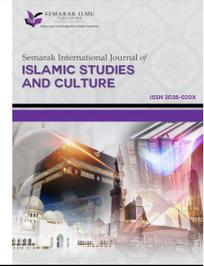




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Bibliometric Analysis on Parent-Adolescent Communication

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ABSTRACT

This study provides a comprehensive bibliometric analysis of global research trends in parent-adolescent communication, a critical area in family studies and adolescent development. Despite its significance, research in this domain remains fragmented, with varying theoretical approaches and limited interdisciplinary contributions. The purpose of this research is to identify key trends, influential studies and gaps in the literature to guide future investigations. Using a dataset of 7122 publications from 1951 to 2024 sourced from the Scopus database, the study employed bibliometric techniques, including content analysis and network visualization, supported by tools such as VOSviewer, MS Excel and Harzing's Publish or Perish software. The analysis revealed significant growth in research output over recent decades, with psychology, medicine, and social sciences emerging as dominant fields. Key findings highlight the prevalence of Western-centric studies, a focus on digital communication's impact, and gaps in exploring cultural, technological, and socioeconomic influences. This research underscores the interdisciplinary nature of parent-adolescent communication studies and emphasizes the need for diverse cultural representation, mixed-method approaches and longitudinal studies to address existing limitations. The insights provided can inform evidence-based practices and guide future research to advance this vital field.

1. Introduction

Communication among family members contributes to the well-being of a family institution [1]. The family unit is widely acknowledged as the cornerstone of society, contributing to its stability, cohesion, and development. Effective communication is paramount within the family, particularly between parents and adolescents, as it shapes the foundation of a healthy familial relationship and fosters adolescent development. Positive communication between parents and teenagers has been shown to significantly influence adolescent mental health, academic performance, and social integration, thereby promoting overall well-being [2]. Conversely, poor communication may

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exacerbate conflicts, hinder emotional expression, and drive adolescents to seek alternative sources of emotional support, often to their detriment [3].

Despite its importance, the study of parent-adolescent communication is marked by fragmented research findings and varying theoretical approaches. As new challenges emerge—such as the rise of digital communication platforms and evolving family structures—understanding the dynamics of parent-adolescent communication has never been more critical. This highlights the need for a systematic overview of existing research to identify trends, influential studies, and gaps in the field. Bibliometric analysis offers a robust framework for achieving this, enabling researchers to systematically examine large volumes of scholarly work. By analyzing key publications, citation networks, and thematic patterns, bibliometric studies provide valuable insights into the intellectual structure and development of a research field [4]. This study undertakes a bibliometric analysis of parent-adolescent communication research, focusing on global trends, influential contributors and emerging themes from 1951 to 2024. Using tools like VOSviewer, MS Excel, and Harzing's Publish or Perish software, the study addresses the following research questions (RQ):

- i. What are the current publication trends in parent-adolescent communication?
- ii. Who are the most prominent scholars in this field?
- iii. Which are the most impactful articles on parent-adolescent communication?
- iv. What are the most popular themes in parent-adolescent communication?
- v. What aspects of parent-adolescent communication require further exploration?

This bibliometric analysis of parent-adolescent communication research aims to provide a comprehensive understanding of the field's evolution and key trends from 1951 to 2024. The findings underscore the critical role of effective communication within families, particularly between parents and adolescents, in shaping adolescent development and well-being. Despite substantial research growth, there remain notable gaps, particularly in terms of cultural diversity, the impact of digital communication, and longitudinal studies. By identifying influential studies, prominent scholars, and emerging themes, this research offers valuable insights to guide future investigations. Addressing the identified gaps will contribute to a more nuanced understanding of the complexities of parent-adolescent communication and facilitate the development of strategies to foster healthier familial relationships in diverse contexts.

2. Literature Review

2.1 The Role of Communication in Family Dynamics

Family communication is essential for establishing a stable and supportive environment, particularly during adolescence. Adolescents face numerous challenges such as identity issues and social pressures, and effective communication with parents helps them navigate these challenges [5]. Family communication plays a crucial role in maintaining and strengthening relationships among family members [6]. Through effective communication, family relationships are enveloped in love, respect, and a sense of acceptance, with members feeling involved and valued [7]. If communication strategies are implemented effectively, they can significantly improve the parent-child relationship, which is vital for the well-being of adolescents [8]. In the context of Muslim families, communication should be guided by Islamic principles [9].

Key elements outlined by Caughlin [10] for family communication, which include openness, maintaining structural stability, expressing love, offering emotional support, reading minds, politeness, discipline, humor, regular interaction, and avoiding conflict. A recent study conducted in

Malaysia highlights that family communication methods focus on placing religious values as the highest priority, ensuring quality time together, consistently providing advice and guidance to children, demonstrating good examples, and using digital media within the family [11].

The importance of family communication is particularly evident in the parenting strategies discussed by Ismail *et al.*, [12]. For example, parents adopting more open and gentle communication styles, as opposed to the authoritarian methods of previous generations, have been shown to improve family dynamics and make it easier for children to approach their parents with issues or concerns. Furthermore, parents who proactively acquire knowledge about family dynamics and seek expert advice can better manage communication within the family, particularly during the challenging adolescent years.

Family communication forms the foundation for expressing love [13]. Through specific communication methods, children recognize that family interactions involve expressions of love towards them [14]. Using a combination of gentle calls, reminders, stories, and humor allows parents to address various aspects of their children's development in a compassionate and constructive manner [15]. The love expressed by parents leaves a deep impact on their children's hearts and minds. This affection becomes a key element in shaping their character and contributing to their personality development [16].

Moreover, family communication serves as a medium for providing emotional support to family members [17]. A positive communication climate enables adolescents to express their thoughts, concerns, and emotions freely, which boosts their confidence, reduces loneliness, and promotes overall mental well-being [18]. The emotional support provided by family members helps children feel secure and valued [19].

Family communication also plays a crucial role in resolving conflicts within the family [20]. Open and effective communication prevents misunderstandings, reduces conflicts, and helps resolve issues in a respectful and constructive manner [21]. Misunderstandings can be effectively managed through communication. One way to address conflicts is by organizing family meetings, as mentioned by Mohd Hamzah Murghayah *et al.*, [22]. In these meetings, parents, as the more mature figures, should act as leaders. The primary focus of the meeting should be to resolve conflicts, ensuring that the goal is achieved by the end of the discussion. These meetings should not be too long, as the time of each family member is valuable. A recommended duration for such meetings is about 30 minutes.

Family communication is essential in shaping children's behavior and social skills. The values imparted during communication with children shape how they interact with others, thereby improving their interpersonal communication skills [23]. Parents, acting as role models for respectful and polite communication, set an example for adolescents to follow in their interactions with others. Active engagement and effective communication with adolescents help parents monitor peer influence and external factors, ensuring that adolescents remain grounded in family values [24]. Many adolescents choose to confide in their peers due to strained relationships with their families [25]. One way for parents to connect with their teenagers is by engaging with their friends as mentioned by Bakkar [26]. This approach encourages adolescents to feel more comfortable and open with parents who show respect and care for their friends.

Family communication serves as a cornerstone for fostering strong and meaningful relationships within the family, particularly during adolescence. By adopting effective communication strategies rooted in love, respect, and empathy, families can create an environment that supports adolescents in navigating the challenges of identity formation, social pressures, and emotional growth. Guided by Islamic principles and enriched by cultural values, family communication in Muslim households underscores the importance of openness, emotional support, and conflict resolution. The adoption of positive parenting approaches, such as gentle communication and active listening, enhances the

parent-child bond, enabling adolescents to feel valued and secure. Ultimately, family communication not only strengthens familial ties but also equips adolescents with the social and emotional skills needed to thrive, ensuring their overall well-being and personal development.

2.2 Challenges in Parent-Adolescent Communication

Parent-adolescent communication is a complex and challenging aspect of family dynamics, with parents often facing numerous obstacles as they navigate their relationships with adolescents [27]. As each family works to establish its identity, it must deal with various situations, from positive interactions to stressful moments [28]. Over the years, societal changes, including shifts in values, behaviors, and social environments, have greatly impacted family structures [29]. While parenting challenges differ across countries and cultures, their effects on adolescents often follow similar patterns, making adolescent-related issues a central concern for parents worldwide [30].

Adolescents undergo three major developmental stages—early, middle, and late adolescence—each marked by its own set of challenges. In the early stage (ages 13-14), adolescents begin forming their self-identity, becoming more sensitive, comparing themselves to others, showing less empathy, and prioritizing peer relationships [31]. The physical and sexual changes during this stage further intensify their emotional responses [32]. In the middle stage (ages 15-16), adolescents develop their personal values, such as skills, morals, and family relationships. They also tend to question authority, experiment with different ideas, and engage in debates [33].

By the late stage (ages 17-18), adolescents exhibit higher maturity, better evaluate the consequences of their actions, and respond more effectively to pressure. They are also more comfortable discussing personal issues with parents, plan for the future, and are less influenced by peer pressure [34]. Research indicates that the intensity of parent-adolescent conflicts peaks during the middle stage before stabilizing in the late stage [35]. Relationships can improve, restoring closeness and leading to long-term positive changes in parent-child interactions with the right approach as stated by Laursen and Collins [36].

Simultaneously, peer relationships become more significant as adolescents seek emotional support and social acceptance [37]. Peers often become a primary source of influence, guiding adolescents' social activities and decisions [38]. Peer support enhances emotional well-being and self-confidence [39], but it may also reduce compliance with parental authority as adolescents strive for independence within social groups [40].

The rise of technology has further complicated communication challenges. Parents who are either overly dependent on or unfamiliar with technology may struggle to connect with their adolescent children [41]. In particular, older parents may face difficulties in communicating effectively due to technological gaps [42]. Additionally, misinterpretations of tone and meaning in written communication often leads to misunderstandings, negatively affecting emotional connections between parents and adolescents [43]. Face-to-face interactions, while still vulnerable to misunderstandings, engage sensory experiences like sight, hearing, and touch, which can mitigate some of the emotional distance [44]. As a result, parents must take a proactive approach to adapt to the evolving communication dynamics with adolescents in an increasingly digital world.

Cultural differences also play a critical role in shaping parent-adolescent communication styles. In cultures with authoritarian approaches, such as China and Kenya, parental communication tends to emphasize obedience and respect for authority. While this may protect adolescents from risky behaviors, it can also stifle emotional expression and limit autonomy. In contrast, cultures that prioritize individualism, like Sweden and the United States, encourage greater adolescent autonomy, resulting in more open and egalitarian communication. While this fosters self-confidence and

emotional well-being, it may reduce parental control, potentially exposing adolescents to greater risks [45].

In collectivist cultures such as Jordan and the Philippines, parent-adolescent communication balances respect for authority with a degree of autonomy. These cultures prioritize family well-being, with communication focused on familial bonds and interdependence. However, cultures with a stronger focus on obedience, such as China and Kenya, tend to favor indirect communication to avoid conflict, which can prevent adolescents from sharing their feelings [46].

Family communication is not only shaped by individual family dynamics but also by broader cultural, social, and economic factors. Countries with better work-life balance, such as Denmark and Estonia, tend to have more positive communication patterns within families, while those facing work-life balance challenges, such as France and Poland, often experience a decline in communication quality [47]. Furthermore, gender roles significantly influence communication dynamics. Girls are generally more likely to share personal information with parents, while boys tend to be more reserved, reflecting traditional gender expectations [48].

Each cultural approach to parent-adolescent communication has both advantages and drawbacks. Authoritarian control can help prevent risky behaviors like substance abuse and delinquency but may hinder adolescent independence and lead to strained relationships. On the other hand, promoting autonomy can boost self-confidence and emotional health but may also expose adolescents to poor decision-making without proper guidance. Direct communication fosters transparency and reduces misunderstandings but may also lead to conflicts, especially when opinions differ. Indirect communication helps maintain harmony but can create emotional distance, preventing adolescents from seeking help when needed [49].

The challenges in parent-adolescent communication are multifaceted and influenced by a variety of factors, including developmental stages, cultural values, gender roles, technological advancements, and socio-economic conditions. As adolescents transition through different stages of development, their needs and communication patterns evolve, often leading to conflicts with parents. While peer relationships and social media play an increasingly significant role in adolescents' lives, the influence of parents remains critical. Cultural differences shape how communication is approached, with authoritarian cultures emphasizing control and obedience, while individualistic cultures promote autonomy and openness. The integration of work and family dynamics, particularly in different cultural contexts, further influences communication styles and the effectiveness of parent-child interactions. Understanding these complex dynamics and adapting communication strategies to the specific needs of adolescents, while considering cultural and technological factors, is essential for fostering healthier and more effective parent-adolescent relationships.

2.3 Trends in Parent-Adolescent Communication Research

Research on parent-adolescent communication has undergone significant evolution over time, reflecting changes in societal, cultural, and technological landscapes. Early studies in the 1900s portrayed these relationships as conflict-driven, particularly during adolescence, when developmental changes like puberty heightened tensions. By the 1990s and 2000s, however, scholars recognized that moderate conflicts over mundane issues were not only normative but also functional. These conflicts, often linked to early adolescence, were shown to help adolescents develop autonomy and negotiation skills, with their intensity typically declining as adolescents transitioned into late adolescence [50].

Since the 1990s, the impact of parenting styles on communication has been a central focus. Authoritative parenting, characterized by high support and moderate control, has consistently been

associated with positive communication outcomes. More recent research highlights the role of autonomy-supportive parenting in fostering open communication and reducing secrecy, emphasizing the importance of encouraging independence within a supportive environment [51]. The balance between conflict and positive interactions within parent-adolescent relationships has remained crucial, with studies stressing the need to maintain emotional warmth and strong connections for positive adolescent outcomes [52].

The integration of technology into family interactions has been a dominant trend since the 2010s. Communication technologies such as phone calls, texting, and social media have significantly influenced the frequency, method, and quality of parent-adolescent interactions [53]. While these tools facilitate frequent contact, they also present challenges such as managing boundaries and expectations. With the rise of digital platforms in the 2000s and 2010s, researchers have increasingly focused on how these emerging technologies impact parent-adolescent communication, extending beyond traditional methods to include social networking sites and instant messaging [54].

Mental health and emotional regulation have also emerged as key themes in recent research. Studies from the 2010s onward highlight how parental anxiety, stress, and emotional regulation practices influence relational dynamics and adolescent outcomes. This focus became particularly relevant during the COVID-19 pandemic, when work-family conflicts and heightened stress magnified the challenges of effective communication [55].

Cultural and contextual variations have gained significant attention over the past two decades, expanding research beyond Western populations. Studies reveal that communication styles are heavily influenced by cultural norms. For instance, collectivist societies often emphasize hierarchical relationships, while Western cultures prioritize open dialogue and autonomy. Understanding these cultural contexts is critical for comprehending the diversity of parent-adolescent communication dynamics [56].

Recent methodological advancements in the 2010s and 2020s have provided deeper insights into the evolution of parent-adolescent communication. Dynamic systems theory and longitudinal studies have been particularly valuable in exploring the interplay between conflict, emotional variability, and relational outcomes over time [57]. This methodological shift has enriched our understanding of how these relationships develop and adapt in response to changing circumstances.

In the 2020s, research has also focused on unique family contexts, such as parenting children with disabilities or managing blended families. These studies emphasize the need for tailored approaches to support effective communication in diverse family structures, highlighting the complexities of modern parenting [58].

The field of parent-adolescent communication research has evolved significantly, reflecting the complexities of modern family dynamics. From early studies emphasizing developmental conflicts to contemporary investigations into the roles of parenting styles, culture, technology, and mental health, the research highlights the multifaceted nature of these relationships. Advances in methodologies and an increasing focus on diverse family structures and cultural contexts have enriched our understanding, providing actionable insights for fostering effective communication. As digital tools and societal shifts continue to reshape family interactions, future research must address emerging challenges, such as digital dependency and intergenerational conflicts, while emphasizing evidence-based interventions and tailored approaches. This progression underscores the importance of holistic, interdisciplinary strategies to strengthen parent-adolescent relationships and promote adolescent well-being in an increasingly interconnected world.

3. Methodology

3.1 Bibliometric Assessment

Bibliometric analysis is a systematic and advanced research methodology designed to analyze and synthesize large volumes of scientific literature. Its primary purpose is to identify trends, relationships, and patterns within a specific field, thereby providing a deeper understanding of the research landscape. By summarizing extensive datasets, this approach is particularly effective for conducting broad reviews of literature in disciplines with extensive publication records. It enables researchers to map the intellectual structure and evolution of a field while ensuring that the findings reflect a comprehensive and diverse spectrum of studies [59].

The versatility of bibliometric analysis lies in its ability to handle expansive datasets and draw on diverse sources, making it a powerful tool for exploring and connecting various facets of a research domain. This method ensures that significant trends, influential works, and emerging areas of study are systematically captured and analyzed. It combines quantitative metrics, such as citation counts and publication volumes, with qualitative methods, like thematic analysis and keyword exploration. This dual approach adds depth to the analysis by contextualizing data and revealing the relationships and thematic evolution within the field [60].

Bibliometric assessment is particularly valuable for examining the historical development of a field while highlighting emerging trends and research gaps [61]. It involves the systematic analysis of published sources, such as books, journals, and academic publications, through the application of statistical tools [62]. A specialized technique within bibliometrics, citation analysis, utilizes citation graphs to visualize the interconnections within a network of references, commonly applied in library and information sciences. This approach facilitates impact assessment, enabling the identification of influential works, prominent researchers, and key publications within a given field [63].

In this study, bibliometric and content analyses were employed to map and illustrate the intellectual framework and growth of research on parent-adolescent communication over the past 73 years. This methodological approach ensures a comprehensive understanding of the field's evolution while identifying critical contributions and emerging areas for further inquiry.

3.2 Procedure Analysis

This study involved a systematic literature search and data collection process, utilizing the Scopus database as the primary source. The data search was conducted on October 24, 2024, and adhered to predefined criteria to ensure comprehensiveness and relevance. The search terms included phrases such as "parent-adolescent communication," "parent-teen communication," "parent-child communication," "parent-child interaction," and "parental communication strategies." These terms were selected to capture a wide range of relevant studies in the field.

The data retrieval process is visually summarized in Figure 1, which presents a structured flow diagram following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines [64]. To organize the collected data efficiently, the reference management tool Mendeley was employed. This tool facilitated the systematic organization and storage of bibliographic records, ensuring a well-structured dataset. This step was critical in creating a comprehensive dataset encompassing all relevant publications necessary for an in-depth bibliometric analysis [65].

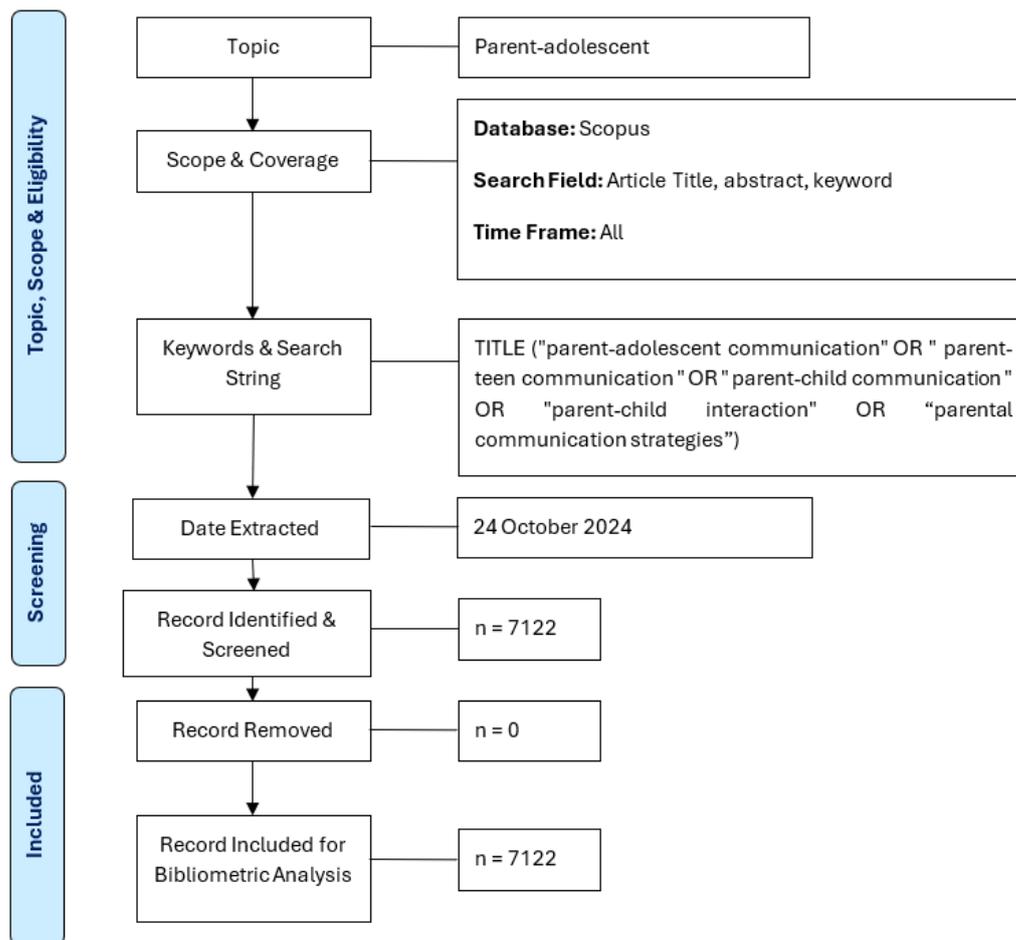


Fig. 1. Flow diagram of the search strategy¹

3.3 Data Analysis

The analysis centered on the topic of "parent-adolescent communication," leveraging the Scopus database as the primary source of data. The search parameters included all available article titles, abstracts, and keywords, without imposing restrictions on time frame, language, source type, or document type. A comprehensive search strategy was employed using a combination of relevant keywords such as "parent-adolescent communication," "parent-teen communication," "parent-child communication," "parent-child interaction," and "parental communication strategies." This extensive approach ensured broad coverage of the research domain. Data extraction occurred on October 24, 2024, resulting in a total of 7122 records being identified and screened. Notably, all records were retained for bibliometric analysis, with no exclusions during the screening process.

The analytical process incorporated multiple methods, including descriptive, network, content, and bibliometric analyses. Descriptive analysis focused on tracking publication trends, identifying leading journals, countries, and prolific authors. Citation data and key influential papers were examined using Harzing's Publish or Perish software. Network and bibliometric analyses, conducted with VOSviewer, calculated critical metrics such as centrality, PageRank, and citation patterns to

¹ Modified from PRISMA (Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group. 2009. Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLoS Med* 6(7): e1000097. doi:10.1371/journal.pmed1000097

uncover relationships within the literature. Cluster and gap analyses were performed to identify core themes and existing research gaps, further enriching the analysis.

Visualization played a pivotal role in the bibliometric analysis, transforming complex data into accessible and interpretable graphical representations. Tools like VOSviewer were used to generate maps, graphs, and other visual formats, enhancing the clarity and impact of the findings. These visualizations were instrumental in communicating the results effectively and making them more meaningful for a broader audience [66].

The final phase involved interpreting the findings and linking them back to the research objectives. A detailed report was prepared using MS Word to summarize the methodologies, results, and implications. This comprehensive document not only presented the study's insights but also offered actionable recommendations, serving as a valuable resource for future research. This meticulous and systematic approach ensured that the dataset was exhaustive and accurately represented the existing literature on parent-adolescent communication, thereby providing a robust foundation for further exploration and understanding of the topic.

4. Results

To address RQ1, "*What are the current publication trends in parent-adolescent communication?*", this study examined trends based on annual publication counts, contributions by country, journal, leading authors, and affiliated organizations. The analysis was conducted using bibliographic data obtained from the Scopus database, providing a comprehensive view of publication patterns within this research field.

4.1 Publication by Year

To address the research questions, publication trends by year were closely monitored. Figure 2 illustrates the publication frequency on parent-adolescent communication from 1951 to 2024. Analysis using Harzing's Publish or Perish software revealed that Milner, E. was the first to publish on this topic, with a pioneering paper titled "A Study of the Relationship Between Reading Readiness in Grade One School Children and Patterns of Parent-Child Interaction" in 1951. Interest in parent-adolescent communication research surged during the 2000s and 2010s, reflecting shifts in family dynamics and communication styles in the modern world [67]. Advances in technology introduced both new challenges and opportunities for parent-adolescent interactions, driving further exploration of this topic [68]. Starting in 2005, annual publications in this area reached 100, and by 2010, this number had doubled to 200, marking a period of substantial growth in scholarly output.

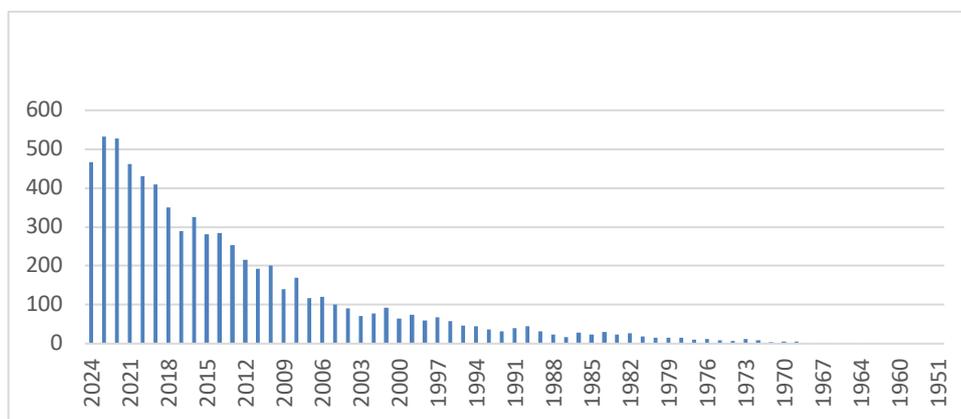


Fig. 2. Total yearly publication

Table 1 presents data on publications over the past decade related to parent-adolescent communication. As shown, total publications have risen steadily over the last 10 years (2015-2024), with a peak in 2023, reaching 532 publications. The year with the highest number of cited publications was 2022, with 447 citations. Notably, 2016 stands out for having the most citations overall within the last decade, with a total of 8788 citations. This high citation count in 2016 significantly impacted the h-index and g-index for that year, raising them to 50 and 73, respectively.

Table 1
 Recent 10 years of publication

Year	TP	NCP	TC	C/P	C/CP	<i>h</i>	<i>g</i>
2024	466	142	264	0.57	1.86	5	7
2023	532	362	1653	3.11	4.57	13	28
2022	518	447	2728	5.27	6.10	18	23
2021	461	404	4147	9.0	10.26	27	39
2020	429	400	5639	13.14	14.10	36	48
2019	410	378	7240	17.66	19.15	38	63
2018	349	327	6712	19.23	20.53	39	62
2017	289	272	7257	25.11	26.68	43	67
2016	326	305	8788	26.96	28.81	50	73
2015	281	261	8663	30.83	33.19	47	78

Note: TP=total number of publications; NCP=number of cited publications; TC=total citations; C/P=average citations per publication; C/CP=average citations per cited publication; *h*=h-index; and *g*=g-index

4.2 Publishing Activity by Country

This study also examined the countries actively contributing to publications on parent-adolescent communication. A total of 122 countries have supported research in this area. Using MS Excel to analyze publication frequency data, the top 20 countries with the highest contributions were identified, as shown in Table 2. The United States leads with 3901 publications, accounting for 54.77% of the total. The United Kingdom follows with 532 publications (7.47%), Canada with 417 (5.86%), and Australia with 360 (5.05%). China, the highest-ranking Asian country on the list, contributed 324 publications (4.55%).

Moreover, a global map in Figure 3 visually represents the publication distribution by country based on the data above.

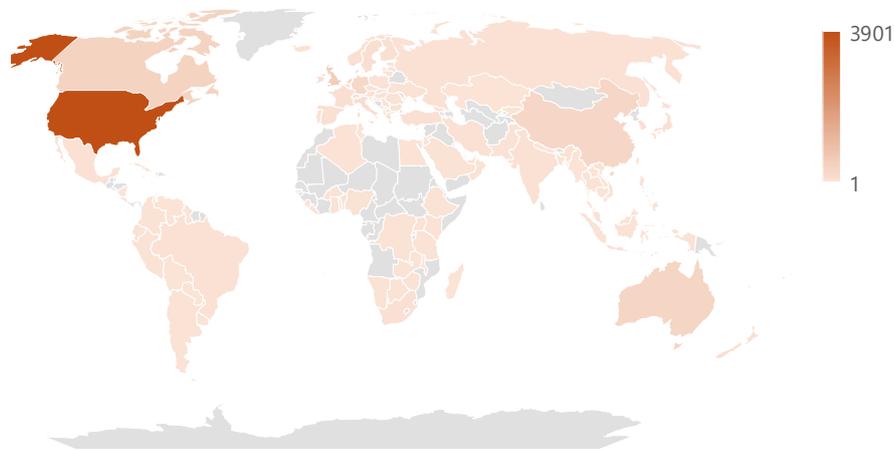


Fig. 3. Total publication by country

Table 2
 Top 20 countries contributed to the publications

Country	TP	% (n=7122)
United States	3901	54.77
United Kingdom	532	7.47
Canada	417	5.86
Australia	360	5.05
China	324	4.55
Netherlands	301	4.23
Germany	278	3.90
Israel	159	2.23
Italy	141	1.98
Sweden	93	1.31
France	84	1.18
South Korea	83	1.17
Hong Kong	82	1.15
Belgium	81	1.14
Spain	79	1.11
Norway	78	1.10
Turkey	71	1.00
New Zealand	70	0.98
Switzerland	70	0.98
Taiwan	68	0.95

Note: TP=total number of publications

Figure 4 shows the network visualization map depicting the co-authorship relationships by country in the research field of parent-adolescent communication. The map, generated using VOSviewer, highlights the United States as the central node with the largest circle, indicating its dominant contribution and collaboration in this research area. Strong co-authorship ties link the United States to countries such as the United Kingdom, Canada and Mexico, reflecting robust international collaboration. Smaller nodes, such as those representing Spain, Taiwan, South Korea and France, indicate moderate contributions, with fewer collaborative links compared to the United States. The thickness of the connecting lines represents the strength of the co-authorship ties, where thicker lines denote more frequent collaboration. This network visualization underscores the prominence of the United States in fostering global research partnerships while also reflecting the geographical disparities in research contributions within this domain.

4.3 Publishing Activity by Journal

A total of 7122 publications on parent-adolescent communication have been published across 168 journals. Table 3 highlights the journals with the highest number of articles in this field. Leading the list is the Journal of Child and Family Studies with 154 articles (2.16%), followed by Frontiers in Psychology with 102 articles (1.43%), Developmental Psychology with 97 articles (1.36%), the Journal of Child Psychology and Psychiatry and Allied Disciplines with 92 articles (1.29%), and the Journal of Family Psychology with 79 articles (1.11%).

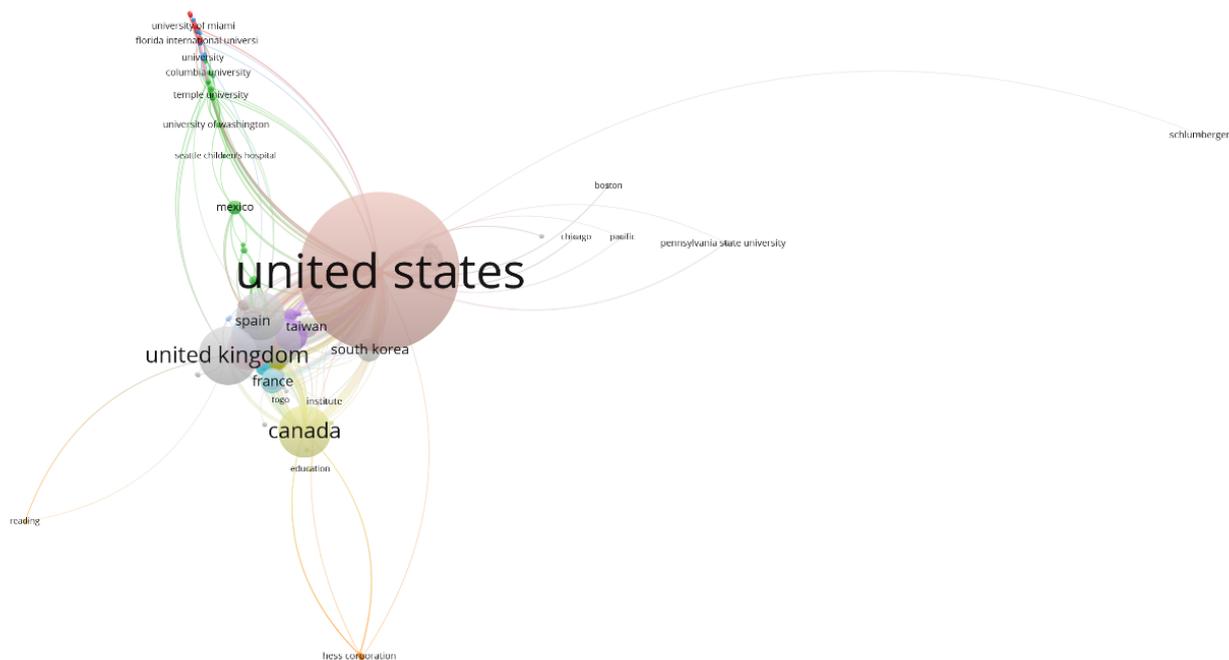


Fig. 4. Network visualization map of the co-authorship by countries

Table 3

Most active source title

Source Title	TP	% (n=7122)	Publisher
Journal of Child and Family Studies	154	2.16	Springer New Yor/k
Frontiers in Psychology	102	1.43	Frontiers Media
Developmental Psychology	97	1.36	American Psychological Association
Journal of Child Psychology and Psychiatry and Allied Disciplines	92	1.29	Wiley-Blackwell Publishing Ltd
Journal of Family Psychology	79	1.11	American Psychological Association
Children and Youth Services Review	70	0.98	Elsevier Ltd
International Journal of Environmental Research and Public Health	70	0.98	Multidisciplinary Digital Publishing Institute
Child Abuse and Neglect	69	0.97	Elsevier
Child and Family Behavior Therapy	69	0.97	Taylor and Francis
Early Child Development and Care	65	0.91	Taylor and Francis

Note: TP=total number of publications

4.4 Publishing Activity by Author and Organization

To respond to RQ2, “Who are the most prominent scholars in this field?”, this study also analyzed the authors and institutions most actively publishing in the field of parent-adolescent communication. Table 4 presents the top 10 most productive authors in this area. According to Scopus data, the leading author is McNeil, C. B. from the University of Florida College of Medicine, United States, with 57 publications. Following him are Bagner, D. M. from Florida International University with 40 publications, and Eyberg, S. M. from the University of Florida with 40 publications. These results highlight the strong research environment and funding support for psychology and family studies at institutions in Florida. Notably, 9 of the top 10 authors are based in the United States, underscoring the country's leadership in this field. The only non-U.S. author in the top 10 is Green, J. from the University of Manchester, United Kingdom, with 23 publications.

Table 4
 Most productive authors

Author's Name	Affiliation	Country	TP	%
McNeil, C. B.	University of Florida College of Medicine	United States	57	0.80
Bagner, D. M.	Florida International University	United States	40	0.56
Eyberg, S.M.	University of Florida	United States	40	0.56
Niec, L.N.	Central Michigan University	United States	25	0.35
Shaw, D.S.	University of Pittsburgh School of Medicine	United States	25	0.35
Green, J.	University of Manchester	United Kingdom	23	0.32
Comer, J.S.	Florida International University	United States	22	0.31
Herschell, A.D.	University of Pittsburgh Medical Center	United States	22	0.31
Garcia, D.	University of Miami	United States	21	0.29
Rowe, M.L.	University of Maryland	United States	20	0.28

Note: TP=total number of publications

The network visualization map, generated by VOSviewer, illustrates the co-authorship relationships among authors based on bibliometric analysis as shown in Figure 5. Each node in the map represents an author, with the size of the node corresponding to the author's contribution to the co-authorship network, such as the number of publications or centrality in collaborations. Larger nodes, such as those of Cheryl B. McNeil and Stephen P. Hinshaw, indicate influential authors who play significant roles in fostering collaborative research. The nodes are grouped into distinct clusters, represented by different colors, which signify research communities or groups of authors frequently collaborating on related topics. These clusters highlight the concentration of research efforts within specific fields or disciplines.

The connections between nodes (edges) depict co-authorship relationships, where the thickness of the lines reflects the strength of the collaboration, determined by the frequency of joint publications. Some authors have connections spanning multiple clusters, indicating interdisciplinary research or broader collaborative efforts. Conversely, isolated clusters may represent niche research communities with limited interaction outside their group. Overall, the map provides valuable insights into the dynamics of research networking, identifying key contributors, collaborative trends, and potential opportunities for interdisciplinary connections within the field.

The most active institutions (Table 5) in parent-adolescent communication research include the University of Washington, leading with 121 publications (1.7%), followed by the University of California, Los Angeles, with 111 publications (1.56%) and Pennsylvania State University, with 110 publications (1.54%). Notably, most of the top 15 contributing institutions are based in the United States, with only two from the Netherlands—Universiteit Utrecht and Universiteit van Amsterdam. This reflects the United States' strong research infrastructure and established focus on family dynamics and child development [69]. Meanwhile, the Netherlands has a robust tradition in social science research, particularly in family studies and child psychology [70].

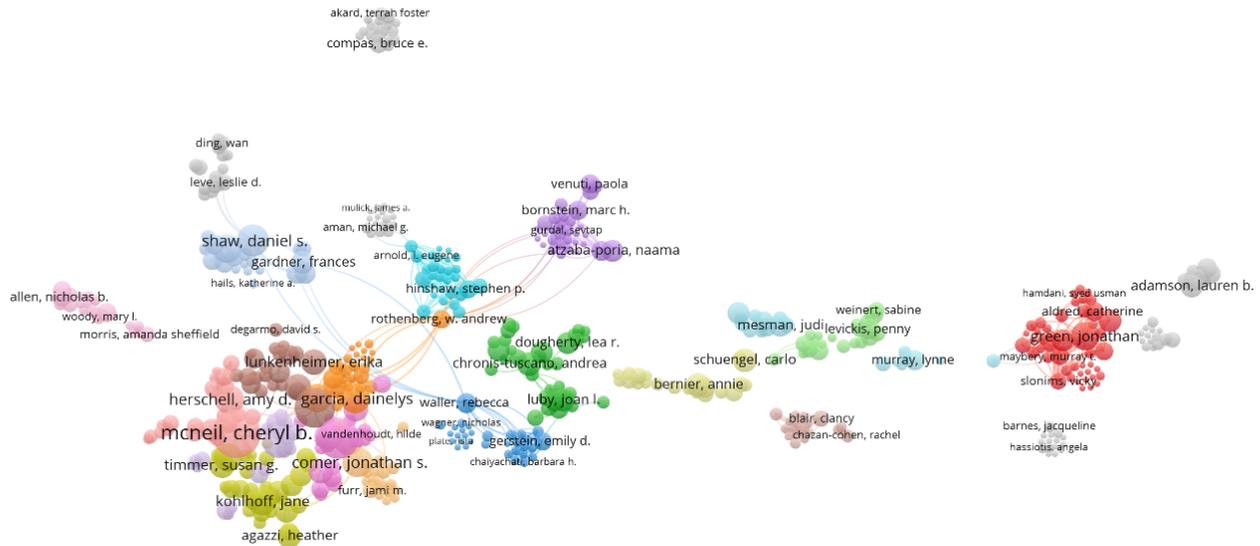


Fig. 5. Network visualization map of the co-authorship (authors)

Table 5
 Most influential institutions

Affiliation	Country	TP	% (n=7122)
University of Washington	United States	121	1.70
University of California, Los Angeles	United States	111	1.56
Pennsylvania State University	United States	110	1.54
The University of North Carolina at Chapel Hill	United States	109	1.53
West Virginia University	United States	99	1.39
University of Pittsburgh	United States	96	1.35
Florida International University	United States	91	1.28
University of Michigan, Ann Arbor	United States	84	1.22
University of Pittsburgh School of Medicine	United States	81	1.14
University of Florida	United States	78	1.10
Universiteit Utrecht	Netherlands	76	1.07
Universiteit van Amsterdam	Netherlands	75	1.05
The Ohio State University	United States	70	0.98
Michigan State University	United States	69	0.97
University of California, Davis	United States	68	0.95

Note: TP=Total number of publications

The network visualization map showcases the co-authorship relationships among organizations based on bibliometric analysis as represented in Figure 6. Each node represents an organization, with the size of the node reflecting the extent of its contribution to collaborative research. Larger nodes indicate organizations with a higher number of publications or a central role in fostering inter-institutional partnerships. The nodes are grouped into clusters represented by different colors, highlighting distinct research networks or institutional collaborations. These clusters reveal the formation of collaborative communities, often centered around specific academic disciplines or research themes.

The connections (edges) between nodes indicate co-authorship relationships, where the thickness of the lines signifies the frequency or strength of collaborations between organizations.

Organizations such as the University of Washington, West Virginia University and Michigan State University appear prominently, signifying their central role in the network. Some clusters are tightly interconnected, reflecting strong collaborative ties within a regional or thematic focus, while others show sparse connections, indicating more independent or specialized research efforts. This map provides insights into the dynamics of academic collaboration, identifying key contributors, regional hubs, and potential opportunities for fostering interdisciplinary partnerships across institutions.

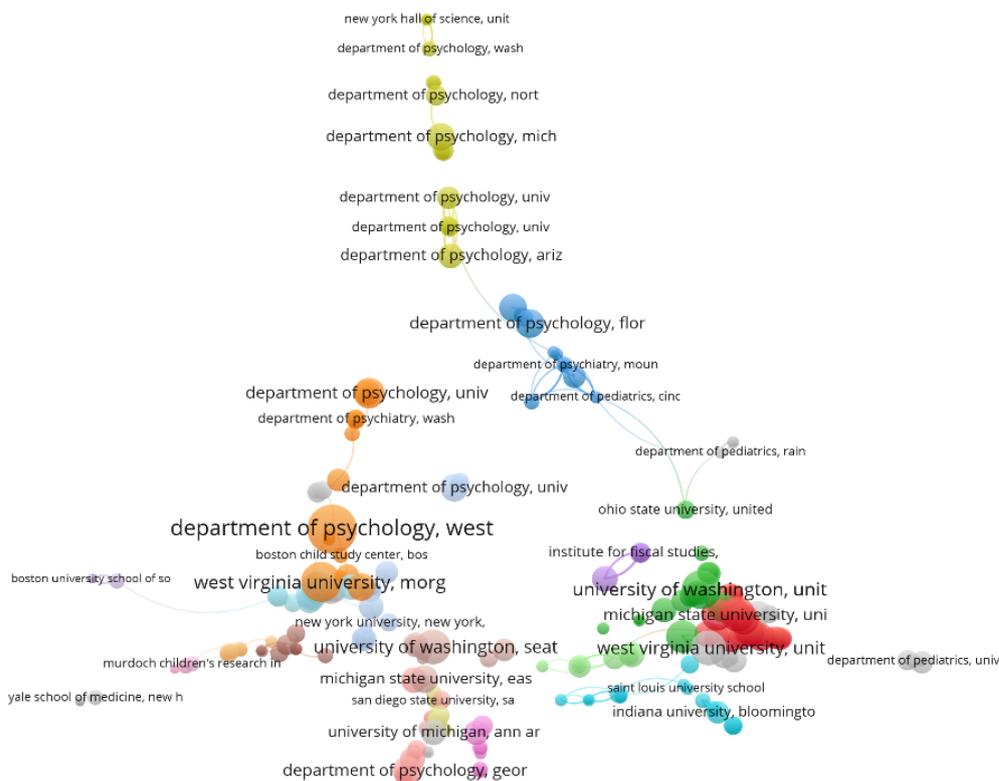


Fig. 6. Network visualization map of the co-authorship (organizations)

4.5 Citation Network Analysis

This study aimed to identify the most influential publications in response to the RQ3: “Which are the most impactful articles on parent-adolescent communication?”. To address this, citation networks across a dataset of 7122 publications were thoroughly analyzed.

4.5.1 A centrality analysis of citation networks

While numerous methodologies exist for assessing the impact of research publications, citation analysis remains the most widely adopted approach [71]. By examining citations and references, researchers can uncover and map the intellectual connections and networks that underpin scholarly discourse, thereby elucidating the relationships and influences within a particular field of study [72]. To conduct a centrality analysis of citations and create a network visualization map of article citations, Harzing’s Publish or Perish and VOSViewer tools were utilized. Table 6 presents the citation metrics for the publications. Across the 7122 studies on parent-adolescent communication, a total of 205713

citations were recorded, with an average of 2817.99 citations per year. On average, each document received 28.97 citations.

Table 6

Citation Metrics

Metrics	Data
Papers	7102
Number of Citations	205713
Years	73
Citations per Year	2817.99
Citations per Paper	28.97
Cites per Author	78466.33
Papers per Author	2720.33
Authors per Paper	3.77
h-index	180
g-index	266

Using data from the Scopus database, this study identified the most frequently cited publications on parent-adolescent communication. Table 7 lists these highly influential works, with the top-cited paper being “*Children of Depressed Parents: An Integrative Review*” by Downey, G., and Coyne, J.C., published in 1990, which has garnered 1814 citations. The second most-cited article, “*A Meta-Analytic Review of Components Associated with Parent Training Program Effectiveness*” by Wyatt Kaminski, J., Valle, L.A., Filene, J.H., and Boyle, C.L., was published in 2008 and has received 1120 citations.

Table 7

Top 20 highly cited articles

No.	Authors	Title	Year	Cites	Cites per Year
1	Downey, G. & Coyne, J.C.	Children of depressed parents: An integrative review	1990	1814	53.35
2	Wyatt Kaminski, J., Valle, L.A., Filene, J.H. & Boyle, C. L	A meta-analytic review of components associated with parent training program effectiveness	2008	1120	70.00
3	Minuchin, P.	Families and individual development: provocations from the field of family therapy	1985	1114	28.56
4	Van Kleef, G. A.	How emotions regulate social life: The emotions as social information (EASI) model	2009	1016	67.73
5	Johnston, C. & Mash, E. J.	Families of children with attention-deficit/hyperactivity disorder: Review and recommendations for future research	2001	864	37.57
6	Niparko, J.K., Tobey, E.A., Thal, D.J., Eisenberg, L.S., Wang, N.-Y., Quittner, A.L. & Fink, N.E.	Spoken language development in children following cochlear implantation	2010	842	60.14
7	Maccoby, E. E.	The role of parents in the socialization of children: A historical overview	1992	836	26.13
8	Rowe, M. L.	A longitudinal investigation of the role of quantity and quality of child-directed speech vocabulary development	2012	818	68.17
9	Wolraich, M.L., Hagan, J.F., Jr., Allan, C., Chan, E., Davison, D., Earls, M., Evans, S.W., Flinn, S.K., Froehlich, T., Frost, J.,	Clinical practice guidelines for the diagnosis, evaluation, and treatment of attention-deficit/hyperactivity disorder in children and adolescents	2019	768	153.60

	Holbrook, J.R., Lehmann, C.U., Lessin, H.R., Okechukwu, K., Pierce, K.L., Winner, J.D. & Zurhellen, W.				
10	Faith, M.S., Scanlon, K.S., Birch, L.L., Francis, L.A. & Sherry, B.	Parent-child feeding strategies and their relationships to child eating and weight status	2004	691	34.55
11	Hinshaw, S. P.	Moderators and mediators of treatment response for children with attention-deficit/hyperactivity disorder: The multimodal treatment study of children with attention-deficit/hyperactivity disorder	1999	649	25.96
12	Wood, J.J., McLeod, B.D., Sigman, M., Hwang, W.-C. & Chu, B.C.	Parenting and childhood anxiety: Theory, empirical findings, and future directions	2003	608	28.95
13	Green, J., Charman, T., McConachie, H., Aldred, C., Slonims, V., Howlin, P., Le Couteur, A., Leadbitter, K., Hudry, K., Byford, S., Barrett, B., Temple, K., Macdonald, W. & Pickles, A.	Parent-mediated communication-focused treatment in children with autism (PACT): a randomised controlled trial	2010	598	42.71
14	Chaffin, M., Silovsky, J.F., Funderburk, B., Valle, L.A., Brestan, E.V., Balachova, T., Jackson, S., Lensgraf, J. & Bonner, B.L.	Parent-child interaction therapy with physically abusive parents: Efficacy for reducing future abuse reports	2004	587	29.35
15	Meins, E., Fernyhough, C., Fradley, E. & Tuckey, M.	Rethinking maternal sensitivity: Mothers' comments on infants' mental processes predict security of attachment at 12 months	2001	567	24.65
16	Crnic, K.A., Gaze, C., & Hoffman, C.	Cumulative parenting stress across the preschool period: Relations to maternal parenting and child behaviour at age 5	2005	555	29.21
17	Love, J.M., Kisker, E.E., Ross, C., Constantine, J., Boller, K., Chazan-Cohen, R., Brady-Smith, C., Fuligni, A.S., Raikes, H., Brooks-Gunn, J., Tarullo, L.B., Schochet, P.Z., Paulsell, D. & Vogel, C.	The effectiveness of early head start for 3-year-old children and their parents: Lessons for policy and programs	2005	534	28.11
18	Hollich, G.J., Hirsh-Pasek, K., Golinkoff, R.M., Brand, R.J., Brown, E., Chung, H.L., Hennon, E. & Rocroi, C.	Breaking the language barrier: An Emergentist coalition model of the origins of word learning	2000	511	21.29
19	Hirsh-Pasek, K., Adamson, L.B., Bakeman, R., Owen, M.T., Golinkoff, R.M., Pace, A., Yust, P.K.S. & Suma, K	The Contribution of Early Communication Quality to Low-Income Children's Language Success	2015	507	56.33
20	DuPaul, G.J., McGoey, K.E., Eckert, T.L. & VanBrakle, J.	Preschool children with attention-deficit/hyperactivity disorder: Impairments in behavioral, social, and school functioning	2001	499	21.70

To ensure meaningful analysis, the minimum citation threshold was set at one citation per document. Using VOSviewer software, a network visualization map was generated, encompassing 6196 papers out of the total 7122 that met this criterion. Figure 7 presents the resulting network diagram of authors' citations. The network visualization map provides a detailed representation of co-citation relationships among authors, emphasizing their influence and thematic connections within a field of study. Each cluster in the map is color-coded, representing groups of authors whose works are frequently cited together, indicating their shared thematic or methodological focus. Prominent authors such as Downey (1990), Hughes (1997) and Wyatt Kaminski (2008) appear as central nodes in the network, highlighting their significant contributions to the research landscape. These authors are frequently co-cited across clusters, suggesting their works serve as foundational references that bridge multiple subfields.

The connections between nodes reflect the strength of co-citation relationships, with thicker lines indicating frequent citations together. The green cluster, for instance, may represent a particular subfield with authors who share a common theoretical or methodological approach, while the red and purple clusters suggest complementary or evolving research themes. Authors like Johnston (2001) and Wyatt Kaminski (2008), with links spanning multiple clusters, highlight areas where different research domains intersect or overlap. Peripheral authors, such as Bradley (1991) or Chan (2003), appear on the edges of the clusters and may represent niche or specialized research areas. While less central, their work could hold significant importance within specific advanced or emerging topics. Additionally, newer publications, such as Lemish (2020) and Stahmer (2020), appear in the network, reflecting recent trends or innovations and indicating potential shifts in research priorities.

Overall, the map highlights the intellectual structure of the field, with tightly connected clusters demonstrating areas of strong thematic focus, while inter-cluster connections reveal interdisciplinary influences. It provides valuable insights into key contributors, foundational literature, and the interconnectedness of research topics, guiding further exploration of influential works or collaborative opportunities.

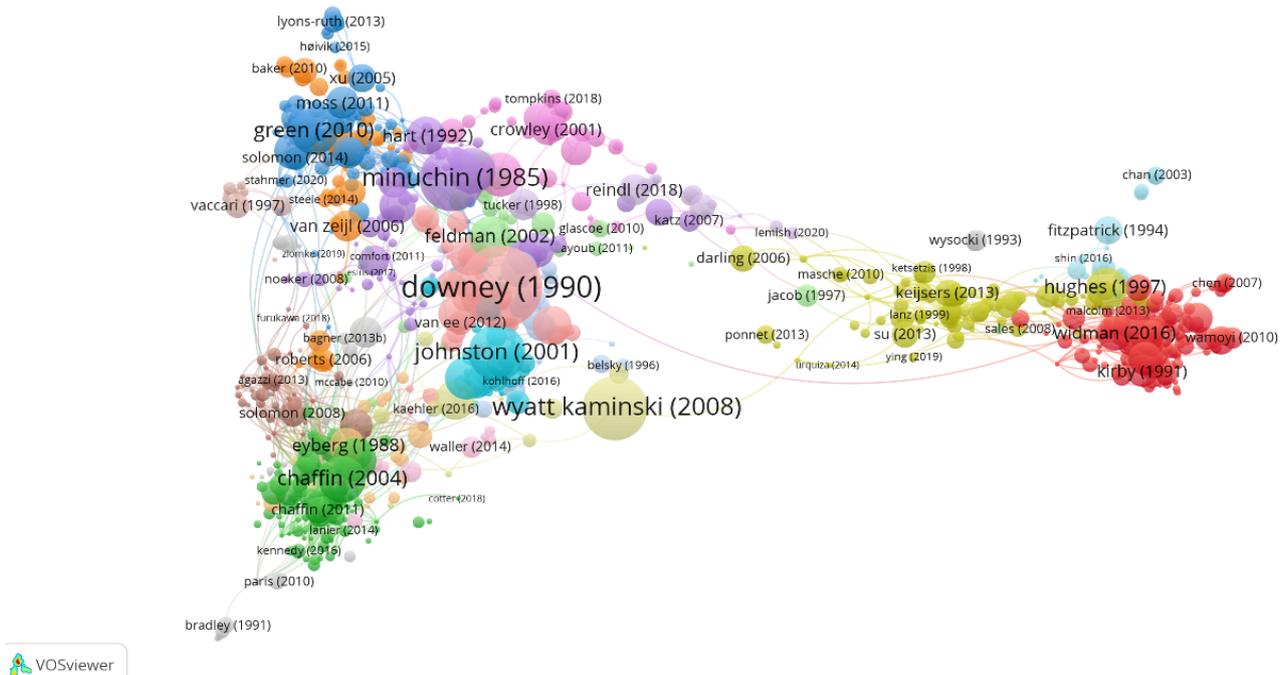


Fig. 7. Network visualization map of the co-authorship (authors)

4.6 Keywords

To address RQ4, “What are the most common academic topics in parent-adolescent communication?”, this study identified the most frequently used keywords in research on the subject. Keyword frequency data were analyzed using MS Excel. Table 8 provides insights into the most frequently used author keywords in the study of parent-adolescent communication, highlighting key themes and focal areas in this research domain. The keyword “Human” dominates the list, appearing in 54.80% of publications (3903 documents), reflecting the overarching focus on human behavior and interactions. This is closely followed by “Female” (42.59%, 3033 documents) and “Child Parent Relation” (40.65%, 2895 documents), indicating a significant emphasis on gender-specific analyses and parent-child relationships.

Other commonly used keywords include “Male” (38.96%, 2775 documents), “Humans” (37.80%, 2692 documents), and “Article” (37.25%, 2653 documents), demonstrating the broad application of human-centered research across studies. Keywords such as “Child” (37.05%) and “Parent-Child Relations” (24.59%) further emphasize the centrality of familial interactions. Meanwhile, terms like “Adolescent” (18.83%, 1341 documents) and “Parenting” (16.74%, 1192 documents) highlight the specific developmental stage of adolescence and the role of parenting practices. Notably, keywords such as “Controlled Study” (16.05%) and “Parent-Child Interaction” (13.41%) reflect the methodological focus on empirical investigations. Emerging themes are evident in terms like “Interpersonal Communication” (9.84%, 701 documents), which underscores the relational and communicative dynamics within families. Overall, the data reveals a multifaceted approach to understanding parent-adolescent communication, encompassing behavioral, psychological, and developmental dimensions.

Table 8

Top keywords

Author Keywords	Total Publications (TP)	Percentage (%)
Human	3903	54.80
Female	3033	42.59
Child Parent Relation	2895	40.65
Male	2775	38.96
Humans	2692	37.80
Article	2653	37.25
Child	2639	37.05
Parent-Child Relations	1751	24.59
Adult	1529	21.47
Adolescent	1341	18.83
Preschool Child	1290	18.11
Parenting	1192	16.74
Child, Preschool	1186	16.65
Parents	1152	16.18
Controlled Study	1143	16.05
Parent-child interaction	955	13.41
Psychology	944	13.25
Major Clinical Study	880	12.36
Infant	779	10.94
Interpersonal Communication	701	9.84

Figure 8 illustrates a term co-occurrence network generated using VOSviewer software, based on a full counting of all keywords related to parent-adolescent communication research. The network is composed of multiple clusters, each represented by a distinct color, which indicate thematic areas

Table 9

Document type		
Document Type	Total Publications (TP)	Percentage (%)
Article	6016	84.47
Review	457	6.42
Book Chapter	304	4.27
Conference Paper	237	3.33
Book	26	0.37
Editorial	23	0.32
Note	18	0.25
Erratum	14	0.20
Conference Review	10	0.14
Short Survey	10	0.14
Letter	3	0.04
Data Paper	2	0.03
Retracted	2	0.03
Total	7122	100.00

Table 10 illustrates the distribution of source types for the 7,122 publications analyzed in this study. “Journals” overwhelmingly dominate as the primary source type, with 6551 publications, representing 91.99% of the total. This highlights the central role of academic journals in disseminating research on parent-adolescent communication. “Books” account for 304 publications (4.27%), while “conference proceedings” contribute 180 publications (2.53%), reflecting the importance of books and conferences as complementary platforms for knowledge sharing. “Book series” comprises 84 publications (1.18%), indicating a smaller but notable contribution to the field. A minimal number of publications (0.04%) are classified as “undefined” sources. The data underscore the prominence of journals as the primary medium for scholarly discourse in this research area, supplemented by other source types for broader dissemination.

Table 10

Source type		
Source Type	Total Publications (TP)	Percentage (%)
Journals	6551	91.99
Book	304	4.27
Conference Proceed	180	2.53
Book Series	84	1.18
Undefined	3	0.04
Total	7122	100.00

Table 11 presents the distribution of languages in which publications on parent-adolescent communication are written. The vast majority of the publications are in “English”, accounting for 6786 documents or 97.30% of the total, reflecting the dominance of English as the primary language for academic discourse in this field. Other languages with notable contributions include “German” (119 publications, 1.08%), “French” (65 publications, 0.81%), “Spanish” (47 publications, 0.66%), and “Chinese” (38 publications, 0.27%). A smaller proportion of publications are in “Portuguese”, “Russian”, “Italian”, “Korean” and “Czech”, each representing less than 0.2%. Languages such as “Japanese”, “Croatian”, “Turkish”, and “Dutch” have even fewer contributions, with fewer than 10 publications each. The remaining languages, including “Danish”, “Moldavian”, “Romanian” and others, have minimal representation, often with only a single publication. This distribution highlights the prevalence of English as the lingua franca in academic research, with limited but diverse contributions from other languages.

Table 11
Languages

Language	Total Publications (TP)*	Percentage (%)
English	6786	97.30
German	119	1.08
French	65	0.81
Spanish	47	0.27
Chinese	38	0.27
Portuguese	20	0.27
Russian	15	0.21
Italian	12	0.17
Korean	12	0.17
Czech	9	0.13
Japanese	8	0.11
Croatian	7	0.10
Turkish	6	0.08
Dutch	5	0.07
Persian	5	0.07
Finnish	4	0.06
Polish	4	0.06
Greek	3	0.04
Bosnian	2	0.03
Danish	1	0.01
Lithuanian	1	0.01
Moldavian	1	0.01
Moldovan	1	0.01
Romanian	1	0.01
Serbian	1	0.01
Slovak	1	0.01
Slovenian	1	0.01
Ukrainian	1	0.01
Total	7122	100.00

Table 12 highlights the diverse subject areas contributing to the body of literature on parent-adolescent communication research. The field is predominantly rooted in “Psychology”, which accounts for 56.15% of the total publications (3999 documents), underscoring its central role in understanding interpersonal dynamics and developmental processes. “Medicine” follows closely, representing 42.80% (3048 documents), reflecting the significant overlap between parent-adolescent communication and health outcomes. “Social Sciences” contribute 35.89% (2556 documents), emphasizing the sociocultural and relational aspects of family interactions. Other notable areas include “Arts and Humanities” (7.82%) and “Nursing” (5.87%), demonstrating interdisciplinary engagement.

Additionally, specialized fields like “Neuroscience” (4.91%), “Health Professions” (3.90%) and “Biochemistry, Genetics, and Molecular Biology” (1.21%) show the biological and cognitive underpinnings of communication. A smaller but notable presence is seen in fields like “Business, Management, and Accounting” (0.88%) and “Economics, Econometrics, and Finance” (0.73%), which may focus on the economic implications or organizational dynamics within family systems. Although “Physics”, “Veterinary Sciences” and “Chemistry” account for less than 0.1% of the publications, their inclusion highlights the broad academic interest in this area. Overall, the table demonstrates the interdisciplinary nature of parent-adolescent communication research, with psychology, medicine, and social sciences leading the contributions.

Table 12

Subject Area	Total Publications (TP)	Percentage (%)
Psychology	3999	56.15
Medicine	3048	42.80
Social Sciences	2556	35.89
Arts and Humanities	557	7.82
Nursing	418	5.87
Neuroscience	350	4.91
Health Professions	278	3.90
Biochemistry, Genetics and Molecular Biology	86	1.21
Business, Management and Accounting	63	0.88
Agricultural and Biological Sciences	59	0.83
Engineering	59	0.83
Economics, Econometrics and Finance	52	0.73
Multidisciplinary	49	0.69
Mathematics	46	0.65
Pharmacology, Toxicology and Pharmaceutics	42	0.59
Energy	27	0.38
Earth and Planetary Sciences	22	0.31
Immunology and Microbiology	15	0.21
Dentistry	9	0.13
Chemical Engineering	7	0.10
Physics and Astronomy	7	0.10
Decision Sciences	5	0.07
Veterinary	3	0.04
Materials Science	2	0.03
Chemistry	1	0.01
Undefined	2	0.03

4.7 Discussion

The research on parent-adolescent communication has grown significantly over the last few decades, with increasing attention paid to understanding the impact of familial communication on adolescent development and well-being. A bibliometric analysis of the literature from 1951 to 2024 reveals clear patterns in the field, highlighting key trends, influential works, and areas requiring further exploration. Despite the growing body of work, bibliometric analyses of this field remain scarce. Existing reviews have highlighted the dominance of psychological and sociological perspectives, with limited contributions from interdisciplinary approaches.

One of the most notable trends is the substantial growth in publications related to parent-adolescent communication since the early 2000s. This surge reflects increasing recognition of the role that family communication plays in adolescent development. Research in this area spans across diverse disciplines, with psychology, medicine, and social sciences emerging as dominant fields. The interdisciplinary nature of this research is evident, as studies incorporate not only psychological perspectives but also medical, social, and technological viewpoints. This is consistent with the findings from the bibliometric analysis, which show that research in this field is primarily situated within psychology (56.15%), followed by medicine (42.80%) and social sciences (35.89%).

While significant progress has been made, a gap remains in the diversity of research perspectives. Most studies are centered on Western contexts, with the United States accounting for over half of the research output. This trend suggests that existing literature may not fully account for cultural differences in parent-adolescent communication. The influence of culture on communication patterns and family dynamics is an area that remains underexplored. This gap is particularly evident in non-Western societies, where family structures, values, and communication strategies can differ substantially. Thus, future research should aim to broaden its scope by including more studies from diverse cultural settings, particularly in non-Western countries where family dynamics and adolescent development may follow distinct patterns.

The analysis also identifies a growing interest in the role of digital communication in parent-adolescent interactions. As adolescents increasingly turn to digital platforms for communication, the traditional modes of interaction within families face new challenges. The impact of digital communication tools on the quality of parent-adolescent communication is a critical area that requires more attention. While some studies have explored how technology influences communication, the majority of research has not adequately addressed the nuanced ways in which digital interactions can either enhance or disrupt familial bonds. Future studies should examine how new communication technologies, such as social media and messaging apps, are reshaping the parent-adolescent relationship and whether these platforms foster healthy communication or contribute to conflict and misunderstanding.

Another significant finding from the bibliometric analysis is the lack of longitudinal studies in this field. Many studies are cross-sectional, offering limited insight into how parent-adolescent communication evolves over time. Longitudinal research would provide valuable data on the long-term effects of different communication styles and their influence on adolescent behavior, mental health, and academic performance. Additionally, there is a need for mixed-method approaches that combine qualitative and quantitative methods to gain a deeper understanding of the dynamics of parent-adolescent communication. Such studies could provide a more holistic view of the interpersonal relationships within families and the mechanisms that contribute to adolescent development.

Furthermore, the analysis underscores the importance of exploring adolescent perspectives on communication. Much of the existing research focuses on the parents' role and how they manage communication with their children, but less attention has been given to how adolescents perceive and react to family communication. Understanding these perspectives is crucial for developing more effective communication strategies that resonate with adolescents and address their needs and concerns.

4.8 Recommendations

Based on the findings of the bibliometric analysis of parent-adolescent communication, several recommendations can be made for various stakeholders, including governments, educational institutions, practitioners, and parents. Governments should prioritize policies that support healthy family communication, particularly in the context of digital communication platforms, by providing resources and guidelines for families to use technology effectively. Additionally, governments can fund interdisciplinary research to address gaps in understanding communication dynamics across diverse socio-cultural contexts.

NGOs, especially those focusing on family support and adolescent welfare, should consider creating awareness campaigns and community programs that emphasize the importance of effective communication within families. These organizations can play a crucial role in providing resources,

workshops, and support systems to help parents develop communication strategies that foster healthy relationships with their adolescent children. Additionally, NGOs can partner with schools, health organizations, and local communities to tailor their programs to the specific cultural, social, and economic needs of different groups, ensuring that the resources are relevant and accessible to diverse populations.

Educational institutions, on the other hand, can integrate family communication and adolescent development into their curricula for both students and parents, providing training for educators to foster supportive relationships between parents and adolescents. Schools and universities can also offer parental guidance programs to equip families with effective communication skills tailored to adolescent developmental stages.

Researchers, on the other hand, should continue to expand the scope of studies on parent-adolescent communication by focusing on underexplored areas such as cultural differences, the impact of digital communication tools, and the perspectives of adolescents themselves. Researchers can use interdisciplinary approaches to explore how communication affects adolescent development, mental health, academic performance, and behavior, and should prioritize longitudinal studies that track communication patterns over time. Mixed-methods research that combines qualitative insights with quantitative data would provide a deeper understanding of family dynamics. Researchers can also collaborate with NGOs, educational institutions, and governments to create evidence-based interventions that can be applied in real-world settings. By addressing these gaps, researchers can significantly contribute to the development of practical tools and strategies that improve family communication and promote adolescent well-being.

Practitioners, such as psychologists and family therapists, should develop intervention strategies that improve communication between parents and adolescents, particularly during critical developmental phases. Given the rise of digital communication, practitioners can also help families navigate technology to strengthen their relationships and provide safe online spaces for communication.

For parents, staying informed about the digital tools their adolescents use is crucial to maintaining effective communication. Parents should engage with their children on these platforms, ensuring clarity and understanding. Moreover, cultural sensitivity is essential for parents, especially when engaging with adolescents from diverse backgrounds, as adapting communication styles to these cultural nuances can enhance familial bonds and foster a supportive environment for adolescent development. By addressing these recommendations, stakeholders can contribute to creating a more open and understanding environment, promoting positive communication and overall well-being in parent-adolescent relationships.

5. Conclusions

The bibliometric analysis of parent-adolescent communication research reveals a dynamic and evolving field with significant implications for adolescent development and well-being. While substantial progress has been made, several key areas require further exploration. Firstly, the need for greater cultural diversity in research is paramount. The dominance of Western perspectives limits our understanding of how cultural variations influence communication patterns and family dynamics. Future studies should expand their scope to include non-Western contexts, particularly those with unique cultural values and family structures. Secondly, the increasing prevalence of digital communication presents both opportunities and challenges for parent-adolescent relationships. More research is needed to examine how digital technologies shape communication patterns, influence relationship quality, and impact adolescent development. Finally, longitudinal studies and

mixed-methods approaches are essential for a comprehensive understanding of the long-term effects of parent-adolescent communication. By tracking changes over time and incorporating both quantitative and qualitative data, researchers can gain deeper insights into the complex interplay between family communication, adolescent development, and well-being.

Addressing these research gaps will contribute to the development of evidence-based interventions and support programs that can help families foster positive communication and promote healthy adolescent development.

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