

# INPLASY PROTOCOL

## Relationships between parenting style and sibling conflicts: A meta-analysis

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None declared.

**Review question / Objective:** The study aims to explore the strength and direction of the associations between parenting styles and sibling conflicts in Chinese and other contexts. This study hypothesizes that (a) authoritative and indulgent parenting styles are negatively associated with sibling conflicts and (b) authoritarian, neglectful, and inconsistent parenting styles are positively associated with sibling conflicts. In addition, this meta-analysis study tests whether the effect size of the associations depends on demographic information and the outcome measure, as well as whether the nature and magnitude of the relationships change over time.

**Condition being studied:** Parenting style, defined as a relatively stable parental behavior pattern and tendency when requesting and providing feedback on their children's behavior (Baumrind, 1991), has been proven as a predictor of sibling conflict (Milevsky et al., 2011). Researchers identified four parenting styles, including authoritative, authoritarian, indulgent, and neglectful (Baumrind, 1971; Maccoby & Martin, 1983), as well as a mixed or ambiguous pattern of inconsistent parenting. In the siblings' dyad, the destructive relationship (sibling conflict) is characterized by frequent, escalating, and intense hostility, as well as high levels of indifference and emotional detachment (Davies et al., 2019). The current meta-analysis aims to identify the associations between the five parenting styles and sibling conflicts.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 05 August 2022 and was last updated on 05 August 2022 (registration number INPLASY202280020).

### INTRODUCTION

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parenting styles are negatively associated with sibling conflicts and (b) authoritarian, neglectful, and inconsistent parenting styles are positively associated with sibling conflicts. In addition, this meta-analysis study tests whether the effect size of the associations depends on demographic information and the outcome measure, as well as whether the nature and magnitude of the relationships change over time.

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## METHODS

**Participant or population:** Siblings and their parents.

**Intervention:** Without intervention.

**Comparator:** Without.

**Study designs to be included:** The research procedures included (1) searching and collecting studies, (2) coding studies, (3) quantifying heterogeneity and selecting effect model, (4) analyzing the effect size of included studies, (5) investigating the moderating effects, (6) analyzing of publication bias.

**Eligibility criteria:** (1) All papers had to be written in Chinese or English, with no published time limit; (2) The studies had to

be empirical; (3) The research design was to investigate the relationship between parenting style and sibling conflicts; (4) The studies had to provide information to calculate effect sizes, such as correlation coefficient and sample size; (5) Participants were from families with siblings and were from the general population.

**Information sources:** During the first phase of literature identification, we discovered 669 articles published about parenting styles and sibling conflict, as well as 6 articles from other sources. During the second phase, two researchers determined eligibility by reading each article's title and abstract. When an article about parenting styles and sibling conflict was confirmed as a relevant record, it was kept and read in full text in the following phase. Following the identification and screening stages, the recorded articles were further screened during the eligibility phase. As a result, this meta-analysis included 16 articles, and these included articles reporting 55 independent effect sizes.

**Main outcome(s):** The correlation coefficient  $r$  was chosen to calculate the overall effect size and was converted into  $Z_r$  for analysis using the Fisher Z value. Because the correlation coefficient  $r$ 's sample distribution was skewed and the variance in the study was dependent on the correlation,  $r$  had to be transformed into  $Z_r$  by Fisher Z, and the distribution of  $Z_r$  could be approximated to a normal distribution.

**Quality assessment / Risk of bias analysis:** Funnel plots aided in determining the validity of this meta-analysis. And the graphic results of publication bias were also supported by the fail-safe ratio (Nfs). Nfs was defined as the number of unpublished studies required to reduce the effect size from significant to insignificant. In general, Nfs was compared to  $5k+10$  ( $k$  was the number of effect sizes). Finally, Egger's regression was used as another method of measuring publication bias in this study.

**Strategy of data synthesis:** Only an effective and accurate heterogeneity

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estimation method can guarantee the estimation accuracy of total effect size in meta-analysis, as well as serve as an important reference for model selection and moderator analysis (Chen et al., 2015). The heterogeneity test was judged using the significance of Q statistics and the I<sup>2</sup> index, and the test results were used to select a model.

**Subgroup analysis:** Mixed-effects between-level Q moderator analyses (Borenstein et al., 2010) were used to examine the effects of categorical moderators, including region and outcome measure. Fixed-effect meta-regression (Borenstein et al., 2010) was used to examine the effects of continuous moderators including gender (the percentage of girls), mean age, and year of publication (Lu et al., 2022).

**Sensitivity analysis:** Only an effective and accurate heterogeneity estimation method can guarantee the estimation accuracy of total effect size in meta-analysis, as well as serve as an important reference for model selection and moderator analysis. The heterogeneity test was judged using the significance of Q statistics and the I<sup>2</sup> index, and the test results were used to select a model.

**Country(ies) involved:** Malaysia (Education Faculty, University Malaya, Kuala Lumpur, Malaysia).

**Keywords:** parenting style; sibling conflicts; meta-analysis; sibling relationships.

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