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Art Therapy Interventions and Developmental Outcomes in Children with Autism: A Systematic Review

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ADMINISTRATIVE INFORMATION

Support - None.

Review Stage at time of this submission - Completed but not published.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 23 November 2025 and was last updated on 23 November 2025.

INTRODUCTION

Review question / Objective RQ1: What are the current research patterns and future trends of art therapy for children with ASD over the past decade? RQ2: How do art therapy interventions influence developmental outcomes in children with ASD?

Rationale Although many studies have highlighted the potential of art therapy for children with ASD, the existing literature remains lacking in systematic synthesis. Previous reviews have primarily focused on overall efficacy, leaving gaps in understanding of the mechanisms, methodological trends, and emerging innovations in this field.

Condition being studied In recent years, the prevalence of autism spectrum disorder (ASD) has been increasing steadily (İnci & Sağlam, 2025). As the precise aetiology of ASD remains unclear, there is currently no cure, and targeted pharmacological treatments are lacking (Huili et al., 2023).

METHODS

Search strategy We searched databases, including Web of Science (WOS), Scopus, and PubMed, for articles indexed from January 2016 to July 2025. This review aims to systematically examine the current status and trends in research on the relationship between children with autism and art therapy over the past decade. The following keyword combinations were used: (1) Art Therapy, (2) Autism Spectrum Disorder, Autistic Disorder, and ASD, (3) Children, Youths, Pediatric Population, Kids, and Adolescents. Using Boolean operators AND or OR for keyword searches (Table 1), we ultimately screened 915 publications.

Participant or population Children with Autism.

Intervention Art Therapy Interventions.

Comparator None.

Study designs to be included Based on the research topic, we established inclusion and exclusion criteria to comprehensively assess the application of art therapy in the therapeutic process for children with autism spectrum disorder.

Eligibility criteria

Inclusion

- 1. Scholarly peer-reviewed articles
- 2. Research involving children
- 3. Articles exploring links between Art Therapy and ASD
- 4. Articles published from 2016 to 2025
- 5. Publications written in English or translated into English.

Exclusion

- 1. Articles not in peer-reviewed journals
- 2. Studies focusing on adults
- 3. Studies where outcomes pertain to ASD without connection to Art Therapy.
- 4. Articles published before 2016
- 5. Non-English language studies without translation.

Information sources The process began with an extensive database search, yielding a total of 915 articles: 262 from Web of Science (WOS), 524 from Scopus, and 129 from PubMed. These articles were then screened based on titles, abstracts, and keywords to determine their relevance, excluding a large number of studies unrelated to the topic. The chart indicates 74 duplicate articles. After excluding these duplicates, further screening based on time and language restrictions, relevance (art therapy, children, autism), and publication type resulted in 577 articles failing to meet the criteria. Upon reviewing the abstract keywords, an additional 170 articles were excluded: 42 were unrelated to children, and 128 were unrelated to art therapy. The final selection yielded 94 documents. Upon careful review, 21 were review articles, 19 lacked full-text access, and 32 did not focus on art therapy. Consequently, only 22 articles were ultimately included in the study.

Main outcome(s) Four themes emerged: Emotional Expression and Regulation, Social Skills Development, Creative and Nonverbal Intervention, and Sensory and Relational Integration. These studies provide new theoretical perspectives and operational frameworks for art-based interventions in autism treatment, advancing therapeutic approaches toward greater humanization, engagement, and effectiveness.

Quality assessment / Risk of bias analysis Four themes emerged: Emotional Expression and

Regulation, Social Skills Development, Creative and Nonverbal Intervention, and Sensory and Relational Integration. These studies provide new theoretical perspectives and operational frameworks for art-based interventions in autism treatment, advancing therapeutic approaches toward greater humanization, engagement, and effectiveness.

Strategy of data synthesis In this analysis, 22 documents were uploaded to the ATLAS.ti 9 software for review, following the method proposed by Zairul (Zairul, 2021). Each document was categorized based on author, journal name, issue number, publisher, and year of publication. This study presents findings through a combined quantitative and qualitative approach. The quantitative analysis primarily mapped the distribution of academic papers across regions, journals, and nationally, while the qualitative section uses thematic analysis to categorize and synthesize content, adhering to the six-step framework proposed by Clarke & Braun, specifically: 1) familiarizing with the data; 2) generating codes; 3) discovering themes; 4) reviewing themes; 5) defining themes; 6) interpreting themes (Braun & Clarke, 2019).

Using inductive coding, we assigned codes based on article metadata and substantive elements (e.g., research objectives, design, conclusions) and extracted high-frequency thematic keywords. Overlapping subthemes were consolidated through iterative review, with all subthemes subsumed under higher-order themes to form a finalized thematic framework. The resulting system synthesizes how art therapy supports developmental outcomes in children with ASD and through which mechanisms these interventions exert their effects.

Subgroup analysis None.

Sensitivity analysis None.

Country(ies) involved China.

Keywords Autism Spectrum Disorder, Art Therapy, Children, Systematic Review, Social Skills Development.

Contributions of each author

Author 1 - Qiuxia Zhu - Qiuxia Zhu reviewed and edited the original drafts, proposed specific research methods, utilized software to validate the data, supervised in real-time, conceptualized much of what was in the original drafts, and managed the project.

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Author 2 - Fanxuan Kong - Fanxuan Kong wrote the original draft, did the survey, and managed the data by using software for visual and formal analysis. All authors reviewed subsequent versions of the manuscript several times. All authors have read and agreed to the published manuscript.

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