

Regular Article

Parental mentalization and children's externalizing problems: A systematic review and meta-analysis

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Abstract

Parental mentalization, as the ability to understand mental states (e.g., desires) behind their children's actions, may play a relevant role in the prevention of future externalizing problems. We conducted a meta-analysis to examine the relationship between parental mentalization and children's externalizing problems. Six electronic databases were searched for studies, published in English or Spanish, linking empirically those two variables. Participants included caregivers and children between 0 and 18 years. The filtering process yielded 42 studies with 52 effect sizes. Random-effect analysis revealed higher parental mentalization associated with fewer externalizing problems, with an effect size of $r = -.19$ (95% CI [-.25, -.13]). Due to high heterogeneity ($I^2 = 83.750$), further analyses were conducted to explore factors affecting such association. Parenting experience and children's developmental stage moderated the relationship, but approaches to operationalize mentalization (MM or PRF), sample type (clinical/at-risk vs. community), and reporting figure (primary caregiver vs. other informants) did not. The study highlights the significance of parental mentalization as a potential contributor to the prevention of externalizing behaviors among infants, children, and adolescents. Our findings may underscore practical implications for equipping caregivers with mentalization skills, helping them to answer appropriately to their children needs.

Keywords: Children's externalizing problems; developmental stage; meta-analysis; parenting experience; parental mentalization

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Early manifestations of externalizing behaviors, such as tantrums, disobedience, and aggression (Peterson et al., 2018), are observed as early as infancy (Perra et al., 2021). Recent meta-analysis results in children aged 1–7 years (Vasileva et al., 2021) reveal a 10% prevalence of externalizing psychopathology, including attention-deficit hyperactivity disorder, conduct disorder, and oppositional defiant disorder. Failure to address these maladaptive behaviors in their early stages increases the risk of future issues, including substance abuse and violence (Moffit, 2017), antisocial personality disorder (Diamantopoulou et al., 2010), and criminal records (Bevilacqua et al., 2018). In fact, early externalizing problems have shown to predict criminal convictions two decades later (Kassing et al., 2019). Hence, it is essential to prevent the emergence of externalizing behaviors and/or to avoid their persistence at early ages.

Externalizing behaviors result from a complex interplay of genetics, neurological changes, and environmental factors (Rovira et al., 2020), including biological disposition (Dodge & Pettit, 2003), parent–child relationship characteristics (Hewitt-Ramírez & Moreno-Méndez, 2018), and the interaction between genetics (e.g., temperament) and environmental (e.g., family) elements (Goodnight et al., 2016). Since interventions and preventive

measures are not applicable to genetic factors, a relevant area of attention and intervention is the realm of the parent–child relationship. Parenting is considered a significant contributing factor of the children's externalizing behavior (Rothbaum & Weisz, 1994). Thus, parental abilities become a primary target for interventions. Encouraging the development of specific parenting skills can enhance the bond between parents and children and reduce various adverse effects, particularly externalizing problems (e.g., see Cooke et al.'s 2022, meta-analysis on parental sensitivity and child behavioral problems). Therefore, the parent–child relationship emerges as an explicative factor worth studying in preventing juvenile crime (Webster-Stratton & Reid, 2018). While the influence of parenting is well established in the case of both externalizing (Pinquart, 2017a) and internalizing problems (Lin et al., 2024; Pinquart, 2017b), the present review focuses on children's and adolescents' externalizing behaviors since including both internalizing and externalizing problems is beyond the scope of the present review.

From a developmental perspective, infants' survival hinges on their caregivers' capacity to interpret their thoughts, feelings, and behaviors to meet their needs (Lavender et al., 2023). Parental mentalization is closely linked to children's inner growth, assisting them in managing emotional conflicts and promoting positive psychological development (Caldarera et al., 2022). In fact, there is evidence showing the links between parental mentalization and positive parenting behaviors (for a systematic review, see Stuhmann et al., 2022). Specifically, parental mentalization has been robustly related to secure child–parent attachment (Zeegers

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et al., 2017), which, in turn, has been strongly associated with a lower incidence of externalizing problems (based on meta-analyses for results with mothers by Fearon et al., 2010, and with fathers by Deneault et al., 2021).

Despite the existent growing number of studies in the field, there are discrepancies regarding the consistency of the relationship between parental mentalization and children's externalizing behaviors. Specifically, research findings show varying degrees of such association. For example, research shows that parental mentalization and externalizing problems are positively associated (Meins et al., 2013, Wade et al., 2021), weakly negatively related (e.g., Dollberg et al., 2023), or strongly inversely correlated (e.g., Khoshroo & Seyed Mousavi, 2022). Such disparities across studies reveal the need of exploring potential reasons behind them. Therefore, the meta-analytic technique, including the use of meta-regression, is instrumental in overcoming inconsistencies in results. The current study represents the first meta-analysis that synthesizes research examining the issue.

Parental mentalization linked to children's externalizing problems

Overall, mentalization is a dynamic and developmental capacity mainly context- and relationship-specific. Parental mentalization primarily emerges within the context of secure attachment relationships, serving as a key construct in children's development and beneficial parent-child relationships (Sharp & Fonagy, 2008). Within that framework, parental mentalization is a psychological mechanism that facilitates parental self-regulation and the co-regulation of the child's emotional states (Stuhrmann et al., 2022). It encompasses parents' capacity to perceive their child as a psychological entity, differentiating between their children's mental experiences and their own. Parental ability to comprehend not only their child's external behaviors but also the internal mental activity (e.g., motives and emotions) that drive those behaviors (Medrea & Benga, 2021), is closely associated to responding to the child appropriately through affectively attuned parenting behavior (Kelly et al., 2005).

In contrast, parents with lower mentalizing capacities may struggle to perceive their children's mental states, failing to comprehend the motivations behind their children's actions and to meet their needs, especially in challenging situations. Consequently, this lower mentalizing capacity may result in punitive responses exacerbating the child's distress and dysregulation (Dollberg et al., 2021; Ensink, Bégin et al., 2017). Evidence suggests that poor parental mentalization is correlated with heightened negative emotionality (Smaling et al., 2016), increased tendencies towards controlling behaviors (Suardi et al., 2020), and with issues in socioemotional development (Nijssens et al., 2020).

In fact, when it comes to the relationship with children's externalizing behaviors, it has been found that high parental mentalization can contribute to the prevention of the onset of these problems (Suardi et al., 2020), and poor parental mentalization is associated with higher externalizing behaviors (Khoshroo & Seyed Mousavi, 2022). Nevertheless, there are some studies that have reported a null (Zeegers et al., 2020) or even a positive relationship (Kochanska & An, 2023; Wade et al., 2021) between parental mentalization and externalizing problems. Therefore, it is evident the need to clarify the association between these variables. In view of the above, we expect a negative relationship. Yet, several circumstances need to be considered in the analysis. A brief account of possible moderators follows.

Parental mentalization: operationalization approaches

Mentalization consists of four primary dimensions: Aspect (automatic vs. controlled), Focus (internal vs. external), Person (self vs. other), and Mode (cognitive vs. affective), being essential that these dimensions maintain a balanced interaction for effective mentalization (Bateman & Fonagy, 2019). Parental mentalization is investigated through three approaches – mind-mindedness (MM; Meins, 2013), parental reflective functioning (PRF; Slade et al., 2005), and insightfulness (Oppenheim & Koren-Karie, 2002) – all focusing on parents' comprehension of their children's internal states (Zeegers et al., 2017). Each one operationalizes caregivers' capacities differently and offers a unique perspective on comprehending parent-child dialogue and interaction (Medrea & Benga, 2021). A simple way to understand how to operationalize parental mentalization is conceptualizing it, following the terminology of Meins and Fernyhough (2015), as 'offline' (representational) and 'online' (interactional) mentalizing abilities.

MM is the only measure that can be evaluated from both online and offline perspectives, while PRF and insightfulness are operationalized in a representational way (offline). Appropriate MM can be measured in: (a) parent-child interactions, where parents provide accurate and spontaneous comments on the child's mental state, matching the infant's experience or behavior (online) and (b) via the caregiver's description of the child in terms of mental attributes (offline; Dollberg, 2022). PRF can be evaluated by coding an interview (e.g., the Parent Development Interview: PDI; Slade et al., 2005; Sleed et al., 2020), or via self-report using a questionnaire (e.g., The Parental Reflective Functioning Questionnaire: PRFQ; Carlone et al., 2023; Luyten et al., 2017). Within the PRFQ, the dimensions include pre-mentalizing (PM), certainty about mental states (CMS), and interest and curiosity (IC), with adequate mentalization characterized by low PM and average CMS and IC scores. The PM subscale, which assesses distortions in mentalizing, reveals particularly detrimental effects of serious mentalization impairments, and is the most closely related dimension to emotional unavailability and insecure attachment (Luyten et al., 2017). Insightfulness is assessed through caregivers' reflections on their relationship with the child in response to questions about the child's thoughts and feelings (Oppenheim & Koren-Karie, 2002).

Nevertheless, the strength and direction among these three approaches (MM, PRF, insightfulness) and children's externalizing problems seems to vary across studies. For instance, the correlation between MM and externalizing problems has been reported as strong (Camisasca et al., 2018), weak (Dollberg et al., 2023), or nonexistent (Zeegers et al., 2020). Similarly, PRF's association with externalizing has been observed as strongly negative (Khoshroo & Seyed Mousavi, 2022) or positive (Borelli et al., 2021). Lastly, analyses of the relationship between insightfulness and externalizing problems have showed positive (Gray et al., 2015) and negative associations (Feniger-Schaal & Koren-Karie, 2021).

Therefore, in view of the aforementioned discrepancies between studies, further research is required. Thus, the present meta-analysis will explore whether MM, PRF or insightfulness has stronger power to predict the expected negative relationship between parental mentalization and children's externalizing problems. We anticipate the relationship between parental mentalization and externalizing problems to vary depending on whether it is assessed representationally or through actual interactions. Some parents may possess adequate mentalization

skills at the representational level (assessed via PRF), but struggle to demonstrate them in real-time interactions, when measured online through their verbalizations about the child's mental states during direct play (Shai et al., 2017). Hence, we expect that, when parental mentalization is analyzed in real-time (online) interactions, the relationship between mentalization and externalizing problems will be stronger than when the measure is a 'representational' approach (offline).

Children's developmental stage

Following normative developmental trajectories, externalizing problems decrease from early childhood to preadolescence, increase during adolescence, and then decrease again from late adolescence into adulthood (Petersen et al., 2015). Yet the impact of parental mentalization on reducing these behaviors may vary depending on the child's developmental stage. For example, some studies have found that the relationship between parental mentalization and externalizing problems in adolescents is close to zero (e.g., Benbassat & Priel, 2012; Borelli et al., 2019). However, it has been found to be negative during infancy (e.g., Salo et al., 2022; Smaling et al., 2016), in young children (e.g., Colonnese et al., 2019; Dollberg et al., 2021) and during middle childhood (e.g., Condon et al., 2019; Ensink et al., 2016). Moreover, a study comparing both early and middle childhood found a stronger negative effect between parental mentalization and externalizing problems in the older group (Khoshroo & Seyed Mousavi, 2022). Thus, younger children may require higher parental mentalization skills to effectively regulate their emotions and behaviors. Considering the above findings, we may posit a stronger negative relationship between mentalization and externalizing problems during middle childhood and a smaller effect during early childhood and adolescence.

Parenting experience

Given the inconsistency of research evidence, we suggest that parenting experience may be another moderator. While certain studies involving first-time parents revealed a modest association (Salo et al., 2021), research involving experienced caregivers uncovered a higher correlation (Lunn et al., 2019). Hence, we hypothesize that the negative relationship between parental mentalization and children's externalizing problems will be stronger in experienced parents as compared to first-time parents.

Population type

Given the processes underlying mentalization, psychopathology will invariably entail challenges related to mentalizing skills (Bateman, 2022). As a matter of fact, in a recent systematic review and meta-analysis (Georg et al., 2023), parental depression has been associated to lower parental mentalization. Yet, the relationship between parental mentalization and children's externalizing problems might differ between clinical and nonclinical populations. In fact, there is research evidence showing a likely stronger effect of parental mentalization in clinical/at risk samples (e.g., Hughes et al., 2017). Specifically, maternal mentalization has been found to have a stronger protective role in mitigating externalizing symptoms in challenging situations or with at-risk families, as opposed to general community samples (Meins et al., 2013). Therefore, we expect the strength of the negative association between parental mentalization and externalizing behaviors to be more pronounced in clinical or at-risk samples compared to studies involving the general community.

Parental education

Research exploring various education levels has shown differential associations of parental mentalization with child externalizing problems. MM was a predictor of child externalizing problems at childhood, but only with parents with no secondary education (Meins et al., 2013). However, some studies reported no association between parental mentalization and externalizing behavior when controlling for parental education (e.g., Colonnese et al., 2019; Dollberg et al., 2021). Given the mixed nature of the evidence, we refrain from proposing a specific hypothesis regarding this matter.

Reporting figure

From a methodological perspective, the reporting figure may also affect the relationship between parental mentalization and behavior. There may be differences between parents' and teachers' reports of children's externalizing problems, as these informants rely on distinct experiences (Deneault et al., 2023). In fact, a meta-analysis reported that parents often perceive more externalizing behaviors than teachers (Carneiro et al., 2021). In addition, when the same observer evaluates two different variables, the correlation between them may increase due to covariance bias (Hoyt, 2000). Thus, it is reasonable to think that the relationship between parental mentalization and children's externalizing problems would be stronger when the primary caregivers are the reporting figure of the latter variable (as opposed to teachers or other reporting figures).

Aims of the meta-analysis

In summary, the evidence that parental mentalization is associated with a decrease in children's externalizing problems is inconclusive. Therefore, one of the objectives of this meta-analysis is to confirm the type of relationship between these variables. We also seek to determine the magnitude of this association, as well as to investigate factors that may moderate this relationship. The present meta-analysis aims at examining the relationship among infants, children, and adolescents. It will consider the following moderators: (a) different approaches for the operationalization of parental mentalization (MM, PRF or insightfulness), (b) children's developmental stage (early childhood, middle childhood or adolescence), (c) parenting experience (first-time vs. experienced parenting), (d) sample type (clinical/at-risk vs. community), (e) parental education, and (f) reporting figure (primary caregiver vs. others).

The main hypothesis is that higher parental mentalization will be associated with fewer externalizing problems in children and adolescents. Furthermore, we expect a stronger negative association between higher levels of parental mentalization and externalizing problems in real time interactions (vs. representational approaches), in middle childhood (vs. younger children and adolescents), in experienced (vs. first-time) parenting family situations, in clinical/at-risk (vs. community), and in primary caregiver (vs. others' reports). Lastly, based on conflicting evidence when examining the possible moderating effects of parental education, we will take an exploratory approach regarding this question.

Methods

Inclusion and exclusion criteria

This systematic review and meta-analysis followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Page et al., 2021). For their inclusion, studies had to meet the following criteria: (a) written in English or Spanish; (b) empirical in nature; (c) reported in peer-reviewed

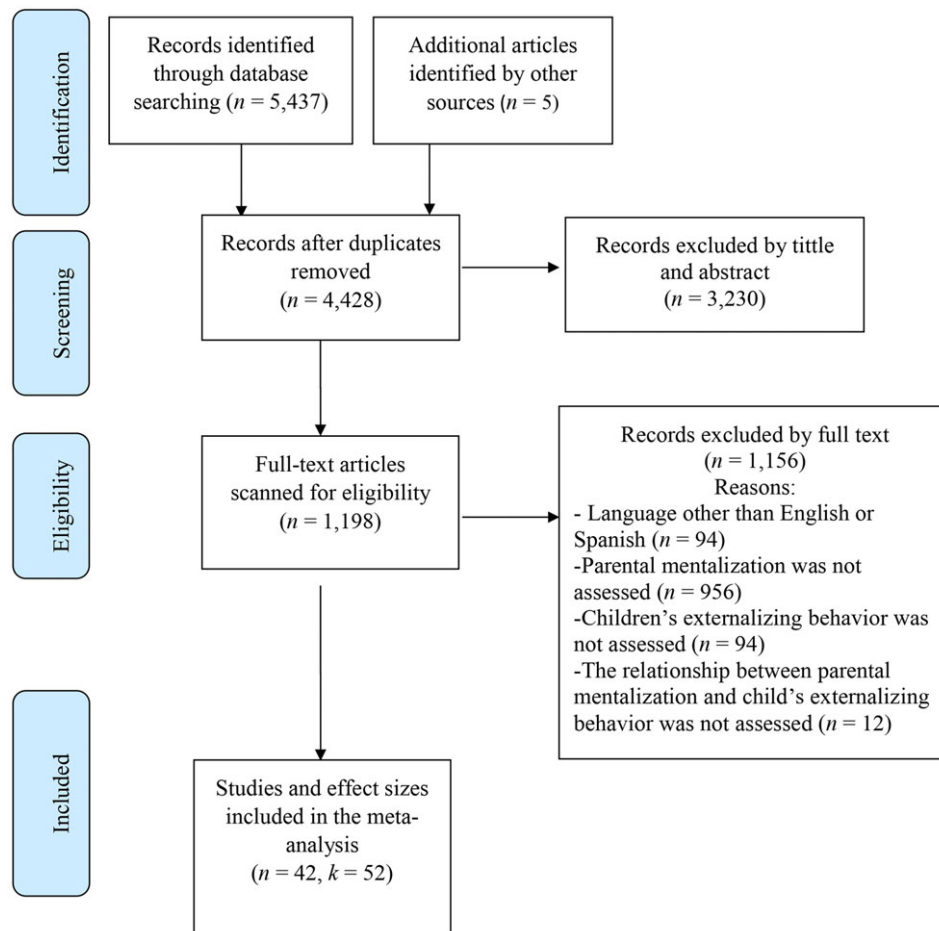


Figure 1. Flow diagram.

journal articles; and (d) included children aged between 0 and 18 years in the sample. Studies were excluded if: (a) they provided insufficient data for effect size analysis, and additional data could not be obtained from the respective authors; (b) they did not evaluate parental mentalization;¹ (c) they did not assess children's externalizing behavior in the age range under analysis (0-18 years); (d) they did not investigate the relationship between parental mentalization and child externalizing symptoms; or (e) were dissertations or book chapters.

Search strategy criteria and selection of studies

The initial search was performed in June 2021; it was updated in January 2024 to retrieve documents included in databases until December 2023. First, six electronic databases were searched to identify records related to parental mentalization and externalizing problems. These databases included APA PsycArticles, APA PsycInfo, PsycBooks, PSICODOC, Scopus, and Web of Science. The following combination of terms was used in the abstract, keywords, and subjects: Mentali* OR reflective function* OR mind-mind* OR mind-related OR insightful AND external* OR internal* OR behav* disorder* OR behav* difficult* OR behav* problem* OR conduct disorder* OR conduct* difficult* OR conduct problem* OR disruptive behav* OR child* problem OR antisocial behav* OR ADHD OR CBCL. Initially, we retrieved 5,442 records; eventually, we included 42 studies ($N = 7,761$ participants) with 52 effect sizes in the meta-analysis (see Figure 1).

¹The study was excluded if the total or a nonvalidated version of the PRFQ scale was reported, and no further data could be obtained.

To ensure consistence and replicability of the meta-analysis, a random sample of every fifth screened paper was independently coded by the second author; disagreements were resolved by having the first author and the second author review the article in question and jointly come to a consensus regarding the appropriate coding. Subsequently, the first and the second author independently reviewed all full-text level records. A high agreement was obtained ($Kappa = 0.98$). The third author resolved discrepancies.

The first and the third authors independently assessed the risk of bias of each of the included studies and discussed their assessments to achieve consensus. An adapted version of the Newcastle–Ottawa Scale for cross-sectional studies (NOS; Herzog *et al.*, 2013; Wells *et al.*, 2000) was used to evaluate the quality of the methodology used in the included studies. The NOS is a checklist that assesses the appropriateness of research design, the recruitment strategy, the representativeness of sample, the objectivity/reliability of outcome determination, the power calculation provided, and appropriate statistical analyses. Score disagreements were resolved by consensus and a final agreed-upon rating was assigned to each study (see S1 of Supplementary Online Materials).

Finally, the data extraction process involved two stages. The first author retrieved the necessary data for analysis (see Table 1), and the third author independently checked the values. Any disagreements were resolved by all authors.

Analysis plan

Our primary analysis included 52 effect sizes assessing parental mentalization and externalizing problems (see Table 1 for

overall effect sizes and study characteristics). The following moderators were examined: approaches for the operationalization of parental mentalization (MM, PRF, or insightfulness), children's developmental stage (early childhood, middle childhood, or adolescence), parenting experience (first-time vs. experienced), the sample type (clinical/at-risk vs. community), and reporting figure (primary caregiver vs. others). Only categorical moderator variables that had at least five contrasts in the categories were used (Bakermans-Kranenburg et al., 2003); thus, we were unable to analyze parental insightfulness ($k = 3$). The data from parental education was noncomparable among the studies to perform moderation analyses (i.e., studies reporting the percentages of participants' educational attainment). When studies reported both maternal and paternal correlations, we chose the maternal correlation for consistency, as more studies focused on maternal mentalization. In longitudinal studies and interventions, we selected the effect size reported at baseline. In order to maintain a comparable number of studies, the operationalization of PRF was prioritized when both PRF and MM were reported, aiming to balance moderation analyses.

Taking into account the three dimensions of PRFQ, we have not considered the CMS or the IC subscales. The reason is that the optimal levels of both subscales are at the midpoint; consequently, a curvilinear analysis might be more appropriate, but it complicates the linear regression required for meta-analytic techniques. Therefore, we have chosen the PM correlation in order to perform the analyses. Accordingly, correlation scores were reverted because it assesses a non-mentalizing stance, indicating that higher scores correspond to lower mentalizing abilities. Moreover, to test whether the relationship between mentalization and externalizing problems differed across the various approaches for the operationalization of mentalization, we compared effect sizes between offline vs. online measures. To define age groups, we have categorized individuals into early childhood (0-5 years), middle childhood (6-12 years), and adolescence (13-18 years) (see S2 of Supplementary Online Materials).

The analysis was conducted using R v4.2.2 (R Core Team, 2022) and the *metafor* package v4.0.0. Random effects model was chosen due to its ability to account for the excess variance (Viechtbauer, 2010). Effect sizes (Pearson's r) were computed to have the same statistic depicting the relationship between parental mentalization (MM or PRF) and externalizing problems. Standard formulas allowed for the transformation of diverse effect sizes, such as group differences (Wilson, 2023) and regression coefficients (Peterson & Brown, 2005). In order to reduce variability, pooled effect sizes were computed with corresponding 95% confidence intervals (Borenstein & Hedges, 2019).

Results

Characteristics of the studies

The following lines provide a summary of some noteworthy aspects of the included research in the meta-analyses. A total of 42 studies with 52 effect sizes were incorporated in the meta-analysis. The investigations were conducted in various countries, including Australia, Belgium, Canada, Finland, Israel, Italy, the Netherlands, Switzerland, Türkiye, the UK, and the USA. The meta-analysis included 7,761 caregivers and their children. Most studies ($k = 38$) included birth parents, while a few involved other caregivers ($k = 4$), such as adoptive and foster parents. Twenty-six studies

included participants from the community, nine studies used clinical or risk samples (i.e., children who experienced abuse or low socioeconomic families), and seven studies compared both sample types. Intervention programs were included in seven research papers. Studies analyzing parental mentalization as a mediator between parent/child mental health (i.e., parental depression or psychopathological impact of sexual abuse in children) on externalizing problems found higher levels of this ability related to fewer externalizing problems. This suggests both direct and indirect effects of parental mentalization on externalizing behaviors (see S3 of Supplementary Online Materials for details of variables analyzed in the studies).

Meta-analytic effects

Effect sizes (Pearson's r) were computed to examine the relationship between parental mentalization and externalizing problems. The coefficient based on the random-effects model of r was $-.19$ (95% [CI: $-.24, -.13$]), ranging from $-.56$ to $.23$, with most estimates being negative (83%). As expected, there was a negative relationship between parental mentalization and externalizing problems. This indicates a small to moderate negative relationship between the variables, implying that higher parental mentalization is associated with fewer externalizing problems observed in children. Figure 2 displays a forest plot illustrating observed outcomes and estimates.

The Q -test suggests heterogeneity among the true outcomes ($Q(51) = 383.760, p = .001, \tau^2 = .029, I^2 = 83.750$), denoting that a significant proportion of the variability in effect sizes is due to differences between studies rather than sampling error. The high I^2 value suggests that approximately 84% of the total variation across studies is attributable to heterogeneity. Consequently, despite the average outcome being estimated as negative, some studies may indicate a positive true outcome (e.g., higher mentalization, elevated externalizing problems). Figure 3 presents a funnel plot of the estimates. Neither the rank correlation ($p = .894$) nor the regression ($p = .849$) test indicated any funnel plot asymmetry, suggesting no publication bias.

We conducted further exploration of the possible sources of heterogeneity through moderation analyses. The mixed-effects model indicated that the association between parental mentalization and externalizing behaviors varied significantly across different developmental stages. As hypothesized, it was stronger for the middle childhood category ($r = -.328, p < .001$) than for younger children ($r = -.112, p = .002$), but was nonsignificant in the adolescence group ($r = -.129, p = .065$). Also, in line with our expectations, parenting experience also turned out to be a significant moderator, such that the inverse relationship between parental mentalization and children's externalizing problems was greater in the case of experienced parents ($r = -.208, p < .001$). In the rest of the moderation analyses – (a) different approaches for the operationalization of parental mentalization (MM or PRF), (b) sample type (clinical/at-risk or community), and (c) reporting figure (primary caregiver vs. others) –, there were no differences between the levels of the moderators (see Table 2). Therefore, our hypotheses in relation to these variables were not confirmed.

Discussion

The purpose of this study was to review the literature on the relationship between parental mentalization and children's externalizing problems, analyzing results from a quantitative perspective. To the best of our knowledge, this is the first attempt at

Table 1. Information of the studies included in the meta-analysis

Authors	<i>N</i>	Country	% girls	% First-time parents	Children's mean age (months)	Mentalization measure	Externalizing behavior measure	Main results	Pearson <i>r</i>
Benbassat & Priel (2012)	105	Israel	nd	nd	189.6	PDI	YSR	High levels of paternal control were associated with higher levels of adolescent externalizing problems, only in the presence of low levels of paternal RF. In the presence of higher levels of parental RF, these parenting behaviors were associated with greater positive adolescent outcomes.	.06
Borelli <i>et al.</i> (2019)	265	US	49.4	nd	184.56	RFQ	CBCL	Higher parental reflective function was associated with less externalizing problems, only when reported by the adolescents. Parent reflective function was not associated with convergence of parent-adolescent reports with respect to externalizing symptoms.	-.07
Borelli <i>et al.</i> (2019)	265	US	49.4	nd	184.56	RFQ	CBCL	When adolescents reported on externalizing problems, higher parental reflective function did not have a negative correlation with externalizing symptoms.	.01
Borelli <i>et al.</i> (2021)	112	US	46	nd	150	PRFQ	CBCL	Eight-week intervention revealed significant pre-post increases in purported mechanisms of change (reflective functioning) and early intervention outcomes (externalizing problems).	-.17
Brown <i>et al.</i> (2023)	44	US	50	nd	13.34	MM	CBCL	Mind-mindedness at 28 months did not predict behavioral difficulties in children from nonmaltreating families.	-.12
Brown <i>et al.</i> (2023)	54	US	50	nd	13.34	MM	CBCL	Mind-mindedness at 28 months predicted fewer behavioral difficulties at 39 months in children from maltreating families.	-.13
Camisasca <i>et al.</i> (2018)	46	Italy	58.7	nd	16.93	MM	CBCL	Somatic symptoms, conjointly with impaired mind-mindedness, predicted externalizing behaviors	-.46
Carlone & Milan (2021)	212	US	nd	nd	108.12	PRFQ	BESS	Low maternal reflective function was associated with elevated child externalizing symptoms, and a greater perceived need for treatment.	-.34
Centifanti <i>et al.</i> (2016)	203	UK	52.42	42.36	61	MM	SDQ	Appropriate mind-related talk indirectly predicted callous unemotional traits via its effect on children's emotion understanding.	-.15
Charpentier-Mora <i>et al.</i> , (2022)	87	Italy	40	nd	121.2	PRFQ	CBCL	Parental mentalizing was significantly associated with child's externalizing symptoms.	-.35
Colonnesi <i>et al.</i> (2019)	104	The Netherlands	52.88	nd	53.41	MM	SCBE - 30	Infrequent use of appropriate mind-related comments of both parents predicted children's externalizing problems.	-.08
Colonnesi <i>et al.</i> (2022)	138	The Netherlands	49.27	nd	161.04	MM	SDQ	General, neutral, and positive mind-mindedness related negatively to externalizing problems.	-.15
Condon <i>et al.</i> (2019)	54	US	nd	nd	80.16	PRFQ	CBCL	High parental reflective function was associated with fewer child emergency department visits, whereas impaired parental reflective function was associated with more externalizing problems.	-.49
Dieleman <i>et al.</i> (2020)	268	Belgium	50.7	nd	181.68	PRFQ	CBCL	Externalizing problems related to both fathers' and mothers prementalization.	-.47
Dollberg <i>et al.</i> (2021)	144	Israel	55.2	50	50.04	MM	CBCL	Maternal mind-mindedness, but not paternal mind-mindedness, moderated the direct link between parents' general anxiety and the child's externalizing behavior.	-.01
Dollberg <i>et al.</i> (2023)	87	Israel	50	91.64	47.52	MM	CBCL	Mothers who demonstrated lower mentalization skills and higher anxiety symptoms reported more child externalizing behaviors.	-.11

(Continued)

Table 1. (Continued)

Authors	N	Country	% girls	% First-time parents	Children's mean age (months)	Mentalization measure	Externalizing behavior measure	Main results	Pearson <i>r</i>
Dollberg et al. (2023)	53	Israel	50	91.64	54.36	MM	CBCL	When mothers showed higher mentalization skills, the indirect effect of anxiety on the link between COVID - 19 and children's externalizing behaviors was weaker, compared to when mothers showed lower mentalization skills in the risk sample.	-.05
Ensink et al. (2016)	168	Canada	57.14	nd	112.06	PDI	CBCL	Maternal mentalization was an independent predictor of child externalizing difficulties, with higher maternal reflective function associated with less externalizing difficulties.	-.3
Ensink, Bégin, Normandin, and Fonagy (2017)	154	Canada	61.92	nd	74	PDI	CBCL	Significant inverse relationships between maternal mentalizing and child externalizing difficulties were observed.	-.31
Ensink, Bégin, Normandin, Godbout et al. (2017)	168	Canada	47.07	nd	91	PDI	CBCL	Maternal reflective function decreased the relationship between sexual abuse on externalizing difficulties.	-.3
Ensink, Leroux et al. (2017)	85	Canada	49.27	nd	112.5	PDI	CBCL	A significant negative correlation was found between reflective parenting stance assessed by the teacher and externalizing difficulties reported by the parent.	-.38
Ensink, Leroux et al. (2017)	158	Canada	49.27	nd	112.5	PDI	CBCL	The associations between reflective parenting stance and parent reports of child externalizing difficulties were small and not significant, in contrast to the significant and moderate strength associations between the reflective parenting stance and teacher reports of child difficulties.	-.25
Feniger-Schaal & Koren-Karie (2021)	28	Israel	50	nd	102	Insightful	CBCL	After the intervention program to increase parental reflective function, a significant decline in the children's externalized and general behavioral problems was found.	-.12
Ghanbari et al. (2023)	357	Iran	48.7	nd	87.12	PRFQ	CBCL	Prementalizing moderated the relationship between effortful control and externalizing problems, and between negative affectivity and externalizing behaviors.	-.37
Gray et al. (2015)	39	US	53	nd	45.96	Insightful	CBCL	Among children not exposed to violence, insightfulness was not related to children's externalizing behaviors, suggesting violence-specific processes.	.23
Gray et al. (2015)	20	US	53	nd	45.96	Insightful	CBCL	Violence-exposed children with noninsightful caregivers demonstrated higher externalizing behaviors.	-.37
Ha et al. (2011)	659	UK	48.40	nd	114.72	Social stories	SDQ	Poor maternal accuracy did not significantly predict the development of externalizing problems at 1-year follow-up when controlling for baseline externalizing problems and age.	-.22
Hobby et al. (2023)	91	Australia	39.6	67	7	MM	SDQ	Higher early appropriate mind-mindedness in mothers with higher parenting distress at 36 months was associated with lower externalizing problems at 51 months.	-.19
Hughes et al. (2017)	116	UK	45	nd	72.36	FMSS	SDQ	Mothers' mind-mindedness predicted unique variance in disruptive behavior.	-.08
Khoshroo & Seyed Mousavi (2022)	224	Iran	51.7	47.7	48	PRFQ	CBCL	Mothers of school-aged children showed significantly higher levels of prementalizing than mothers of preschoolers. Certainty about mental states moderated the relationship between maternal depression and child externalizing behaviors in school-aged children.	-.49

(Continued)

Table 1. (Continued)

Authors	N	Country	% girls	% First-time parents	Children's mean age (months)	Mentalization measure	Externalizing behavior measure	Main results	Pearson <i>r</i>
Khoshroo & Seyed Mousavi (2022)	461	Iran	51.7	47.7	48	PRFQ	CBCL	Parental mentalization was negatively correlated with externalizing problems. No moderating effect was found for prementalizing or interest and curiosity in mental states in the preschoolers group.	-.43
Kochanska & An (2023)	175	US	49.14	nd	36	PRFQ	ITSEA	Mothers, but not fathers, who had more negative higher prementalizing scores rated their children as less disruptive.	.15
Konijn <i>et al.</i> (2020)	48	The Netherlands	49.7	nd	116.4	MM	SDQ	Foster parents' mind-mindedness was not significantly related to children externalizing problems.	-.21
Koren Swisa <i>et al.</i> (2024)	89	Israel	49	44	47.52	MM	CBCL	The positive associations between conflict exposure and children's externalizing behaviors were mitigated when the parents' mentalization skills were matched or when the mother's mentalization skills were high.	-.1
Lunn <i>et al.</i> (2019)	67	UK	44	nd	123.6	Social Stories	CBCL	In the normative sample, lower maternal mind-mindedness predicted child externalizing problems.	-.44
Lunn <i>et al.</i> (2019)	34	UK	44	nd	144	Social Stories	CBCL	Higher negative maternal mind-mindedness in children with epilepsy, predicted greater externalizing problems.	-.51
Meins <i>et al.</i> (2013)	91	UK	49	47.7	52.71	MM	SDQ	Maternal mind-mindedness was not associated with externalizing behaviors in the high socioeconomic group.	.14
Meins <i>et al.</i> (2013)	60	UK	49	47.7	52.71	MM	SDQ	In the low socioeconomic group, having a mind-minded mother mitigated their negative effects on children's externalizing behaviors at 44 months and in the first year of school.	-.03
Menashe-Grinberg & Atzaba-Poria (2023)	84	Israel	53	62	51.6	MM	CBCL	Improvement in the parent-child interaction, child reflective function, and child externalizing problems were related to improvement in PRF.	-.08
Salo <i>et al.</i> (2021)	429	Finland	nd	100	12	PRFQ	BITSEA	For mothers, earlier relationship satisfaction predicted later infant externalizing problems, also through the current level of parental reflective function. For fathers, both relationship satisfaction and parental reflective function had direct, but not mediated, effects, and on infant externalizing problems.	-.04
Salo <i>et al.</i> (2022)	1016	Finland	nd	100	24	PRFQ	CBCL	For both mothers and fathers, a low level of relationship satisfaction, but not PRF, predicted consistently higher levels of child externalizing problems at age 2.	-.01
Shai & Belsky (2017)	200	US	nd	nd	54	TRF	PEM	Higher parental embodied mentalizing negatively predicted externalizing problems. Higher maternal sensitivity, after controlling for parental embodied mentalizing, was related with more externalizing problems.	-.19
Shalev <i>et al.</i> (2023)	106	Israel	50.49	nd	48.84	PDI	CBCL	Externalizing problems were related to greater intensity of parental guilt only when PRF levels were low.	-.24
Smaling <i>et al.</i> (2016)	123	The Netherlands	44	100	19.97	PDI	CBCL	Postnatal self-focused reflective function was positively linked to externalizing behavior and negative emotionality in offspring, while relation-focused reflective function scores were negatively associated with child physical aggression.	.08
Suardi <i>et al.</i> (2020)	23	Switzerland	52	48	26.7	Working Model of the Child Interview	ITSEA	Maternal reflective function was negatively correlated with externalizing behaviors in the general sample.	-.31

(Continued)

Table 1. (Continued)

Authors	N	Country	% girls	% First-time parents	Children's mean age (months)	Mentalization measure	Externalizing behavior measure	Main results	Pearson <i>r</i>
Suardi et al. (2020)	33	Switzerland	52	48	27.5	Working Model of the Child Interview	ITSEA	Maternal reflective function was negatively correlated with externalizing behaviors in the posttraumatic sample.	-.4
Wade et al. (2021)	501	Canada	49.3	nd	18	FMSS	BITSEA	Lower maternal reflective capacity was associated marginally with lower externalizing psychopathology.	.2
Walker et al. (2012)	21	UK	56	44	47.21	MM	SDQ	In the community group there was a strong negative correlation between mind-mindedness and children's externalizing problems.	-.56
Walker et al. (2012)	25	UK	56	44	44.68	MM	SDQ	In the clinical group there was no significant correlation between mind-mindedness and children's externalizing problems.	-.23
Yatziv et al. (2020)	98	Israel	nd	32	66.03	PDI	SDQ	The links between executive functions and parental reflective functioning were stronger when children were perceived as more difficult, that is, as having negative affectivity, externalizing problems, and difficulties in adjustment.	.09
Zeegers et al. (2020)	53	Amsterdam	54.7	nd	97.44	MM	CBCL	Parents reported less child externalizing problems at posttest and follow-up. Parents' mind-mindedness increased from pre- to post-test but not from pretest to follow-up.	.00
Zimmer-Gembeck et al. (2019)	139	Australia	30	nd	53.3	PRFQ	BASC-2	Improvement in prementalizing modes were associated with improvement in children's externalizing symptoms.	.14

Notes. BASC-2 = Behavior Assessment Scale for Children—Second Edition; BITSEA = Brief Infant–Toddler Social and Emotional Assessment; CBCL = Child Behavior Checklist; ECBI = The Eyberg Child Behavior Inventory; FMSS = Five-Minute Speech Sample; ICQ = Infant's Characteristics Questionnaire; ITSEA = Infant–Toddler Social and Emotional Assessment; nd = No data; Ohio = Ohio Youth Problem Functioning, and Satisfaction Scales; PDI = Parent Development Interview; SCBE-30 = Social Competence and Behavior Evaluation-30; SDQ = Strengths and Difficulties Questionnaire; TRF = Teacher Report Form; YSR = Youth Self-Report.

summarizing the empirical results on the topic. The included studies were conducted in different countries, predominantly involved biological parents with their children, and were drawn from a combination of community and clinical/at-risk samples. We observed that the expected negative association between parental mentalization and child externalizing problems was predominantly consistent across studies. The magnitude of the effect size may be considered small to moderate (Funder & Ozer, 2019), being slightly stronger than similar meta-analyses in the field, such as those reviewing the predictive power of parental sensitivity on children's behavior problems – e.g., $r = -.14$ in Cooke et al.'s (2022) and $r = -.08$ in Rodrigues et al.'s (2021).

Thus, it seems that parental ability to understand a child's mental states allows caregivers to better respond to the child's needs, likely prompting a decrease in externalizing problems and confirming the relevance of paying special attention to parenting mentalization. This finding reveals substantive effects that underline the importance of intervening with parents on mentalization as a useful strategy that can contribute to prevent later children's externalizing problems.

Beyond the overall negative association between parental mentalization and externalizing problems in offspring, the significant heterogeneity in this relationship suggests the need to consider potential moderators. With respect to the possible moderators examined, the different approaches and measures to parental mentalization did not reveal significant effects. Children's developmental stage (early and middle childhood) and parenting

experience (experienced parenting vs. first-time parents) were found to strengthen the negative relationship between parental mentalization and externalizing problems. Population type (clinical/at risk vs. community), and reporting figure (primary caregivers vs. others) failed to reach statistical significance. Insightfulness and parental education could not be analyzed due to lack of data. Below we outline some reflections on the possible meaning of our results.

Contrary to what expected, different operationalization of parental mentalization (offline-representational vs. online-interactive) did not moderate the relationship between parental mentalization and externalizing problems. Although different approaches to parental mentalization are reported in the literature (e.g., Medrea & Benga, 2021), our results suggest that these may be closer to each other. This may indicate that parental mentalization might be a singular construct that can be operationalized in various ways. In line with our results, Yatziv et al. (2020) found PRF (offline-representational) and MM (online-interactive) to be positively correlated, that is, mothers who tended to spontaneously describe their child in a mentalistic manner during interactions (MM) were more likely to have more elaborated representations of their child's mind (PRF). Hence, both operationalizations appear to explore the common domain of the parent–child relationship through the lenses of parent's mentalizing abilities.

In line with our expectations, children's developmental stage moderated the negative relationship between parental mentalization and externalizing behaviors. These results show that parental

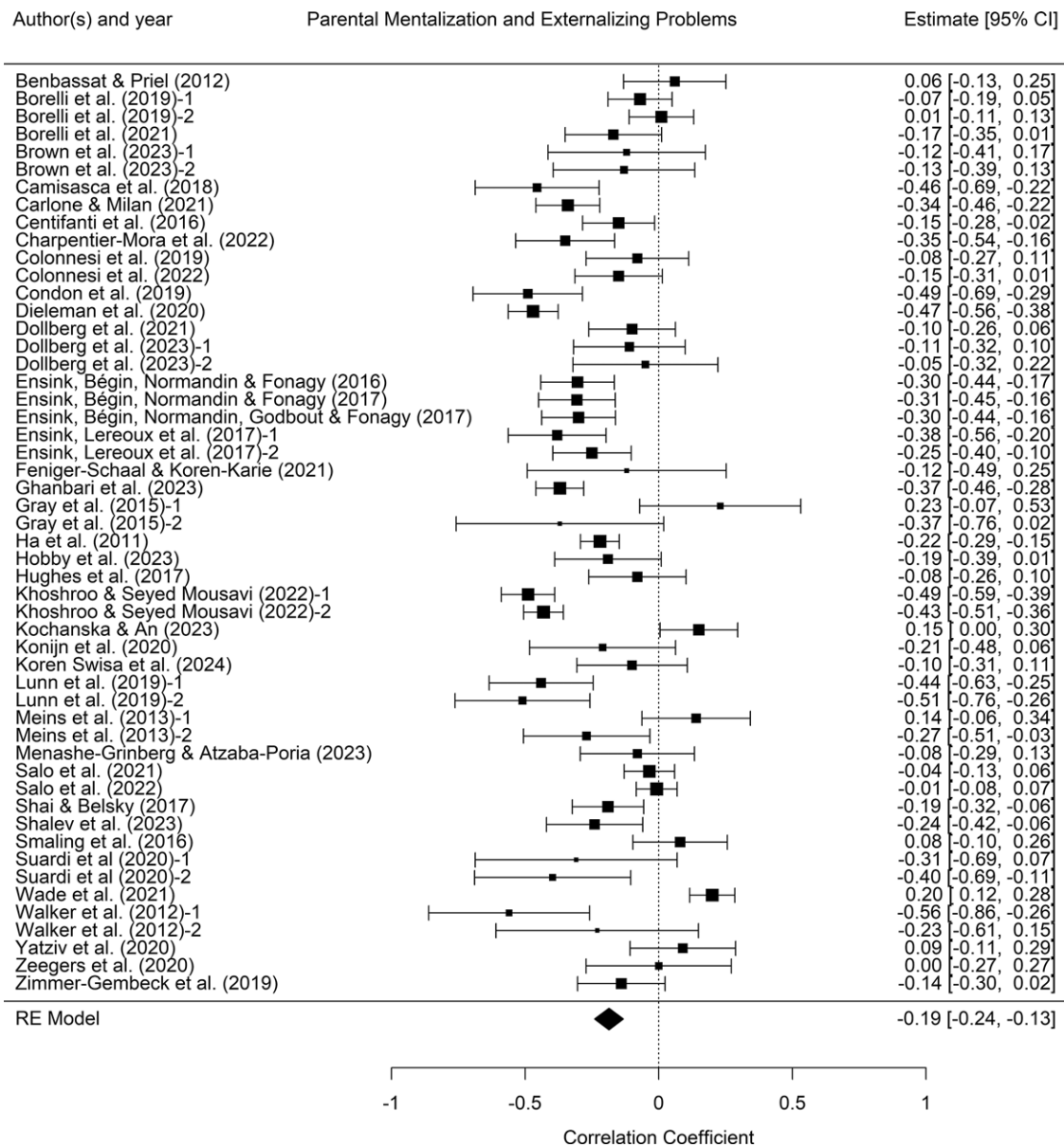


Figure 2. Forest plot.

mentalization is inversely associated with externalizing problems both in the early and middle childhood age groups as compared to adolescence. In addition, the relationship was stronger during middle childhood as compared to early childhood. Differences in developmental competencies and in the relative weight of contextual influences among these three age groups may explain these results.

Even though in the context of younger children there is a significant reduction in heterogeneity, child's temperament may play an important role in predicting externalizing symptoms (Frick & Morris, 2004; Muris & Ollendick, 2005; Putnam et al., 2001), and temperament influences seem to be stronger in the early years (Bates et al., 2012). Thus, the effect of child temperament might be associated with increased attenuation of the relationship between parental mentalization and less externalizing behaviors in the younger children group. Furthermore, greater competencies in different domains of development in middle childhood (vs. early

childhood) may be responsible for the stronger negative relationship between parental mentalization and externalizing problems in this age group. For example, some characteristic advances in cognitive competences in middle childhood underlie the increase in socio-cognitive skills typical of this stage (Collins et al., 2013), such as children's mentalization capacities. Middle childhood can be considered a key phase in the development of lifelong mentalization because it can only confidently be stated that a normally developing child has a full and explicit mentalization capacity from the age of six onwards (Frith & Frith, 2003). Since children's and adolescents' own mentalization has been associated with externalizing problems (Midgley et al., 2017), better mentalizing equipment in middle childhood (as compared to the earlier stage) may support a stronger association between parental mentalization and children's externalizing behaviors.

In addition to this tentative explanation, and closely related to mentalization, deficits in self-regulation have also been linked to

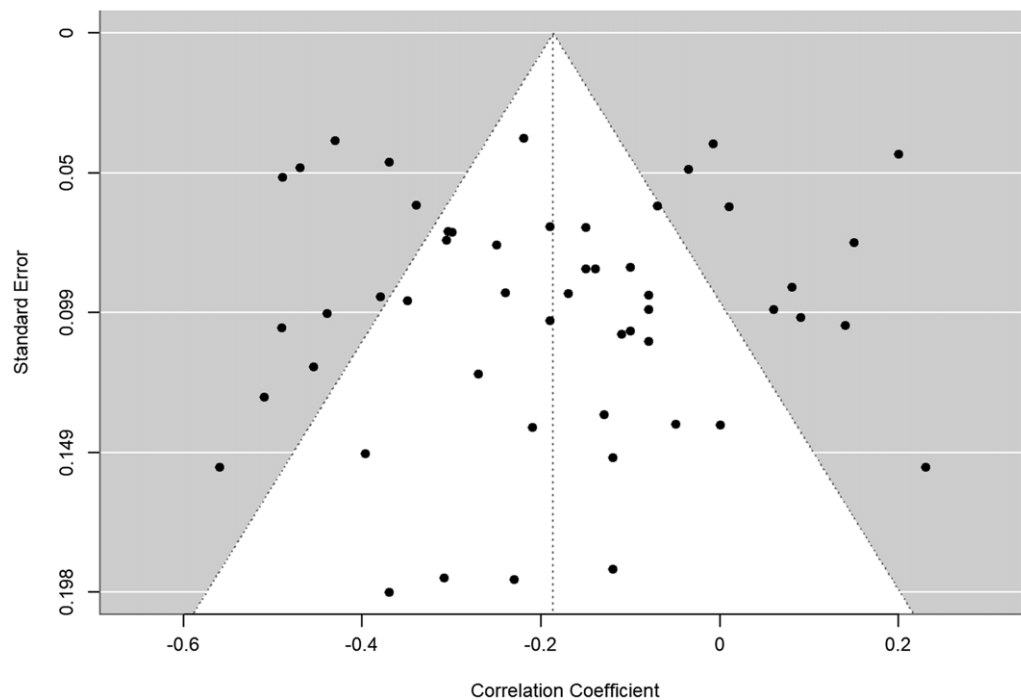


Figure 3. Funnel plot.

externalizing problems (Eisenberg et al., 2017, Perry et al., 2018). There is longitudinal evidence of age-related increases in self-regulation, especially from early to middle childhood. Specifically, in Raffaelli et al.'s (2005) study, a significant increase in self-regulation only was observed between early and middle childhood, whereas the difference between middle childhood and early adolescence was not significant. Therefore, developmental differences in self-regulation may contribute to the relationship between parental mentalization and fewer externalizing problems being stronger in middle than in early childhood.

Regarding the absence of a link between parental mentalization on adolescents' externalizing problems, peer influences may partly account for this finding. Although there is an increase of the influence of peers and other adults outside the family sphere on children's development in middle childhood, it is not until early adolescence that contact with peers dominate their social networks (Steinberg & Silk, 2013). In fact, during adolescence peer influence extends particularly to externalizing behaviors (Giletta et al., 2021). Adolescents tend to influence each other's externalizing problems within the same social circle, often mirroring and adopting behaviors over time through mechanisms such as encouragement, emulation, and peer pressure (Fortuin et al., 2015). Specifically, mild externalizing problems significantly affect adolescents' likability within their peer groups, leading them to align their behaviors with those of their peers. Hence, in the case of adolescence, the influence of peers may be more significant, thus diminishing the importance of the negative relationship between parental mentalization and externalizing problems. Other influences may refer to other parental skills, where harsh and psychological control are associated with more externalizing problems over time (Pinquart, 2017a), while parental monitoring predicted lower externalizing behaviors (Bailey et al., 2009; Lopez-Tamayo et al., 2016). Such findings may indicate that, during adolescence, both positive and negative parenting may exert a stronger effect on externalizing behaviors than parental mentalization.

Overall, other factors (i.e., temperament during early childhood, increased developmental competences in middle childhood, and peer influence and/or parental monitoring during adolescence) may diminish the effect of parental mentalization on children's externalizing problems. These third variables may explain the stronger decrease of externalizing problems in middle childhood as compared to the other two age groups. In support of this idea, Lo and Wong's (2022) meta-analysis demonstrates that interventions designed to enhance PRF were more effective for parents of school-aged children compared to parents of infants. Thus, interventions to enhance parental mentalization in order to prevent or reduce children's externalizing problems, should be precisely directed to the middle childhood age group. In this regard, given that low-quality studies seem to prevail in middle childhood research (Midgley et al., 2021), it is imperative to attain a solid foundation for mentalization-based interventions at this stage of development.

In line with our assumption, parenting experience also moderated the association between parental mentalization and children's externalizing problems, indicating that in the case of experienced parents the negative relationship is stronger. In other words, with the experience gained in raising previous children (Whiteman et al., 2003), parental mentalization exerts a stronger effect in diminishing externalizing problems. Moreover, other parental characteristics such as parental stress (Mak et al., 2020), low parental self-efficacy (Bodalski et al., 2023), and low marital satisfaction (Vaez et al., 2015) are associated with children's externalizing symptoms and may influence the relationship between the target variables of this meta-analysis. In fact, some studies reveal the above factors to be typically present in first-time parents (i.e., low parental self-efficacy in Amin et al., 2018; high parental stress in Lévesque et al., 2020, and low marital satisfaction in Bogdan et al., 2022). Hence, these parental characteristics may affect the relationship between parental mentalization and externalizing problems. Consequently, in order to reduce externalizing problems through improving parental mentalization

Table 2. Statistical test for heterogeneity and moderators included in the meta-analysis

Variable	Level	Residual heterogeneity		Test of moderators		Effect size	
		QE (df)	QM (df)	k	N	r (95% CI)	
Mentalization measure mode	Offline	QE(49) = 354.283, $p < .001$	QM(2) = 1.796, $p = .407$	42	6,494	-.191 (-.252, -.130)	
	Online			10	1,532	-.167 (-.293, -.041)	
Children's developmental stage	Young Children	QE(42) = 274.308, $p < .001$	QM(2) = 11.654, $p = .003$	28	4,095	-.112 (-.180, -.043)	
	Middle childhood			10	1,785	-.328 (-.436, -.220)	
	Adolescence			7	1,184	-.116 (-.245, .013)	
Parenting experience	First-time	QE(50) = 333.642, $p < .001$	QM(1) = 4.708, $p = .030$	6	1,454	-.031 (-.181, .119)	
	Experienced			46	6,572	-.208 (-.264, -.152)	
Sample type	Community	QE(50) = 363.327, $p < .001$	QM(1) = 0.153, $p = .696$	33	5,801	-.179 (-.246, -.111)	
	Clinical/at-risk			19	2,225	-.202 (-.296, -.108)	
Reporting figure	Cross-report	QE(50) = 383.173, $p < .001$	QM(1) = 0.068, $p = .794$	8	1,236	-.170 (-.304, -.036)	
	Same-person report			44	6,790	-.190 (-.250, -.130)	

Notes. CI = confidence Interval, QE = Q-statistic for residual heterogeneity, QM = Q-statistic for moderators.

skills, practitioners may deliver their interventions focusing on the experienced parents.

We hypothesized that sample type would influence the relationship between parental mentalization and children's externalizing problems. Surprisingly, our analysis revealed no significant impact of the population type on this association. This aligns with recent meta-analyses investigating parental sensitivity and behavior problems, which similarly found no substantial moderating effect when comparing clinical/at-risk samples against the general population (Cooke et al., 2022; Rodrigues et al., 2021). Despite empirical studies suggesting a potentially stronger influence of parental mentalization in clinical/at-risk samples (e.g., Hughes et al., 2017), our meta-analysis did not find such association.

The vast diversity (i.e., from low socioeconomic status to inpatient psychiatric facility) and the broad severity (i.e., COVID vs. childhood sexual abuse) within the clinical/at-risk sample might explain the unexpected absence of moderation effects. Such variability within these populations could lead to differing correlations. For instance, Suardi et al. (2020) reported a more robust relationship between parental mentalization and externalizing problems in a posttraumatic stress disordered parents' sample, while Walker et al. (2012) found a stronger relationship in the general population. These findings underscore the complexity of controlling for severity sources within clinical/at-risk samples and emphasize the need for further research to delineate the nuanced influences of different risk factors within diverse samples on the extent of moderation effects.

Finally, we expected that the relationship would be stronger when primary caregivers reported on both mentalization and externalizing behaviors; yet, the results show no influence of the reporting figure on this relation. This finding may be explained due to children behaving differently at home or at school, allowing both teachers and caregivers to provide unique responses. It might also be due to the unique way parents perceive their child's behavior depending on gender. For example, Mowlem et al. (2019) found that parents overrated externalizing symptoms (e.g., hyperactivity/impulsivity) in boys but not in girls. Nevertheless, other authors

reported similar results on externalizing problems both on parents and teachers after the pandemic (Watts & Pattnaik, 2023). In any case, further consideration of both parental and teacher perspective in reporting may provide valuable insights given the distinct experiences and observations of these informants (Deneault et al., 2023).

Limitations and future directions

The current meta-analytic review is not without limitations. Firstly, although certain possible moderators may be influential, eventually they could not be examined due to the limited number of studies. This was the case of factors such as both the caregivers' and children's gender. Upon data availability in the future, these questions may be explored. In fact, parents often respond differently to the child based on their children's gender, which included variations in displays of affection (Morawska, 2020). Boys tend to display more anger and aggression (Perra et al., 2021), while girls are perceived as being more cuddly (Sechi et al., 2020). Research also suggests that parents typically display higher PM tendencies with daughters compared to sons, suggesting greater challenges in understanding daughters' mental experiences (Pazzagli et al., 2018). Moreover, bearing in mind that the significance of a child's temperament in relation to parenting and developmental aspects is widely acknowledged (e.g., Belsky & van IJzendoorn, 2017; Clark et al., 2000), its examination as a possible moderator should be warranted. Despite its importance, this variable was not included in the meta-analysis due to the limited existing studies focusing on a child's temperament as a possible moderator. Nonetheless, future research endeavors should investigate the potential moderating role of a child's temperament in the relationships between parental mentalization and child externalizing problems.

Secondly, we should acknowledge that the conceptualization of 'externalizing problems' as a unitary construct is troublesome. As pointed out by Bongers et al. (2004), there are various manifestations within the spectrum of 'externalizing behaviors' – opposition, aggression, property violations, and status violations, according to Frick et al.'s (1993) taxonomy. These various manifestations of

symptoms may follow distinct developmental paths, and the influence of parental mentalization may vary across each trajectory.

A further possible limitation concerns the transactional nature of the relationship between parenting and externalizing problems in offspring. As the meta-analysis by Yan et al. (2021) shows, not only do parental behaviors predict externalizing problems, but such problems have comparable effects on subsequent parental functioning. Given that there are not enough longitudinal studies to fully understand these dynamics over time, more prospective research is needed to gain deeper insights into how these transactions evolve and inform more effective intervention strategies. Finally, since we only analyzed externalizing problems, future research may benefit from the comparison of effects on the relationship between parental mentalization and both externalizing and internalizing behaviors.

Final conclusions

In the context of practical applications, equipping caregivers with appropriate mentalization skills could enhance their ability to regulate their own and their children's emotions, and responding with attuned behaviors to address appropriately the needs of their sons or daughters. Evidence shows that improvement in parental mentalization is associated with lower levels of children's externalizing problems (e.g., Camoirano, 2017). Our results suggest that parental programs aimed at improving parental mentalization skills to prevent and/or mitigate children's externalizing behaviors are particularly recommended in the case of experienced parents and during the middle childhood developmental stage. Beyond the reduction of externalizing problems, mentalization-based interventions are suggested to be beneficial for both parents and children. Notably, improvements have been observed in caregivers' psychological distress and reflective function (Byrne et al., 2020) and in children's general well-being (Midgley et al., 2021). All in all, our findings pave the way for practitioners to design parental mentalization interventions that may prevent potential future criminal trajectories.

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B.T.G. – Conceptualized and designed the study, funding acquisition, interpretation of data, overall supervision, and write-up of the manuscript.

I.A.A. – Conceptualized and designed the study, funding acquisition, interpretation of data, overall supervision, and write-up of the manuscript.

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