



Impact on mental health in late-adopted adolescents: scoping review protocol

Sara Filipa Moreira Almeida¹  0009-0002-8074-5899
Carina Sofia Pereira Amorim¹  0000-0001-7920-1646
Sónia Manuela Almeida Teixeira^{1,2}  0000-0002-6199-4091

¹ Fernando Pessoa School of Health, Porto, Portugal

² RISE-Health Research and Development Unit, Porto, Portugal

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Corresponding Author:

Sónia Teixeira; RISE-Health Fernando Pessoa Health School; soniateixeira@ufp.edu.pt

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ABSTRACT

Introduction: Adolescence is characterized as a stage of life marked by significant physical, emotional and social changes, which can be exacerbated in youth with a history of late adoption. Late-adopted adolescents are sometimes subjected to adverse experiences such as prolonged institutionalization and/or neglect. Analyzing these impacts is essential to ensure the necessary support for this group.

Objectives: To map scientific evidence on the impact of mental health in late-adopted adolescents.

Methodology: This Scoping Review follows the guidelines of the Joanna Briggs Institute and is based on the question: What scientific evidence has been published on the impact on mental health in late-adopted adolescents? The search will be conducted in CINAHL Complete (EBSCO), MEDLINE Complete (EBSCO), Psychology and Behavioral Sciences Collection (EBSCO), PubMed and Web of Science, as well as in gray literature sources, including ProQuest Dissertation & Thesis Citation Index (Web of Science) and RCAAP (Open Access Scientific Repositories of Portugal). Three filters will be applied: language (Portuguese, English and Spanish), publication date (last 5 years) and free access to the full text. The process of article selection will be conducted in accordance with the guidance set out in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR) statement.

Conclusion: This scoping review will try to provide evidence-based information on the impact of mental health in late-adopted adolescents.

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Autor correspondente:

Sónia Teixeira; RISE-Health Escola
Superior de Saúde Fernando Pes-
soa; soniateixeira@ufp.edu.pt

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RESUMO

Introdução: A adolescência caracteriza-se como uma etapa da vida com alterações físicas, emocionais e sociais marcantes, que podem ser exacerbadas em jovens com histórico de adoção tardia. Adolescentes adotados tardiamente são, por vezes, submetidos a experiências desfavoráveis como institucionalização prolongada e/ou até negligência. Analisar estes impactos torna-se primordial para assegurar o suporte necessário a este grupo.

Objetivos: Mapear a evidência científica sobre o impacto da saúde mental em adolescentes adotados tardiamente.

Metodologia: Scoping Review que segue as orientações do Joanna Briggs Institute e que parte da questão: Qual a evidência científica publicada sobre o impacto da saúde mental em adolescentes adotados tardiamente? A pesquisa será realizada nas bases de dados CINAHL Complete (EBSCO), MEDLINE Complete (EBSCO), Psychology and Behavioral Sciences Collection (EBSCO), PubMed e Web of Science, bem como em fontes de literatura cinzenta, incluindo o ProQuest Dissertation & Thesis Citation Index (Web of Science) e o RCAAP (Repositório Científico de Acesso Aberto de Portugal). Serão aplicados 3 filtros: idioma (português, inglês e espanhol), data de publicação (últimos 5 anos) e acesso livre ao texto integral. A seleção dos artigos seguirá as recomendações do Preferred Reporting Items for Systematic Reviews and Meta Analyses Extension for Scoping Reviews (PRISMA-ScR statement).

Conclusão: Esta revisão de escopo tentará fornecer informações baseadas em evidências sobre o impacto da saúde mental em adolescentes adotados tardiamente.

Introduction

Mental health does not exist in isolation, but rather as a vital component of overall health.¹ The concept of health, established in 1946, defines it as a state of complete well-being (physical, mental and social) and not merely the absence of disease.² Adoption is a legal process that formalizes a permanent bond between a family and a child or adolescent with whom they have no biological connection. Consequently, it grants the child or adolescent the same rights and responsibilities as biological children.³ In this context, it is important to consider the negative impact associated with late adoption, which refers to children adopted at the age of six years or older.⁴

Adolescents adopted at an older age often present a history of accumulated adverse experiences during early life, primarily involving trauma related to maltreatment or institutionalization.⁵ Such experiences not only affect the mental health but can also persist throughout their lives, deeply and permanently shaping their future trajectories.⁶ Moreover, mental health in adolescence is influenced by multiple environmental and social factors. Exposure to adverse conditions, social stigma, discrimination or lack of access to supportive services can increase vulnerability, especially for those living in fragile environments.⁷

Bowlby's attachment theory (1969) reinforces this understanding by recognizing that a lack of stable emotional bonds in early life compromises the ability to form lasting interpersonal connections and manage emotional regulation. Consequently, adoption during adolescence, particularly at an older age, may be considered a specific risk condition, manifested by increased psychiatric problems, instability in emotional bonds and difficulties in emotional regulation.⁸

A key variable highlighted in the literature is the age of the child at the time of adoption. Prolonged institutionalization is associated with an increased risk of social problems.⁹ Furthermore, numerous studies suggest that adolescents adopted, especially in international contexts, show a higher incidence of psychiatric conditions compared to non-adopted peers.¹⁰

According to the 2024 CASA report, released by the Portuguese Social Security Institute, more than half (52.1%) of children and young people in state care were over 15 years old, with 14.1% of them experiencing mental health issues, particularly those aged 15 to 20, highlighting their vulnerability and extended time in institutional care.¹¹ In the United Kingdom, at the end of 2024, 70,418 children awaited adoption, with more than half being six years of age or older. Among the 46,935 children adopted during the same period, the youngest age group was the most common: 54% were between 1 and 5 years old, while 26% were aged 6 to 10 and 17% were between 11 and 16 years old. These statistics show that, as a rule, older children are placed in foster care for longer terms and are less likely to be adopted early on.¹²

A preliminary analysis of PubMed (National Library of Medicine), International Prospective Register of Systematic Reviews (PROSPERO), Joanna Briggs Institute (JBI) Evidence Synthesis, Cochrane Database of Systematic Reviews and Open Science Framework (OSF), revealed that there are no literature reviews or ongoing reviews that provide a comprehensive overview of the impact on mental health in late-adopted adolescents. Therefore, this scoping review aims to map the available scientific evidence on the impact of mental health in late-adopted adolescents. Although individual studies have been conducted, there is currently no review that summarizes the overall state of

mental health among adolescents who were adopted at a late age.

Methodology

This scoping review protocol has been prepared in line with the JBI methodological guidance, together with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR) statement and has been prospectively registered on the OSF (<https://osf.io/jyp4a/overview>).¹³

Review question

This review seeks to address the following research question: *What scientific evidence has been published on the impact on mental health in late-adopted adolescents?*

The aim is to map scientific evidence on the impact of mental health in late-adopted adolescents.

Inclusion Criteria

The Participants–Concept–Context (PCC) framework will be used to determine the criteria by which studies are assessed for inclusion in the scoping review.¹⁴

Participants

Studies carried out with adolescent participants aged between 6 and 19 years old. No limitations will be applied based on gender, ethnicity, or other individual characteristics.

Concept

Regarding the concept, studies that address aspects of mental health (namely anxiety, depression, trauma, attachment, self-esteem and behavior) as the main focus will be included.

Context

Studies addressing the topic of late adoption (namely national and international adoption, previous institutionalization and adoptive families) will be included. Late adoption is understood as the adoption of children aged 6 years or older.

Types of sources

The types of sources to be included are: primary studies (quantitative, qualitative, and mixed-methods), secondary studies (all types of reviews), opinion articles, editorials, theses, and reports. Only studies published in English, Portuguese, or Spanish will be considered for inclusion. This language restriction is justified by the language proficiency of the review team, which is essential to ensure accurate interpretation, and synthesis of data. Only studies published in the past five years will be included. This decision can be justified by the fact that, in recent years, several countries have implemented reforms in their child protection systems, adoption procedures and post-adoption support services. Consequently, by limiting the timeframe to the last five years, it is possible to analyze evidence gathered in legislative and service contexts that are more closely aligned with the current reality.

Research strategy

The research strategy is organized into three sequential stages. The initial stage involved identifying relevant Medical Subject Headings (MeSH) and other key terms pertinent to the subject under investigation. The subsequent stage focused on formulating an appropriate Boolean search expression. The final stage will comprise conducting research across multiple databases using the previously developed Boolean string, adjusted as necessary to the specifications of each database. This stage will also include a review of the reference lists of all studies selected for inclusion in the scoping review.¹³

Table 1 presents the MeSH descriptors alongside the most commonly occurring key terms identified in the titles and abstracts of the publications addressing this topic.

Table 1 – MeSH descriptors and keywords.

	Population	Concept	Context
MeSH descriptors	Adolescent* Child	Mental health Anxiety Depression Psychological well-being Dangerous behavior	Adoption Adopted child Institutionalization
Keywords	Adolescence Teen* Youth	Trauma Attachment	Late adoption Older adoption Adoption after age 6 Late-adopted Foster youth

The Boolean search string was developed using the selected MeSH descriptors and key terms, employing the Boolean operators AND and OR in conjunction with truncation symbols, brackets, asterisks, and quotation marks. These operators allow for the precise specification of relationships between the MeSH descriptors. The search will be undertaken across CINAHL Complete (EBSCO), MEDLINE Complete (EBSCO), and the Psychology and Behavioral Sciences Collection (EBSCO), in addition to PubMed and the Web of Science. Further evidence will be sought within grey literature sources, including the ProQuest Dissertation & Thesis Citation Index (Web of Science) and the RCAAP (Open Access Scientific Repositories of Portugal).

The particular features of each database consulted for the review will be considered. Table 2 provides a synthesis of the records retrieved from the searches conducted across all the databases consulted and table 3 outlines the procedure used to construct the Boolean search string in PubMed (National Library of Medicine).

Table 2 – Records of the searches conducted across all databases.

Database	Strategy	Results
CINAHL Complete (EBSCO)	(Adolescent OR adolescent* OR teen* OR youth* OR child) AND (Adoption OR adopted child*) AND (“late adoption” OR “older adoption” OR “adoption after age 6” OR “late-adopted” OR institutionalization OR “foster youth”) AND (“mental health” OR anxiety OR depression OR trauma OR attachment OR “psychological well-being” OR “dangerous behavior”)	21
Medline Complete (EBSCO)	(Adolescent OR adolescent* OR teen* OR youth* OR child) AND (Adoption OR adopted child*) AND (“late adoption” OR “older adoption” OR “adoption after age 6” OR “late-adopted” OR institutionalization OR “foster	7

	youth") AND ("mental health" OR anxiety OR depression OR trauma OR attachment OR "psychological well-being" OR "dangerous behavior")	
Psychology and Behavioral Sciences Collection	(Adolescent OR adolescent* OR teen* OR youth* OR child) AND (Adoption OR adopted child*) AND ("late adoption" OR "older adoption" OR "adoption after age 6" OR "late-adopted" OR institutionalization OR "foster youth") AND ("mental health" OR anxiety OR depression OR trauma OR attachment OR "psychological well-being" OR "dangerous behavior")	7
PubMed	(Adolescent OR adolescent* OR teen* OR youth* OR child) AND (Adoption OR adopted child*) AND ("late adoption" OR "older adoption" OR "adoption after age 6" OR "late-adopted" OR institutionalization OR "foster youth") AND ("mental health" OR anxiety OR depression OR trauma OR attachment OR "psychological well-being" OR "dangerous behavior")	200
Web of Science	(Adolescent OR adolescent* OR teen* OR youth* OR child) AND (Adoption OR adopted child*) AND ("late adoption" OR "older adoption" OR "adoption after age 6" OR "late-adopted" OR institutionalization OR "foster youth") AND ("mental health" OR anxiety OR depression OR trauma OR attachment OR "psychological well-being" OR "dangerous behavior")	14
ProQuest Dissertation & Thesis Citation Index (Web of Science)	(Adolescent OR adolescent* OR teen* OR youth* OR child) AND (Adoption OR adopted child*) AND ("late adoption" OR "older adoption" OR "adoption after age 6" OR "late-adopted" OR institutionalization OR "foster youth") AND ("mental health" OR anxiety OR depression OR trauma OR attachment OR "psychological well-being" OR "dangerous behavior")	6
RCAAP	Adoption AND Child AND Adolescent AND Health	5

Table 3 - Research strategy used in the PubMed database.

Database	Strategy	Results
PubMed	#1 (Adolescent OR adolescent* OR teen* OR youth* OR child) AND (Adoption OR adopted child*)	13,841
	#2 ("mental health" OR anxiety OR depression OR trauma OR attachment OR "psychological well-being" OR "dangerous behavior")	451,163
	#3 (Adoption OR adopted child*) AND ("late adoption" OR "older adoption" OR "adoption after age 6" OR "late-adopted" OR institutionalization OR "foster youth")	5,599
	#4(((#1) AND (#2)) AND (#3)))	200

Study selection

The process of selecting the articles will be undertaken systematically, encompassing the identification, screening, and inclusion stages as delineated in a PRISMA flow diagram.¹⁷

Upon completion of the search process, all retrieved records will be consolidated and imported into the Rayyan Intelligent Systematic Review platform (Qatar Computing Research Institute, Doha, Qatar). This tool will support the identification and removal of duplicate entries and will aid in the efficient screening and selection of studies for the scoping review. All the articles included will subsequently be organized using the ZOTERO® reference management software.

The analysis will be carried out by reading the title, abstract and full text, with the aim of eliminating those that do not meet the inclusion criteria established for the review. Articles that fulfil all inclusion criteria will progress to the data extraction stage, during which the relevant information will be systematically collected. Additionally, the reference lists of each included study will be examined to identify any further publications that may be pertinent to the review.

This procedure will be undertaken by two independent reviewers who, in cases of ambiguity or uncertainty, will deliberate to determine whether a study should proceed to the subsequent stage of the review.

Any discrepancies arising between the reviewers during the first three stages of the selection process will be addressed through discussion or, if necessary, by consulting a third reviewer, thereby ensuring consensus and methodological rigor. The reasons for excluding studies will be clearly documented in a flowchart.^{14,16,17}

Data extraction

Data extraction for the articles included in the scoping review will be undertaken using a Microsoft Word® tool specifically developed by the authors for this purpose, as shown in Table 3. The development of this extraction instrument adhered to the guidelines set out in the JBI Manual.¹⁸

Throughout the data extraction process for each included study, the reviewers will introduce any necessary modifications or refinements to the preliminary extraction tool. All revisions will be fully documented in the final review report. Any disagreements between reviewers will be addressed through discussion or, where required, by consulting a third reviewer. When necessary, the authors of the original studies will be contacted by email to obtain missing information or supplementary data.

Table 4 - Data extraction tool.

First author	Last name of the first author of the study
Year	Year of publication
Title	Title of study
Country	Country of study
Study design/Level of evidence	Level of evidence according to JBI ¹⁹
Participants	Target participants of the study (e.g. gender, age, other sociodemographic characteristics)
Concept	Mental health outcomes (e.g. anxiety, depression, trauma, attachment, self-esteem and behavior)
Context	Adoption contexts (e.g. national and international adoption, previous institutionalization and adoptive families)

Analysis of evidence and presentation

The extracted data will be organized and presented in tables or visual diagrams, ensuring consistency with the objectives and research questions of this scoping review. Should alternative formats be identified during the analysis as more effective for communicating the findings, these may also be employed.

A narrative overview will accompany the tabulated and/or visual data, providing contextual interpretation and clarifying how the findings correspond to the review's aims and guiding questions.

Conclusion

This scoping review protocol may stand out as a significant contribution to various fields of mental health, particularly within the context of late adoption and child and adolescent mental health. By raising awareness among the scientific community and others regarding the distinctive aspects of this group, it is expected to substantially broaden the understanding of the adversities these young people face, especially considering that they represent a population repeatedly overlooked in both research and intervention.

The adoption of a structured and transparent methodological approach facilitates the mapping of existing interventions, the identification of gaps in the current body of knowledge, and the establishment of a robust basis for future research.

Furthermore, it reinforces the relevance of non-pharmacological interventions in supporting the mental health and psychological adjustment of adolescents adopted at a later age.

The anticipated findings may contribute to the development and improvement of more comprehensive clinical and social practices, fostering balanced, healthy, and resilient growth among these adolescents. Furthermore, this review may provide empirical justification for the implementation of targeted mental health interventions for adoptive families, delivered by nurses and other members of multidisciplinary teams, including psychiatry, psychology and social pediatrics.

Ultimately, this review protocol aims to support the advancement of initiatives that foster greater dedication and social commitment toward this population, so that late adoption no longer constitutes a barrier to healthy development.

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