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Group-Based Versus Individual Parenting Programs: A Meta-Analysis of Effects on Parents

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Parenting programs aim to motivate change in parents' behaviors, perceptions, and knowledge to promote desirable changes in children's adjustment and behavior. Parenting programs are typically delivered in a group-based or individual format, and it is unknown which format most effectively supports parents. On the one hand, group-based programs may be more effective since they provide access to peer-based support. On the other hand, individual programs may be more successful since they offer a tailored approach. Therefore, this meta-analysis investigated which delivery format is most effective in optimizing child behavior management (i.e., positive reinforcement and nonviolent discipline), parenting stress, and parental depressive symptoms. Studies were selected from the systematic review by Backhaus et al. (2023). Our sample included evaluations of 121 group-based and 41 individual programs based on social learning theory principles. Robust variance estimation indicated that parents' child behavior management and parenting stress improved in both delivery formats. In contrast, parental depressive symptoms improved only in group-based programs. Our findings suggest that whether parents benefit more from a group-based or individual program in part depends on the outcome examined. Therefore, it is important for clinicians to understand parents' goals to effectively guide them toward the most appropriate parenting program delivery format.


Keywords: parenting programs, delivery format, parenting behaviors, parental mental health, meta-analysis

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Parents play an important role in optimizing children's cognitive, behavioral, and socioemotional development (Bennett et al., 2013; Wittkowski et al., 2016). As a result, parenting programs are widely implemented to target parents' behaviors with the ultimate goal to optimize the parent-child relationship and children's development (Barlow & Coren, 2018). These parenting programs are delivered in different formats, with in-person group-based and individual formats being most common (e.g., Triple P, Sanders et al., 2002; Parent-Child Interaction Therapy [PCIT], Eyberg & Funderburk, 2011). In the present meta-analysis, we compare the effects of group-based and individual parenting programs. On the one hand, there are reasons to expect that group-

based programs may be more effective, for instance, because they create opportunities for peer support and social learning through observation (Severt & Estrada, 2015). On the other hand, it could equally be the case that individual programs are more effective, for instance, because one-on-one coaching allows for a more personalized approach (Eyberg & Funderburk, 2011). Because the superiority of either format may depend on the outcome of interest, we will examine the effects of the program delivery format on parental child behavior management, parenting stress, and parental depressive symptoms. These are commonly targeted intervention outcomes that are important for children's adjustment.

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Parenting Programs

Parenting programs strive to motivate change in parents' behaviors and communication. There is sound evidence for parenting programs based on operant and social learning theory principles that explain how children's behavior develops through differential attention and observational learning (Bandura, 1977; Wierson & Forehand, 1994). These programs focus on breaking maladaptive patterns of parent-child interactions in which parents and children unwittingly reinforce each other's negative and coercive behaviors (Kaehler et al., 2016; Patterson, 1982). Such coercive cycles typically begin with a child's noncompliant reaction to a parent's request, which in turn provokes anger and hostility in the parent, fueling an upward spiral of children's opposition and parental harshness. These interactions often intensify as the coercive cycle escalates and may spiral into maladaptive behavior management techniques.

Parenting programs attempt to break these coercive cycles by directly altering parent behaviors. Notably, these programs often focus on encouraging parents to use positive reinforcement to increase prosocial behavior in their children (e.g., through praise and incentives) and to apply nonviolent discipline techniques (e.g., communicating boundaries and reasons for these boundaries, avoiding reinforcement through time-out or removal of privileges; Barnett et al., 1996; Phelan, 2010). Although each parenting program has its own unique features, they generally rely on the underlying assumption that parents are active agents who can increase their parenting abilities by changing their own behaviors, which ultimately would have positive consequences for children's development. This intervention model is implemented in dozens of established parenting programs that are used across the world. Some of these interventions consist of only a few sessions (e.g., the Triple P Seminar Series; Level 2: Selected Triple P that includes three 90-min seminars; Foskolos et al., 2023; Sumargi et al., 2015), while others consist of up to 50 sessions held twice a week (e.g., Brotman et al., 2003). Most programs are led by trained facilitators who guide the sessions and support the parents' understanding of social learning theory principles through a range of techniques, such as lectures, role-play, video vignettes or feedback, or discussion. Parents are asked to implement the skills at home and share their experiences during the following session. Each session typically focuses on a different theme, such as positive discipline techniques, emotion regulation of the parent and the child, and understanding children's behavior.

Parenting programs are delivered in a variety of settings, from clinics to community centers, in schools, and at parents' homes. Program sessions are traditionally offered in person, although online delivery is now also common (Spencer et al., 2020). In terms of delivery format, they are most commonly delivered individually, that is, on a one-to-one basis (e.g., MacMillan et al., 2009; Thomas & Zimmer-Gembeck, 2011), or in a group (e.g., Menting et al., 2013), followed by parenting programs offered online (e.g., Baumel & Faber, 2018). The present meta-analysis will focus on the difference in effects of in-person group-based and individual parenting programs.

Group-Based Versus Individual Parenting Programs

Although group-based and individual programs based on social learning theory principles share fundamental similarities, they each

come with unique advantages. First, group-based parenting programs provide parents the opportunity to meet and exchange with other parents, which may potentially increase parents' perception of social support. In other words, participating in group-based programs may allow parents to gain a sense of connectedness, which would in turn predict a range of benefits (e.g., decreased levels of parenting stress and parental aggression; McLeigh et al., 2018; Plesko et al., 2021). Second, when parents exchange with other parents who have similar difficulties, it may decrease the stigma of parenting difficulties (Niec et al., 2016; Webster-Stratton & Herbert, 1993). Normalizing some of the challenges that parents face can alleviate the perceived pressure to be perfect in their role as a parent. Third, the group format is an ideal setting for parents to observe and vicariously learn from other parents, while also being able to give and receive feedback (Morran et al., 1998). These feedback exchanges have been associated with increased motivation for change, greater satisfaction levels with the group experience, and an increased awareness of how one's behavior may affect others (Jacobs et al., 1974; Robison et al., 1986; Rothke, 1986). In addition, when parents are challenged to adapt their thinking and behavior, it may be more powerful when these suggestions come from other group members rather than from the facilitator alone (Rice, 2001). Through vicarious learning and the exchange of feedback, parents may feel like they are actively supporting and helping other parents, hence potentially playing an important role in other people's lives. This may encourage parents to be good role models for each other. Finally, the group setting may help create a culture of positive peer pressure among parents, since parents encourage and motivate each other to experiment with new strategies, which may also increase attendance (Niec et al., 2005).

Individual parenting programs, on the other hand, offer an individualized, one-to-one approach where parents can get tailored support from a trained facilitator. Some individual parenting programs offer the possibility to include the child in the session (e.g., PCIT, Funderburk & Eyberg, 2011), allowing parents to practice new skills with their children in a controlled setting. Such direct coaching, where facilitators directly observe and provide immediate reinforcement and corrective feedback on live parent-child interactions, is a predictor of improved parenting behavior. They may therefore be a potential mechanism of change in parenting interventions (Caron et al., 2018; Kaminski et al., 2008; Shanley & Niec, 2010). Furthermore, this in-the-moment feedback predicts stronger parenting program effects (Kaminski et al., 2008). Based on the parent's skills, the facilitator may then adapt the pace and content of the program to accommodate the specific needs of the parents and formulate an individualized plan to manage the child's behavior.

Child Behavior Management, Parenting Stress, and Parental Depressive Symptoms

Importantly, the superiority of either group-based or individual programs may depend on the outcome of interest. Since improved parenting behavior is associated with better outcomes for children across multiple domains (such as self-esteem, emotional and behavioral adjustment, cognitive development, and educational achievement; Bornstein et al., 2018; DeHart et al., 2006; Majumder, 2016), the most common and proximal target of parenting programs is parental use of child behavior management techniques. These techniques include positive reinforcement and nonviolent discipline, such as providing reasons when communicating boundaries and

using nonviolent strategies (e.g., time-out) to break coercive cycles. There is evidence for both group-based and individual programs to improve parents' use of child behavior management techniques (e.g., Gross et al., 2018; Niec et al., 2016). This increase in child behavior management across both delivery formats may be due to the direct, explicit focus of parenting programs on parenting behaviors, especially since parenting practices are the presumed mechanism of change in child adjustment (Patterson, 2005). Since both formats can offer advantages that may work equally well for improving parenting behaviors, we hypothesize that both group-based and individual programs will successfully enhance parent's use of child behavior management techniques.

Even though the primary goal of parenting programs was usually to promote change in parenting behaviors (Dretzke et al., 2005), they may also indirectly impact parents' stress and depression levels (Bennett et al., 2013). These mental health aspects play an important role in parenthood, especially since several studies have documented that high stress and depression levels are risk factors for hostile, coercive parenting practices (e.g., Li et al., 2021; Lovejoy et al., 2000; Vondra & Belsky, 1993; Wilson & Durbin, 2010).

Effects on parental stress may occur through improved child behavior management and subsequent reductions in children's behavior problems (Lanjekar et al., 2022; Neece et al., 2012; Tehrani et al., 2024). Although most of the studies evaluating group-based and individual programs report decreases in parenting stress after participation (e.g., Barlow et al., 2012; Beelmann et al., 2023; Leung et al., 2020; Tehrani et al., 2024), the findings of these studies can be inconsistent. For instance, Portwood et al. (2011) reported increased parenting stress levels after participation in a group-based program. The authors hypothesized that this increase might be due to parents' increased awareness of the challenges associated with parenting, and this awareness would elicit increased feelings of stress. Chesterfield et al. (2021) also found no clinically significant effect of a group-based program on parenting stress, hypothesizing that this may be due to allowing only one parent to participate. Similarly, when examining the outcome of parenting stress in individual parenting programs, the parenting program often did not affect parenting stress levels (e.g., Villodas et al., 2021), or parenting stress decreased equally in the control group as in the intervention group (e.g., Schappin et al., 2013). Although findings on parenting stress can be inconsistent, since most group-based and individual parenting programs directly target child behavior management, there is reason to believe that there may be a decrease in parental stress as a secondary outcome in both the delivery formats.

Findings regarding parental depressive symptoms are inconsistent as well. Some studies suggest positive effects of group-based or individual programs on parents' depressive symptoms (Barlow et al., 2012; Silovsky et al., 2023; Weber et al., 2019). Other studies, however, of both group-based and individual programs report inconsistent findings. For example, an integrative review by Masiran et al. (2022) and a systematic review and meta-analysis by Leijten et al. (2018) found no effects of group-based parenting programs on parent's depressive symptoms. A similar pattern emerges for individual programs, where several randomized controlled found no effects on parent's depressive symptoms (e.g., Thompson et al., 2009; Williams et al., 2020). However, because parents in group-based programs may benefit from peer support, it can increase their sense of connectedness (Wickramaratne et al., 2022). Therefore, we hypothesize that on average, group-based

programs may be more effective in reducing parental depressive symptoms. This may be especially plausible since mechanisms such as cohesion and social support have an important affective function in a group setting, such as satisfying the need to belong and decreasing feelings of loneliness (Severt & Estrada, 2015; Shekelle et al., 2024).

Studies directly comparing group-based with individual programs are crucial to answer questions related to the differences in effects between delivery formats, but it is important to highlight that these are limited and focus primarily on other outcomes, such as parent engagement and cost-effectiveness (Gross et al., 2018; Sonuga-Barke et al., 2018). Importantly, however, a randomized controlled trial (RCT) conducted by Niec et al. (2016) stands out, as it compared group PCIT with individual PCIT in their effects on parenting behaviors and mental health. In line with our hypotheses, the findings from this trial indicated that both formats led to enhancements in parenting skills and parenting stress. Furthermore, anecdotal evidence suggested that group PCIT may offer more social support, although there was no statistical evidence for this.

The Present Study

The goal of this meta-analysis was to examine and compare the effects of group-based and individual parenting programs based on social learning theory principles on parents' use of child behavior management techniques, parenting stress, and depressive symptoms. We examined overall program effects on each of the three outcomes. We then compared group-based and individual programs in their effects on each of the three outcomes. In line with previous findings, we hypothesized that (a) both formats increase parents' use of child behavior management techniques, (b) both formats decrease parenting stress, and (c) especially group-based programs decrease parental depressive symptoms.

Method

Search Strategy

We report this meta-analysis using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses and Cochrane guidance for meta-analyses on interventions (Deeks et al., 2019; Page et al., 2021). We used the results of the preregistered systematic literature review by Backhaus et al. (2023). They searched for trials in three ways. First, they updated their systematic reviews completed in 2014 (completed in August 2022). Second, they included eligible trials from a systematic review of trials in low- and middle-income countries (CRD42 019141844; last updated in August 2022). Last, they searched for eligible trials in 11 databases between January 2014 and August 2022 (EMBASE, 3ie Database of Impact evaluations, ASSIA, Campbell Library, The Cochrane Library [Cochrane Database of Systematic Reviews, Cochrane Central Register of Controlled Trials], ERIC, MEDLINE, National Criminal Justice Reference Service, The International Bibliography of the Social Sciences, APA PsycInfo, PILOTS). Trials were also searched in the following trial registries: <https://clinicaltrials.gov/>, Australian New Zealand Clinical Trials Registry, WHO International Clinical Trials Registry Platform, and metaRegister of Controlled Trials.

Inclusion Criteria

We included peer-reviewed publications, unpublished articles, dissertations, and results published in trial registries. In terms of target population, we included trials on parents of children with a mean age of 2–10 years. In terms of the programs, we included RCTs with a minimal intervention, no-intervention, wait-list, or care-as-usual control. The programs were considered for inclusion when they were based on social learning theory principles and when more than 50% of the sessions were directed at parents. Moreover, for this subreview, programs had to be delivered in person in groups or individually—programs were considered group-based when more than 50% of the sessions were delivered in a group and individual when more than 50% of the sessions were delivered individually. In terms of program delivery format, all self-directed or online parenting programs were excluded. Regarding our outcomes, only trials that included outcomes related to child behavior management, parenting stress, and depressive symptoms were included. Child behavior management was defined as the use of positive reinforcement and nonviolent discipline techniques. In addition, measures of child behavior management, parenting stress, and depressive symptoms were considered for inclusion when more than 50% of their items related to our target research outcomes.

Data Items

Data were extracted by three authors of Backhaus et al. (2023). The coders extracted data necessary for effect size calculation, as well as trial (e.g., type of control), intervention (e.g., group-based or individual), and sample characteristics (e.g., child age). The risk of bias in the included studies was assessed as high, low, or unclear using the Cochrane Risk of Bias Tool for RCTs (Higgins et al., 2011). Based on the Cochrane Handbook's standardized guidance, we rated trials on random sequence generation, allocation concealment, blinding of assessors, blinding of providers and families, incomplete outcome data, selective reporting, and other sources of bias. We coded trials as universal prevention (when the program targets general community samples and no selection criteria are used), selective prevention (when the program targets families based on risk factors, such as socioeconomic status), indicated prevention (when participants were actively recruited and screened as part of a research study and were only included to participate when they showed clinical or subclinical levels, with the goal of preventing the escalation of early signs into fully developed clinical conditions), and treatment (when families, already experiencing significant clinical issues, were referred to or referred themselves to receive the program in a clinical setting).

Data Analysis

We converted postintervention means and standard deviations into Cohen's d values. When these data were not reported, we used alternative summary statistics to calculate Cohen's d (e.g., p values and sample sizes). We contacted the authors from eight trials to obtain the required statistics to compute Cohen's d but did not obtain further information. We used robust variance estimation (RVE) where multiple effect sizes from the included trials are weighted using the Robumeta package in Stata. RVE provides a way to include all dependent effect sizes even when the exact nature of

dependence is unknown, that is, where trials report multiple effect sizes for an outcome. We used a random-effects model with an intercorrelation of 0.8. We grouped effect sizes by delivery format: group-based or individual. First, we estimated the overall effects of group-based and individual programs on each of the three outcomes: child behavior management, parenting stress, and parental depressive symptoms. We then pooled all effect sizes and used a dichotomous predictor to the model (0 = individual; 1 = group-based) to compare group-based with individual programs on each of the three outcomes.

Preregistration of Review and Data Availability

The protocol of this review was preregistered on PROSPERO (CRD42023422026). The data are available upon request.

Results

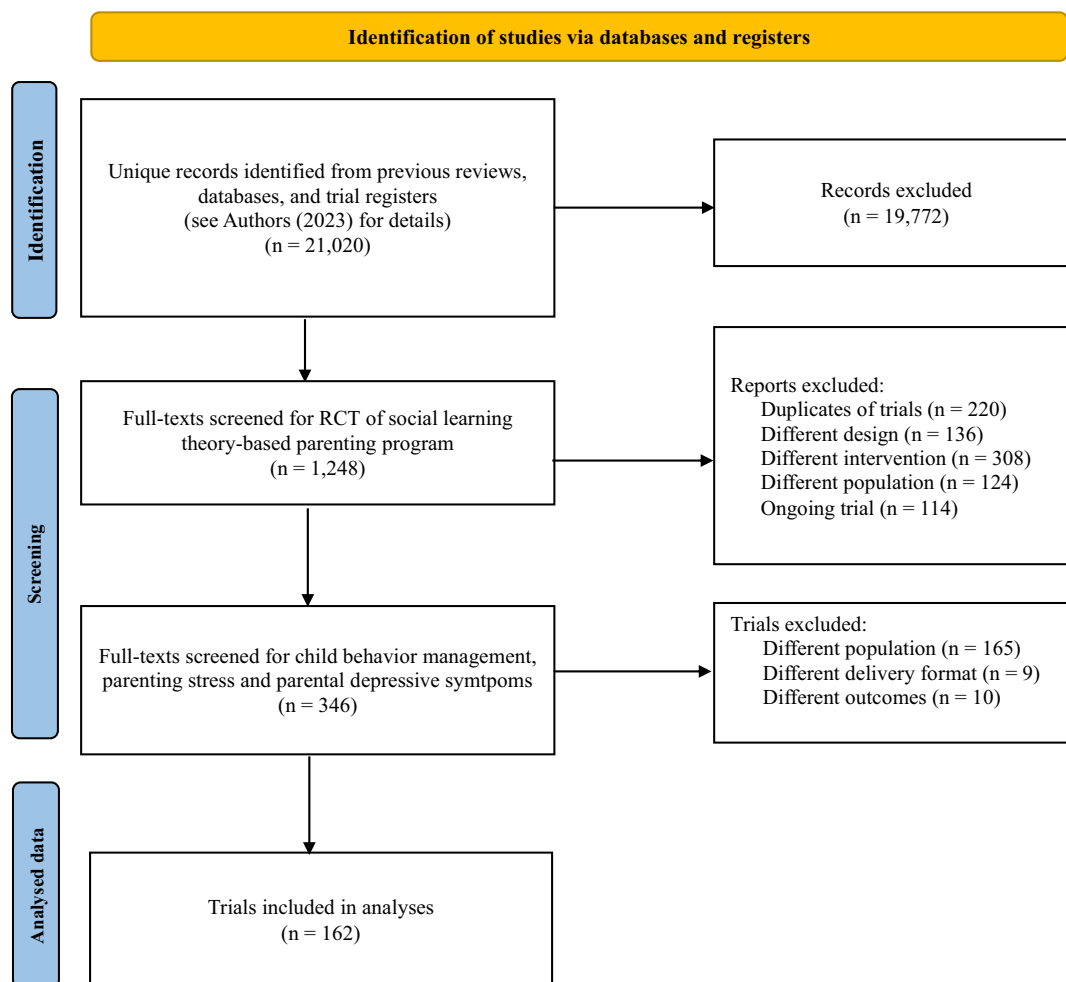
Included Trials

From the 346 trials included in the systematic review by Backhaus et al. (2023), 162 trials were eligible for inclusion in this meta-analysis, based on their measurement of at least one of the three target outcomes (flowchart, Figure 1). The 162 articles on these trials were published between 1980 and 2022. Trials were conducted in 34 countries: 41% in North America (Canada, United States, Puerto Rico), 3% in South America (Brazil, Chile, Mexico), 30% in Europe (Belgium, Denmark, Finland, Germany, Iceland, Ireland, Netherlands, Norway, Portugal, Sweden, Spain, United Kingdom, Wales), 11% in Oceania (Australia and New Zealand), 13% in Asia (China, Hong Kong, Indonesia, Iran, Israel, Japan, Lebanon, Malaysia, Philippines, Thailand, Turkey), and 2% in Africa (Liberia, South Africa).

Of the 162 trials, 121 (75%) evaluated group-based and 41 (25%) evaluated individual parenting programs. Both group-based and individual programs were mostly compared to a wait-list control group (68%, $n = 82$ for group-based programs and 51%, $n = 21$ for individual programs). All individual programs were delivered 100% individually. Of the 120 group programs, 90% were entirely group-based and 10% were primarily group-based with additional individual sessions or phone calls (e.g., 20 group sessions with four additional home visits; Karjalainen et al., 2019). Further demographic information and characteristics of the trials on group-based and individual programs can be found in Table 1 and Supplemental Table S1. The use of group-based versus individual programs differed somewhat per level of prevention and treatment: Group-based programs were most commonly evaluated for children at risk for conduct problems (i.e., 34% of all trials on group programs were evaluated in selective prevention settings, $n = 41$), whereas individual programs were more often evaluated for children referred for conduct problems (34% of all individual programs were evaluated in treatment settings, $n = 14$). In a post hoc sensitivity analysis, we tested if this difference between group-based and individual programs impacted our findings.

All trials used self-reported measures to assess parenting stress (e.g., Parenting Stress Index in 29% of the trials) and parental depressive symptoms (e.g., the Depression Anxiety Stress Scale in 14% of the trials and the Beck Depression Inventory in 10% of the trials). Trials used either parent-reports (e.g., Parenting Practice

Figure 1
Flowchart of Data Collection Procedure



Note. RCT = randomized controlled trial. See the online article for the color version of this figure.

Interview) or observations (e.g., Dyadic Parent–Child Interaction Coding System) to assess child behavior management, such as positive reinforcement and nonviolent discipline. Importantly, trials evaluating group-based programs used more self-reported questionnaires (57% self-reported questionnaires, 43% observations), whereas trials evaluating individual programs used more observations (30% self-reported questionnaires, 70% observations). We conducted a post hoc sensitivity analysis to test if this difference in measurement type in individual programs impacted our findings.

Risk of Bias Assessment

The majority of the studies failed to indicate whether the allocation was concealed (see Supplemental Figure S1). Since trials evaluating parenting interventions cannot blind participants or facilitators, there was a high risk of bias around blinding participants. Furthermore, most of the data were self-reported by the parents; hence, the risk of bias regarding the blinding of outcome assessors was high. However, for random sequence

allocation, incomplete data assessment, and other risk of bias, most of the included studies had a low risk of bias.

Overall Program Effects

We found overall small effects of parenting programs on increased child behavior management ($n = 71$, $k = 190$; $d = 0.44$; 95% CI [0.27, 0.60]; $\tau^2 = 0.26$), decreased parenting stress ($n = 83$, $k = 281$; $d = -0.26$; 95% CI [-0.36, -0.16]; $\tau^2 = 0.14$), and decreased parental depressive symptoms ($n = 58$, $k = 106$; $d = -0.18$; 95% CI [-0.28, -0.09]; $\tau^2 = 0.07$).

Group-Based Versus Individual Parenting Programs

Regarding child behavior management, there was a small but significant increase in group-based parenting programs ($n = 35$, $k = 143$; $d = 0.33$; 95% CI [0.19, 0.46]) and a medium-to-large effect size in individual programs ($n = 13$, $k = 47$; $d = 0.64$; 95% CI [0.24, 1.05]). Although these effect sizes did not differ from each other

Table 1
Demographics of Group-Based Versus Individual Parenting Programs

Characteristic	Group-based (<i>n</i> = 121)	Individual (<i>n</i> = 41)
Sample characteristics		
Mean child age, <i>M</i> (<i>SD</i>)	5.55 (1.88)	5.28 (2.06)
Mean parent age, <i>M</i> (<i>SD</i>)	35.90 (4.94)	34.10 (5.01)
Trial characteristics		
Number of sessions, <i>M</i> (<i>SD</i>)	11.10 (6.83)	10.20 (5.59)
Number of weeks, <i>M</i> (<i>SD</i>)	11.60 (6.56)	13 (9.37)
Level of prevention or treatment of child conduct problems, <i>n</i> (%)		
Universal	26 (22)	6 (14)
Selective	41 (34)	10 (23)
Indicated	28 (23)	11 (25)
Treatment	26 (22)	14 (34)

significantly (differential $d = 0.32$; 95% CI $[-0.10, 0.73]$), the effect size in individual programs was almost twice the size of the effect size in group-based programs (see Figure 2). Regarding parenting stress, there was a small decrease in both the group-based programs ($n = 44$, $k = 203$; $d = -0.23$; 95% CI $[-0.34, -0.12]$) and the individual programs ($n = 20$, $k = 78$; $d = -0.37$; 95% CI $[-0.60, -0.14]$). These effect sizes were not significantly different (differential $d = 0.14$; 95% CI $[-0.10, 0.38]$). Regarding parental depressive symptoms, there was a small decrease in group-based programs ($n = 41$, $k = 84$; $d = -0.20$; 95% CI $[-0.31, -0.09]$). By contrast, the effect size for individual programs was not statistically significant from zero ($n = 11$, $k = 22$; $d = -0.11$; 95% CI $[-0.30, 0.07]$). Even though only group-based programs significantly decreased parental depressive symptoms, the effect sizes from the group-based and individual programs were not statistically different from one another (differential $d = 0.14$; 95% CI $[-0.10, 0.38]$).

Post Hoc Sensitivity Analyses

We conducted post hoc sensitivity analyses to test, first, whether the level of prevention impacted our findings and, second, whether the type of measure (parental self-report or observational) impacted our findings.

There is a well-replicated difference in effect size between treatment and prevention settings, with stronger effects in treatment

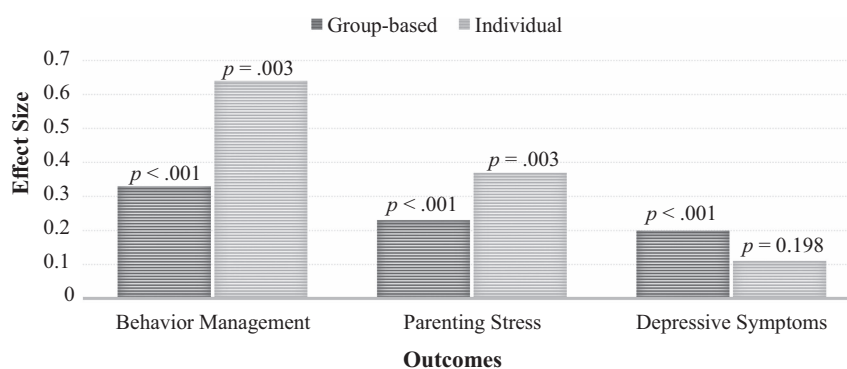
settings, where children have more severe conduct problems (Leijten et al., 2019, 2020). In our analyses, we distinguished between prevention settings (universal and selective prevention) and treatment settings (indicated prevention and treatment) because the difference in effect size between universal and selective settings as well as the difference between indicated prevention and treatment is not significant (Leijten et al., 2019). We reran our analyses separately for trials conducted in prevention settings and for trials conducted in treatment settings. Findings were similar across outcomes (see Supplemental Table S2). Our findings thus cannot be explained by more frequent use of individual programs in treatment settings, although our findings should be interpreted in light of the differences in use of group-based and individual programs in prevention and treatment settings. In a similar trend, we tested for a potential impact of the type of measurement (i.e., observation or self-reports), by controlling for type of measurement in our analyses of program effects on child behavior management. This did not change any of the findings (see Supplemental Table S3).

Discussion

In the present study, we tested whether either group-based or individual parenting programs are superior in increasing parents' use of child behavior management techniques, reducing parenting stress, and reducing parental depressive symptoms. Our results indicate that parents' child behavior management and parenting stress improve significantly in both group-based and individual programs. By contrast, parental depressive symptoms were found to improve significantly only in group-based programs and not in individual programs.

Although the difference in effects between group-based and individual parenting programs on child behavior management was not significant, the effect size for individual programs ($d = 0.64$) was twice as big as the effect size for group-based programs ($d = 0.33$). This could suggest that parents' use of behavior management techniques might improve particularly well in the context of individual programs. Potentially, individual programs can offer a more tailored approach, where parents can get personalized support from a facilitator. A more personalized approach may offer the opportunity to work on exactly those parenting behaviors that parents want to change or situations with which they are struggling. On the other hand, we note that there tended to be more severe levels

Figure 2
Effect Sizes for Group-Based and Individual Programs



of conduct problems in individual-based programs, which would typically be associated with higher effect sizes (Leijten et al., 2020), potentially contributing to the trend toward stronger effects in individual programs. However, future research is needed to test these hypotheses explicitly, ideally through a direct comparison between individual and group-based programs in one trial.

Importantly, it should be noted that the effect sizes were not significantly different for group-based versus individual programs. This might be explained by the great variability between individual programs in their effects on parenting behaviors. This variation in effects might as well be explained by the reliance upon an individualized approach, as this may bring about more variability in the exact program content for each family. Future research is needed to better understand this variability, for instance, by focusing on the decisions that clinicians make in individual parenting programs, and whether these decisions have implications for the effectiveness of these programs.

Further, our findings suggest that both group-based and individual programs effectively reduced parenting stress. Following the trend of previous meta-analyses (e.g., Cooley et al., 2014; Li et al., 2021; Tehrani et al., 2024), we found a small significant effect in both delivery formats. This suggests that although each format may come with its own advantages, either format works equally well in reducing parenting stress. This could be because effects on parenting stress are mainly explained by factors that are similar across formats (e.g., a supportive therapist and practical guidance or reduced disruptive child behavior) or because different factors can result in similar effects on parenting stress (e.g., personalized guidance in individual programs and social support in group-based programs). Therefore, further research would be needed to investigate the mechanisms of change, which may be similar or different in a group-based or individual format. This way, parenting stress can be targeted more thoroughly in parenting programs.

In line with our hypotheses, we found that only group-based programs significantly reduced parents' depressive symptoms. There could be several possible explanations for this. First, parents participating in a group-based program can share their experiences with other parents. This can be a welcomed relief for parents who feel helpless and discouraged by parenting difficulties (Gross et al., 2018). These interactions may also foster a sense of connectedness, which can lower feelings of loneliness or isolation (Satici et al., 2016). Second, in a group setting, parents can observe and learn from the other parents. Such vicarious learning in groups may put less pressure on parents to learn new parenting skills than in an individual setting, where a parent may apply a new skill while being directly observed by a professional (Gross et al., 2018). Third, parents can give and receive feedback to each other during the sessions, which may give them a sense of mastery (Pearlin & Schooler, 1978). This sense of control may be important, especially since people with a high sense of personal control can weather stressful conditions or negative events more easily (Thoits, 1995).

Helping and supporting other parents through feedback provides a sense of purpose and can facilitate well-being (Thoits, 1992) while it may also motivate parents to experiment with new parenting strategies (Morran et al., 1998; Rothke, 1986). In this sense, parents may feel encouraged to be a good example because they can actively help the other parents in the group. This way, parents can strengthen their own competences while also being active agents in other parents' lives. These explanations can be supported by the findings

of the systematic review of qualitative literature by Butler et al. (2020), where parents identified the group as an important factor. The group helped them to feel less alone, was a source of support, and provided a sense of belonging. However, to better understand the role of the group in parents' experiences and perceptions of the group, further in-depth research is needed to develop the role of group dynamics in parenting programs. This understanding is vital to fully comprehend what exact mechanisms in a group setting could potentially contribute to parents' mental well-being.

Clinical Implications

Our findings provide support for the use of both individual and group-based parenting programs to change parenting behavior and reduce parenting stress, and the use of group-based programs to reduce depressive symptoms. However, there may be differences between families in the underlying mechanisms between group-based and individual programs that we did not test in this study but that could have clinical implications. In addition, feasibility and cost-effectiveness may also influence what the right type of parenting program is for different settings. On the one hand, group-based programs may increase the availability of services since one facilitator can work with multiple parents simultaneously, making it potentially a more cost-effective approach (Dretzke et al., 2005; Furlong et al., 2012). On the other hand, individual programs can be implemented more flexibly in terms of timing as there is no specific number of attendees needed before the sessions can start. Therefore, the choice of delivery format can be decided by several factors. In sum, we advise clinicians to integrate in their decisions our findings with the preferences and abilities of both the parents and the clinicians.

Strengths and Limitations

Our study answers calls to identify whether delivery format plays a role in the effects of parenting programs on parents' behaviors and mental health (e.g., Gross et al., 2018). The credibility of our findings was strengthened by the methodological rigor of our comprehensive literature search of published and unpublished works in multiple languages, inclusion criteria that increased homogeneity in trial design and program content (e.g., only programs based on social learning theory), and the use of RVE analyses to include all eligible effect sizes. Additionally, we conducted several post hoc sensitivity analyses to rule out possible alternative explanations for our findings.

There are, however, several limitations of our study that merit attention. First, similar to other meta-analyses, we only tested for associations between study characteristics (i.e., delivery format) and our three targeted outcomes, instead of examining causal effects. The reason for this is that head-to-head trials (i.e., studies directly comparing group-based programs with individual programs) are rare. Per outcome, we came across only one or two of these trials in our systematic search (Gross et al., 2018; Niec et al., 2016), which is too few to produce reliable estimates. Second, we only included parenting programs based on social learning theory principles. Although this reduced heterogeneity between trials and allowed us to include the most common and most established programs (e.g., PCIT, Incredible Years, Triple P, Parent Management Training–Oregon model), this limits the generalizability of our findings to

other types of parenting programs (e.g., those primarily based on attachment theory or communication perspectives). Third, despite relative homogeneity in the interventions in our sample (e.g., sample age, program length), there was a lot of variability in the effect sizes of child behavior management in individual programs. There may be several factors that contribute to this variability, such as the small sample size, the heterogeneity in the method of the program, and facilitator and measurement characteristics. Fourth, we were unable to take into account whether factors such as problem behavior severity and preintervention levels of parental stress and depressive symptoms influenced parents' decisions to participate in either a group or individual parenting program. If different types of parents are less or more likely to sign up for either group or individual programs, this could have impacted our findings. Therefore, future research should explore how these factors may influence parents' choice of delivery mode. Finally, although a total of 162 trials were included in this study, most trials did not measure all our outcomes. Because of this, the number of studies included for certain analyses was much smaller (e.g., $n = 11$ for the effects of individual programs on depressive symptoms). Because of these limitations, our findings should be interpreted with caution.

Conclusion

Our findings indicate that both group-based and individual parenting programs improve parents' child behavior management and parenting stress, with management techniques potentially improving particularly well in individual settings, while only group-based programs reduced parents' depressive symptoms. In sum, whether parents will benefit more from a group-based or individual program may depend on the parenting aspect the parent wishes to address. Therefore, clinicians should strive to obtain a complete, in-depth understanding of the parent's demand for support to guide them toward the most appropriate setting that aligns with their needs.

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