Research Square

Preprints are preliminary reports that have not undergone peer review.
They should not be considered conclusive, used to inform clinical practice,
or referenced by the media as validated information.

Predictors and Benefits of Fathers' Parenting Program Attendance: An Individual Participant Data Meta-Analysis of Randomised Trials

Christian J Bachmann
University of Ulm
Stephen Scott
King's College London
G. J. Melendez-Torres
University of Exeter
Frances Gardner
University of Oxford
Loes van Rijn-van Gelderen
University of Amsterdam
Ulf Axberg
VID Specialized University
Maria João Seabra-Santos
University of Coimbra
Sinéad McGilloway
Maynooth University
Ankie T. A. Menting
Utrecht University
Bram O. Castro
University of Amsterdam
Patty Leijten
p.leijten@uva.nl

University of Amsterdam

Short Report

Keywords: parenting, parent-child relations, fathers, meta-analysis, attention deficit disorder with hyperactivity, conduct disorder

Posted Date: November 1st, 2026

DOI: https://doi.org/10.21203/rs.3.rs-10832343/v1

License: This work is licensed under a Creative Commons Attribution 4.0 International License.
Read Full License

Additional Declarations: No competing interests reported.

Abstract

Background

Parenting programs are widely used to reduce disruptive child behaviour. However, they are mainly attended by mothers and there is limited understanding of when fathers attend and whether this yields greater benefits for children with disruptive behaviour. We aimed to identify predictors and effects associated with fathers' attendance.

Methods

We pooled individual participant data from 785 families randomised to the Incredible Years parenting program across 10 European randomised trials. We examined child age and gender, family income, household unemployment, and baseline levels of disruptive child behaviour as predictors of father attendance. We compared intervention effects on mother-reported disruptive child behaviour for families with mother-only vs. mother- and father attendance, using generalised estimating equations.

Results

We found that fathers in families with younger children odds ratio (OR = 0.94; 95% CI 0.89, 0.9995; p = 0.048), and in families with more severe disruptive child behaviour OR = 1.06, 95% CI 1.02, 1.10; p = 0.003) were more likely to attend parenting programs. However, for children where fathers attended in addition to mothers, we did not find evidence for additional intervention benefits according to mother report.

Conclusion

The identified predictors of father attendance in parenting programs may help to inform their development in ways that better support the inclusion of fathers. Also, research designs tailored to disaggregate co-parenting effects are needed to explore the nature and extent of the association between father attendance and intervention effects.

Introduction

Since their introduction in the 1970s, parenting programs have become an important element in the treatment and prevention of disruptive behaviour problems in children. Most programs are based on social learning theory principles that explain how parents and children are mutually influenced to engage in aversive behaviour through a combination of operant and classical conditioning (i.e., coercive cycles). Parenting programs strive to improve positive and consistent parenting, in order to break these coercive

cycles and are usually offered by trained facilitators in individual or group settings for a period of several weeks [1].

Existing research on the effects of parenting programs in reducing disruptive behaviour spans a broad spectrum of program types, settings, and participant characteristics. The findings are predominantly positive with regard to both the impact and cost-effectiveness of parenting programs on disruptive child behaviour [1]. However, programs are mainly attended by mothers and there is limited understanding, therefore, of when fathers attend and whether this yields greater benefits for children. Theoretically, we would expect families to benefit more from programs if both parents attend sessions [2]. This may help to promote a common understanding of parenting strategies between caregivers, and support consistent reinforcement.

Empirically, however, the evidence is mixed in this regard. One of the first major reviews, undertaken in the early 80s and exploring the potential effects of father attendance in parent programs (n = 28 studies [3]), found that their attendance did not "substantially" increase program effectiveness. Lundahl et al [4], in a meta-analysis of 26 studies, found that programs which included fathers, led to significantly more positive changes in children's behaviour than those that included only one parent (mainly the mother). More recent, a (non-randomised) US study found no significant differences in child behaviour outcomes or attendance rates between dual (n = 123) versus individual attendees (n = 141) of training for parents of children between 0–5 years [5].

In addition to earlier findings being mixed, many previous studies of father involvement were conducted decades ago. Furthermore, many of these studies lacked optimal research designs for examining this question; some had very small samples while reviews examined father involvement only at aggregate, trial level. Also, in many Western countries, fathers have become more involved in children's caregiving in recent decades, and some parenting programs have been designed specifically to get higher rates of father involvement. This may include involving both parents as a "parenting team", offering parent trainings out of traditional working hours, avoiding deficit-oriented parenting models, and using father-specific marketing strategies in order to increase their awareness of parenting programs [6].

The overall aim of this study was to identify predictors and effects associated with fathers' attendance in a large sample of pooled Incredible Years parenting program RCTs, guided by the following research questions: (1) In what families are fathers more likely to attend? and (2) Do we see greater benefits for children with disruptive behaviour if fathers attend in addition to mothers?

Methods

Participants

Based on the *European Parenting Program Research Consortium* database, which contains pooled individual participant data from 14 European RCTs of behavioural parenting interventions,we used data from the families randomised to intervention arms in an individual participant data analysis of all RCTs

of the *Incredible Years Basic* parenting program in Europe [7]. The final sample consisted of 785 (single- and two-parent) families from 10 trials across five countries. Characteristics of the trials and families can be found in Supplement Table S1.

Measures

Regarding predictors, we included measures of family characteristics that had been used in all of the original trials: child age in years (continuous), child gender, low family income (yes/no), household unemployment (yes/no), and baseline levels of disruptive child behaviour. The latter was assessed using the 36-item, mother-completed Eyberg Child Behavior Inventory (ECBI). Parenting program effects were assessed using post-intervention ECBI scores.

Analyses

We examined whether fathers attended the program, either alone or in addition to mothers, using a logistic regression model. As observations were clustered by trial, we used a logistic regression model with generalized estimating equations and robust standard errors to account for clustering. We used an exchangeable correlation matrix, assuming that the inter-correlation of all participants in the same trial was, on average, the same.

We considered predictors one at a time and then in a multi-predictor model where we further explored the fractional polynomial relationship between each continuous predictor and father attendance. In a subset of four trials with varying levels of father attendance, we looked at the benefit in terms of reduced disruptive child behaviour of both parents attending compared to only mothers attending. We built a multi-predictor linear regression model with robust standard errors, including terms for condition, baseline disruptive behaviour, and fixed effects for trials, and added a term to reflect the interaction between condition and both parents attending.

Results

Fathers were slightly more likely to attend in families with younger children (odds ratio (OR) for higher age =0.94; 95% confidence interval (CI) 0.89, 0.9995; p=0.048; Table 1, Figure 1a) and in families where children showed more severe disruptive behaviour (OR=1.06, 95% CI 1.02, 1.10; p=0.003).

Table 1. Predictors for Father Attendance of Parenting Program (General Estimate Equation).

Predictor	Odds ratio (95% confidence interval)	*p*	No. of participants included
Child age	0.94 (0.89; 0.9995)	0.048	711
Child gender	1.19 (0.84; 1.69)	0.335	717
Family income	1.35 (0.90; 2.03)	0.146	680
Household unemployment	0.97 (0.65; 1.46)	0.897	567
Disruptive child behaviour	1.06 (1.02; 1.10)	0.003	686

Interestingly, the relationship between severity of disruptive behaviour and father attendance was U-shaped, indicating lower paternal attendance rates in children with average levels of disruptive behaviour (Figure 1b).

Parental income (OR=1.35, 95% CI 0.90, 2.03; p=0.146), parental unemployment (OR=0.97, 95% CI 0.65, 1.46; p=0.897), and child gender (OR=1.19, 95% CI 0.84, 1.69; p=0.335) did not predict father attendance. We found no evidence that father attendance was associated with reductions in disruptive child behaviour (B=1.00, SE=4.44, 95% CI 7.73, 9.73, p=0.822).

Discussion

We found that fathers were more likely to attend in families with younger children, and in families with more severe disruptive child behaviour. This last finding is in line with some evidence that parental attendance rates, in general, tend to be higher in families with more severe disruptive child behaviour [8, 9]. Wells et al. [9], however, found that mothers, but not fathers, were more likely to attend a parenting program if they reported more child behaviour problems. Our finding that fathers are more inclined to attend sessions in addition to mothers when there are higher levels of disruptive child behaviour could suggest that fathers in these families are more motivated to contribute to change. Higher father attendance in younger children, which might be due to practical reasons (e.g., better parental leave options for fathers of younger children), is a new finding and requires further scrutiny.

Remarkably, we did not find effects of socio-economic status on father attendance, despite a wide range in family income and unemployment rates in the included studies. This contrasts with earlier findings that fathers with a higher level of education are more likely to attend parenting program sessions [8, 10], and might be attributable to the dichotomous measure used in this meta-analysis.

We found no evidence of additional benefits for children when both parents attended. The mixed findings from earlier studies on this topic suggest that the interrelationship between father attendance and intervention effects is more complex than first thought. For instance, it may be that father attendance in

some families reflects higher general father involvement in the family life, which has the potential to positively influence children's behaviour, at least in adolescents. It may also be that in some families (e.g., those with strong co-parenting skills), it is sufficient for one parent to attend. Understanding who these families are, could make programs more cost-effective, if it allows more families to attend the same parenting groups. Finally, fathers are a very mixed group (e.g., absent fathers, fathers with a history of offending), and fathers' role in parenting appears to be a unique one, with effects distinct from that of mothering [11].

A major strength of this study is the international, large and diverse sample, with regard to symptom severity, and sociodemographic characteristics. In addition, we were able to make like-with-like comparisons in terms of use of the same parenting intervention ("The Incredible Years") in all included trials. Moreover, we were able to analyse a large data set at a participant level, using a range of potential predictors. Our study also has several limitations. First, father attendance was low or even zero in most of the underlying trials, which limits generalizability of our findings. The majority of those studies with 0% father participation only allowed one parent to attend, in order to allow as many families as possible to profit from the program. Nevertheless, because father attendance is low in most parenting program trials, we feel that pooling the available data on father involvement is helpful for understanding how patterns of parenting program benefit vary by father involvement.

Second, only mothers' reports of child behaviour could be analysed, which is a limitation, as mothers' and fathers' reports may significantly differ. For example, Helfenbaum et al. [12] found that fathers and teachers, but not mothers, reported improvements in children whose fathers attended a father-only parenting program. Third, we were only able to examine father attendance in addition to mother attendance, thus leaving out single fathers. Fourth, we did not measure some factors that might influence father attendance, such as time of day when sessions were held. Also, while our study only looked at potential changes in disruptive child behaviour, there may be other benefits beyond the child's disruptive behaviour, e.g., parents' well-being, or the functioning of the family system. Finally, we were only able to examine a limited number of potential predictors, as we had to focus on those variables that were available for most of the pooled studies.

Given the paucity of father-focused studies, this study, despite its limitations, represents a valuable addition to the extant literature and identifies some important possible directions for future research. In this regard, Panter-Brick et al. [13] identified key barriers to engaging fathers in parenting programs, including intervention design, delivery and evaluation, which should be addressed in future studies. This might encompass using evaluation methodology that allows to disaggregate co-parenting effects and measure "indirect attendance" of the second parent, engaging fathers and co-parenting couples successfully, and looking at possible gains at a family systems level, beyond child problem behaviour. Such measures might help to increase both parenting program accessibility and acceptability for fathers.

Declarations

Acknowledgements

The authors gratefully acknowledge the researchers, practitioners, and families who participated in each of the original trials, the funders of the original trials, and the National Institute for Health Research, UK, which funded the pooling of the trial data through their Public Health Research programme (project number 12/3070/04).

Ethics Approval

The data underlying this analysis were fully anonymized, and informed consent from participants was appropriately obtained within each trial. Investigators of each individual trial were responsible for receiving ethics approval for conducting research with human participants.

Data availability statement

The data that support the findings of this study are available from the data holders of the underlying trials. Restrictions apply to the availability of these data, which were used under license for this study.

Competing Interests

The authors have no competing interests to declare that are relevant to the content of this article.

Funding information

This research received no external funding.

Author Contributions Statement

CJB and PL designed the study. PL prepared the data for analysis. GJMT analysed the data, CJB and PL interpreted the data. CJB, GJMT and PL drafted the manuscript. All authors reviewed the manuscript critically for important intellectual content, approved the final manuscript version to be published and agree to be accountable for all aspects of the work.

References

1. Scott S, Gardner F (2025) Parenting programs. In: *Rutter's Child and Adolescent Psychiatry and Psychotherapy.* 7th edn. Edited by Thapar A, Pine D, Cortese S, Creswell C, Ford T, Leckman J, Stringaris A. Oxford and New York: Wiley Blackwell
2. Weeland J, Helmerhorst KOW, Lucassen N (2021) Understanding Differential Effectiveness of Behavioral Parent Training from a Family Systems Perspective: Families Are Greater than Some of Their Parts. J Family Theory Rev 13(1):34–57

3. Budd KS, O'Brien TP (1982) Father involvement in behavioral parent training: An area in need of research. Behav Ther 5(3):85–89
4. Lundahl BW, Tollefson D, Risser H, Lovejoy MC (2008) A meta-analysis of father involvement in parent training. Res Soc Work Pract 18(2):97–106
5. McCoy T, Dickinson S, Agazzi H (2026) One is Good, but are Two Really Better? Outcomes for Dual versus Individual Attendees in a Behavioral Parent-Training Program for Caregivers of Young Children. Evidence-Based Pract Child Adolesc Mental Health 11(1):102–113
6. Lechowicz ME, Jiang Y, Tully LA, Burn MT, Collins DAJ, Hawes DJ, Lenroot RK, Anderson V, Doyle FL, Piotrowska PJ et al (2019) Enhancing Father Engagement in Parenting Programs: Translating Research into Practice Recommendations. Australian Psychol 54(2):83–89
7. Leijten P, Gardner F, Landau S, Harris V, Mann J, Hutchings J, Beecham J, Bonin EM, Scott S (2018) Research Review: Harnessing the power of individual participant data in a meta-analysis of the benefits and harms of the Incredible Years parenting program. J Child Psychol Psychiatry 59(2):99–109
8. Rostad WL, Self-Brown S, Boyd C, Osborne M, Patterson A (2017) Exploration of factors predictive of at-risk fathers' participation in a pilot study of an augmented evidence-based parent training program: A mixed methods approach. Child Youth Serv Rev 79:485–494
9. Tully LA, Piotrowska PJ, Collins DAJ, Mairet KS, Black N, Kimonis ER, Hawes DJ, Moul C, Lenroot RK, Frick PJ et al (2017) Optimising child outcomes from parenting interventions: fathers' experiences, preferences and barriers to participation. BMC Public Health 17(1):550
10. Wells MB, Sarkadi A, Salari R (2016) Mothers' and fathers' attendance in a community-based universally offered parenting program in Sweden. Scand J Public Health 44(3):274–280
11. Jeynes WH (2016) Meta-Analysis on the Roles of Fathers in Parenting: Are They Unique? Marriage Family Rev 52(7):665–688
12. Helfenbaum-Kun ED, Ortiz C (2007) Parent-training groups for fathers of Head Start children: A pilot study of their feasibility and impact on child behavior and intra-familial relationships. Child Fam Behav Ther 29(2):47–64
13. Panter-Brick C, Burgess A, Eggerman M, McAllister F, Pruett K, Leckman JF (2014) Practitioner review: Engaging fathers–recommendations for a game change in parenting interventions based on a systematic review of the global evidence. J Child Psychol Psychiatry 55(11):1187–1212

Figures

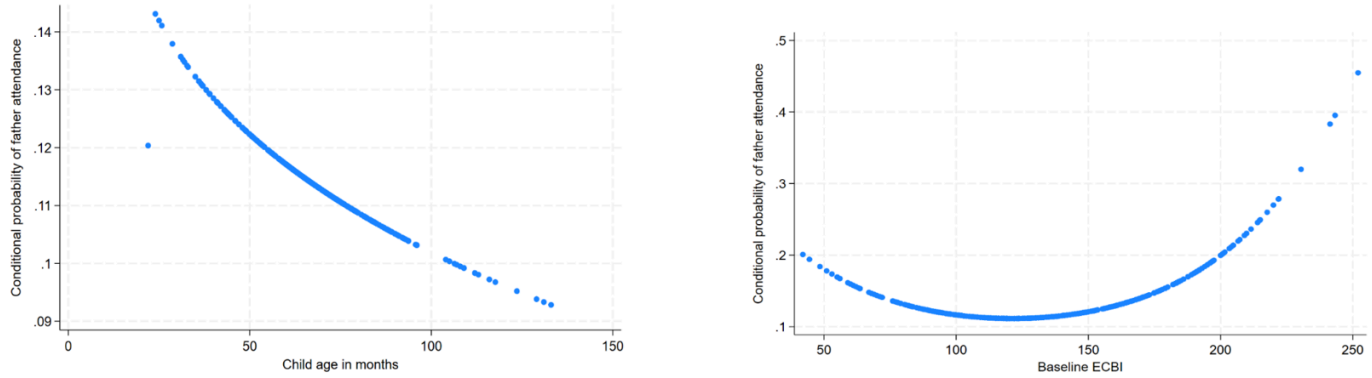


Figure 1

a. Association between father participation and child age in the Incredible Years parenting training program.

b. Association between father participation and child problem severity (ECBI score) in the Incredible Years parenting training program.

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- SupplementalTableS1ECAP.docx