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Transported Versus Homegrown Parenting Interventions for Reducing Disruptive Child Behavior: A Multilevel Meta-Regression Study

Patty Leijten, PhD, G.J. Melendez-Torres, DPhil, RN, Wendy Knerr, MSc, Frances Gardner, DPhil

Objective: Children's disruptive behavior problems place children at high risk for oppositional defiant disorder and conduct disorder, and carry a high burden for individuals and society. Policy makers and service providers aiming to reduce children's disruptive behavior problems must often choose between importing an intervention developed abroad or instead developing or using a "homegrown" (i.e., local) intervention. No comprehensive comparison of these interventions exists.

Method: We performed a multilevel meta-regression of 129 randomized trials (374 effect sizes) of transported and homegrown parenting interventions. We identified trials by searching the included trials lists of systematic reviews, found through searches in 6 databases (e.g., MEDLINE, EMBASE). Trials that had not yet been reviewed were found by searching the same databases. Primary outcome was the mean difference in effectiveness between transported and homegrown interventions to reduce disruptive child behavior. We also compared this differential effectiveness for various intervention "brands" (e.g., Incredible Years and Triple P

Positive Parenting Program) and geographical regions (e.g., North America and Europe).

Results: Transported and homegrown interventions did not differ in their effectiveness to reduce disruptive child behavior ($d = 0.10$, not significant). Results were robust across intervention brands and geographical regions. Six trials on transported interventions in Hong Kong, Iran, and Panama suggest promising results for transporting interventions to "nonwestern" countries, whereas one trial in Indonesia does not.

Conclusion: Parenting interventions based on the same principles led to similar outcomes, whether transported or homegrown. This finding supports the selection of interventions based on their evidence base rather than on cultural specificity.

Key words: disruptive behavior problems, parenting intervention, randomized controlled trial, multilevel meta-regression, transportability

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There has been a substantial rise in policy recommendations and implementation of parenting interventions to prevent and treat disruptive child behavior problems.¹⁻⁵ Disruptive behavior problems, such as defiance and anger, put children at high risk for oppositional defiant disorder and conduct disorder and carry a high burden for individuals and society as a whole: they are common, persistent, and costly.⁶ Use of parenting interventions based on (social) learning theory is an effective, and cost-effective, strategy to reduce disruptive child behavior across countries and cultures.⁷⁻¹⁰ Building on Patterson's theory of coercive cycles,¹¹ these interventions focus on increasing positive parent-child interactions (e.g., through parent-child play) and teach parents to reward positive child behavior (e.g., providing praise) and to use adequate disciplining techniques for misbehavior (e.g., providing a "time-out").

When deciding which parenting interventions to implement, service providers are faced with an often difficult

choice: to import interventions developed and evaluated in other countries, or to nurture "homegrown" interventions that are developed in the target family's own country. This dilemma highlights a lack of our understanding of how intervening in parenting practices influences developmental pathways of disruptive child behavior across cultures, and the level of context dependency of interventions that is involved.

Transported and Homegrown Interventions

Importing parenting interventions has several advantages over developing new interventions. First, developing an intervention is time consuming and costly. Second, if an intervention is proved to be effective in a certain context, this can be a promising sign for its effectiveness in another context. Third, and relatedly, if coercive parent-child interactions¹¹ are at the core of the development of disruptive child behavior across countries, similar techniques for breaking these cycles may work equally well across countries.^{7,12-14}

An alternative approach to importing parenting interventions is to develop interventions locally, based on the same underlying theory as established interventions. This has the advantage of specifically designing interventions to fit the needs of families within a certain country.^{15,16}



Clinical guidance is available at the end of this article.



Supplemental material cited in this article is available online.

Whereas transported interventions may restrain therapists from making adaptations, to protect program fidelity, homegrown interventions can be tailored to meet the cultural values and norms of target families.

Among the few existing meta-analyses of transportability of parenting interventions, results are mixed. Gardner *et al.*¹⁰ showed that evidence-based parenting interventions were effective in countries other than their country of origin. Strikingly, parenting interventions seemed especially effective in countries that were culturally more distinct from the interventions' countries of origin. Hasson *et al.*¹⁷ compared the effectiveness of a wide range of psychosocial interventions (i.e., parenting and others) in Germany and Sweden that were homegrown, transported, and culturally adapted, or transported and not culturally adapted. Homegrown interventions and transported interventions that were culturally adapted were more effective than interventions that were not adapted. In contrast to the findings of Gardner *et al.*,¹⁰ the findings by Hasson *et al.* suggest that transported interventions, at least when no cultural adaptations are made, are less effective than homegrown interventions. However, their meta-analysis focused on a wide range of psychosocial interventions, comprised both randomized and nonrandomized designs, and included trials from only 2 European countries. To date, there has been no meta-analysis of evidence across continents, including the limited but increasing number of trials outside North America, Europe, or Australia, that directly tests the differential effects of transported and homegrown parenting interventions to reduce disruptive child behavior.

Informing Theory About Context Dependency of How Parenting Shapes Child Behavior

The extent to which parenting interventions are equally effective across countries is at least in part a question of the extent to which the translation of theory into parenting techniques affects families in less or more universal ways. Operant learning theory¹⁸ and social learning theory,¹⁹ which are at the core of most parenting interventions for reducing disruptive child behavior, are universal theories about behavior modification. However, does the way in which these theories have been translated into discrete parenting techniques in parenting interventions lead to equally universal effects on child behavior? Evidence suggests that this may not be the case. A parenting technique that may differentially affect children's disruptive behavior in different cultural groups is physical punishment.²⁰ Although there are differing views and findings on this subject,^{21,22} some studies have found that parental corporal punishment is associated with disruptive child behavior, but that this varies by ethnic group.^{20,23} Similarly, strategies for paying compliments to children are known to vary between more direct praise in western countries and more indirect praise in eastern countries.²⁴ Country norms may vary in relation to parenting behavior that is appropriate, and effects of parenting techniques on children's behavior are likely to be influenced by the meaning applied to parental behavior.²⁵ Our meta-regression of the transportability of parenting

interventions from one country to another aims to shed light on the level of context dependency of the effects of parenting techniques on children growing up in different countries. Based on promising findings for transported interventions in individual trials,^{7,26} we hypothesize that transported interventions are as effective as homegrown interventions for reducing disruptive child behavior.

Transportability of Different Programs and for Different Regions

The transportability of parenting interventions may differ across different types of programs. Although the content of many programs based on social learning theory principles tends to be fairly similar, some programs are more fixed in the techniques that they teach parents,²⁷ whereas others more explicitly focus in therapist training and intervention delivery on flexibilities of the intervention to deal with individual differences in cultural norms and values.²⁸ This may affect program transportability. To explore whether some parenting intervention programs are more transportable than others, we compare the effectiveness of parenting interventions in their home country with the effectiveness of these same interventions in new countries for a range of parenting intervention "brands" (i.e., manualized interventions that are implemented under a particular name).

The transportability of parenting interventions may also differ across geographical regions. Cultural similarities between an intervention's country of origin and a new country may affect transportability success. For example, even translation of program materials (e.g., for transportability to non-English-speaking countries in Europe) might affect the extent to which program fidelity is ensured. Gardner *et al.*¹⁰ found that transported parenting interventions were just as likely to be effective (and in some respects more so) in countries that were culturally more distinct from the interventions' countries of origin. In this study, we explore for several different geographical regions whether importing interventions or nurturing homegrown interventions seems the better approach for reducing disruptive child behavior.

The Present Study

The present systematic review and multilevel meta-regression aims to inform theory on how parent-child interactions in different countries shape disruptive child behavior in children, and to better enable policy makers to decide which interventions to implement. We examine to what extent transported parenting interventions for reducing disruptive child behavior lead to better (or worse) outcomes than homegrown parenting interventions, different parenting intervention brands retain their effectiveness after transportation, and different geographical regions show superior effects of either transported or homegrown interventions.

METHOD

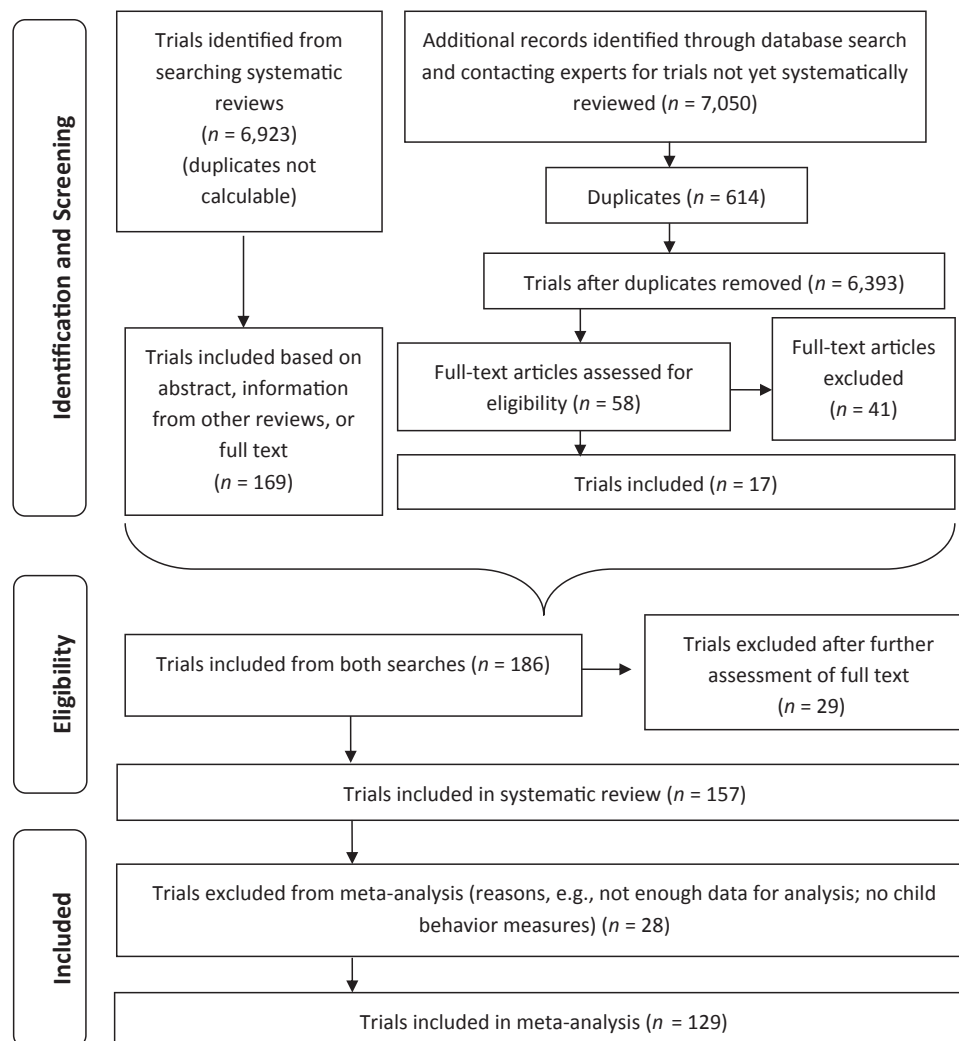
Data Sources, Study Selection, Inclusion Criteria

We identified randomized controlled trials of parenting interventions that were based on behavioral/social learning theory

and aimed at reducing disruptive child behavior. Because this is a field that has been extensively reviewed,²⁹⁻³¹ we conducted searches in line with Cochrane guidance³² on systematic reviews of reviews. Relevant systematic reviews that were published from 2008 to 2015 were searched (see Supplement 1, available online). Included systematic reviews for identification of eligible trials are presented in Table S1, available online. No date limit was placed on included trials. We also searched for recent trials that may not yet have been systematically reviewed through searches of 6 online databases (see Supplement 2, available online) and for unpublished trials by contacting experts and searching trial registries. Neither reviews nor trials were excluded based on language, and efforts were made to identify trials published in any language, for example, by contacting colleagues and other experts working on parenting programs in many countries and regions. We applied our inclusion criteria to the list of trials based first on abstracts and then, if needed, the full text, to produce a list of included trials for this review. Figure 1 presents our Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow chart. We acknowledge that although our search was systematic and thorough, we cannot fully exclude the possibility that there might be trials that we did not identify.

We included trials that compared a parenting intervention (comprising techniques largely based on the principles of social learning theory) to a control condition. Other inclusion criteria were as follows: random assignment to treatment conditions; more than 50% of sessions focused specifically on parenting; children's mean age between 2 and 9 years; and a control condition that was either no treatment, wait-list, minimal intervention (e.g., telephone help-line), or care as usual. We excluded interventions directed at parents or caregivers/carers of special child populations that were not defined by their behavioral problems, including (but not limited to) children in temporary foster care, children of the street, children with autism, and children with physical disabilities or very severe learning disabilities or mental illness. Because conduct problem symptoms and hyperactivity-impulsivity symptoms often co-occur in young children with disruptive behavior,³³ samples of children with attention-deficit/hyperactivity disorder (ADHD) that came up in our search were included as long as the study explicitly focused on reducing conduct problems. Importantly, only outcome measures of general disruptive behavior, not ADHD symptoms, were included in our study. Trials were excluded if they involved a wide range of services to children and families but did not isolate the effects of parenting intervention.

FIGURE 1 Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Flow-Chart.



One author (W.K.) assessed abstracts and full texts of studies that were likely to meet inclusion criteria; discrepancies and the final list of trials included in the review were assessed by 2 other authors (P.L. and F.G.). Final inclusion in the meta-regression was agreed by all authors.

Data Extraction

In addition to general trial characteristics, we coded whether the evaluated intervention was transported or homegrown. Unfortunately, trials on transported interventions hardly provided any information about the extent to which interventions were culturally adapted. This could therefore not be included in the analyses. Included outcome measures were all parent-reported measures of disruptive child behavior to ensure comparability across trials: observed and teacher-rated child behavior were available only for a subset of trials. Most outcome measures were symptom measures; only small minorities of the outcome measures were impairment measures. Generally no information was available about measurement invariance of the outcome measures across countries.

Intervention Brand. For subgroup analysis, trials were coded in different intervention brand categories. Although the content of the different brands is fairly similar, the interventions meaningfully vary in their delivery methods (e.g., individual- versus group-based), level of inbuilt flexibility to deal with cultural differences, and training and supervision procedures for new and overseas therapists. Coded brands were: Incredible Years (IY)³⁴; Triple P Positive Parenting Program (Triple P)³⁵; Parent-Child Interaction Therapy (PCIT)²⁷; and Parent Management Training-Oregon (PMTO).³⁶ Other intervention brands (e.g., 123 Magic³⁷) were evaluated only in one or a few trials and could therefore not be analyzed as a separate category. We used guidance from the Cochrane Handbook for Systematic Reviews of Interventions³² to decide that categories needed to include at least 9 trials. The remaining interventions (13%) were not branded and therefore could not be categorized. These interventions seemed designed mainly for research purposes and were based on various combinations of principles (e.g., the Hanf model³⁸) and books (e.g., *Helping the Noncompliant Child*³⁹). Examples of nonbranded interventions include those evaluated by Bernal, Klinnert, and Schultz,⁴⁰ and by Hamilton and MacQuiddy.⁴¹

Geographical Region. Trials were also coded according to 4 different geographical regions. Regions were defined based on the continent, the number of trials available from each region, and language similarities because transportability success may be affected by translation of intervention materials. This led to 4 categories: North America; Australia; the United Kingdom and Ireland (i.e., English-speaking European countries), and other European countries (i.e., non-English-speaking European countries). Unfortunately, there were not enough trials from Asia, Africa, and Latin America to categorize into meaningful geographical regions.

Effect Size Calculation

Effect sizes were the standardized mean differences on disruptive child behavior between parenting intervention and control, represented as Cohen's *d* values,⁴² and were based on means and standard deviations reported at posttreatment. We preferred means and standard deviations that were analysis of covariance adjusted for baseline, as is recommended in the analysis of randomized trials.³² Where appropriate, we used other summary statistics (e.g., *p* values and sample sizes, or *t* test statistics) to calculate *d*. Twenty-one trials did not provide relevant outcomes measures or sufficient information to compute effect sizes and were excluded from the analyses.

Two trials^{43,44} compared both transported and homegrown interventions to a control condition. We split these trials into the relevant transported versus control and homegrown versus control

comparisons and treated these as separate studies. We avoided double-counting of control participants by estimating effect sizes with the size of the control group split between the 2 clusters resulting from each of these 2 trials. Twenty-one trials did not provide relevant outcome measures or sufficient information to compute effect sizes and were excluded from the analyses (Table S2, available online).

Data Analyses

We used a 3-level multilevel meta-analysis method with random effects to account for the clustering of outcomes within studies. Level 1 is implied and represents research and control participants in the studies. Level 2 is composed of each outcome measure for a treatment-control comparison (within-study level). Level 3 is composed of each study (between-study level). Multilevel meta-analysis is most appropriate when studies report multiple effect sizes corresponding to the same construct; that is, unlike multivariate meta-analysis, in which the variance-covariance matrix between different types of outcomes is required, multilevel meta-analysis can combine within studies multiple measures of the same outcome.⁴⁵

Our meta-regressor, whether an intervention was transported or homegrown, was a binary variable that was placed on level 3, between studies. We first fit an overall model with the meta-regressor to test for overall differences between transported and homegrown interventions. We then stratified models first by brand of intervention and then by region. For each meta-regression model, we calculated I^2 at the between-study level by dividing the variance component for this level by the sum of the within-study and between-study variance components and the arithmetic mean of the variances attached to each effect size,⁴⁵ and we compared this residual I^2 to the I^2 for a model without a meta-regressor. The regression coefficient is thus the difference in intervention effectiveness between groups expressed in terms of Cohen's *d*, that is, how many more (or fewer) standard deviations intervention groups improve relative to control groups in transported interventions as opposed to homegrown interventions.

We then estimated the size of the intervention effect for transported and homegrown interventions by refitting meta-analysis models without an intercept. Because several of the study groups that we were examining contained small numbers of studies, and because we used random effects models, estimating intervention effects in this way allowed for a more stable between-study variance parameter to be estimated.

Risk of Bias

We assessed risk of bias in included studies (as high, low, or unclear) using the Cochrane Collaboration tool (Table 1).³²

RESULTS

Transported Versus Homegrown Interventions

Tables S3a and S3b, available online, show the characteristics of the 129 included trials. There was no significant difference in effect sizes between transported and homegrown interventions ($d = 0.10$, 95% CI = -0.08 to 0.29) (Table 2). Transported and homegrown interventions are thus not statistically different in their effectiveness in reducing disruptive child behavior.

Differential Effectiveness per Intervention Brand

IY, Triple P, and PCIT yielded significant effects on reduced disruptive child behavior in their country of origin and after

TABLE 1 Risk of Bias per Intervention Brand Category

Intervention Brand Category	Trial Location (No. of trials)	Adequate Sequence Generation?	Allocation Concealment?	Blinding of Assessors?	Incomplete Outcome Data Addressed?
Incredible Years	Transported (16)	+	+	+	+
	Homegrown (14)	+?	+	+	+
Triple P	Transported (13)	+	+?	?	+
	Homegrown (25)	+	?	?	+
PCIT	Transported (5)	+	?	+?	+
	Homegrown (6)	?	+?	?	?
Parent Management Training (Oregon)	Transported (2)	+	+	+	+
	Homegrown (7)	?	?	?	+?

Note: PCIT = Parent-Child Interaction Therapy; Triple P = Triple P Positive Parenting Program. + = Low risk; ? = unclear risk.

transportation. PMTO did not yield significant effects. There was little evidence to suggest that IY and PCIT are differentially effective before and after transportation (Table 2). There was a trend suggesting that Triple P is less effective after transportation compared to in its home country, but this effect did not reach significance (95% CI = 0.56 to -0.02). In all models, including transportation as a meta-regressor did not meaningfully reduce I^2 . In addition, there were no significant differences in effect sizes of transported and homegrown interventions for any of the intervention brands (Table 2). Because there were only 2 trials of PMTO in other countries, the transportability of PMTO cannot be interpreted.

Differential Effectiveness per Geographical Region

There were no significant differences in effect sizes between transported and homegrown interventions for any of the geographical regions (Table 2). As above, including transportation in meta-regression models did not reduce I^2 , and differences between groups did not rise to statistical significance. The mean effect size for homegrown interventions, but not transported interventions, was significant in non-English-speaking European countries (UK and Ireland), but the difference between effect sizes of transported and homegrown trials was not significant. Because there were only 2 transported intervention trials in the United States and Canada, the transportability of interventions to this region cannot be interpreted.

Unfortunately, numbers of trials from Asia, Africa, and Latin America were too small to meta-analyze. Transporting interventions to countries that are culturally more different from the country in which the intervention was developed may be especially challenging. We therefore briefly summarize the findings from individual trials from Asia, Africa, and Latin America. Negative effect sizes indicate that reductions in disruptive child behavior were stronger in the intervention condition than in the control condition.

There were 4 trials in Hong Kong on transported interventions. The effects of these interventions on various measures of reduced disruptive child behavior ranged between $d = -0.26$, CI = -0.79 to 0.26, and $d = -2.28$, CI = -3.29 to -1.27. Indonesia, Iran, and Panama each had 1 trial on a transported intervention with multiple measures of reduced disruptive child behavior (Indonesia: $d = -0.23$, CI = -0.56 to 0.10, and $d = -0.03$, CI = -0.36 to 0.30; Iran: $d = -2.28$,

CI = -3.51 to -1.26, and $d = -2.72$, CI = -3.91 to -1.52; Panama: $d = -0.51$, CI = -0.92 to -0.10, and $d = -0.23$, CI = -0.63 to 0.18). These findings suggest promising results for transporting interventions to Hong Kong, Iran, and Panama. Effects of the transported intervention to Indonesia on disruptive child behavior were not significant.

Hong Kong, Israel, and Liberia each had 1 trial on a homegrown intervention (Hong Kong: $d = -0.45$, CI = -0.77 to 0.14, and $d = -0.55$, CI = -0.86 to -0.24; Israel: $d = -0.75$, CI = -1.04 to -0.45, and $d = -0.78$, CI = -1.08 to 0.48; Liberia: $d = 0.09$, CI = -0.15 to 0.33).

Post Hoc Analyses

First, we re-estimated our overall model without interventions that were not branded (i.e., did not have a formal name and manual). Second, we controlled for comparison arms that involved interventions that seemed more substantial than typical treatment as usual. None of these changed our findings about the overall lack of difference between transported and homegrown interventions.

DISCUSSION

We found no significant difference in effectiveness between transported and homegrown parenting interventions for reducing disruptive child behavior. The same underlying theoretical principles thus led to similar effects, regardless of whether translation of these principles into an actual intervention was done abroad or locally. This is reassuring for policymakers, practitioners, and service commissioners, who can benefit from programs that have been designed and shown to work abroad, thereby saving costs. Importantly, this finding held regardless of the geographical region importing the intervention or the type (i.e., brand) of the intervention.

Thus, our findings support both the dissemination of evidence-based parenting interventions across countries and the use of locally developed and rigorously tested interventions based on the same theoretical principles. Our findings of the relative lack of difference between these strategies led us to suggest that no preference should exist for either strategy. We do emphasize that despite the strong intuitive appeal of homegrown programs, there is very little evidence to suggest that they are superior in their effects to

TABLE 2 Number of Trials (*k*), Number of Effect Sizes (*n*), Mean Effect Size (*d*), and Significance by Intervention Brand and Geographical Region

	Homegrown		Transported		Mean Difference (95% CI)	I ² (%) (Original, Residual)
	<i>k</i> (n)	<i>d</i> (95% CI)	<i>k</i> (n)	<i>d</i> (95% CI)		
All models	91 (270)	-0.55*** (-0.65, -0.45)	38 (104)	-0.45*** (-0.60, -0.29)	0.10 (-0.08, 0.29)	66, 66
Intervention brand						
Incredible Years	14 (39)	-0.48*** (-0.69, -0.27)	17 (43)	-0.36*** (-0.53, -0.18)	0.12 (-0.15, 0.40)	58, 58
Triple P	26 (82)	-0.60*** (-0.76, -0.43)	13 (31)	-0.33** (-0.56, -0.09)	0.27 (-0.02, 0.56)	59, 55
PCIT	6 (30)	-1.37*** (-1.82, -0.92)	5 (21)	-0.97*** (-1.44, -0.49)	0.40 (-0.26, 1.05)	65, 64
Parent Management Training (Oregon)	7 (20)	-0.60 (-1.22, 0.03)	2 (4)	-0.21 (-1.37, 0.95)	0.39 (-0.93, 1.70)	84, 85
Geographic region						
US and Canada	49 (150)	-0.56*** (-0.71, -0.40)	2 (5)	-0.37 (-1.14, 0.41)	0.19 (-0.60, 0.98)	64, 64
Australia	26 (82)	-0.59*** (-0.75, -0.44)	4 (19)	-0.78*** (-1.20, -0.36)	-0.19 (-0.63, 0.26)	50, 51
Non-English-speaking European countries (Continental Europe and Iceland)	8 (23)	-0.61** (-0.99, -0.22)	14 (37)	-0.23 (-0.52, 0.06)	0.38 (-0.11, 0.86)	82, 81
English-speaking European countries (UK/Ireland)	5 (10)	-0.24 (-0.54, 0.06)	11 (28)	-0.31*** (-0.49, -0.13)	-0.07 (-0.42, 0.28)	53, 55

Note: PCIT = Parent-Child Interaction Therapy; Triple P = Triple P Positive Parenting Program.
****p* < .001; ***p* < .01.

imported programs. This finding is of relevance to policy-makers in countries without well-established evidence-based programs who want to choose an intervention. Moreover, if it comes to implementing homegrown interventions that have not yet been tested in randomized trials (which represent the majority of parenting interventions in most countries, e.g., in the Netherlands⁴⁶), then arguably preference should be given to interventions that have been properly tested, even if this was done abroad.

Parenting across countries has both similarities and differences.⁴⁷ Our findings suggest that translations of social learning theory-based principles (e.g., positive reinforcement increases behavior) into actual parenting techniques (e.g., providing praise for compliance) leads to similar effects on children across countries. On a clinical and policy level, these findings add to the body of evidence that parenting interventions based on social learning theory can be effective for reducing disruptive child behavior across countries.¹⁰

Some study limitations merit attention. First, our results pertain to parenting interventions that have a strong base in social learning theory, and transported interventions were mainly branded interventions such as IY and Triple P. Although parenting interventions based on social learning theory form the majority of parenting interventions tested in randomized controlled trials in this age group, our findings cannot be generalized to parenting interventions with other theoretical bases. Second, the number of trials from other regions than North America, Europe, or Australia was limited (*k* = 10 studies). Although we included studies from around the world, the limited number of available studies from Asia, Africa, and Latin America limits the global scope of our findings. Findings of individual trials from Panama,

Iran, Hong Kong, and Indonesia generally suggest promising results for transporting interventions to countries with relatively high income (e.g., Iran and Hong Kong), but different cultures from the countries in which the interventions were developed. Third, we were unable to describe variation in the extent to which transported interventions were culturally adapted as papers provided little information about this. Implicit and “intuitive” cultural adaptations tend to be made in the process of transportation, although they often remain undocumented. This makes it hard to evaluate the effects of cultural adaptations.⁴⁸ Moreover, some interventions may be little adapted but rather may train therapists to adapt some of the content of the intervention flexibly to the needs of individual families. These inbuilt flexibilities in some manualized interventions further complicate the study of cultural adaptations.⁴⁹ Fourth, outcome measures generally lacked information about measurement invariance across trials, and all were parent-reported and thus not blinded to the families' condition. We chose to include parent-reported outcome measures to ensure comparability across trials: observed and teacher-rated child behavior were available only in a subset of trials.

Policymakers and mental health service providers across the world aim to reduce the burden of disruptive child behavior and prevent conduct disorders. They must often choose between implementing evidence-based interventions designed abroad versus developing or nurturing one locally. Our findings show that transported and homegrown parenting interventions based on the same underlying principles led to similar outcomes across western countries. This finding supports the selection of interventions

based on their evidence base rather than on their cultural specificity. More research is needed outside North America, Europe, and Australia to enhance our understanding of

the transportability of parenting interventions across more distinct countries and cultures. &



Clinical Guidance

- Parenting interventions based on social learning theory principles are an effective strategy to reduce disruptive child behavior.
- Policy makers and clinicians must often choose between using transported interventions (i.e., developed abroad) or homegrown interventions (i.e., developed locally).
- Transported and homegrown parenting interventions do not differ in their effectiveness to reduce disruptive child behavior; this finding was robust across intervention brands and geographical regions of Western countries.
- Interventions should be selected on their evidence base rather than on cultural specificity.

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