parenting interventions are an effective strategy to improve child development across families with different socio-economical and ethnic backgrounds. Parenting interventions are able to increase positive parenting practices, reduce disruptive child behavior, and motivate parents to engage in mental health services. Randomized controlled microtrials on the effectiveness of discrete intervention elements can complement traditional effectiveness trials on parenting intervention programs, and may increase insight into which parenting intervention techniques determine program effectiveness. Together, comprehensive effectiveness trials and microtrials provide opportunities for improving the reach and effectiveness of parenting interventions, to benefit the lives of families and society at large.

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Summary in Dutch

Oudercursussen zijn een veelbelovende strategie om antisociaal gedrag bij kinderen te voorkomen. Wetenschappelijke evidentie voor de effectiviteit van oudercursussen om gedragsproblemen bij kinderen te verminderen neemt toe en er komt steeds meer inzicht in welke ouders het meeste profijt hebben van oudercursussen. Helaas zien we ook dat veel sociaaleconomisch kwetsbare gezinnen niet worden bereikt (o.a. laagopgeleide en immigrante gezinnen die wonen in achterstandswijken), dat de effectgroottes van oudercursussen klein tot matig blijven en dat een kwart tot een derde van de gezinnen die deelneemt aan een oudercursus geen vermindering van gedragsproblemen laat zien. We staan dan ook voor de belangrijke uitdaging om het bereik en de effectiviteit van oudercursussen te verbeteren. Deze dissertatie heeft als doel kennis en onderzoek gericht op het verbeteren van het bereik en de effectiviteit van oudercursussen te bevorderen. Ze richt zich specifiek op twee uitdagingen: (1) meer inzicht krijgen in hoe sociaaleconomisch kwetsbare gezinnen effectief bereikt en geholpen kunnen worden door oudercursussen en (2) het vergroten van de effectiviteit van bestaande oudercursussen.

Deel 1: Sociaaleconomisch Kwetsbare Gezinnen Bereiken

Deze dissertatie startte met een meta-analytische studie naar de mate waarin gezinnen met een lage sociaaleconomische status (SES) baat hebben bij oudercursussen (Hoofdstuk 2). Vaak wordt verwacht dat gezinnen met een lage SES minder verbetering in opvoedvaardigheden en probleemgedrag laten zien na oudercursussen, bijvoorbeeld omdat deze gezinnen naast opvoedproblematiek vaak ook andere stressoren (o.a. financiële problemen) ervaren, maar empirische evidentie is inconsistent. We hebben getoetst of de invloed van SES afhangt van de mate van probleemgedrag van kinderen voorafgaand aan de cursus en of SES wellicht een grotere invloed heeft op het behouden van positieve effecten van oudercursussen, dan op positieve effecten direct na afloop van oudercursussen. We vonden dat gezinnen met een lage SES evenveel baat hadden bij oudercursussen als gezinnen met een hogere SES, mits gedragsproblemen van kinderen voorafgaand aan de cursus relatief ernstig waren (en de cursus dus niet alleen preventief ingezet was). De ernst van gedragsproblemen bleek de belangrijkste voorspeller van het effect dat oudercursussen hebben: hoe ernstiger de gedragsproblemen vooraf waren, hoe meer verbetering er doorgaans optrad. Daarnaast werd onze hypothese dat SES met name invloed heeft op het behouden van positieve effecten bevestigd. Gezinnen met een lage SES lieten met name een

half jaar tot een jaar na afloop van de oudercursus minder verbetering zien dan gezinnen met een hogere SES, onafhankelijk van de ernst van de gedragsproblemen bij aanvang. Stressoren die gepaard gaan met het hebben van een lage SES, zoals financiële problemen, leiden er mogelijk toe dat gezinnen met een lage SES meer moeite hebben om te blijven oefenen met de in de oudercursus geleerde opvoedvaardigheden.

Hoofdstuk 3 focust op mogelijke redenen voor de beperkte deelname van gezinnen met een immigrantenachtergrond aan oudercursussen. We weten dat deze gezinnen ondervertegenwoordigd zijn in vrijwillige hulpverlening, maar we weten niet precies waardoor dit wordt verklaard. Eén van de mogelijke verklaringen is dat ouders met een immigrantenachtergrond probleemgedrag van hun kind anders ervaren dan ouders met een autochtoon Nederlandse achtergrond. Meer specifiek zou dit inhouden dat ouders met een immigrantenachtergrond gedragingen van hun kind die, althans volgens westerse empirische evidentie voor ontwikkelingspsychopathologie, kenmerkend zijn voor gedragsproblemen minder snel als problematisch ervaren dan autochtoon Nederlandse ouders. Dit zou kunnen verklaren waarom ouders met een immigrantenachtergrond minder snel hulp zoeken. Dit verschil in probleem perceptie was eerder al onderzocht (en bevestigd) bij gezinnen die geen hulpverlening zoeken, maar nog niet bij gezinnen die wel hulp gezocht of geaccepteerd hebben. We wilden weten of deze culturele verschillen ook aanwezig waren bij gezinnen die deelnemen aan een oudercursus, en deze ouders dus niet weerhouden van deelname. Dit bleek het geval. Ouders met een migrantenachtergrond ervoeren gedragingen die kenmerkend zijn voor een gedragsproblemen als minder problematisch en minder belastend voor hun kind en zichzelf dan autochtoon Nederlandse ouders. Opvallend aan deze bevinding is met name dat we deze verschillen zien bij gezinnen die aangegeven hebben behoefte te hebben aan opvoedingsondersteuning. Dat gezinnen met een migratieachtergrond het gedrag van hun kind minder snel als problematisch ervaren lijkt (tenminste in onze studie) dus geen belemmering te zijn voor de motivatie van gezinnen om deel te nemen aan oudercursussen.

In Hoofdstuk 4 en 5 hebben we de opgedane kennis uit Hoofdstuk 2 en 3 gebruikt om de effectiviteit van twee cursussen voor sociaaleconomisch kwetsbare gezinnen te toetsen. In beide studies is bewust gewerkt aan het overwinnen van de mogelijke barrières tot hulpverlening van sociaaleconomisch kwetsbare gezinnen (o.a. angst voor stigma en taal- en cultuurverschillen). In beide studies werd gebruik gemaakt van een randomized controlled trial, een gedegen manier om de

effectiviteit van interventies te onderzoeken. In Hoofdstuk 4 hebben we de effectiviteit van de oudercursus Incredible Years (in Nederland ook wel Pittige Jaren genoemd) onderzocht. Hierbij hebben we gekeken naar de mate waarin het opleidingsniveau en de culturele achtergrond van ouders een rol spelen bij deelname aan de cursus en bij de effectiviteit van de cursus om opvoedgedrag van ouders te verbeteren en probleemgedrag van kinderen te verminderen. Ouders met een migrantenachtergrond en ouders met een lage SES bleken bereid en gemotiveerd om deel te nemen als zoveel mogelijk drempels voor deelname werden weggenomen. Dit werd onder andere gedaan door de cursus op een niet-stigmatiserende locatie aan te bieden (bijvoorbeeld op scholen) en gratis kinderopvang en tolken aan te bieden tijdens de cursus. Deelname aan Incredible Years leidde tot meer positief opvoedgedrag (complimenteren en belonen) en minder negatief opvoedgedrag (hard en inconsistent straffen) van ouders. Ook zagen we dat Incredible Years opstandig gedrag (zoals gerapporteerd door ouders) en afleidbaar en hyperactief gedrag (zoals gerapporteerd door leerkrachten) van kinderen verminderde. Deze effecten waren 3 maanden na afloop van de cursus in dezelfde mate aanwezig als direct na afloop van de cursus. Het opleidingsniveau en de culturele achtergrond van ouders hadden geen invloed op de effectiviteit van Incredible Years. Dit betekent dat Incredible Years even effectief was voor de verschillende groepen gezinnen die deelnamen (o.a., gezinnen met verschillende opleidingsniveaus en Nederlandse, Marokkaanse en Turkse gezinnen).

Ondervertegenwoordiging van sociaaleconomisch kwetsbare gezinnen is één van de uitdagingen van de hedendaagse hulpverlening. Daarom hebben we in Hoofdstuk 5 getoetst of de kortdurende cursus Family Check-Up er in de Verenigde Staten toe leidt dat gezinnen met een verhoogd risico op de ontwikkeling van gedragsproblemen bij kinderen meer gebruik maken van hulpverlening. Kenmerkend van de Family Check-Up is dat er met ouders toewerkt wordt naar het krijgen van inzicht in de sterke en zwakke punten binnen het gezin. Door gezinnen uitgebreid feedback te geven op vragenlijsten die ouders hebben ingevuld over hun thuissituatie en door met ouders samen terug te kijken naar ouder-kind spelobservaties die gedaan zijn door de onderzoekers, krijgen ouders meer inzicht in wat er goed gaat in het gezin en waar ruimte is voor verbetering. We weten uit eerdere onderzoeken dat de Family Check-Up een positief effect heeft op het opvoedgedrag van ouders en gedragsproblemen van kinderen laat afnemen. Onze studie in Hoofdstuk 5 laat met Amerikaanse gegevens zien dat de Family Check-Up ervoor zorgt dat ouders vervolgens meer gebruik gaan maken van hulpverlening,

zoals behandeling van depressieve klachten bij ouders en opvoedingsondersteuningsprogramma's. Belangrijker nog dan het algemene effect van deze cursus is dat de toename van gebruik van hulpverlening met name gold voor gezinnen die deze hulp het hardst nodig leken te hebben: gezinnen met kinderen die al op jonge leeftijd probleemgedrag laten zien en gezinnen met een sociaaleconomisch kwetsbare positie. De toename van gebruik van hulpverlening buiten de Family Check-Up om droeg echter niet bij aan de afname van gedragsproblemen die kinderen als gevolg van de Family Check-Up lieten zien. Dit betekent dat de hulpverlening die gezinnen zelf zochten vaak niet effectief was om gedragsproblemen bij kinderen te verminderen en onderstreept het belang van bewezen effectieve hulpverlening.

Samenvattend laten deze hoofdstukken zien dat (1) gezinnen met een sociaaleconomisch kwetsbare positie bereikt kunnen worden door oudercursussen als bewust wordt getracht de barrières tot hulpverlening die gezinnen ervaren te overwinnen, (2) Incredible Years leidt tot een verbetering van opvoedgedrag en een vermindering van gedragsproblemen in gezinnen met verschillende sociaaleconomische en culturele achtergronden en (3) de Family Check-Up sociaaleconomisch kwetsbare gezinnen motiveert om meer gebruik te maken van beschikbare hulpverlening.

Deel 2: Toewerken Naar Effectievere Oudercursussen

Het tweede deel van deze dissertatie richtte zich op de vraag hoe we de effectiviteit van bestaande oudercursussen kunnen verbeteren. In Hoofdstuk 6, een theoretisch hoofdstuk, introduceerden we een model over hoe de effectiviteit van oudercursussen verbeterd kan worden door onderzoek naar de effectiviteit van complete programma's te combineren met onderzoek nar de effectiviteit van discrete elementen van programma's. Dit kan onderzocht worden met behulp van zogenaamde microtrials: kleinschalige, gerichte experimentele studies waarbij ouders aan één specifiek element van een oudercursus worden blootgesteld. De effectiviteit van dit specifieke element kan vergeleken worden met de effectiviteit van alternatieve elementen. Door de discrete elementen geïsoleerd van elkaar (of in weloverwogen interactie met elkaar) te bekijken leren we niet alleen welke elementen daadwerkelijk effect hebben op het gedrag van ouders en kinderen, maar ook voor welke ouders welke elementen het meest geschikt zijn. Als we weten welke elementen effectief zijn—en voor wie—kunnen we oudercursussen zo samenstellen dat gezinnen alleen in die elementen getraind worden die voor hen

het beste werken. Dit helpt niet alleen om cursussen effectiever te maken, maar ook om ze efficiënter en kosten-effectiever te maken. Uiteindelijk kunnen deze efficiëntere programma's er mogelijk toe bijdragen dat oudercursussen beter verspreid en geïmplementeerd kunnen worden, iets wat nu vaak bemoeilijkt wordt door het complexe en veelomvattende karakter van oudercursussen.

In Hoofdstuk 7 en 8 brengen we de theorie van Hoofdstuk 6 in praktijk. We hebben twee microtrials gedaan naar de effectiviteit van het oudercursus-element 'specifieke complimenten'. Ouders leren in oudercursussen standaard dat ze hun kinderen specifieke complimenten moeten geven. Dit houdt in dat ze in het compliment dat ze geven expliciet moeten verwijzen naar het positieve gedrag wat hun kind heeft laten zien. Als een kind bijvoorbeeld zijn speelgoed heeft opgeruimd is een specifiek compliment 'wat goed dat jij je speelgoed hebt opgeruimd'. Een niet-specifiek compliment in dit voorbeeld zou bijvoorbeeld 'goed zo' of 'wat goed van jou' zijn. In onze eerste studie (Hoofdstuk 7) hebben we de effectiviteit vergeleken van specifieke, niet-specifieke en geen complimenten op de directe gehoorzaamheid van kinderen. We vonden hierbij dat specifieke complimenten, in tegenstelling tot wat vaak wordt verwacht, niet leidden tot meer gehoorzaamheid bij kinderen dan niet-specifieke of geen complimenten. In onze studie was het zelfs zo dat specifieke complimenten leidde tot minder gehoorzaamheid dan niet-specifieke complimenten. Alleen niet-specifieke complimenten leidden tot meer gehoorzaamheid bij kinderen dan geen complimenten. Vervolganalyses lieten zien dat dit effect gold voor gezinnen die in het dagelijks leven weinig gebruik maakten van specifieke complimenten. De conclusie van deze eerste studie was dat specifieke complimenten niet effectiever lijken te zijn dan niet-specifieke complimenten en dat ze zelfs minder effectief kunnen zijn dan niet-specifieke complimenten als gezinnen weinig ervaring hebben met deze manier van complimenteren.

In onze tweede studie (Hoofdstuk 8) bouwden we voort op de bevindingen en beperkingen van de eerste studie. Omdat het bekend zijn met specifieke complimenten invloed had op de effectiviteit van deze complimenten in de eerste studie, hebben we nu niet alleen gekeken naar de directe effectiviteit van complimenten, maar ook naar de effectiviteit van complimenten na een oefenperiode van twee weken. Daarnaast hebben we in deze studie de effectiviteit van specifieke en niet-specifieke complimenten onderzocht bij gezinnen met kinderen met lichte tot matig ernstige opstandige gedragsproblemen. Het geven van complimenten voor positief gedrag leidde tot meer gehoorzaam en minder

opstandig gedrag bij kinderen. Deze tweede studie bevestigde daarnaast het resultaat van de eerste studie dat specifieke complimenten niet effectiever zijn dan niet-specifieke complimenten. Specifieke en niet-specifieke complimenten waren even effectief voor het bevorderen van directe gehoorzaamheid van kinderen en voor het afnamen van opstandig gedrag.

Samenvattend laten deze hoofdstukken zien (1) hoe het combineren van onderzoek naar oudercursusprogramma's en onderzoek naar discrete elementen van oudercursussen mogelijk kan leiden tot de verbetering van de effectiviteit van oudercursussen, (2) dat complimenten een effectieve manier zijn om de directe gehoorzaamheid van kinderen te vergroten en opstandig gedrag van kinderen te verminderen en (3) dat specifieke complimenten niet effectiever lijken te zijn dan niet-specifieke complimenten om de directe gehoorzaamheid van kinderen te vergroten en opstandig gedrag van kinderen te verminderen.

Het doel van oudercursussen is om probleemgedrag bij kinderen te voorkomen of te verminderen door opvoedingsvaardigheden van ouders te verbeteren. Deze dissertatie richtte zich op de vraag hoe we dit doel beter kunnen bereiken. We hebben laten zien dat oudercursussen effectief zijn voor sociaaleconomisch kwetsbare gezinnen en dat het mogelijk is om de drempels tot hulpverlening van deze gezinnen te overwinnen. Daarnaast hebben we laten zien hoe onderzoek naar de effectiviteit van discrete elementen van oudercursussen mogelijk bij kan dragen aan de verbetering van de effectiviteit van oudercursussen. Dit type onderzoek geeft inzicht in welke elementen die ouders aangeboden krijgen ook daadwerkelijk effectief zijn—en voor welke gezinnen. Het combineren van onderzoek naar de effectiviteit van volledige programma's met onderzoek naar de effectiviteit van discrete elementen biedt kansen om het bereik en de effectiviteit van oudercursussen te verbeteren.

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Publications

Manuscripts in this Dissertation

Leijten, P., Raaijmakers, M. A. J., Orobio de Castro, B., & Matthys, W. (2013) Does socioeconomic status matter? A meta-analysis on parent training effectiveness for disruptive child behavior. *Journal of Clinical Child and Adolescent Psychology, 42,* 384–392.

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Curriculum Vitae

Patty Leijten (1986) graduated from the Research Master's program in Behavioural Science at Radboud University Nijmegen (*cum laude*). In 2009, she started as a Ph.D. Candidate at the department of Developmental Psychology at Utrecht University. Her work received support from the Fulbright Organization, United States Council of International Exchange Scholars, and the Jacobs Foundation. She spent several months at the Child and Family Center in Eugene, Oregon, and at the Prevention Research Center in Tempe, Arizona. Since September 2013, she works as a postdoctoral researcher at the University of Amsterdam and the University of Oxford, where she continues her work on the improvement of evidence-based parenting intervention (www.pattyleijten.com).