Journal of Clinical Child & Adolescent Psychology
Publication details, including instructions for authors and subscription information:
http://www.tandfonline.com/loi/hcap20

Effectiveness of the Incredible Years Parenting Program for Families with Socioeconomically Disadvantaged and Ethnic Minority Backgrounds

Patty Leijten[a], Maartje A. J. Raaijmakers[a], Bram Orobio de Castro[a], Els van den Ban[bc] & Walter Matthys[d]

[a] Department of Developmental Psychology, Utrecht University

[b] Department of Child and Adolescent Psychiatry, University Medical Centre Utrecht

[c] Altrecht Institute for Mental Health Utrecht

[d] Department of Child and Adolescent Studies, Utrecht University

Published online: 18 May 2015.

To cite this article: Patty Leijten, Maartje A. J. Raaijmakers, Bram Orobio de Castro, Els van den Ban & Walter Matthys (2015): Effectiveness of the Incredible Years Parenting Program for Families with Socioeconomically Disadvantaged and Ethnic Minority Backgrounds, Journal of Clinical Child & Adolescent Psychology, DOI: 10.1080/15374416.2015.1038823

To link to this article: http://dx.doi.org/10.1080/15374416.2015.1038823

Journal of Clinical Child & Adolescent Psychology, 0(0), 1–15, 2015

ISSN: 1537-4416 print/1537-4424 online
DOI: 10.1080/15374416.2015.1038823

Routledge
Taylor & Francis Group

Effectiveness of the Incredible Years Parenting Program for Families with Socioeconomically Disadvantaged and Ethnic Minority Backgrounds

Patty Leijten, Maartje A. J. Raaijmakers, and Bram Orobio de Castro
Department of Developmental Psychology, Utrecht University

Els van den Ban
Department of Child and Adolescent Psychiatry, University Medical Centre Utrecht, and Altrecht Institute for Mental Health Utrecht

Walter Matthys
Department of Child and Adolescent Studies, Utrecht University

Families with socioeconomically disadvantaged and ethnic minority backgrounds are often hard to reach for the prevention and treatment of disruptive child behavior problems. We examined whether the Incredible Years parenting intervention can successfully reach and benefit families with socioeconomic disadvantaged and ethnic minority backgrounds in the Netherlands. One hundred fifty-four families from a wide range of socioeconomic and ethnic backgrounds were recruited in an outpatient clinic for child and adolescent psychiatry and in elementary schools serving deprived neighborhoods. Families were randomly assigned to the BASIC Incredible Years parenting intervention 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% of the children met *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., text rev.) criteria for oppositional defiant disorder, conduct disorder, and/or attention-deficit hyperactivity disorder. Incredible Years reduced parent-reported disruptive child behavior and teacher-reported hyperactive and inattentive child behavior and increased parent-reported use of praise and incentives and reduced harsh and inconsistent discipline. Incredible Years did not affect parent-reported hyperactive and inattentive child behavior; teacher-reported child conduct problems; and parent-reported use of appropriate discipline techniques, clear expectations, physical punishment, and parenting stress. Of importance, the effectiveness of Incredible Years did not differ across families with different socioeconomic and ethnic backgrounds. Effects were maintained at 3-month follow-up. This study shows that socioeconomically disadvantaged and ethnic minority families in disadvantaged neighborhoods can be engaged in and benefit from parenting interventions to reduce disruptive child behavior.

Disruptive behavior problems in childhood set children at risk for behavior disorders and antisocial behavior in later childhood, adolescence, and adulthood (Loeber, Capaldi, & Costello, 2013; Moffitt, 1993) and bring about high burdens and costs for the children and their families, and for society at large (Scott, Knapp, Henderson, & Maughan, 2001). Parenting programs

Correspondence should be addressed to Patty Leijten, University of Oxford and the University of Amsterdam, 32 Wellington Square, Oxford, OX1 2ER, United Kingdom. E-mail: p.leijten@uva.nl

At the time of the research, Patty Leijten was affiliated with Utrecht University. Patty Leijten is currently affiliated with the University of Oxford and the University of Amsterdam.

are considered to be the key strategy for the prevention and treatment of disruptive child behaviors (e.g., Dretzke et al., 2009; McCart, Priester, Davies, & Azen, 2006; Weisz & Kazdin, 2010) and are 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, Daly, Hutchings, Bywater, & Eames, 2008).

Families with socioeconomic disadvantage (i.e., parental educational levels and/or low income) and families with ethnic minority backgrounds (i.e., in the Netherlands defined as families with relatively recent migration histories) are among the families for whom prevention and early treatment of disruptive behavior problems is considered most important (Tolan & Dodge, 2005; U.S. Department of Health and Human Services. Mental Health, 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 socioeconomically disadvantaged neighborhoods (e.g., Bengi-Arslan, Verhulst, & Crijnen, 2002; Bradley & Corwyn, 2002). Despite consensus on the need to engage families with socioeconomically disadvantaged and ethnic minority backgrounds in early intervention programs, these families appear to be hard to reach for parenting interventions in most European countries and North America. Once engaged in parenting interventions, meta-analytic findings are inconsistent about the extent to which families with socioeconomic disadvantage benefit less (e.g., Lundahl, Risser, & Lovejoy, 2006; Reyno & McGrath, 2006), less lasting (Leijten, Raaijmakers, Orobio de Castro, & Matthys, 2013), or more (Deković et al., 2011) from parenting interventions. Ethnic minority parents who have relatively recent immigration experiences often face difficulties with language and culture differences. Examples are Latin American and Asian American parents in the United States (Abe-Kim et al., 2007; U.S. Department of Health and Human Services. Mental Health, 2001), Somalian and Pakistani parents in Norway (Bjørknes, Jakobsen, & Nærde, 2011), and Moroccan and Turkish parents in the Netherland (e.g., Bevaart et al., 2012). Because families with relatively recent immigration histories are hard to reach for early intervention programs, knowledge on the effectiveness of parenting interventions for these families is limited. Based on the few studies that are available (e.g., Bjørknes, Kjøbli, Manger, & Jakobsen, 2012), parenting interventions appear to be effective at improving parenting practices and reducing disruptive child behavior for families with recent immigration histories.

Challenges to effectively reach families with socioeconomically disadvantaged and ethnic minority backgrounds lie both within parents and within interventions. Barriers for parents to start or accept treatment include limited resources to find and finance help, negative experiences with governmental or other 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 services free of charge, parents 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 reach socioeconomically disadvantaged and ethnic minority parents who need help. Challenges within interventions to reach these parents include concerns about the transportability of interventions to other cultures and tensions between program fidelity and cultural adaption (Castro, Barrera, & Martinez, 2004; Kumpfer, Alvarado, Smith, & Bellamy, 2002; Lau, 2006). Current practice encourages the use of empirically supported programs for ethnic minority families over the use of culturally adapted programs for several reasons. First, adapting parenting programs typically increases retention rates but often does not improve—and sometimes even reduces—positive outcomes (Castro et al., 2004; Griner & Smith, 2006; Kumpfer et al., 2002). Second, evidence accumulates that empirically supported parenting programs originally designed for Caucasian populations tend to be effective for families from different cultures if they are sensitive to parental perspectives on parenting and child behavior (Bjørknes et al., 2012; Gardner, Montgomery, & Knerr, 2015; Huey & Polo, 2008; Miranda et al., 2005; Reid, Webster-Stratton, & Beauchaine, 2001; Scott, O'Connor, et al., 2010; Scott, Sylva, et al., 2010).

INCREDIBLE YEARS

The Incredible Years parenting program meets criteria for a well-established evidence-based intervention (Menting, Orobio de Castro, & Matthys, 2013). In terms of theoretical background, multiple principles of Incredible Years enhance its cultural sensitivity: (a) it uses a group format that emphasizes parents' common issues rather than individual difficulties, (b) it explicitly respects cultural differences (e.g., parent groups determine their own rules, parents determine their own weekly goals), and (c) it explores and addresses possible cultural barriers to the intervention content (e.g., discussing barriers to child-directed play or praise is part of the program; Webster-Stratton, 2009). In terms of empirical evidence, the Incredible Years program has shown that it improves parenting behavior and reduces child behavior problems in families from different socioeconomic and ethnic backgrounds in the United States

(Gross et al., 2003; Kim, Cain, & Webster-Stratton, 2008; Reid, Webster-Stratton, & Baydar, 2004; Reid et al., 2001) and the United Kingdom (Hutchings et al., 2007; Scott, O'Connor, et al., 2010; Scott, Sylva, et al., 2010).

Of importance, recruitment or referral processes to parenting interventions are often different for socioeconomically disadvantaged and ethnic minority families, compared to Caucasian families who are not socioeconomically disadvantaged. Because socioeconomically disadvantaged and ethnic minority families tend to be harder to reach for interventions, they typically need to be actively recruited to sign up for parenting programs (e.g., Kim et al., 2008; Scott, O'Connor, et al., 2010). In this study, we explore recruitment method as a putative moderator of the effectiveness of parenting interventions in these families. Our study is among the first in to explicitly include a highly mixed sample in terms of socioeconomic status, ethnic background, and referral status. It therefore enables the unique direct comparison (i.e., within one trial) of program effectiveness between families from different backgrounds recruited in different ways. These direct comparisons are important to increase insight into which families benefit most from parenting programs.

AIMS OF THE PRESENT STUDY

We examined whether the Incredible Years parenting program is differentially effective for families with different socioeconomic status and ethnic backgrounds in the Netherlands. First, we examined whether the Incredible Years parenting program is effective at improving child behavior and parenting practices in a socioeconomically mixed and multiethnic sample. Second, we tested whether the effectiveness of Incredible Years depends on families' socioeconomic status or ethnic minority status. Third, we examined whether effectiveness depends on families' recruitment process. Finally, we tested whether families are able to maintain positive change up to 3 months after intervention termination.

METHOD

Design

We used a waiting list control design. 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. First, hardly any treatment as usual exists for socioeconomically disadvantaged ethnic minority families. Most of these families in the Netherlands 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, families who signed up indicated that they experienced parenting difficulties due to disruptive child behavior but hardly engaged in any other form of mental health support. We considered it unethical to withhold them from the Incredible Years program that we offered for this study.

We used a 2:1 ratio to randomize families in the intervention or waiting list control condition to have a control group while giving immediate parenting program access to as many participants as possible (Friedman, Furberg, & DeMets, 1998; Kim et al., 2008). In addition, the 2:1 allocation also enabled us to start providing the program faster. We offered the program in the families' own neighborhoods and needed at least eight parents 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 parenting intervention 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). For actual random allocation, we used a box with closed envelopes, of which two thirds of the envelopes contained "intervention condition" and one third contained "control condition," from which researchers blind to participants drew one envelope for each family that agreed to participate.

Participants

Participants were 154 mothers experiencing parenting difficulties due to disruptive child behavior. Children were 3 to 8 years 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. To ensure sufficient variation in socioeconomic and ethnic background in our sample, we actively recruited the other two thirds ($N = 109$) of the families in the most deprived neighborhoods of Utrecht, one of the Netherlands' four largest cities. Characteristics of referred and recruited families are presented in Table 1.

Largest ethnic minority groups in our sample were Moroccans (41%) 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 thirds 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

TABLE 1
Family Characteristics and Problem Severity in Referred and Recruited Families

	Referred Families[a] *M (SD)*	*Recruited Families*[b] *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-TR* Criteria		
ODD	56%	19%
CD	11%	8%
ADHD	81%	38%

Note: *DSM-IV-TR* = *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., text rev.); ODD = oppositional defiant disorder; CD = conduct disorder; ADHD = attention-deficit hyperactivity disorder.
[a] $n = 46$.
[b] $n = 110$.

and many actively recruited families were ethnic minority families, our sample included a small sample of referred ethnic minority families (15.6% of referred families) and recruited Caucasian families (17.4% of recruited families). Socioeconomic status was indexed by mothers' educational level. Mothers had on average 13 years of education, which in the Dutch education system reflects elementary school and high school. However, variation in educational level between families was large ($SD = 4.41$), ranging from elementary school to university degrees.

Procedure

Participants were thus either referred for disruptive child behavior to outpatient clinics for child and adolescent psychiatry or actively recruited in deprived neighborhoods. In the psychiatric clinic, parents of children in the appropriate age range who had a *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., text rev. [*DSM-IV-TR*]; American Psychiatric Association, 2000) diagnosis of 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 referred families who were invited, 45 families participated (Figure 1). Sixteen percent of these families had ethnic minority backgrounds (Table 1).

To recruit ethnic minority families who suffered from disruptive child behavior, we built on the experiences from earlier studies, and on theory and empirical findings to engage ethnic minority families in treatment (e.g., Kazdin, Hollan, & Crowley, 1997; Scheppers et al., 2006; Scott, O'Connor, et al., 2010; Tolan & McKay, 1996). We organized welcoming coffee meetings at elementary schools serving socioeconomically disadvantaged, multicultural neighborhoods to inform parents about the project. During these meetings, we announced the start of a parenting program in the neighborhood and explained what this program 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 in this manner, we used specific strategies to overcome several key barriers to treatment. First, groups in these neighborhoods were held at schools and community centers, rather than in buildings of mental health organizations. Second, groups were held during school hours, and we offered free child care for younger brothers or sisters during the meetings. Third, groups met the cultural norms of Moroccan and Turkish families by organizing groups for mothers only. Fourth, we used interpreters when needed, to overcome possible language barriers during coffee meetings, Incredible Years meetings, and filling in questionnaires. Fifth, we did not impose criteria that might be considered stigmatizing, such as referral by a general practitioner or a formally diagnosed behavior disorder. Families who showed interest in the parenting program were individually interviewed and invited to participate if they verbally indicated that they perceived parenting difficulties due to disruptive child behavior. We chose to use verbal report rather than a formal screening measure because fear of stigma and mistrust of professional agencies based on previous experiences are among the key barriers to treatment for ethnic minority families in the Netherlands (e.g., Scheppers et al., 2006; Tolan & McKay, 1996). Our staff found this approach to be helpful, especially with families who experienced language difficulties. Because we aimed to include families who 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 who were contacted via elementary schools, 109 families indicated to experience disruptive child behavior and were interested in participation in the program. Seventy-four percent of these families were ethnic minority families (Figure 1). The 157 families who attended a coffee meeting but did not sign up for participation did not provide us with their contact information after the meeting. We therefore do not know whether they felt their children did or did not show disruptive child behavior. Clinical impressions were that part of these families merely attended because they were interested in parenting in general, whereas some parents did experience disruptive child behavior problems but did not sign up because

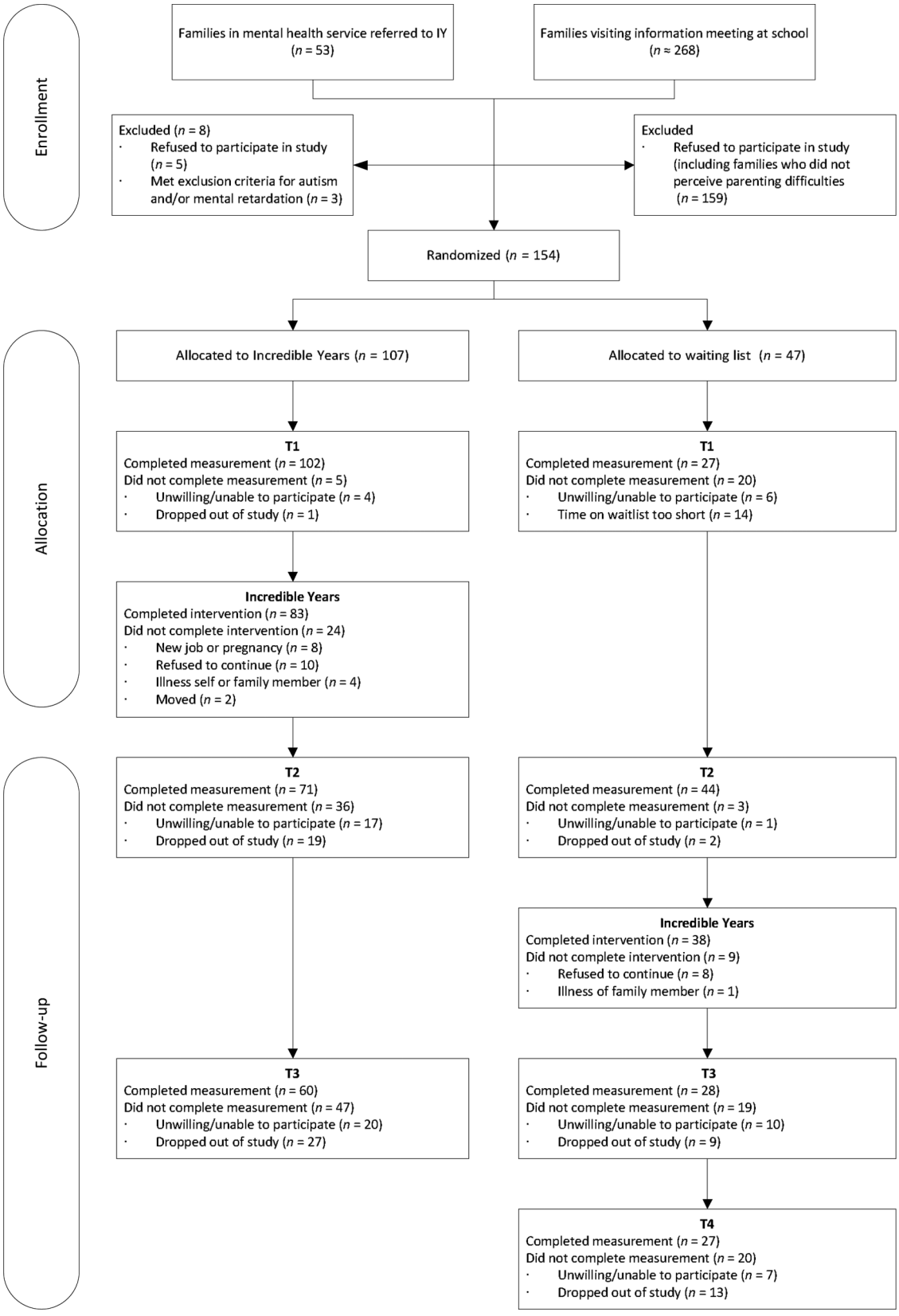

FIGURE 1 Participant flow diagram.

they did not feel comfortable participating in the parenting intervention group.

Families filled in questionnaires a few weeks or days prior to the start of the intervention, immediately after termination of the intervention, and 3 months later. Families in the waiting list control condition filled in questionnaires 3 months prior to the intervention, just before the start of the intervention, immediately after termination, and 3 months later (Figure 1). Parents received up to €45 to accommodate lost time due to filling in the questionnaires. All parents signed informed consent. The study protocol was approved by the Medical-Ethical Committee of University Medical Center Utrecht.

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 7-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 (Baden & Howe, 1992; Eyberg & Ross, 1978). 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, a 25-item measure of problem behavior and prosocial behavior, showing good reliability and validity in the Netherlands (Goodman, 1997; Van Widenfelt, Goedhart, Treffers, & Goodman, 2003). We used the Conduct Problems scale (five items), Hyperactivity and Inattention scale (five 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 six-item Teacher Rating of Aggression (Dodge & Coie, 1987), showing good psychometrical properties in the Netherlands (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 reliable 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, 2004). 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 $\alpha = .60$ and $\alpha = .84$ ($M = .72$).

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 chose a subset of subscales to diminish the burden for parents of filling too many questionnaires. We used two key subscales from the parent domain (restricted role and isolation) and two key subscales from the child domain (acceptability and reinforces parent), which resulted in 33 items in total. 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 $\alpha = .89$.

Diagnostic interview on child behavior. Parents were interviewed to indicate the extent to which their children met *DSM-IV-TR* criteria for ODD, CD, and ADHD (American Psychiatric Association, 2000). We used the Kiddie-Disruptive Behavior Disorder Schedule (Bunte, Schoemaker, Hessen, van der Heijden, & Matthys, 2013; Keenan, Wakschlag, & Danis, 2002) for children between 3 and 5, and the Diagnostic Interview Schedule for Children version IV (Shaffer, Fisher, Lucas, Dulcan, & Schwab-Stone, 2000) for children between 6 and 8. The Kiddie-Disruptive Behavior Disorder Schedule and Diagnostic Interview Schedule for Children version IV are semistructured interviews shown to reliably and validly matching the *DSM-IV-TR* criteria (e.g., Bunte et al., 2013; Shaffer et al., 2000).

The Intervention

The BASIC Incredible Years videotape modeling parent program (Webster-Stratton, 2001) entails groups of 8 to 15 parents for weekly 2-hr sessions. The program consisted of 12 to 18 sessions (during our project between 2010 and 2012, the number of sessions for the Incredible

Years program was extended by the developer Webster-Stratton). For all groups one booster session was delivered between 1 or 2 months after termination of the program. The BASIC Incredible Years parenting program covers the following 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 on 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 and to read the book (Webster-Stratton, 2006) 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 Incredible Years certified; all were bachelor's, master's, or Ph.D.-level clinicians and participated in supervision meetings. Many group leaders were front-line clinicians and 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 ethnic minority or Caucasian families. Dominant language during Incredible Years sessions was Dutch, and interpreters were used to help parents who did not sufficiently master the Dutch language. The program was used in its original form (i.e., not culturally adapted). However, 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. More specifically, 42 families (21 in the intervention condition and 21 in the control condition) had missing data on one of the time points (i.e., either baseline or posttest), and 22 other families dropped out of the study completely. Main reasons for missing data were families' unavailability for measurement due to illness or family crisis, dropping out of the study because families were no longer willing or able to participate, and a too short waiting list period for some of the families in the control condition. Too short waiting list periods for families in the control condition occurred when parents enrolled in the study when the final group in their neighborhood started within 3 months after enrollment. Parents were enrolled in this period until the minimum number of eight mothers to start the group was reached. For example, mothers who were randomized into the control condition but enrolled a few weeks before the start of the final group in their neighborhood had missing data on T1. We considered it unethical to refer them to other neighborhoods.

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). We therefore used Multiple Imputation procedures in SPSS 20.0 to estimate missing parameters (IBM Corp, 2011; Little & Rubin, 2002). Multiple Imputation produces maximally unbiased parameter estimates (Allison, 2002; 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. Kenward & Carpenter, 2007). 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

Before the primary analyses, a multivariate analysis of variance was used to test whether the Incredible Years and waiting list control condition differed on demographic characteristics and baseline levels of outcome variables. For the primary analyses, first, analyses of covariance (ANCOVAs) were used to test the effect of Incredible Years versus waiting list condition on the outcome measures on T2, including T1 baseline scores as covariates. Second, two-way ANCOVAs were used to test the possible moderator effects of family socioeconomic status and ethnic background on the effectiveness of Incredible Years. Third, to test for possible influences of the ways in which families were recruited for the study, we used two-way ANCOVAs to test the possible moderator effect of recruitment process (i.e., referred vs. recruited). Fourth, paired samples T tests were used on immediate posttest and follow-up scores to test the extent to which immediate posttest change was maintained at 3-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 a multivariate analysis of variance, $F(22, 130) = .68$, *ns*. Program attendance rates were satisfactory and similar to those in other Incredible Years studies (e.g., Hutchings et al., 2007; Webster-Stratton, 1998). Mothers of referred children attended on average 72% of all sessions ($SD = 24\%$); mothers of recruited children attended 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 nonreferred children, as indicated with an analysis of variance (Table 1). Referred children scored on average around the 90th percentile on the ECBI intensity scale; nonreferred 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 nonreferred 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 parenting intervention studies on nonreferred families in the Netherlands (e.g., Leijten, Overbeek, & Janssens, 2012; Menting, Orobio de Castro, Wijngaards-de Meij, & Matthys, 2014) and underscores the high risk nature of our recruited sample.

Immediate Effects of Incredible Years

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 stronger reductions in disruptive child behavior on the ECBI 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, $F(2, 153) = 7.79$, $p < .05$, $d = .45$. Reliable change index calculations (cf. Jacobson, Follette, & Revenstorf, 1984) showed that 38% of the children in the Incredible Years condition showed clinically meaningful reductions in disruptive behavior, as measured with the ECBI intensity scale. More specifically, at posttest, 86% of the children in the Incredible Years condition scored within 1 standard deviation above the general population norms on the ECBI intensity scale, compared to 57% of the children in the control condition. 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 stronger reductions in hyperactive and inattentive behavior for 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, for children whose mothers had participated in Incredible Years.

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, Fs(2, 153), ranging from .24 to 1.56, *ns*, ds = .08–.20, nor did mothers report reduced parenting stress in any of the subscales or combined PSI scales, $F(2, 153) = .27$, *ns*, $d = .09$, for combined PSI score; Table 2).

Because the number of sessions was extended during our project and not all families attended an equal amount of sessions, we checked 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 attended) influenced families' improvement in parenting or child behavior (ps > .29 and ps > .50, respectively).

Are Effects of Incredible Years Influenced by Families' Socioeconomic or Ethnic Backgrounds?

We compared the effectiveness of Incredible Years for families with various socioeconomic (i.e., educational

TABLE 2
Immediate Effects of Incredible Years

	Incredible Years[a]				*Control*[b]				
	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 Problems	14.22	5.69	12.57	6.38	14.32	6.26	13.43	6.05	.19
Conduct	2.94	1.84	2.23	1.79	3.43	2.26	3.20	2.03	.45*
Hyper/Inattention	5.61	2.76	5.00	2.82	6.13	2.58	5.47	2.75	.31
SDQ-Teacher									
Total Problems	10.93	6.25	9.33	6.52	11.49	7.55	11.09	6.32	.29
Conduct	1.84	2.21	1.79	3.14	2.26	3.11	2.07	1.84	.26
Hyper/Inattention	5.16	3.03	4.31	3.40	5.00	3.31	5.39	3.13	.38*
Parenting (PPI)									
Appropriate Discipline	4.18	.89	4.30	.96	4.19	.91	4.13	.87	.20
Harsh & Inconsistent Discipline	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: ECBI = Eyberg Child Behavior Inventory; SDQ = Strengths and Difficulties Questionnaire; PPI = Parent Practices Interview; PSI = Parenting Stress Index.

[a] $n = 107$.

[b] $n = 47$.

*$p < .05$. ***$p < .001$.

level) and ethnic backgrounds using two-way analyses of variance on all outcome measures presented in Table 2. No moderation effects were found of socioeconomic status or ethnic minority background on reduced mother- or teacher-reported disruptive behavior ($ps > .10$) or on improved parenting behavior ($ps > .30$). Thus, families' socioeconomic and ethnic background did not significantly affect families' improvement as a result of Incredible Years. This is reflected in comparable effect sizes for socioeconomic status and ethnic background subgroups. On the ECBI Intensity Scale, our main outcome variable, the effect size of Incredible Years was $d = .44$ for socioeconomically disadvantaged families and $d = .60$ for socioeconomically nondisadvantaged families, and $d = .70$ for families *without* an ethnic minority background and $d = .37$ for families *with* ethnic minority backgrounds.

Figure 2 shows the change in ECBI intensity scores over time for low versus moderately educated parents and for Dutch majority versus ethnic minority families. 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 reductions in disruptive child behavior

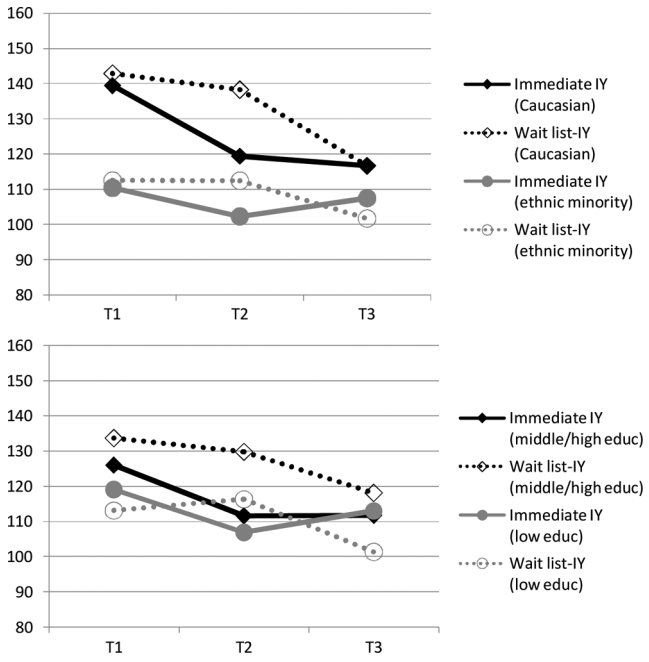

FIGURE 2 Change in children's disruptive behavior (ECBI Intensity Scale) in the immediate Incredible Years intervention condition (IY between T1 and T2) and waiting list control condition (IY between T2 and T3).

between T1 and T2, whereas 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 show reductions in disruptive child behavior once they receive Incredible Years, between T2 and T3.

Are Effects of Incredible Years Influenced by Recruitment Processes?

We used two different recruitment methods to ensure a large variety of families socioeconomic and ethnic backgrounds. Families were either referred to Incredible Years in an outpatient clinic for child and adolescent psychiatry for disruptive child behavior or recruited for Incredible Years in socioeconomically disadvantaged neighborhoods. We tested whether recruitment process influenced the effectiveness of Incredible Years. Recruitment process as a dichotomous moderator had no significant influence on the effects of Incredible Years on any of our outcome measures ($ps > .11$). Thus, the effects of Incredible Years were not statistically different for referred and recruited families.

Maintenance of the Effects of Incredible Years

Due to the waiting list design, no follow-up data were available for the control group. We therefore tested whether outcomes deteriorated from immediate post-treatment to 3 months' follow-up for the sample as a whole. We thus combined families from the intervention condition (between T2 and T3) and waiting list control condition (between T3 and T4) to test maintenance of effects. Within-participant t tests indicated that scores did not change between immediate after intervention measurement and 3 months' follow-up, $ts(142) = -.24$ to .84, *ns*, with very low effect sizes (Cohen's $ds = -.04$ to .14). Thus, immediate improvements of parenting and child behavior were still present 3 months later.

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 nonsignificant effects on disruptive child behavior based on imputed data became significant when analyzing only 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. Effects on parenting behavior and parenting stress did not change. Overall, results were highly similar for imputed data analysis and complete data analysis and our imputed data analysis seemed to yield more conservative results.

DISCUSSION

We examined the effectiveness of the BASIC Incredible Years parenting program to reduce disruptive child behavior in families in the Netherlands with socioeconomically disadvantaged and ethnic minority backgrounds. Despite the often hard-to-reach nature of these families, we found that Incredible Years improved parenting and child behavior in these families. Effects were independent of recruitment method and maintained at 3 months' follow-up.

Incredible Years reduced parent-reported disruptive child behavior, reduced teacher-reported child 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 successfully change family practices and improve child outcomes (e.g., Gardner et al., 2007; Menting et al., 2013; Webster-Stratton, 1998). Effect sizes were moderate (mean Cohen's d including non-significant findings was .34 for child effects and .30 for parenting effects), and similar to effect sizes found in other parenting intervention studies (e.g., McCart et al., 2006; Weisz & Kazdin, 2010).

Incredible Years did not reduce parent-reported child aggression. The Parent Rating of Aggression instrument includes mainly items on children's aggression toward other children (e.g., "uses physical force to dominate other children"). Incredible Years thus seems to primarily affect children's oppositional and aggressive behavior toward parents, rather than children's aggressive behavior toward other children. Although Incredible Years focuses on reducing oppositional behavior, rather than hyperactivity, 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. 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 parenting intervention 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, but not all, targeted parenting practices. The use of positive parenting practices such as praise, incentives, and consistency is considered critical in the Incredible Years program (Webster-Stratton, 2001) and 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 effects of Incredible Years specifically for these techniques.

Our finding that the effects of Incredible Years on improved parenting and child behavior were not influenced by families' socioeconomic and ethnic background adds to the growing body of evidence on the effectiveness of parenting interventions across families from different socioeconomic and ethnic backgrounds (e.g., Deković et al., 2011; Leijten et al., 2013; Shelleby & Shaw, 2013). More specifically, the cultural sensitive character of Incredible Years may contribute to the program's effectiveness across families with different 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 acknowledgment, regardless of socioeconomic or 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 who tend to have more fear of stigma (Scheppers et al., 2006; Tolan & McKay, 1996).

More generally, there is growing evidence for the effectiveness of established parenting intervention programs to reduce of disruptive behavior problems in young children 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., 2015, for a review). Parenting intervention programs that are sensitive to differences between families across cultures appear 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 parenting programs provided in non-Western countries and by non-Western therapists is needed to draw final conclusions about effective transportability across cultures.

We needed to use different recruitment methods to ensure a large variety of families' socioeconomic and ethnic backgrounds. Families were either referred by a general practitioner to an outpatient clinic for child and adolescent psychiatry or actively recruited in deprived neighborhoods. Recruitment processes did not affect the effectiveness of Incredible Years. This may be somewhat surprising, given that the initial levels of behavior problems were substantially higher in referred children, compared to recruited children. Higher initial levels of behavior problems typically predict more improvement (Leijten et al., 2013; Menting et al., 2013), which might be explained by a larger scope of improvement and more motivation to change. Nevertheless, several characteristics of our recruited sample might explain the effectiveness of Incredible Years for these families. First, clinical impressions suggested that most families from our recruited sample do not typically engage in mental health treatment and that many mothers had not received any previous professional help to change parenting practices and child behavior. Thus, they may have had much to gain from the support they received in the Incredible Years program. Second, many recruited families initially indicated that they experienced serious barriers to treatment. Often multiple meetings with families were necessary before families agreed to participate. There may have been a selection effect in that recruited families who overcame their barriers to treatment were families who were especially motivated to change.

Limitations, Implications, and Suggestions for Future Research

We emphasize the importance of studying a hard-to-reach population of socioeconomically disadvantaged and ethnic minority families, who are typically reluctant to engage in mental health services. Despite this importance, studying these families brought along several limitations. First, we rely mainly on parent report of child behavior and parenting practices. The majority of the ethnic minority mothers had Islamic backgrounds, and many did not want to be videotaped based on religious beliefs. Although we have multi-informant data in which

teacher reports partly confirm parent reported change in child behavior, bias may exist in mother reports of child behavior. This bias can go two ways. On one hand, some suggest that parenting interventions can increase mothers' awareness of negative child behavior (e.g., Posthumus, Raaijmakers, Maassen, van Engeland, & Matthys, 2012), which may lead to an underestimation of true change in parent-reported measures. 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 in parent-reported measures. Second, despite extensive efforts to include all families in each of the waves of data collection, we had relatively many missing data. We used the preferred approach of multiple imputation to account for these missing data and followed standard guidelines by comparing our results to the results of complete data analysis, which led to 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 to engage the hardest-to-reach families, 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 3 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 (Jones et al., 2008; Posthumus et al., 2012). In this study, however, we were not able to contribute to this research and can conclude only that parent and child behavior did not change significantly between immediate termination and 3 months after the intervention.

Our study is among the few to study the effectiveness of an established parenting program for ethnic minority families with recent immigration backgrounds. Yet many questions remain unanswered. We compared program effectiveness for ethnic minority and majority families who differed from each other in more ways than just ethnicity, the main difference for most many families being the way in which they were recruited to participate in this study. This was inevitable. There is no substantial referred population of ethnic minority families in the Netherlands, and in many European countries alike. Although we specifically checked whether recruitment processes affected the effectiveness of Incredible Years, our sample, like most individual parenting intervention trials, was underpowered for moderation analyses to detect even medium interaction effects (observed power was .45 to detect medium effect sizes). Studies with larger subsamples, of those synthesizing data across trials, are needed to answer more refined research questions and to disentangle possible confounding or counterbalancing effects (e.g., the specific role of ethnic minority status, socioeconomic status, and recruitment process).

This study indicates that families with socioeconomically disadvantaged and ethnic minority backgrounds can be effectively reached to engage in the Incredible Years parenting program. Our study does suggest that reaching ethnic minority and socioeconomically disadvantaged families may require outreaching strategies, such as providing interventions in nonstigmatizing locations (e.g., schools) and avoiding strict inclusion criteria that could be considered stigmatizing (e.g., psychiatric diagnosis). A challenging but important task for policymakers and clinicians might be to implement these outreaching strategies into regular mental health practice to help socioeconomically disadvantaged and ethnic minority families in the most optimal way. Successful implementation of evidence-based parenting interventions into regular mental health services may require the implementation of outreaching strategies to actually reach, retain, and benefit families with socioeconomically disadvantaged and ethnic minority backgrounds.

ACKNOWLEDGMENTS

Maartje Raaijmakers is involved in the dissemination and implementation of the Incredible Years parenting program in the Netherlands. None of the other authors have any conflicts of interest to declare.

FUNDING

This research was supported by the Netherlands Organisation for Health Research and Development.

REFERENCES

Abe-Kim, J., Takeuchi, D. T., Hong, S., Zane, N., Sue, S., Spencer, M. S., … Alegría, M. (2007). Use of mental health–related services among immigrant and US-born Asian Americans: Results from the National Latino and Asian American Study. *American Journal of Public Health*, *97*, 91–98. doi:10.2105/AJPH.2006.098541

Abidin, R. R. (Ed.). (1983). *Parenting stress index manual*. Charlottesville, VA: Pediatric Psychology Press.

Achenbach, T. M., & Edelbrock, C. S. (1986). *Manual for the teacher's report form and teacher version of the child behavior profile*. Burlington, VT: Author.

Allison, P. D. (2000). Multiple imputation for missing data: A cautionary tale. *Sociological Methods & Research*, *28*, 301–309. doi:10.1177/0049124100028003003

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: Author.

Baden, A. D., & Howe, G. W. (1992). Mothers' attributions and expectancies regarding their conduct-disordered children.

Journal of Abnormal Child Psychology, *20*, 467–485. doi:10.1007/BF00916810

Bengi-Arslan, L., Verhulst, F. C., & Crijnen, A. A. M. (2002). Prevalence and determinants of minor psychiatric disorder in Turkish immigrants living in the Netherlands. *Social Psychiatry and Psychiatric Epidemiology*, *37*, 118–124. doi:10.1007/s001270200003

Bevaart, F., Mieloo, C. L., Jansen, W., Raat, H., Donker, M. C., Verhulst, F. C., & van Oort, F. V. (2012). Ethnic differences in problem perception and perceived need for care for young children with problem behaviour. *Journal of Child Psychology and Psychiatry*, *53*(10), 1063–1071.

Biederman, J., Monuteaux, M. C., Doyle, A. E., Seidman, L. J., Wilens, T. E., Ferrero, F., … Faraone, S. V. (2004). Impact of executive function deficits and attention-deficit/hyperactivity disorder (ADHD) on academic outcomes in children. *Journal of Consulting and Clinical Psychology*, *72*, 757–766. doi:10.1037/0022-006X.72.5.757

Bjørknes, R., Jakobsen, R., & Nærde, A. (2011). Recruiting ethnic minority groups to evidence-based parent training. Who will come and how? *Children and Youth Services Review*, *33*, 351–357. doi:10.1016/j.childyouth.2010.09.019

Bjørknes, R., Kjøbli, J., Manger, T., & Jakobsen, R. (2012). Parent training among ethnic minorities: Parenting practices as mediators of change in child conduct problems. *Family Relations*, *61*, 101–114. doi:10.1111/j.1741-3729.2011.00683.x

Bradley, R. H., & Corwyn, R. F. (2002). Socioeconomic status and child development. *Annual Review of Psychology*, *53*, 371–399. doi:10.1146/annurev.psych.53.100901.135233

Bunte, T. L., Schoemaker, K., Hessen, D. J., van der Heijden, P. G., & Matthys, W. (2013). Clinical Usefulness of the kiddie-disruptive behavior disorder schedule in the diagnosis of DBD and ADHD in preschool children. *Journal of Abnormal Child Psychology*, *41*, 681–690. doi:10.1007/s10802-013-9732-1

Burns, G. L., & Patterson, D. R. (2001). Normative data on the Eyberg Child Behavior Inventory and Sutter-Eyberg Student Behavior Inventory: Parent and teacher rating scales of disruptive behavior problems in children and adolescents. *Child & Family Behavior Therapy*, *23*, 15–28. doi:10.1300/J019v23n01_02

Castro, F. G., Barrera, M., Jr., & Martinez, C. R., Jr. (2004). The cultural adaptation of prevention interventions: Resolving tensions between fidelity and fit. *Prevention Science*, *5*, 41–45. doi:10.1023/B:PREV.0000013980.12412.cd

Chronis, A. M., Chacko, A., Fabiano, G. A., Wymbs, B. T., & Pelham, W. E., Jr. (2004). Enhancements to the behavioral parent training paradigm for families of children with ADHD: Review and future directions. *Clinical Child and Family Psychology Review*, *7*, 1–27. doi:10.1023/B:CCFP.0000020190.60808.a4

De Brock, A. A. J. L., Vermulst, A. A., Gerris, J. R. M., & Abidin, R. R. (1992). *Nijmeegse ouderlijke stress index, handleiding experimentele versie* [Nijmegen parenting stress index, manual experimental version]. Amsterdam, the Netherlands: Swets & Zeitlinger.

Deković, M., Slagt, M. I., Asscher, J. J., Boendermaker, L., Eichelsheim, V. I., & Prinzie, P. (2011). Effects of early prevention programs on adult criminal offending: A meta-analysis. *Clinical Psychology Review*, *31*, 532–544. doi:10.1016/j.cpr.2010.12.003

De Los Reyes, A. (2011). Introduction to the special section: More than measurement error: Discovering meaning behind informant discrepancies in clinical assessments of children and adolescents. *Journal of Clinical Child & Adolescent Psychology*, *40*, 1–9. doi:10.1080/15374416.2011.533405

Dodge, K. A., & Coie, J. D. (1987). Social-information-processing factors in reactive and proactive aggression in children's peer groups. *Journal of Personality and Social Psychology*, *53*, 1146–1158. doi:10.1037/0022-3514.53.6.1146

Dretzke, J., Davenport, C., Frew, E., Barlow, J., Stewart-Brown, S., Bayliss, S., … Hyde, C. (2009). The clinical effectiveness of different parenting programmes for children with conduct problems: A systematic review of randomised controlled trials. *Child and Adolescent Psychiatry and Mental Health*, *3*, 7–16. doi:10.1186/1753-2000-3-7

Eyberg, S. M., & Ross, A. W. (1978). Assessment of child behavior problems: The validation of a new inventory. *Journal of Clinical Child Psychology*, *7*, 113–116. doi:10.1080/15374417809532835

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, *39*, 175–191. doi:10.3758/BF03193146

Friedman, L. M., Furberg, C. D., & DeMets, D. L. (1998). *Fundamentals of clinical trials*. New York, NY: Springer.

Gardner, F., Montgomery, P., & Knerr, W. (2015). Transporting evidence-based parenting programs for child problem behavior (age 3–10) between countries: Systematic review and meta-analysis. *Journal of Clinical Child & Adolescent Psychology*. Advance online publication. doi:10.1080/15374416.2015.1015134.

Gardner, F., Shaw, D. S., Dishion, T. J., Burton, J., & Supplee, L. (2007). Randomized prevention trial for early conduct problems: Effects on proactive parenting and links to toddler disruptive behavior. *Journal of Family Psychology*, *21*, 398–406. doi:10.1037/0893-3200.21.3.398

Goodman, R. (1997). The strengths and difficulties questionnaire: A research note. *Journal of Child Psychology and Psychiatry*, *38*, 581–586. doi:10.1111/j.1469-7610.1997.tb01545.x

Griner, D., & Smith, T. B. (2006). Culturally adapted mental health intervention: A meta-analytic review. *Psychotherapy: Theory, Research, Practice, Training*, *43*, 531–538. doi:10.1037/0033-3204.43.4.531

Gross, D., Fogg, L., Webster-Stratton, C., Garvey, C., Julion, W., & Grady, J. (2003). Parent training of toddlers in day care in low-income urban communities. *Journal of Consulting and Clinical Psychology*, *71*, 261–278. doi:10.1037/0022-006X.71.2.261

Hendrickx, M., Crombez, G., Roeyers, H., & Orobio de Castro, B. (2003). Psychometrische evaluatie van de Nederlandstalige versie van de Agressie Beoordelingsschaal van Dodge en Coie (1987) [Psychometric evaluation of the Dutch version of the Agression Scale by Dodge and Coie (1987)]. *Gedragstherapie*, *36*, 33–43.

Hinshaw, S. P. (1992). Academic underachievement, attention deficits, and aggression: Comorbidity and implications for intervention. *Journal of Consulting and Clinical Psychology*, *60*, 893–903. doi:10.1037/0022-006X.60.6.893

Huey, S. J., Jr., & Polo, A. J. (2008). Evidence-based psychosocial treatments for ethnic minority youth. *Journal of Clinical Child & Adolescent Psychology*, *37*, 262–301. doi:10.1080/15374410701820174

Hutchings, J., Gardner, F., Bywater, T., Daley, D., Whitaker, C., Jones, K., … Edwards, R. T. (2007). Parenting intervention in Sure Start services for children at risk of developing conduct disorder: Pragmatic randomised controlled trial. *British Medical Journal*, *334*, 678. doi:10.1136/bmj.39126.620799.55

IBM Corp. (2011). *IBM SPSS statistics for windows, Version 20.0*. Armonk, NY: Author.

Jacobson, N., Follette, W., & Revenstorf, D. (1984). Psychotherapy outcome research: Methods for reporting variability and evaluating clinical significance. *Behavior Therapy*, *15*, 336–352. doi:10.1016/S0005-7894(84)80002-7

Jalali, M., Shaeeri, M. R., Tahmasian, K., & Pourahmadi, E. (2009). The effects of triple P-Positive Parenting Program on 7–10 year old children with oppositional defiant disorder (ODD). *Daneshvar Raftar*, *1*, 29–38.

Jones, K., Daley, D., Hutchings, J., Bywater, T., & Eames, C. (2008). Efficacy of the Incredible Years Programme as an early intervention

for children with conduct problems and ADHD: Long-term follow-up. *Child: Care, Health and Development*, *34*, 380–390. doi:10.1111/j.1365-2214.2008.00817.x

Kazdin, A. E., Holland, L., & Crowley, M. (1997). Family experience of barriers to treatment and premature termination from child therapy. *Journal of Consulting and Clinical Psychology*, *65*, 453–463. doi:10.1037/0022-006X.65.3.453

Keenan, K., Wakschlag, L., & Danis, B. (2002). *Manual for the kiddie disruptive behavior disorders schedule for preschool children (K-DBDS), Version 1.1* (Unpublished manuscript). University of Chicago, Chicago, IL.

Kenward, M. G., & Carpenter, J. (2007). Multiple imputation: Current perspectives. *Statistical Methods in Medical Research*, *16*, 199–218. doi:10.1177/0962280206075304

Kim, E., Cain, K. C., & Webster-Stratton, C. (2008). The preliminary effect of a parenting program for Korean American mothers: A randomized controlled experimental study. *International Journal of Nursing Studies*, *45*, 1261–1273. doi:10.1016/j.ijnurstu.2007.10.002

Kumpfer, K. L., Alvarado, R., Smith, P., & Bellamy, N. (2002). Cultural sensitivity and adaptation in family-based prevention interventions. *Prevention Science*, *3*, 241–246. doi:10.1023/A:1019902902119

Lakes, K. D., Kettler, R. J., Schmidt, J., Haynes, M., Feeney-Kettler, K., Kamptner, L.,... Tamm, L. (2009). The CUIDAR early intervention parent training program for preschoolers at risk for behavioral disorders: An innovative practice for reducing disparities in access to service. *Journal of Early Intervention*, *31*, 167–178. doi:10.1177/1053815109331861

Lau, A. S. (2006). Making the case for selective and directed cultural adaptations of evidence-based treatments: Examples from parent training. *Clinical Psychology: Science and Practice*, *13*, 295–310. doi:10.1111/j.1468-2850.2006.00042.x

Leijten, P., Overbeek, G., & Janssens, J. M. A. M. (2012). Effectiveness of a parent training program in (pre)adolescence: Evidence from a randomized controlled trial. *Journal of Adolescence*, *35*, 833–842. doi:10.1016/j.adolescence.2011.11.009

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 & Adolescent Psychology*, *42*, 384–392. doi:10.1080/15374416.2013.769169

Leung, C., Sanders, M. R., Leung, S., Mak, R., & Lau, J. (2003). An outcome evaluation of the implementation of the triple P-Positive Parenting Program in Hong Kong. *Family process*, *42*, 531–544. doi:10.1111/j.1545-5300.2003.00531.x

Little, R. J. A., & Rubin, D. B. (2002). *Statistical analysis with missing data*. Hoboken, NJ: Wiley.

Loe, I. M., & Feldman, H. M. (2007). Academic and educational outcomes of children with ADHD. *Journal of Pediatric Psychology*, *32*, 643–654. doi:10.1093/jpepsy/jsl054

Loeber, R., Capaldi, D. M., & Costello, E. (2013). Gender and the development of aggression, disruptive behavior, and early delinquency from childhood to early adulthood. *Disruptive Behavior Disorders*, *1*, 137–160. doi:10.1007/978-1-4614-7557-6_6

Lundahl, B., Risser, H. J., & Lovejoy, M. C. (2006). A meta-analysis of parent training: Moderators and follow-up effects. *Clinical Psychology Review*, *26*, 86–104. doi:10.1016/j.cpr.2005.07.004

McCart, M. R., Priester, P. E., Davies, W. H., & Azen, R. (2006). Differential effectiveness of behavioral parent-training and cognitive-behavioral therapy for antisocial youth: A meta-analysis. *Journal of Abnormal Child Psychology*, *34*, 527–541. doi:10.1007/s10802-006-9031-1

Menting, A. T. A., Orobio de Castro, B., & Matthys, W. (2013). Effectiveness of the incredible years parent training to modify disruptive and prosocial child behavior: A meta-analytic review. *Clinical Psychology Review*, *33*, 901–913. doi:10.1016/j.cpr.2013.07.006

Menting, A. T. A., Orobio de Castro, B., Wijngaards-de Meij, L. D. N. V., & Matthys, W. (2014). A trial of parent training for mothers being released from incarceration and their children. *Journal of Clinical Child & Adolescent Psychology*, *43*, 381–396. doi:10.1080/15374416.2013.817310

Miranda, J., Bernal, G., Lau, A., Kohn, L., Hwang, W.-C., & LaFromboise, T. (2005). State of the science on psychosocial interventions for ethnic minorities. *Annual Review of Clinical Psychology*, *1*, 113–142. doi:10.1146/annurev.clinpsy.1.102803.143822

Moffitt, T. E. (1993). Adolescence-limited and life-course-persistent antisocial behavior: A developmental taxonomy. *Psychological Review*, *100*, 674–701. doi:10.1037/0033-295X.100.4.674

Nixon, R. D. V., Sweeney, L., Erickson, D. B., & Touyz, S. W. (2003). Parent-child interaction therapy: A comparison of standard and abbreviated treatments for oppositional defiant preschoolers. *Journal of Consulting and Clinical Psychology*, *71*, 251–260. doi:10.1037/0022-006X.71.2.251

Posthumus, J. A., Raaijmakers, M. A. J., Maassen, G. H., van Engeland, H., & Matthys, W. (2012). Sustained effects of incredible years as a preventive intervention in preschool children with conduct problems. *Journal of Abnormal Child Psychology*, *40*, 487–500. doi:10.1007/s10802-011-9580-9

Reid, M. J., Webster-Stratton, C., & Baydar, N. (2004). Halting the development of conduct problems in Head Start children: The effects of parent training. *Journal of Clinical Child & Adolescent Psychology*, *33*, 279–291. doi:10.1207/s15374424jccp3302_10

Reid, M. J., Webster-Stratton, C., & Beauchaine, T. P. (2001). Parent training in head start: A comparison of program response among African American, Asian American, Caucasian, and Hispanic mothers. *Prevention Science*, *2*, 209–227. doi:10.1023/A:1013618309070

Reyno, S. M., & McGrath, P. J. (2006). Predictors of parent training efficacy for child externalizing behavior problems—A meta-analytic review. *Journal of Child Psychology and Psychiatry*, *47*, 99–111. doi:10.1111/j.1469-7610.2005.01544.x

Robinson, E. A., Eyberg, S. M., & Ross, A. W. (1980). The standardization of an inventory of child conduct problem behaviors. *Journal of Clinical Child Psychology*, *9*, 22–28. doi:10.1080/15374418009532938

Rubin, D. B. (1987). *Multiple imputation for nonresponse in surveys*. New York, NY: Wiley.

Sanders, M. R., Baker, S., & Turner, K. M. T. (2012). A randomized controlled trial evaluating the efficacy of Triple P Online with parents of children with early-onset conduct problems. *Behaviour Research and Therapy*, *50*, 675–684. doi:10.1016/j.brat.2012.07.004

Schafer, J. L. (1999). Multiple imputation: A primer. *Statistical Methods in Medical Research*, *8*, 3–15. doi:10.1191/096228099671525676

Scheppers, E., van Dongen, E., Dekker, J., Geertzen, J., & Dekker, J. (2006). Potential barriers to the use of health services among ethnic minorities: A review. *Family Practice*, *23*, 325–348. doi:10.1093/fampra/cmi113

Scott, S., Knapp, M., Henderson, J., & Maughan, B. (2001). Financial cost of social exclusion: Follow up study of antisocial children into adulthood. *British Medical Journal*, *323*, 191. doi:10.1136/bmj.323.7306.191

Scott, S., O'Connor, T. G., Futh, A., Matias, C., Price, J., & Doolan, M. (2010). Impact of a parenting program in a high-risk, multi-ethnic community: The PALS trial. *Journal of Child Psychology and Psychiatry*, *51*, 1331–1341. doi:10.1111/j.1469-7610.2010.02302.x

Scott, S., Sylva, K., Doolan, M., Price, J., Jacobs, B., Crook, C., & Landau, S. (2010). Randomised controlled trial of parent groups for child antisocial behaviour targeting multiple risk factors: The

SPOKES project. *Journal of Child Psychology and Psychiatry*, *51*, 48–57. doi:10.1111/j.1469-7610.2009.02127.x

Shaffer, D., Fisher, P., Lucas, C. P., Dulcan, M. K., & Schwab-Stone, M. E. (2000). NIMH Diagnostic Interview Schedule for Children Version IV (NIMH DISC-IV): Description, differences from previous versions, and reliability of some common diagnoses. *Journal of the American Academy of Child and Adolescent Psychiatry*, *39*, 28–38. doi:10.1097/00004583-200001000-00014

Shelleby, E. C., & Shaw, D. S. (2013). Outcomes of parenting interventions for child conduct problems: A review of differential effectiveness. *Child Psychiatry & Human Development*, *45*, 628–645. doi:10.1007/s10578-013-0431-5

Sterne, J. A. C., White, I. R., Carlin, J. B., Spratt, M., Royston, P., Kenward, M. G., … Carpenter, J. R. (2009). Multiple imputation for missing data in epidemiological and clinical research: Potential and pitfalls. *British Medical Journal*, *338*, 157–160. doi:10.1136/bmj.b2393

Tolan, P. H., & Dodge, K. A. (2005). Children's mental health as a primary care and concern: A system for comprehensive support and service. *American Psychologist*, *60*, 601–614. doi:10.1037/0003-066X.60.6.601

Tolan, P. H., & McKay, M. M. (1996). Preventing serious antisocial behavior in inner-city children: An empirically based family intervention program. *Family Relations*, *45*, 145–155. doi:10.2307/585285

U.S. Department of Health and Human Services. Mental Health. (2001). *Culture, race, and ethnicity–A supplement to mental health: A report of the surgeon general*. Rockville, MD: U.S. Public Health Service.

van Widenfelt, B. M., Goedhart, A. W., Treffers, P. D. A., & Goodman, R. (2003). Dutch version of the Strengths and Difficulties Questionnaire (SDQ). *European Child and Adolescent Psychiatry*, *12*, 281–289. doi:10.1007/s00787-003-0341-3

Webster-Stratton, C. (1998). Preventing conduct problems in head start children: Strengthening parenting competencies. *Journal of Consulting and Clinical Psychology*, *66*, 715–730. doi:10.1037/0022-006X.66.5.715

Webster-Stratton, C. (2001). *The incredible years. Parents and children videotape series. A parenting course (BASIC)*. Seattle, WA: Incredible Years.

Webster-Stratton, C. (2006). *The incredible years: A trouble-shooting guide for parents of children aged 3–8*. Toronto, Canada: Umbrella Press.

Webster-Stratton, C. (2009). Affirming diversity: Multi-cultural collaboration to deliver the incredible years parent programs. *International Journal of Child Health and Human Development*, *2*, 17–32.

Webster-Stratton, C., Reid, M. J., & Hammond, M. (2004). Treating children with early-onset conduct problems: Intervention outcomes for parent, child, and teacher training. *Journal of Clinical Child & Adolescent Psychology*, *33*, 105–124. doi:10.1207/S15374424JCCP3301_11

Weisz, J. R., & Kazdin, A. E. (Eds.). (2010). *Evidence-based psychotherapies for children and adolescents*. New York, NY: Guilford Press.