

# Peer-Mediated Interventions for Children with Intellectual and Developmental Disabilities: A Systematic Literature Review

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## Abstract

Children with intellectual and developmental disabilities (IDD) frequently experience difficulties in social interaction and communication, highlighting the need for effective inclusive intervention strategies in educational settings. This study aims to systematically review the implementation and effectiveness of peer-mediated interventions for children with IDD in inclusive school contexts. A systematic literature review was conducted following the PRISMA 2020 guidelines, complemented by a bibliometric analysis using the Bibliometrix package. A total of 194 articles were identified, of which 13 studies met all inclusion criteria and were included in the final synthesis. The results indicate that peer-mediated interventions, such as peer tutoring, peer modeling, and peer support, significantly improve social interaction, communication skills, and behavioral engagement among children with IDD. The effectiveness of these interventions is influenced by key factors, including structured peer training, active teacher facilitation, and supportive learning environments. Additionally, the bibliometric findings reveal a growing research interest in this field, with dominant themes centered on social interaction, communication, and inclusive education. In conclusion, peer-mediated interventions represent an effective and practical approach to enhancing social and communicative outcomes while promoting inclusive learning environments for children with IDD. The findings suggest that educators should integrate structured peer-mediated strategies into classroom practices, while policymakers and researchers are encouraged to further develop and expand evidence-based inclusive interventions across diverse educational contexts.

## 1. Introduction

Inclusive education has increasingly been positioned as a global educational priority, emphasizing equitable access and participation for all learners, including children with intellectual and developmental disabilities (IDD) (Bombardelli, 2020; Okyere et al., 2019). Despite policy advancements, persistent challenges remain in ensuring meaningful inclusion, particularly in relation to students' social interaction, communication, and engagement within classroom environments. These challenges indicate that inclusion is not solely a matter of placement but requires pedagogical approaches that actively support participation and social integration (Vetoniemi & Kärnä, 2021; Juvonen et al., 2019).

From a theoretical perspective, inclusive practices are closely aligned with social learning theory, which underscores the role of interaction, observation, and modeling in shaping learning behaviors (B. Zhang et al., 2022). Within this framework, peer-mediated interventions (PMIs) have emerged as a pedagogically grounded approach that utilizes naturally occurring peer interactions as a medium for learning (Woodgate et al., 2020; McCollow & Hoffman, 2019). Rather than positioning teachers as the sole agents of instruction, PMIs redistribute instructional roles to peers, thereby fostering reciprocal learning processes and socially embedded skill development. This shift reflects a broader paradigm movement from teacher-centered to interaction-centered learning in inclusive education (de Melo Venturini & Faria, 2025).

Empirically, a growing body of research has demonstrated the potential of PMIs to improve social communication, increase peer engagement, and reduce social isolation among children with developmental disabilities (Aldabas, 2020; Travers & Carter, 2022). Various models such as peer tutoring, peer modeling, and structured peer networks have been implemented across diverse educational contexts, with generally positive outcomes reported (Bowman-Perrott et al., 2023). However, the evidence base remains conceptually and methodologically heterogeneous. Differences in intervention design, duration, participant characteristics, and implementation fidelity contribute to variability in outcomes, limiting the generalizability of findings. Moreover,

existing studies tend to focus on discrete outcome domains, often privileging social or behavioral aspects while overlooking the interconnected nature of learning processes in inclusive settings.

At the level of research synthesis, prior reviews have provided valuable insights but exhibit notable limitations. Many are restricted to specific populations, particularly individuals with autism spectrum disorder, thereby narrowing the scope of applicability across the broader IDD population (Trembath et al., 2019). In addition, earlier reviews often lack integration between qualitative synthesis and quantitative mapping of research trends, resulting in a fragmented understanding of how the field has evolved. Given the rapid expansion of inclusive education practices and the increasing complexity of intervention models over the past decade, there is a critical need for a more integrative and up-to-date synthesis that combines systematic review with bibliometric analysis.

Addressing this gap, the present study aims to provide a comprehensive and analytically integrated review of peer-mediated interventions for children with IDD in inclusive educational settings. Specifically, this study seeks to (1) identify and categorize the types of peer-mediated intervention models, (2) examine their effects on social, behavioral, and learning-related outcomes, (3) analyze how these interventions operate within authentic classroom contexts, and (4) determine the key mechanisms and conditions that influence their effectiveness. By combining systematic literature review with bibliometric analysis, this study not only synthesizes empirical evidence but also maps the intellectual structure and developmental trajectory of research in this field.

Through this approach, the study contributes to the advancement of inclusive education by offering a theoretically grounded and empirically integrated understanding of peer-mediated interventions. It positions PMIs not merely as instructional techniques but as a strategic framework for fostering socially responsive and participatory learning environments. In doing so, this research provides a foundation for future inquiry, policy development, and the design of more effective inclusive practices.

## 2. Method

### 2.1. Research Design

This research used a Systematic Literature Review (SLR) design to systematically identify, evaluate, and synthesize the studies that focus on peer-mediated intervention for children with intellectual and developmental disabilities (Andreini & Bettinelli, 2017; Kumar, 2023). The systematic review adhered to PRISMA 2020 (preferred reporting items for systematic reviews and meta-analyses) guidelines for a transparent, rigorous and replicable review process (X. Zhang et al., 2020; Tugwell & Tovey, 2021). We also performed bibliometric analysis using the Bibliometrix package in R to offer a complete overview of research trends, publication patterns and inter-relations between studies within this domain.

### 2.2. Time and Scope of the Study

The currently reported study occurred within the year 2026 and centered in on articles published during 2020-2026 to gather updated developments among peer-mediated interventions. The research did not take place in a concrete environment, but fully used historical data from international scientific databases.

### 2.3. Research Data Sources

The data were drawn from a review of studies on peer-mediated interventions in the area of intellectual and developmental disabilities (IDD) published in refereed international journals. To identify the articles, we focused on extracting from Scopus, because of its comprehensiveness (Baas et al., 2020), with extensive coverage of high-quality publications. Supplemental searching on Google Scholar was performed to achieve comprehensive inclusion of pertinent studies.

### 2.4. Inclusion and Exclusion Criteria

The selection of articles was based on predefined inclusion and exclusion criteria (see Table 1).

**Table 1. Inclusion and Exclusion Criteria**

No	Inclusion Criteria	Exclusion Criteria
1	Articles focusing on peer-mediated interventions or peer support strategies	Articles not related to peer-mediated interventions
2	Studies involving children with intellectual and developmental disabilities	Studies focusing solely on clinical or medical interventions without an educational context
3	Studies conducted in educational or learning settings	Conference proceedings, book chapters, and non-peer-reviewed publications
4	Articles published between 2020 and 2026	Articles with insufficient methodological clarity

No	Inclusion Criteria	Exclusion Criteria
5	Articles published in peer-reviewed journals and written in English	-

## 2.5. Data Collection Techniques

Data were collected through a systematic search using predefined keywords and search strings applied to the selected databases. The search process was conducted in two main stages: (1) Title and Abstract Screening: Identification of relevant articles based on titles and abstracts. (2) Full-Text Screening: In-depth evaluation of full-text articles to ensure alignment with the inclusion criteria. All retrieved records were managed using reference management software such as Mendeley or Zotero to remove duplicates and organize the dataset.

## 2.6. Research Instruments

PRISMA Flow Diagram which show the process of article identification, screening, eligibility and inclusion was the main instrument employed in this study (Rethlefsen & Page, 2022; Islam et al., 2025). Bibliometrix was also utilized to specifically analyze publication trends, keyword co-occurrence, citation structures and network collaborations of authors and institutions.

## 2.7. PRISMA Stages

The article selection process followed the PRISMA 2020 framework. The results of each stage are presented in Table 2.

**Table 2. PRISMA Stages of Article Selection**

PRISMA Stage	Number of Articles (n)
Identification	194
After Removing Duplicates	194
Title & Abstract Screening	131
Full-Text Eligibility	60
Included in Final Synthesis	13

## 2.8. Data Analysis Techniques

The data analysis in this study was conducted using two complementary approaches:

### 2.8.1. Qualitative Analysis:

Important findings from the articles were extracted through thematic analysis regarding types of peer-mediated interventions, implementation strategies, measurable outcomes (i.e., learning, social interaction and behavior), as well to identify features that seemed to contribute to program effectiveness.

### 2.8.2. Bibliometric Analysis:

Bibliometric analysis was conducted using the R-programme Bibliometrix package to examine publication trends, keyword co-occurrence networks, citation analysis, collaboration networks and thematic mapping to explore dominant themes in peer-mediated interventions as well as emerging research frontiers.

## 2.9. Research Procedure

This study followed the PRISMA 2020 framework to ensure a systematic, transparent, and replicable review process. The procedure began with the identification stage, in which relevant articles were retrieved from selected databases using predefined search strings designed to capture studies related to peer-mediated interventions for children with intellectual and developmental disabilities.

Subsequently, the screening stage was conducted by removing duplicate records and evaluating the remaining articles based on their titles and abstracts to determine their initial relevance to the research objectives. Articles that met the preliminary criteria were then subjected to a more rigorous eligibility assessment through full-text review, ensuring alignment with the established inclusion and exclusion criteria.

Finally, in the inclusion stage, a set of studies that fully satisfied all criteria was selected and incorporated into both the qualitative synthesis and bibliometric analysis. Through this structured and iterative process, the study ensures methodological rigor while providing a comprehensive and reliable synthesis of existing evidence. This approach ultimately supports a deeper understanding of peer-mediated interventions and contributes to the advancement of evidence-based practices in inclusive education.

### 3. Results and Discussion

#### 3.1. Results

A total of 194 articles were identified from database searching. Following deduplication, 194 articles were screened. A total of 131 articles were included as potentially relevant through first stage title and abstract screening. This left 60 articles which went through full-text eligibility. In total, 13 studies meeting the inclusion and exclusion criteria were included in the final synthesis. This process was conducted according to the transparent and systematic guidelines of PRISMA 2020, 14 allowing easy replication of all procedures undertaken.

Characteristics of the included studies were summarized in Table 3. The designs of the included studies were diverse- comprising experimental, systematic reviews, mixed-methods studies, and literature reviews (Khoo-Lattimore et al., 2019; Hong et al., 2020). Such diversity suggests that peer-mediated interventions have been investigated with a combination of methodological approaches within various contexts.

**Table 3. Summary of Selected Studies on Peer-mediated Interventions**

Author(s) & Year	Title	Design	Research Focus	Key Findings
(Foster et al., 2024)	Peer-Mediated Intervention for Socially Isolated Children With Autism Spectrum Disorder	Experimental Study	Examining the effectiveness of PMI in reducing social isolation	PMI significantly increased peer interaction and reduced isolation
(W michael, 2023)	Peer-Mediated Interventions for Students with Autism Spectrum Disorder: A Systematic Review	Systematic Review (PRISMA)	Synthesizing PMI effectiveness	PMI improves communication, social interaction, and inclusion
(Aldabas, 2019)	Effectiveness of Peer-Mediated Interventions for Young Children With Autism Spectrum Disorder	Systematic Review	Evaluating PMI effectiveness	PMI improves social behavior and communication skills
	How Do Peers Benefit From Peer-Mediated Interventions?	Systematic Review	Exploring peer outcomes	Peers develop empathy and social competence
(Fedewa et al., 2025)	Effects of a Teacher-Facilitated Peer-Mediated Intervention on Social Interaction Skills	Experimental Study	Teacher-supported PMI	Improves interaction quality and frequency
(Shillingsburg et al., 2025)	Maintaining and Generalizing Social Skills Using Peer-Mediated Interventions	Literature Review	Skill retention	PMI supports long-term generalization
(Verkooijen et al., 2026)	Impact of Peer-Support Programs for Individuals With Autism Spectrum Disorder	Empirical Study	Peer support beyond school	Improves participation and well-being
(Lee et al., 2022)	Using Cooperative Physical Activities in Inclusive Settings: A Peer-Mediated Approach	Experimental Study	PMI in physical activity	Increases engagement and participation
(Marsack-Topolewski et al., 2023)	Evaluation of Peer-Mediated Systems Navigation Intervention for Developmental Disabilities	Mixed-Methods Study	PMI in service systems	Improves independence and access
(Ashley & Fox, 2025)	It's Time to Play: Peer-Mediated Intervention for Social Engagement	Experimental Study	Play-based PMI	Increases spontaneous interaction
(Yi et al., 2022)	Effects of the SCERTS Model-Based Intervention With Peer Involvement	Experimental Study	SCERTS with peer support	Improves communication and regulation
(Davis et al., 2021)	A Systematic Review of Supports for Students With Autism Spectrum Disorder in Higher Education	Systematic Review	Higher education support	Peer support improves engagement
(Janse van Rensburg & Liang, 2025)	Improving Autistic Students' Experiences in Higher Education Through Peer Support	Empirical Study	Peer support in higher education	Improves belonging and reduces anxiety

An overview of the compiled studies suggest that peer-mediated interventions were delivered through several different strategies, defined as: peer tutoring, peer modeling, peer support programs and structured peer interaction. Of these, peer tutoring and peer interaction strategies are the most widely used methods, especially within inclusive education. These methods allow for interaction between students with and without disabilities to help promote social development along with academics.

Consistent evidence is presented that peer-mediated interventions improve social interaction, communication abilities, and behavioral involvement. The majority of studies found that children with IDD had increased engagement with peers, better communication skills and less social isolation. Furthermore numerous studies mentioned the ability to regulate emotions and involvement. Most studies reported social outcomes (expected), and some studies also yielded academic benefits.

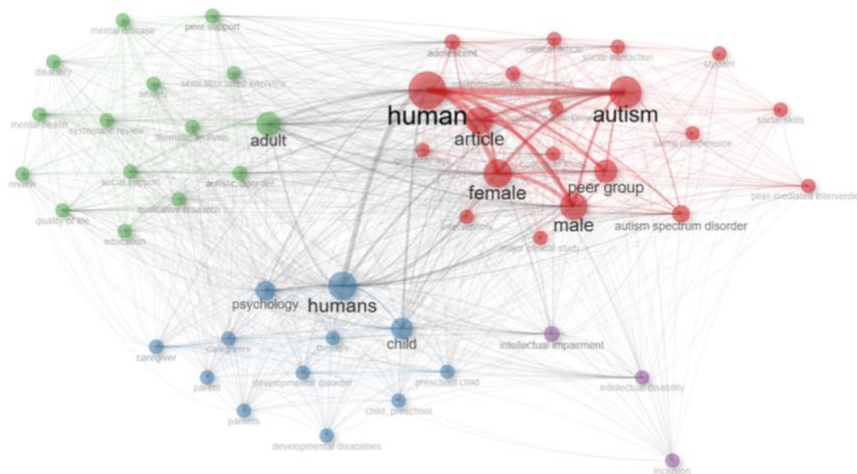
Along with the qualitative synthesis, a bibliometric analysis was performed to outline research trends and structures in this domain. The bibliometric analysis provides an overview of publication trends, authorship patterns, and thematic development in the field of peer-mediated interventions. Figure 1 presents the descriptive bibliometric analysis of peer-mediated intervention research published between 2020 and 2026.



**Figure 1. Descriptive Bibliometric Analysis of Peer-mediated Intervention Research (2020–2026)**

A total of 194 documents published in 126 sources, involving 824 authors (See Table 1 for country and source details). The average number of co-authors per document (4.58), reflecting extensive collaboration between researchers. The modest level of international collaboration (19.59% International co-authorship share). The dataset itself is pretty substantial, 23,850 references with what looks like a strong theoretical underpinning. Documents averaged 2.7 years old (indicating a relatively recent literature), and had an average citation per document of 6.531 citations (moderate academic impact) [44,49]. So, the annual rate of growth of + 1.02% indicates a persistence in improving research activity. In addition, 524 author keywords were captured indicating thematic diversity of the field.

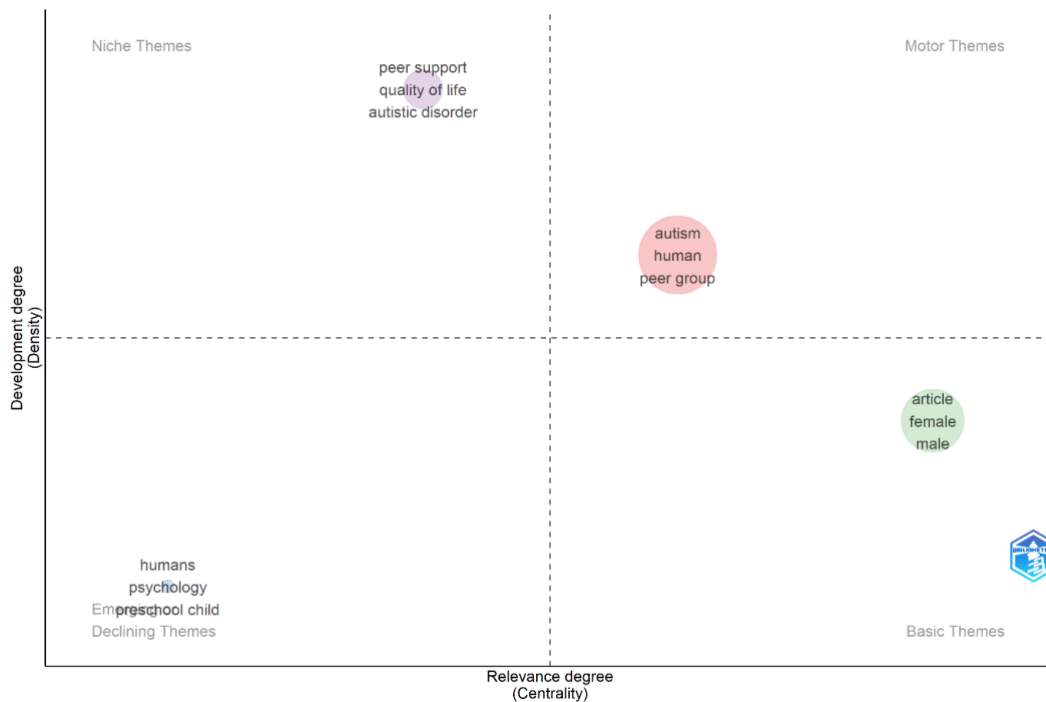
To explore the conceptual structure of the research field, a keyword co-occurrence analysis was conducted. As shown in Figure 2, the network illustrates the relationships among frequently used keywords, highlighting dominant research themes and their interconnections within peer-mediated intervention studies.



**Figure 2. Keyword Co-occurrence Network**

Keywords co-occurrence network visualises the conceptual structure of the research field. Their papers also contain many words, including “peer-mediated intervention,” for example “autism,” the family term used by authors (not a parent study with well-known publications in the same field of research on social interactions, communication in inclusive education). These keywords create clusters that are highly interconnected, suggesting that research tends to focus on social and communication outcomes. The network also reveals very strong associations between peer mediated strategies and inclusive education underlining the relevance of peer interaction for learning and participation.

To identify the main themes and their development within the research field, a thematic mapping analysis was conducted. As shown in Figure 3, the thematic map illustrates the distribution of research topics based on their centrality and development, highlighting core, emerging, and niche themes in peer-mediated intervention studies.



**Figure 3. Thematic Map of Research Trends**

The thematic map shows the categories of research on the basis of its centrality and development. These themes were in the motor themes quadrant (i.e. the most developed and important core themes for the field) as they contain a lot of relevant literature - Autism, Peer Group, Social Interaction. Basic topics, especially demographic-related ones such as male and female participants are found in the bottom right corner. At lower-left (emerging/declining), we find the themes that might need further investigation, like early childhood and psychological factors. Niche themes, quality of life and peer support are well established but not as central to the field.

To analyze the geographical distribution of research contributions, an analysis of corresponding authors' countries was conducted. As shown in Figure 4, the distribution highlights the dominance of publications from high-income countries, particularly the United States, the United Kingdom, and Australia, indicating an imbalance in global research contributions.

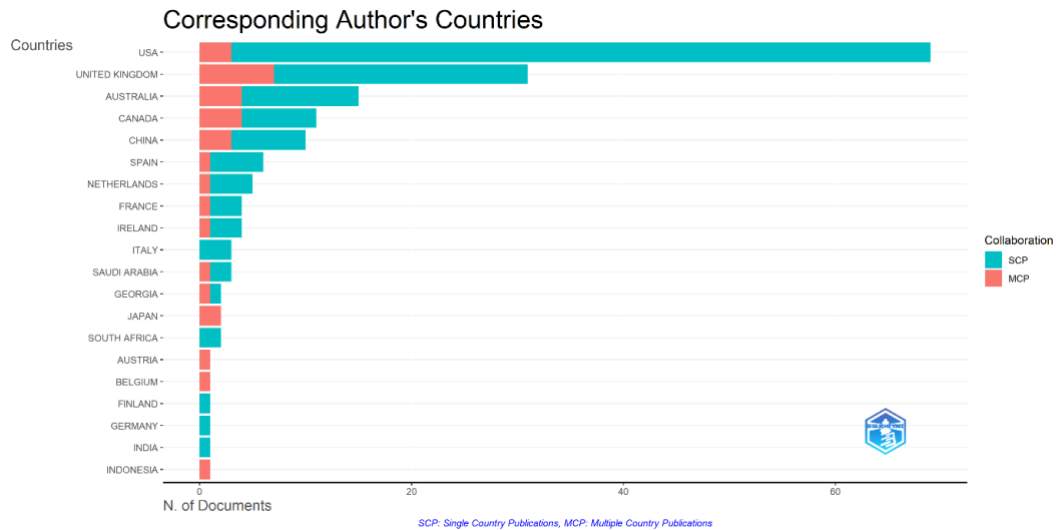


Figure 4. Corresponding Author's Countries

When we analyze the country of the corresponding authors, quantitative data show that most publications had a corresponding author with an affiliation in the United States (794/1671, 47.4%), followed by those in the United Kingdom (420/1671, 25.1%), Australia (201/1671, 12.0%) and Canada (176/1671, 10.5%). This would suggest that evidence for peer mediated interventions is primarily concentrated in countries with large volumes of high-income (HIC) studies. Single-country publications (SCP) and multiple-country publications (MCP) might depict domestic or international collaboration, in which global participation stays unbalanced.

To identify the most influential publication outlets in this field, a source analysis was conducted. As shown in Figure 5, the most relevant sources are dominated by journals focusing on autism and developmental disabilities, reflecting the disciplinary concentration of research on peer-mediated interventions.

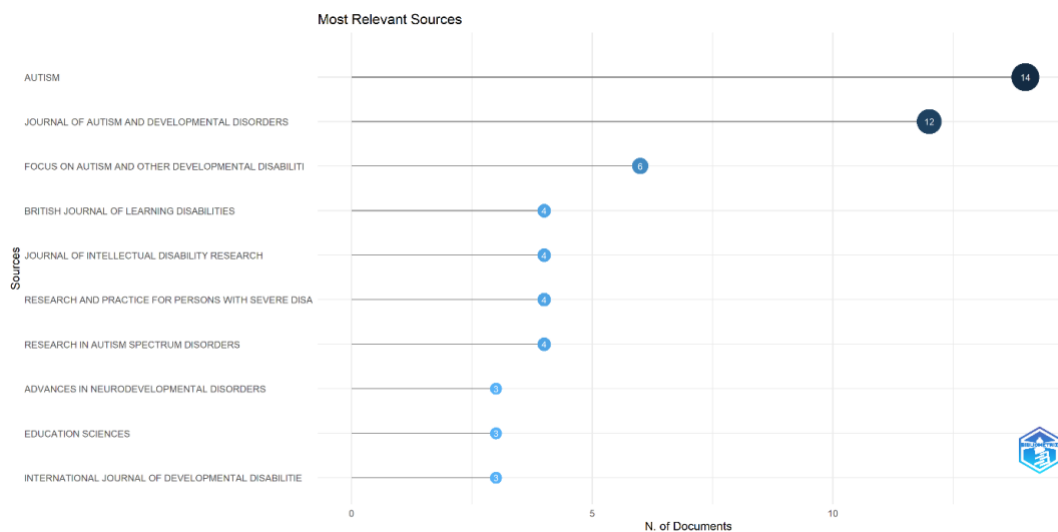
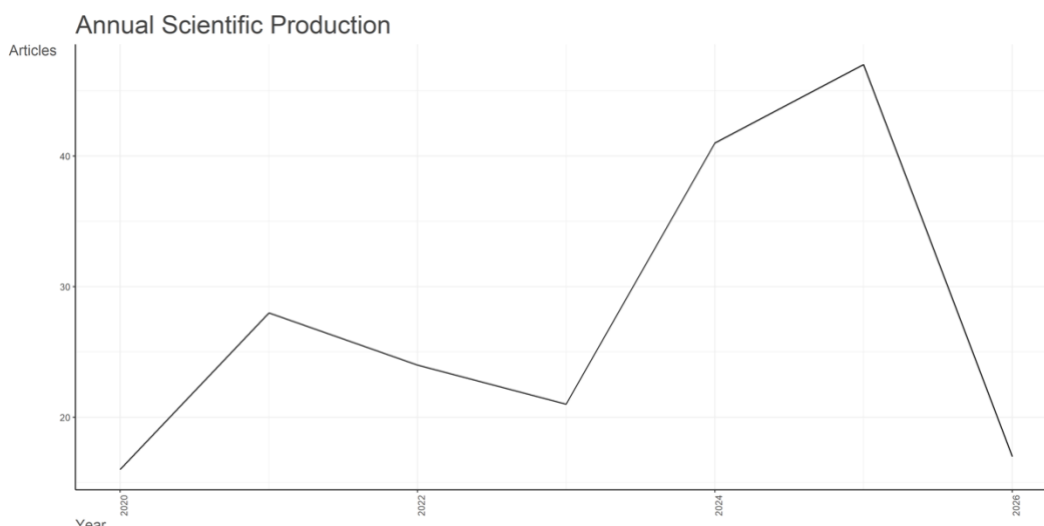


Figure 5. Most Relevant Sources

Based on the source analysis, we found that most relevant journals are Autism and Journal of Autism and Developmental Disorders in this field. Additional associated journals include Focus on Autism and Other Developmental Disabilities, Journal of Intellectual Disability Research. The implications of this finding point to the fact that research on peer-mediated interventions has been grounded heavily within the cultures of special education and developmental disabilities.

To analyze publication trends over time, an annual scientific production analysis was conducted. As shown in Figure 6, the number of publications on peer-mediated interventions has fluctuated but demonstrates an overall increasing trend between 2020 and 2026, indicating growing research interest in this field.



**Figure 6. Annual Scientific Production (2020-2026)**

Annual production shows oscillations in the number of publications across years, with a particularly strong rise during more recent years. The recent trend is consistent with a growing research attention on peer-mediated strategies and inclusive practices. The rise in this publication can be attributed to peer-mediated approaches that have been identified as a successful method to aiding children with intellectual and developmental disabilities

Overall the current systematic literature review and bibliometric analysis provided an overview of peer-mediated interventions. Overall, the findings suggest that these interventions are effective in increasing pro-social and communicative outcomes and have matured from being emerging practices to more established practices within the literature. In fact, the bibliometric results also corroborate that this field is maturing, as exhibited by an expansion of collaborative research and increased thematic density.

### 3.2. Discussion

This study provides a comprehensive analytical synthesis of peer-mediated interventions (PMIs) for children with intellectual and developmental disabilities (IDD), focusing on intervention types, effectiveness, implementation processes, and moderating factors. Rather than merely describing patterns, the findings indicate that PMIs function as socially embedded learning mechanisms that extend beyond instructional techniques. The predominance of models such as peer tutoring, peer modeling, and structured peer interaction reflects a broader pedagogical shift toward interaction-based learning in inclusive classrooms. This aligns with previous research emphasizing that peer-mediated approaches are inherently adaptable and context-sensitive, allowing them to be implemented across diverse educational settings while maintaining ecological validity (Woodgate, Tennent, et al., 2020).

The consistently positive impact of PMIs on social interaction and communication skills can be interpreted as evidence of their alignment with the naturalistic learning processes emphasized in inclusive education. Unlike teacher-directed interventions, PMIs situate learning within authentic peer interactions, thereby increasing opportunities for meaningful engagement and social participation. This finding is consistent with earlier studies demonstrating that peer involvement enhances social communication and reduces isolation among students with developmental disabilities (Aldabas, 2020). However, the relatively inconsistent effects on academic outcomes suggest that PMIs may be more effective as social-behavioral interventions rather than direct academic supports, a pattern also noted in previous systematic reviews (Travers & Carter, 2022). This distinction highlights the need to reconceptualize PMIs not as universal solutions, but as targeted strategies with domain-specific strengths.

From an implementation perspective, the effectiveness of PMIs appears to be contingent upon structured and intentional design rather than spontaneous peer interaction alone. The findings indicate that interventions supported by systematic peer training, active teacher facilitation, and continuous monitoring tend to produce more sustainable outcomes. This supports the argument that the success of PMIs depends on implementation fidelity and instructional scaffolding, as emphasized in prior research (Bowman-Perrott et al., 2023). In contrast, loosely structured interventions may fail to produce consistent benefits, suggesting that the presence of peers alone is insufficient without a clear pedagogical framework. This insight contributes to the ongoing discourse by reinforcing that PMIs require deliberate instructional planning to achieve optimal impact.

The variability in outcomes across studies can be further explained by the interaction of multiple moderating factors, including participant characteristics, intervention duration, and contextual conditions. This heterogeneity reflects a broader issue within the literature, where differences in study design and measurement approaches complicate direct comparison of findings. Similar concerns have been raised in earlier reviews, which highlight the fragmented nature of evidence in this field (Trembath et al., 2019). Therefore, the present study extends existing knowledge by emphasizing the importance of considering contextual and methodological variability when interpreting the effectiveness of PMIs, rather than assuming uniform outcomes across settings.

The findings can be theoretically grounded in social learning theory, which posits that learning occurs through observation, imitation, and social interaction. PMIs operationalize this theory by embedding learning opportunities within peer relationships, enabling children with IDD to acquire social and communicative skills through repeated and meaningful interactions. This theoretical alignment explains why PMIs are particularly effective in enhancing social engagement, as they leverage naturally occurring social dynamics rather than artificial instructional settings (Bandura, 1977). Consequently, PMIs can be understood not only as instructional strategies but also as mechanisms for fostering socially mediated learning processes in inclusive environments.

An important contribution of this study is the recognition of reciprocal benefits for typically developing peers involved in PMIs. Beyond supporting children with disabilities, peer participants often demonstrate increased empathy, social competence, and positive attitudes toward inclusion. This finding is consistent with previous research indicating that peer-mediated approaches contribute to the development of inclusive values and social awareness among all students (Travers & Carter, 2022). Such mutual benefits reinforce the role of PMIs as a holistic educational approach that supports both individual development and inclusive classroom culture.

The bibliometric analysis further strengthens the interpretation by demonstrating a growing and increasingly structured body of research in this field. The rising number of publications and the concentration of key themes around social interaction, communication, and inclusion suggest that PMIs are gaining recognition as a central strategy in inclusive education. However, the dominance of studies conducted in high-income countries indicates a significant imbalance in the global evidence base. This limitation echoes concerns raised in prior literature regarding the lack of contextual diversity and the need for more research in underrepresented regions (Okoye et al., 2019). As such, the generalizability of current findings remains constrained by geographical and socio-cultural factors.

Despite its contributions, this study is not without limitations. The relatively small number of included studies may limit the breadth of synthesis, while variations in research design and intervention characteristics may affect the consistency of findings. Additionally, the reliance on selected databases introduces the possibility of publication bias and the exclusion of relevant studies. These limitations are consistent with common challenges in systematic reviews and highlight the need for cautious interpretation of results (Kumar, 2023).

Future research should address these limitations by expanding the scope of investigation across diverse cultural and educational contexts, as well as by employing longitudinal designs to examine the sustainability of intervention effects over time. Furthermore, the integration of technology with peer-mediated approaches represents a promising direction, particularly in enhancing accessibility and scalability in inclusive education. Exploring these dimensions will contribute to a more comprehensive and contextually responsive understanding of PMIs in practice.

In summary, this study advances the field by providing an analytically grounded synthesis of peer-mediated interventions, highlighting their strengths, limitations, and underlying mechanisms. The findings underscore that peer interaction is not merely a supportive element but a central component of effective inclusive education. By situating PMIs within both theoretical and empirical frameworks, this study contributes to a more nuanced understanding of how inclusive practices can be designed to support meaningful participation for children with intellectual and developmental disabilities.

### 3.3. Implications

The findings of this study carry important implications at both theoretical and practical levels within the field of inclusive education. From a theoretical perspective, this study reinforces the relevance of social learning theory as a foundational framework for understanding how peer-mediated interventions (PMIs) facilitate learning and development among children with intellectual and developmental disabilities (IDD). By demonstrating that learning outcomes are significantly enhanced through structured peer interaction, the study extends existing theoretical discourse by positioning social engagement not merely as a supportive component, but as a central mechanism of learning in inclusive environments. This contributes to a more integrated conceptualization of inclusive pedagogy, where cognitive, social, and behavioral processes are interconnected rather than treated as separate domains.

From a practical standpoint, the results highlight the necessity of designing and implementing PMIs in a structured and intentional manner. The effectiveness of these interventions is closely tied to the presence of well-prepared peers, active teacher facilitation, and supportive classroom environments. Therefore, educators are encouraged to move beyond informal peer support and adopt systematic approaches that include peer training, clear instructional roles, and ongoing monitoring. In addition, the findings suggest that PMIs can be strategically utilized to promote not only the development of students with disabilities but also the social competence and inclusive attitudes of typically developing peers. This dual impact underscores the potential of PMIs as a sustainable and scalable strategy for fostering inclusive classroom cultures.

At the policy level, the study provides evidence to support the integration of peer-mediated strategies into inclusive education frameworks and teacher training programs. Policymakers should consider incorporating guidelines for the implementation of PMIs within national or institutional curricula, ensuring that inclusive practices are supported by both pedagogical and structural provisions. Furthermore, the growing body of research identified through the bibliometric analysis indicates an increasing global interest in this field, suggesting opportunities for cross-cultural adaptation and wider dissemination of peer-mediated approaches.

### 3.4. Limitations

Despite its contributions, this study is subject to several limitations that should be acknowledged when interpreting the findings. First, the number of studies included in the final synthesis was relatively limited, which may affect the comprehensiveness and generalizability of the conclusions. Although the selected studies met strict inclusion criteria, the small sample size restricts the extent to which the findings can represent the full diversity of peer-mediated intervention practices across different contexts. Second, the studies reviewed exhibit considerable heterogeneity in terms of research design, participant characteristics, intervention models, and outcome measures. This variability poses challenges for direct comparison and synthesis, as differences in implementation fidelity and contextual factors may influence the reported effectiveness of interventions. Consequently, the conclusions drawn from this review should be understood as indicative rather than definitive.

Another limitation relates to the scope of data sources. This review primarily relied on articles indexed in major databases and published in English, which may have resulted in the exclusion of relevant studies from other languages or regional publications. Such limitations may introduce a degree of publication bias and limit the representation of research conducted in diverse cultural and educational settings. Finally, while this study integrates systematic literature review and bibliometric analysis to provide a comprehensive overview, it does not include meta-analytic procedures that could quantify the magnitude of intervention effects. Future research may benefit from combining qualitative synthesis with meta-analysis to provide more precise estimates of effectiveness. Addressing these limitations in future studies will be essential for advancing a more robust and contextually inclusive evidence base on peer-mediated interventions.

## 4. Conclusion

This study demonstrates that peer-mediated interventions (PMIs) represent an effective and contextually relevant approach for supporting children with intellectual and developmental disabilities (IDD) in inclusive educational settings. The findings highlight that the value of PMIs lies not only in improving social and communicative outcomes but also in fostering participatory and inclusive learning environments through structured peer interaction. A key contribution of this study is the integration of systematic literature review and bibliometric analysis, which provides both empirical synthesis and a broader mapping of research trends in the field. This combined approach offers a more comprehensive understanding of how PMIs have evolved and identifies their growing significance within inclusive education research. Overall, this study positions PMIs as a strategically important framework for advancing inclusive practices, while also offering a foundation for future research to further refine their implementation across diverse educational contexts.

## Author Contributions

All authors have equal contributions to the paper. All the authors have read and approved the final manuscript.

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## Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/ or publication of this article.

## Data Availability

The datasets generated during and/ or analyzed during the current study are available from the corresponding author on reasonable request.

## Declaration on AI Use

The authors declare that no artificial intelligence (AI) or AI-assisted tools were used in the preparation of this manuscript.

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