

INPLASY PROTOCOL

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None declared.

Parents' executive functioning in parenting outcomes: A meta-analytic review

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Review question / Objective: Guided by the PRISMA guidelines, this study aims to systematically review and meta-analyze the literature exploring the association between parents' basic and higher-order executive functions in adulthood (working memory, inhibitory control, cognitive flexibility, planning, reasoning, problem-solving) and positive and negative parenting outcomes (parenting practices, behaviors, styles).

Eligibility criteria: his meta-analysis will include: 1) Studies that analyze the association of mothers'/ fathers' basic and higher-order executive functions in adulthood and parenting outcomes (e.g., parental styles, behaviors, quality of interaction, abusive or violent practices); 2) Quantitative empirical studies (correlational, longitudinal, and group comparison designs); 3) Peer-reviewed articles or dissertations, published in English, Spanish, or Portuguese. The exclusion criteria are: 1) Studies analyzing children's executive functions; 2) Studies analyzing children's developmental outcomes; 3) Studies not focusing on parenting outcomes; 4) Qualitative studies, and non-empirical studies such as theoretical reviews, systematic reviews, or meta-analyses.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 18 March 2023 and was last updated on 18 March 2023 (registration number INPLASY202330067).

INTRODUCTION

Review question / Objective: Guided by the PRISMA guidelines, this study aims to systematically review and meta-analyze the literature exploring the association

between parents' basic and higher-order executive functions in adulthood (working memory, inhibitory control, cognitive flexibility, planning, reasoning, problem-solving) and positive and negative

parenting outcomes (parenting practices, behaviors, styles).

Rationale: Research has been consistently emphasizing the role of adverse childhood experiences on children's outcomes and in the intergenerational transmission of parenting. A potential underlying mechanism proposed by neurocognitive models is parents' executive functioning. Responsible for controlling and monitoring actions and behavior, executive functioning is composed of specialized components such as working memory, inhibition, and cognitive flexibility, essential to achieve positive outcomes in different life dimensions such as the parental role. A parent constantly is in need to focus on certain stimulus to perceive children's needs, switch between concurrent stimuli in a dynamic environment, and manipulate information to guide their interaction with the child. Some research has been showing that parental difficulties in executive functioning components are related to poorer parenting behaviors, disrupted parent-child interaction, presence of conflict, harsh parenting attitudes, and perpetration of neglect. However, some questions still need further investigation, namely how to assess parental executive functioning, what are the skills under the umbrella of executive functioning more associated with positive and negative parenting, and what is the role of certain contextual characteristics such as household chaos and poverty in this association.

Condition being studied: Parental difficulties in executive functioning, namely deficits regarding working memory, inhibitory control, cognitive flexibility, planning, reasoning, problem-solving.

METHODS

Search strategy: A systematic electronic search will be conducted in eight databases, namely MEDLINE, APA PsycInfo, APA PsycArticles, Academic Search Complete, Psychology and Behavioral Sciences Collection, ERIC, Scopus and Web of Science, restricted to

articles and theses published in academic journals in English, Portuguese, and Spanish. The studies will be identified using all possible combinations of the following groups of search terms: (a) "executive function*" OR "attentional control" OR "cognitive inhibition" OR "inhibitory control" OR "working memory" OR "cognitive flexibility" OR planning OR reasoning OR problem-solving; AND (b) "parental behaviors" OR "parental practices" OR "parental sensitivity" OR "parental responsiveness" OR "parent-child interactions" OR caregiving OR "emotional availability" OR "negative parenting" OR "child maltreatment" OR "child abuse" OR "child neglect". Additionally, a hand search will be performed based using a snowball approach, by screening the reference lists of the included papers.

Participant or population: Mothers and fathers adults.

Intervention: Not applicable.

Comparator: Not applicable.

Study designs to be included: Will be included quantitative empirical studies, using correlational, longitudinal, and group comparisons designs.

Eligibility criteria: This meta-analysis will include: 1) Studies that analyze the association of mothers'/ fathers' basic and higher-order executive functions in adulthood and parenting outcomes (e.g., parental styles, behaviors, quality of interaction, abusive or violent practices); 2) Quantitative empirical studies (correlational, longitudinal, and group comparison designs); 3) Peer-reviewed articles or dissertations, published in English, Spanish, or Portuguese. The exclusion criteria are: 1) Studies analyzing children's executive functions; 2) Studies analyzing children's developmental outcomes; 3) Studies not focusing on parenting outcomes; 4) Qualitative studies, and non-empirical studies such as theoretical reviews, systematic reviews, or meta-analyses.

Information sources: Electronic search will be conducted in eight databases, namely MEDLINE, APA PsycInfo, APA PsycArticles, Academic Search Complete, Psychology and Behavioral Sciences Collection, ERIC, Scopus, and Web of Science, restricted to articles and theses published in academic journals. Additionally, a hand search will be performed based using a snowball approach, by screening the reference lists of the included papers.

Main outcome(s): A set of meta-analyses will be conducted to measure the effects (measured in r correlations) of different parents' executive functions on different parenting outcomes, namely positive and negative parental behaviors or practices. Specifically, effect sizes of similar executive functions (e.g., working memory) will be aggregated, and parenting outcomes will be categorized into positive or negative behaviors or practices. Subsequently, a meta-analysis will be conducted for each association of a type of executive function with a category (positive or negative) of parenting outcomes.

Additional outcome(s): Moderation analyses will be conducted in order to analyze the role of parents' gender and age, and certain contextual characteristics such as household chaos and poverty in this association.

Quality assessment / Risk of bias analysis: The quality assessment of the primary studies will be conducted using the STROBE criteria (Vandenbroucke et al., 2007). Based on this assessment, categories of high/ moderate/ low risk of bias will be created and used as a moderator (subgroup analysis) in order to check the influence of risk of bias on the effect sizes. Further, trim and fills analyses will be conducted to check for publication bias.

Strategy of data synthesis: A coding sheet will be created and data will be extracted into an excel form. The meta-analyses will be conducted in R software.

Subgroup analysis: Parents' gender and age, socioeconomic status, and risk of bias will be considered for subgroup analyses.

Sensitivity analysis: Not applicable.

Country(ies) involved: Portugal.

Keywords: Executive functioning; parenting; caregiving.

Dissemination plans: Publication of the study in an international journal of Psychology.

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