

## Research Trends of Family Communication in Caregiving Context: A Bibliometric Mapping From 2016 to 2025

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### Abstract

Despite the universal nature of family caregiving and its profound impact on family communication patterns and psychological well-being, this field remains fragmented across disciplines with limited theoretical integration and geographic disparities. This study addresses this gap by providing comprehensive landscape mapping of family communication and caregiving as an integrated field, rather than examining isolated contexts. This quantitative bibliometric analysis examines 421 Scopus-indexed articles (2016–2025) using keyword co-occurrence mapping to identify research trends in family caregiving communication by using VOSviewer software (threshold of 5 keywords). As the result, 106 keywords, 2.460 links, and 7.406 total link strength are categorized into six thematic clusters: (1) Child and Adolescent Development in Family Contexts, (2) Interpersonal Dynamics & Decision Making, (3) Social Support & Palliative Contexts, (4) Professional-Patient Interaction & Health Literacy, (5) Geriatric Caregiving & Illness Narratives, and (6) Digital Health, Migration & Crisis. The United States dominates research output (51.8%, n=218), with most prolific authors including Barkan, S.E. (n=3), Cooper, R.A. (n=3), and Goldsmith, J.V. (n=3). Meanwhile, 81% of publications originate from English-speaking countries, leaving substantial Global South populations underrepresented. While publication volume increased by 204% over the decade, with 54% (228 articles) published after 2022, analysis reveals structural asymmetries. Dementia research comprises 24% of occurrences, overshadowing emerging domains like transnational caregiving that demonstrate high citation impact. Findings are interpreted through Family Systems Theory, Relational Dialectic Theory, and Communication Privacy Management. This map identifies a critical geographic-

intellectual divide and argues for a shift toward locally-grounded, longitudinal research, serving as a strategic guide for scholars and policymakers to bridge fragmented research communities and prioritize underserved caregiving settings.

**Keywords:** *Family Communication; Family Caregiving; Interdisciplinary; Keyword Co-Occurrence; Scopus.*

## **1. Introduction**

Qualitative evidence describes caregiving as a "full-time job" that leads to the total reorganization of family life, both relationally, emotionally, and communicatively (Kokorelias et al., 2020; Wray, 2020). Family caregiving is a universal experience that happens at various life stages and across different social contexts. Globally, caregiving is increasingly reliant on informal caregivers, especially primary family members like women, adult children, or spouses (Liang et al., 2024). This happens because demographic aging and the rise of care demands worldwide are bringing challenges across aging populations and increasing chronic medical conditions (Zhylybekova et al., 2024), ranging from pediatric disabilities and terminal illnesses, neurodegenerative disorders, mental health conditions, to lifelong family support (Stuart et al., 2022).

However, managing roles as informal caregivers often imposes heavy psychological, financial, and relational burdens on family members (Kayaalp et al., 2021), particularly when caregiving responsibilities conflict with other life roles. These pressures are frequently intensified by prolonged care demands and cultural expectations that frame caregiving as a family obligation (Nguyen et al., 2021; L. Wang et al., 2022; Q. Wang et al., 2023). Yet the heart of this burden is inherently communicative; family members must navigate care decisions and manage complex emotions while striving to maintain meaningful connections amid these strains. For communication scholars, the inquiry shifts from the mere presence of burden to the specific processes of how families negotiate roles, present support, manage conflict, and connection while sustaining their caregiving practice. Whether navigating a child's needs or a parent's cognitive decline, the quality of family communication in these interactions, including strategies to preserve identity and connection, determines the well-being of both the caregiver and the care-recipient (Stuart et al., 2022). Consequently, everyday communication is not merely a way of care, but the primary mechanism and central component where caregiving is sustained or strained (Lindeza et al., 2024; Stuart et al., 2022).

In this study, family communication refers to intrafamilial interaction, family caregiver–care recipient communication, and family–professional

interaction as these processes shape family coordination, support, and meaning-making. Caregiving is a relational process where a change in one member's health affects the entire family ecosystem (Stuart et al., 2022). It is increasingly recognized not just as a physical task, but as a fundamental communicative skill set (Morris et al., 2018). Communication serves as the main tool for negotiating roles, managing privacy boundaries, and building resilience. For instance, research on "protective buffering" in cancer families shows how mutual emotional shielding between patients and caregivers determines whether a family experiences isolation or shared coping (Rothausen et al., 2023). Therefore, it is especially important to study caregiving as a family communication process because care depends on how family members exchange information (Stuart et al., 2022), coordinate decisions, (Stuart et al., 2022; Zhylkybekova et al., 2024), manage emotion (Rossiter, 2026; Rothausen et al., 2023), and sustain both their (Liang et al., 2024). This communication-centered definition distinguishes our focus from caregiver-burden or patient-outcome literatures, positioning family interaction itself as the core analytical unit.

In the last decade, caregiving research has drawn from diverse disciplines, including communication studies, nursing, gerontology, and psychology, in which each contributes distinct theoretical and methodological perspectives (Secinaro et al., 2021). While individual systematic reviews have addressed specific substantive dimensions, such as caregiver burden in dementia, family communication patterns as illness progresses (Stuart et al., 2022), gender differences in caregiving burden (Duangjina et al., 2023), and culturally situated caregiving practices (Xiao et al., 2024) These reviews remain largely discipline-specific and context-bound. Crucially, no comprehensive map currently exists that treats family communication and caregiving as an integrated, cross-condition field. This gap is significant; by viewing diverse caregiving literatures as interconnected rather than isolated, we can determine whether communication concepts developed in one context (e.g., dementia) are salient across others, such as pediatric or oncology care. Consequently, scholars still face several unresolved questions regarding the structure and evolution of this field:

1. There is limited integration across disciplines, making it difficult to identify how concepts, methods, and priorities align or overlap (Gallagher-Thompson et al., 2020).
2. It remains unclear which research topics, theoretical frameworks, and methodologies cluster together across these disparate disciplines.

3. There is limited evidence on how research priorities across different contexts have shifted over the past decade, or whether communication concepts from one caregiving context, like dementia, are effectively applied to other health conditions.
4. There is a need to identify which caregiver populations and geographic regions are frequently prioritized and which remain understudied.

Bibliometric research offers a rigorous way to address these gaps by examining how the research literature itself has systematically organized knowledge across disciplines (Baas et al., 2020) rather than synthesizing findings within a narrow substantive niche. In particular, keyword co-occurrence analysis reveals thematic clusters and research frontiers across interdisciplinary fields (Saeidnia et al., 2025) rather than synthesizing substantive findings within predefined topic boundaries (Moral-Muñoz et al., 2020). This approach allows us to treat family caregiving communication as a cohesive research space rather than a fragmented series of illness-specific topics. Furthermore, this method clarifies how macro-level changes in population, family structures, and crises, like COVID-19, affect research and identify where new studies are most needed (Wu & Zhao, 2025).

Bibliometric analysis has established itself as a valuable approach for field synthesis across multiple health and social science domains. Previous studies have systematically mapped areas such as telehealth and digital interventions for caregivers (Azizan et al., 2025; Zhai et al., 2023), end-of-life caregiving (Ursoleo et al., 2025), and family communication more broadly (Al-Hamad et al., 2025; Hodgson et al., 2024; Kim et al., 2021). Within the communication field specifically, bibliometrics has proven highly effective in revealing thematic clusters and emerging frontiers that often remain invisible in traditional reviews (Viana & Teixeira, 2021), ranging from family communication (Murghayah et al., 2025; Viana & Teixeira, 2021), digital and organizational communication (Clavijo-Tapia et al., 2021), to trends in illness narratives (Chen et al., 2025). These works consistently highlight critical structural issues, including research concentration in high-income countries, disciplinary fragmentation, and persistent evidence gaps for minority and underserved populations. Given the consistency of these structural gaps across related subfields, a comprehensive bibliometric synthesis of family caregiving communication is both timely and necessary to systematically identify where research currently concentrates and where scholarly attention is urgently needed.

Family caregiving research is inherently interdisciplinary, spanning nursing, psychology, gerontology, and social work (Gallagher-Thompson

et al., 2020; Secinaro et al., 2021; Viana & Teixeira, 2021). Therefore, a bibliometric approach is uniquely suited to treat these separate literatures as interconnected nodes (Saeidnia et al., 2025). However, previous studies do not show how family communication is organized across caregiving scholarship as a cross-condition and interdisciplinary field. The present study addresses this gap by mapping family caregiving research through a communication-centered lens, treating diverse health conditions (e.g., dementia, cancer, pediatric, and mental health) and populations (e.g., children, aging parents) as interconnected domains rather than isolated literatures.

Interpreting these interdisciplinary bibliometric patterns requires grounding in relevant theoretical frameworks. Among several useful perspectives in communication, like Communication Privacy Management (CPM) and Relational Dialectics Theory (RDT), which offer valuable interactional insights, this study draws on Family Systems Theory (FST) by Dr. Murray Bowen as an interpretive lens. FST posits that family members are interdependent on one another and foregrounds the systemic, interdependent nature of family caregiving. Shifts in one member's health condition reverberate across family roles, boundaries, and communication patterns for the entire family (Braithwaite et al., 2024; Handley et al., 2019). Critically, this study does not empirically test FST hypotheses. Rather, it employs the theory interpretively once the data is gathered.

The quantitative bibliometric findings, such as keyword co-occurrences and thematic clusters, stand independently. However, applying FST allows us to interpret these patterns not merely as descriptive data, but as interconnected dimensions of family dynamics and communicative strategies. FST is able to conceptualize caregiving as a catalyst for cascading changes in family roles, identities, and communication patterns (Stuart et al., 2022; Wray, 2020). Framing this multidisciplinary dataset within FST provides a cohesive sense-making framework, revealing how the broader research literature conceptualizes and theorizes the relational complexities of family caregiving. More importantly, acknowledging the complexity of empirical clusters in bibliometric study, other communication framework like CPM or RDT may equally serves as valid and robust interpretive lenses to analyze the keyword patterns.

This study aims to conduct a comprehensive bibliometric analysis of research on family caregiving communication. Specifically, the objectives are to:

1. Examine the geographic distribution of the research, highlighting leading countries, core journals, influential authors, and underrepresented regions.
2. Describe the evolutionary growth and publication patterns of the literature from 2016 to 2025.
3. Map the intellectual structure of the field by identifying major thematic clusters and dominant keywords related to family communication and caregiving.
4. Analyze how the research agenda has evolved over the past decade to identify emerging topics and future research.

By achieving these objectives, this study provides an integrated bibliometric map of family caregiving communication research. This mapping will not only help communication scholars navigate interdisciplinary linkages and identify underexplored niches but also guide policymakers in targeting resources toward neglected populations and contexts within informal family caregiving.

## **2. Method**

This study employs a qualitative descriptive bibliometric approach to map the scholarly research structure, trends, and impact of scientific literature of family communication within caregiving contexts (Klarin, 2024). Following best practices in communication science mapping (Murghayah et al., 2025), the analysis focuses on publication trends, citation patterns, and keyword co-occurrence networks. Keyword-level analysis was strategically prioritized over institutional collaboration networks because co-authorship and keyword-based networks capture distinct layers of a scientific domain. While co-authorship maps *show who collaborates*, *keyword co-occurrence maps show what ideas cohere*, modeling conceptual relationships between topics, as well as revealing the knowledge structure and evolution of a field (Araújo et al., 2023; Feng & Law, 2021). In geographically dispersed and fragmented fields like family caregiving, keyword-level insights offer a more accurate representation of conceptual innovation (Murghayah et al., 2025; Sweileh, 2024), as researchers frequently share a common theoretical language and conceptual focus without necessarily maintaining formal institutional or funding-based ties (Sweileh, 2024). Keywords act as “distilled representations” of a study’s focus, and their co-occurrence shows how topics converge, evolve, and delineate intellectual frontiers (Feng & Law, 2021), independent of institutional affiliation. This choice is grounded in the capacity of co-word networks to reveal the evolution of a field more effectively than collaboration networks (Shi et al., 2020), specifically by

identifying thematic clusters, "hot topics", disruptive trends, and conceptual bridges across otherwise disconnected research areas (Araújo et al., 2023; Feng & Law, 2021; L. Wang et al., 2022).



**Figure 1.** Research flowchart from defining research goals to data interpretation.

## 2.1. Tools and Software

Bibliographic data extraction and structural analytics were conducted using Scopus's native analytical tools. VOSviewer software (version 1.6.20) was utilized for the systematic construction and visualization of bibliometric networks (Hoang, 2025; Van Eck & Waltman, 2010). Its clustering algorithm relies on the Association Strength normalization and a modularity-based technique, which provides a mathematically unified approach to mapping and clustering (Van Eck & Waltman, 2023). This software also facilitates the identification of influential authors, key journals, research hotspots, and gaps in knowledge. Therefore, it provides a comprehensive overview of how a scientific domain evolves and where future research may be directed (Kirby, 2023; Tarazi, 2024).

## 2.2. Data Collection

The Scopus database is selected based on its balance between curated selectivity and interdisciplinary breadth. Family caregiving communication is inherently interdisciplinary, intersecting between social science, nursing, psychology, and gerontology. Thus, the database selection must cover both of these areas well. While the Web of Science (WoS) is recognized for its high selectivity, the Scopus database offers a broader indexing scope (Singh et al., 2021), which is very helpful for interdisciplinary studies. Scopus indexes significantly more active scholarly journals (n=20,346) than Web of Science (n=13,605) (Mongeon & Paul-Hus, 2016). It has more coverage of social science journals and

consistent indexing of communication-related scholarship compared to other databases (Caputo & Kargina, 2022; Tarazi, 2024). In the field of Nursing, Scopus has been found to cover 100% of journals with faculty publications, compared to 82% in WoS, while also providing higher h-indices for indexed researchers (Powell & Peterson, 2017). Scopus indexes approximately 28% of active social science journals globally (Martín-Martín et al., 2018), whereas WoS covers less than 15%, with nearly 64% of its titles exclusive to Scopus (Mongeon & Paul-Hus, 2016). Moreover, About 99.11% of the journals indexed in Web of Science are also indexed in Scopus (Singh et al., 2021). If WoS is included, it would have introduced redundant metadata without significantly expanding the conceptual boundaries. While broader, open-access databases such as Dimensions or Google Scholar offer even greater volume, they often lack the rigorous metadata standardization required for reliable bibliometric network analysis (Singh et al., 2021).

The data collection process began by defining the research goals and search strategy (Herawati et al., 2022; Kholidah et al., 2022; Klarin, 2024). The next step involved creating a search strategy and applying filters on the Scopus website, such as limiting the year, document type, and language to refine the dataset (Kuzior & Sira, 2022). After collecting the articles, the bibliographic data were saved in a CSV format (Herawati et al., 2022). All essential information was included, such as author names, document titles, years, citation counts, affiliations, institution, abstract, author keywords, and Indexed keywords (Kirby, 2023).

### **2.3. Search Strategy**

To minimize noise and ensure precision, the search strategy was optimized through iterative pilot testing of the query. The primary focus was to find manuscripts that discuss family communication within a caregiving context as a primary analytical lens, not general caregiving literature that mentions communication peripherally. Initially, the inclusion of "family communication" as a specific phrase beside "communication" acted as a primary and double filter to maintain contextual relevance (Herawati et al., 2022). While 'family communication' acts as the specific boundary, the inclusion of 'communication' as a secondary term ensures that articles indexed under broader disciplinary tags were not omitted. However, sensitivity analysis revealed that adding or removing the standalone "communication" term did not reduce or affect the results at all, confirming that using both terms simultaneously is tautological. To demonstrate the necessity of this restriction and optimization, a sensitivity analysis was conducted during the pilot phase:

1. Search 1 yields 21,845 results: ( TITLE-ABS-KEY ( caregiving ) OR TITLE-ABS-KEY ( caregiver ) ) AND ( LIMIT-TO ( SUBJAREA , "SOCI" ) )
2. Search 2: Adding (communication) reduced results to 2,461.
3. Search 3: Swapping communication for (family communication) yielded 674 results.
4. Search 4: Adding and deleting (communication) alongside (family communication) did not reduce the results, proving the additional term was redundant.
5. Search 5 (Final String): Utilizing all refined filters yielded a highly precise dataset of 421 articles.

The final search focused on the intersection of the core domains within the titles, abstracts, and keywords of publications. To capture contemporary longitudinal developments, constraints were applied to include only peer-reviewed journal articles (Kuzior & Sira, 2022), published in English between 2015 and 2025 December, and restricted to the "Social Sciences" subject area. Therefore, it generates the following Boolean syntax: (TITLE-ABS-KEY (family communication) AND TITLE-ABS-KEY (caregiving) OR TITLE-ABS-KEY (caregiver)) AND PUBYEAR >2015 AND PUBYEAR <2026 AND (LIMIT-TO (SRCTYPE, "j")) AND (LIMIT-TO (DOCTYPE, "ar")) AND (LIMIT-TO (SUBJAREA, "SOCI")) AND (LIMIT-TO (LANGUAGE, "English")).

#### **2.4. Data Cleaning Process**

The data underwent a rigorous cleaning process to ensure integrity. First, it was manually curated using Microsoft Excel to check for and remove any duplicates and irrelevant entries (Herawati et al., 2022), of which none were found. When importing the CSV file from Scopus to VOSviewer, researchers used the "Create a map based on bibliographic data" option (Herawati et al., 2022; Mondal, 2025). The analysis focused on "co-occurrence" of keywords to identify common themes.

Following Grames (Grames et al., 2019), non-substantive research and generic methodology descriptors were also excluded to improve network clarity (Radhakrishnan et al., 2017). Non-substantive keywords are those that describe methodological approaches or study design (e.g., "qualitative research," "interviews," "thematic analysis") rather than conceptual or thematic content. These are excluded to ensure the resulting clusters represent actual research topics rather than just shared research methods (Donthu et al., 2021; Panda et al., 2025). Furthermore, MeSH (Medical Subject Headings) indexing terms, such as "major clinical study" and "human experiment," were removed because they represent database labels

automatically generated by Scopus for medical articles, rather than substantive research concepts related to family communication. Irrelevant geographic labels that do not represent core research topics are also excluded to clarify the conceptual structure, enhance the precision of thematic clusters, and improve the interpretability and meaningfulness of co-occurrence networks (Lozano et al., 2019). The complete list of thesaurus data is attached in the appendix.

## **2.5. Data Normalization and Validation**

VOSviewer uses Association Strength and modularity clustering for network structuring, which is performed in the same way as in the LinLog mapping and the modularity clustering technique (Van Eck & Waltman, 2010). Normalization was conducted to prevent VOSviewer from treating variations of the same concept as separate nodes, which would otherwise weaken the statistical weight of the dominant research themes (Radhakrishnan et al., 2017). Using a customized thesaurus file, semantic duplicates (e.g., "caregiver," "family caregiving," and "caregiving") were merged into a single representative term to improve clarity. Separate age-related keywords (e.g., "child," "adolescent," and "preschool child") were also standardized to prevent fragmentation within the pediatric and geriatric clusters and to ensure related concepts linked strongly to one another (Radhakrishnan et al., 2017). To minimize bias, two researchers audited the keyword categorization. A detailed normalization log documenting all standardizations was maintained in a thesaurus file to ensure the normalization process is consistent and can be audited (Sweileh, 2024).

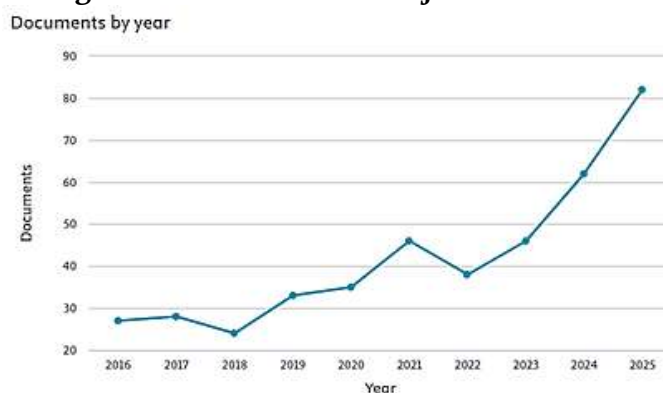
A minimum threshold of 5 occurrences per keyword was set to ensure the focus remained on the most significant topics (Kirby, 2023). Once the thesaurus file was added, of the 2,064 keywords, 106 met the threshold and continued for visualization. We selected  $n=5$  because it balances two competing concerns. First, at  $n=3$ , the network includes 69 keywords appearing only once, which represent singleton observations or database errors rather than established topics. Second, at  $n=7$ , we lose emerging topics (e.g., 'transnational caregiving' with 6 occurrences, a growing area). Therefore,  $n=5$  threshold represents the inflection point where noise meaningfully decreases without sacrificing conceptual completeness (Kirby, 2023; Klarin, 2024). Then, "network, overlay, and density" maps were created to interpret the clusters, trends, and relationships between keywords and research themes (Kirby, 2023; Mondal, 2025). To minimize subjective bias, the keyword clusters are reviewed together based on their co-occurrence patterns.

This study also strictly adhered to a standardized bibliometric protocol for internal validity (Sweileh, 2024). First, the search was conducted on one single day (13th December 2025) to avoid discrepancies caused by daily database updates in Scopus. Second, the exact Boolean testing revealed that the conjunction of the main concepts yielded an appropriately bounded dataset (421 articles), ensuring that each entry aligns with the family communication and caregiving context (Pilelienė & Jucevičius, 2023).

Despite this comprehensive coverage achieved, certain methodological boundaries remain. First, this analysis relies exclusively on the Scopus database. While Scopus offers nearly double the coverage of Social Science journals compared to Web of Science, it is recognized that major citation databases exhibit a structural bias toward English-language publications and the Natural Sciences and Engineering (Asubiaro et al., 2024; Mongeon & Paul-Hus, 2016; Singh et al., 2021). Furthermore, these repositories are characterized by a systematic underrepresentation of non-English, book-based, and sub-Saharan African scholarship (Asubiaro et al., 2024; Singh et al., 2021). Consequently, while this study uses the Scopus database as the most reliable and comprehensive metadata to map interdisciplinary fields (Caputo & Kargina, 2022) It may not fully capture the localized or non-indexed literature. The results should therefore be interpreted as a map of the international, peer-reviewed scholarly conversation rather than a universal census of all caregiving-related knowledge.

### 3. Results

#### 3.1. Research Agenda Evolution and Trajectories



**Figure 2.** Annual publication growth of research in family communication and caregiving contexts. Data is taken from Scopus Analytics.



The temporal trend analysis (see Figure 3) shows the chronological sequencing of cluster emergence that visualized by color saturation. It illustrates thematic evolution through three distinct waves based on keyword publication dates. First, the early period (pre-2019) established the field's bedrock, focusing on general family systems, palliative care, and traditional stress-coping models which prioritized the static structure of care and end-of-life contexts. Second, the transitional phase (2020–2021) shows increased attention to condition-specific high-burden contexts, namely dementia and autism (avg. pub. year 2020.8), while elevating "decision-making" as a core concept. The transition indicates a shift from passive coping models toward active medical management within the literature during this period.

The recent period (2022–2025) demonstrates an increased concentration on digital family care, with keywords including telehealth (10 occ, 14.30 avg. citations), technology (8 occ, 34.62 avg. citations), and COVID-19 (19 occ, 6.42 avg. citations). These terms frequently co-occur with established themes like caregiver, stress, and family communication, suggesting that mental health is increasingly treated as a primary outcome rather than simple distress. Most notably, the emergence of “negotiating responsibility”, while representing only 0.31% of network occurrences, signals growing scholarly interest in the communicative process of how families bargain over roles rather than merely focusing on burden-based assignment. This literature illustrates thematic expansion from analyzing static demographics and face-to-face coping toward exploring digitally mediated dynamic negotiation processes. The transition places narratives of responsibility negotiation at the forefront of the discipline's post-pandemic trajectory. However, this temporal emergence reflects recent research priorities rather than a causal paradigm shift. Keywords like COVID-19 and telehealth appear post-2020 primarily because the phenomena themselves are recent, not necessarily because of a fundamental change in the field's conceptual frameworks.

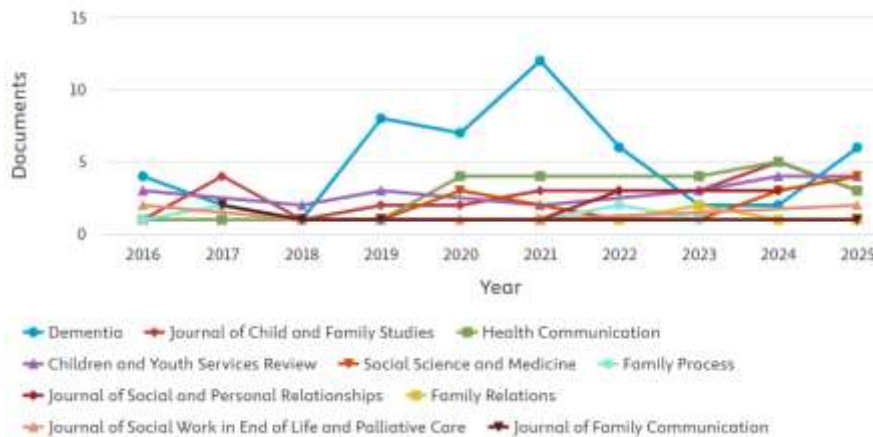
### **3.2. Global Publication Overview**

The analysis was derived from 421 research papers published between 2016 and 2025 from nearly 159 different journals across six continents. This dataset alone demonstrates the field's international scope and multidisciplinary engagement. The sheer volume indicates that family communication and caregiving have transitioned from a niche topic to a mainstream social science concern.

**Table 1.** Most used Journals and the number of published papers.

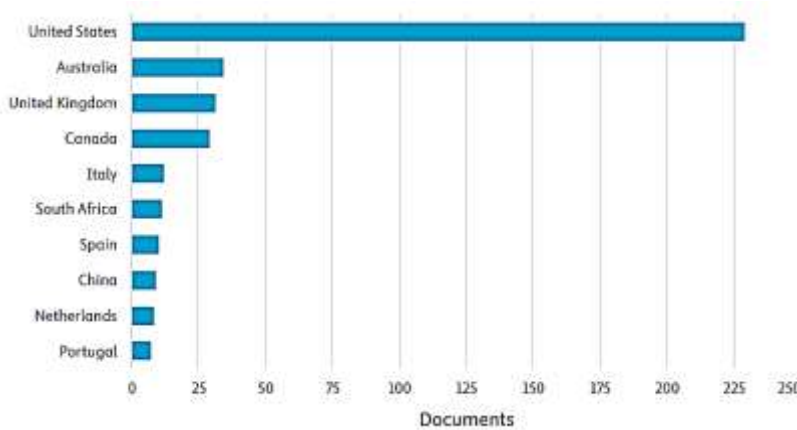
Sources	Article	Primary Disciplinary Focus
Dementia	50	Gerontology, cognitive decline, caregiver stress
Journal of Child and Family Studies	27	Family psychology, developmental outcomes
Health Communication	24	Provider-family interaction, health literacy
Children and Youth Services Review	21	Child welfare, family services policy
Social Science and Medicine	13	Sociomedical aspects, health disparities

The publication landscape demonstrates that research in this field is fundamentally multidisciplinary. No single journal controls the conversation, with total published articles in the top 5 journals accounting for only 46% of publications (135 out of 421). While specialized journals like Dementia (50) lead in total volume due to global concerns regarding aging populations (see Table 1), significant contributions also come from Health Communication (24), Journal of Child and Family Studies (27), Children and Youth Services Review (21), and Social Science and Medicine (13). This diversity spans across gerontology, family psychology, and health services policy, suggesting that the most significant innovations occur at the disciplinary intersections.



**Figure 4.** The increasing article trends from various disciplines (Scopus Analytics).

Author productivity analysis reveals a highly decentralized research community. Interestingly, only seven scholars, including S.E. Barkan, R.A. Cooper, and J.V. Goldsmith, have published three or more papers during the last decade. While roughly 40 other researchers have contributed two publications each, the other 160 unique authors in this dataset have only one or two (low average of 2.6 publications per author). These findings suggest that the field of family communication and caregiving is not dominated by certain researchers. Instead, the knowledge is distributed across a wide and diverse network of scholars.



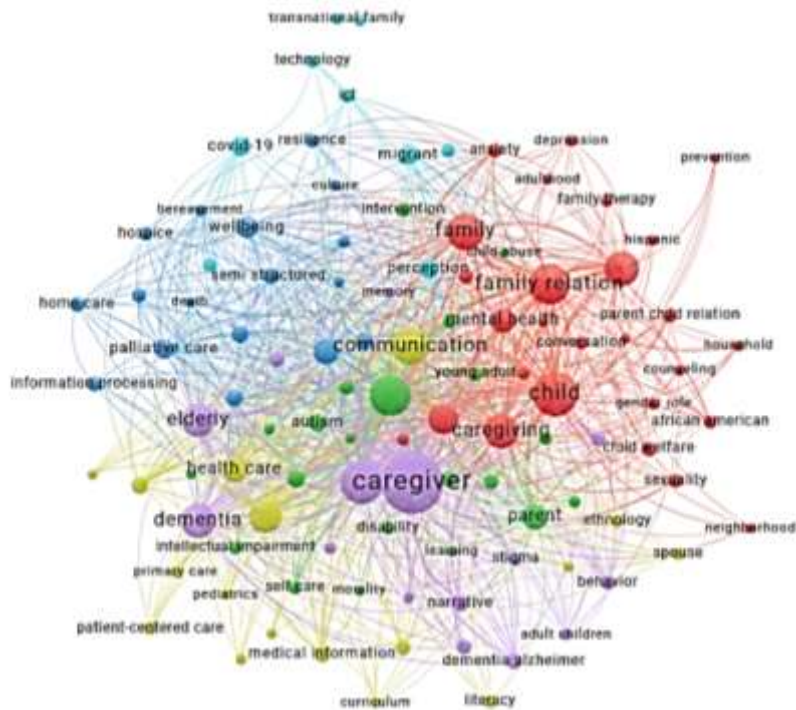
**Figure 5.** Documents by country or territory from Scopus Analytics.

In terms of geographical distribution, while the United States dominates with 51.8% of publications (218 documents), this concentration reflects research infrastructure advantages rather than research importance. There are also significant contributions from Australia (8.1%), United Kingdom (6.9%), and Canada (6.4%), also emerging research communities in South Africa (2.6%), Italy (2.4%), and China (2.1%), which are considered underrepresented. This geographic distribution signals a growing international engagement with family caregiving, yet it remains characterized by a profound imbalance. This disparity parallels findings in broader family research.

### 3.3. Keyword Clusters

Based on the co-occurrence parameter in VOSviewer, six thematic clusters with a total of 106 keywords is identified: Cluster 1 (red, 27 items), cluster 2 (green, 21 items), cluster 3 (blue, 17 items), cluster 4 (yellow, 17 items), cluster 5 (purple, 15 items), and cluster 6 (cyan, 9 items). The keywords were grouped based on how often they were cited together and how closely their topics were related, or link strength (Yuan et al., 2022).

Cluster formations and color assignments were generated organically without justifying hierarchical importance. VOSviewer's Association Strength and modularity clustering algorithms ensure structural validity independent of manual categorization (Klarin, 2024; Van Eck & Waltman, 2010, 2023). These clusters represent different dimensions of family caregiving research, demographic populations (childhood, adulthood, elderly), and approaches (communication-centered, healthcare systems-oriented, technology-mediated). While each keyword is grouped according to its most dominant associations, it may still maintain secondary connections across other clusters that are not explicitly visualized.



**Figure 6.** Network visualization of co-occurrence frequencies.

### ***3.3.1. Cluster 1: Nurturing Through Life Transitions in Pediatric and Family Development***

Cluster 1 (red nodes) represents the largest thematic grouping in family caregiving research and encompasses child-centered perspectives on family caregiving and development. The cluster is anchored by the keyword "child" with 102 occurrences and 665 link strengths, followed by "family relation" and "family", establishing family dynamics as the foundational context for understanding pediatric caregiving. The density of these three

keywords indicates the cluster's conceptual core, suggesting that family structure and relational patterns constitute the primary analytical framework for examining how families manage care for dependent children.

**Table 2.** Top Keywords of Cluster 1 (red nodes)

<b>Top Keywords</b>	<b>Occ</b>	<b>TLS</b>	<b>Avg. Cit.</b>	<b>Avg. Pub. Year</b>
child	102	665	8.79	2021.5
family relation	83	570	13.7	2020.5
caregiving	58	359	10.22	2021.4
anxiety	10	84	20.6	2020.3
depression	7	43	30.71	2020.3
household	6	50	5.17	2023.5
adulthood	5	25	1.4	2023.6
friend	5	41	3.4	2023.6

The cluster demonstrates sophisticated engagement with developmental stages across the lifespan. Beyond childhood, it encompasses "adolescent" (60 occurrences, link strength 343), a keyword with substantial citation impact (9.57 average citations), and "caregiving" itself (58 occurrences, link strength 359), suggesting that caregiving is understood as a dynamic process evolving across developmental transitions. The inclusion of keywords like "education" (45 occurrences, link strength 300) indicates strong scholarly attention to how families support developmental and educational trajectories of children with varying needs.

Moderate citation levels (13.5) suggest the cluster addresses established rather than cutting-edge theoretical questions. Mental health and psychological dimensions permeate this cluster with particular emphasis on childhood vulnerabilities. Keywords such as "mental health" (30 occurrences), "anxiety" (10 occurrences, notably high citations at 20.6), and "depression" (7 occurrences, extremely high citations at 30.71) indicate that researchers conceptualize family caregiving for children through psychological and emotional lenses.

### ***3.3.2 Cluster 2: Communication Process and Interpersonal Dynamic***

While Cluster 1 is structural, Cluster 2 is deeply interactional, representing the communication-focused dimension of family caregiving research. This cluster is dominated by interpersonal communication, which possesses the highest total link strength in the entire network after "caregiver".

**Table 3.** Top Keywords of Cluster 1 (green nodes)

<b>Top Keywords</b>	<b>Occ</b>	<b>TLS</b>	<b>Avg. Cit.</b>	<b>Avg. Pub. Year</b>
interpersonal communication	82	718	13.76	2020.7
decision making	15	157	13.4	2020.5
stress	13	136	20.08	2020.5
father	10	78	22.6	2020.1
disability	8	37	2	2023.9
learning	5	43	2.6	2023.8

This extraordinary connectivity, 718 total link strengths across only 82 occurrences, establishes interpersonal communication as the structural backbone connecting diverse caregiving contexts. Keywords "Autism" and "intellectual impairment" in communication research in caregiving acknowledge how disabilities fundamentally alter family communication patterns and demands. "Decision making" and "coping behavior" suggest that family caregiving is understood as an ongoing process requiring continuous communication-mediated decisions and adaptive responses.

The cluster's treatment of role-specific dynamics like "parent" (33 occurrences), "father" (10 occurrences, notably high citations 22.6), and "mother" (9 occurrences) indicates recognition that caregiving communication differs across family role positions. Importantly, this cluster demonstrates exceptionally high scholarly impact metrics. "Stress" (13 occurrences, citations 20.08) and "emotion" (10 occurrences, citations 12.7) achieve high citation counts, suggesting that the emotional labor and psychological burden of caregiving communication receive substantial scholarly attention. "Self-care" (8 occurrences, citations 13.125) emerges as a theme, though with lower frequency, indicating emerging attention to caregiver self-maintenance as a communication-mediated outcome.

### ***3.3.3 Cluster 3: Supporting Wellbeing***

Cluster 3 addresses the outcomes and support mechanisms sustaining caregiving activity, with particular emphasis on caregiver wellbeing and end-of-life care contexts. This cluster is anchored by "social support" with the highest connectivity in this cluster, followed by "wellbeing" and "palliative care". This thematic configuration reflects a coherent research agenda focused on understanding how social and institutional support mechanisms sustain caregiver wellbeing across the caregiving trajectory, particularly in terminal illness contexts.

**Table 4.** Top Keyword of Cluster 3 (blue nodes)

<b>Top Keywords</b>	<b>Occ</b>	<b>TLS</b>	<b>Avg. Cit.</b>	<b>Avg. Pub. Year</b>
social support	33	319	13.55	2020.9
wellbeing	23	187	7.35	2021.1
palliative care	19	196	14.84	2021
coping behavior	15	136	14.53	2021.4
resilience	9	63	23	2021.9
hospice	9	92	11.44	2020.6
cultural anthropology	8	100	10.38	2022.2
bereavement	6	77	15	2021,.8
death	5	66	15.8	2021.2

The cluster's attention to palliative and hospice care (combined 28 occurrences with strong citation impact) establishes end-of-life communication as a distinctive caregiving domain. These keywords achieve the highest average citations in the cluster (14.84 for palliative care), indicating that death-related caregiving communication represents theoretically sophisticated and practically consequential research. Keywords such as "bereavement" and "death", though lower frequency, join palliative care to constitute an entire dimension and address how families communicate through anticipatory grief and loss. This thematic coherence suggests that end-of-life caregiving represents a distinct research community with particular theoretical concerns.

### ***3.3.4 Cluster 4: Navigating Professional Boundaries Between Healthcare Professional and Family Communication***

Cluster 4 represents the healthcare systems dimension of family caregiving communication, positioned at the interface between family systems and professional medical contexts. The cluster is structured around three core keywords: "communication" (72 occurrences, link strength 478), "healthcare professional" (53 occurrences, link strength 520), and "health care" (33 occurrences, link strength 326). This configuration establishes professional-family communication as the central research concern, with healthcare professionals and communication processes forming the primary analytical focus.

**Table 5.** Top Keywords of Cluster 4 (yellow nodes).

<b>Top Keywords</b>	<b>Occ</b>	<b>TLS</b>	<b>Avg. Cit.</b>	<b>Avg. Pub. Year</b>
communication	72	478	14.14	2020.1
healthcare professional	53	520	12.64	2020.9

<b>Top Keywords</b>	<b>Occ</b>	<b>TLS</b>	<b>Avg. Cit.</b>	<b>Avg. Pub. Year</b>
health care	33	326	9.73	2020.6
professional-family relation	14	157	6.93	2020.8
medical information	13	121	4.77	2022
health literacy	11	96	9.64	2020.5
spouse	8	53	16.75	2018.9
patient-centered care	8	51	9	2021
general practice	5	39	4.6	2022.4

The cluster demonstrates extensive engagement with information and literacy dimensions. Keywords such as "health literacy", "medical information, "health communication," and "literacy" collectively suggest that a significant portion of healthcare professional-family caregiving research addresses how families understand, interpret, and act upon health information.

The lower citation counts for information-focused keywords compared to wellbeing-focused keywords in Cluster 3 may indicate this as an emerging research priority. The cluster includes keywords addressing patient-centered approaches and professional values, namely "patient-centered care", "professional-family relation", and "general practice". These indicate scholarly attention to how professional communication frameworks emphasizing patient/family partnership and relationship-centered care reshape caregiver-professional interactions. Keywords like "health care system" and "primary care" also suggest that system-level analysis of caregiving remains underdeveloped relative to dyadic professional-family communication dynamics.

### ***3.3.5 Cluster 5: Geriatric and Dementia Caregiving***

Cluster 5 represents the most researched caregiving population in the bibliometric landscape. Despite having only 15 keywords, Cluster 5 generates 499 occurrences (second highest after Cluster 1's 595), with an extraordinary average of 33.27 occurrences per keyword. This density indicates intense scholarly focus, with individual keywords appearing repeatedly across many studies. The average publication year of 2021.28 indicates contemporary research activity, while the average citations of 9.84 position the cluster as moderately influential.

This cluster is anchored by "caregiver" itself (193 occurrences, extraordinary link strength 1,238), which dominates the entire network as the most central and connected keyword. This single keyword's dominance

shows that adult and elderly caregiving research operates under the primary frame of caregivers' identity and experience.

**Table 6.** Top Keyword of Cluster 5 (purple nodes).

<b>Top Keywords</b>	<b>Occ</b>	<b>TLS</b>	<b>Avg. Cit.</b>	<b>Avg. Pub. Year</b>
caregiver	193	1,238	9.68	2021.2
middle-aged adult	92	788	11.35	2021.2
dementia	59	351	13.39	2020.8
dementia Alzheimer	12	84	7.25	2022.5
elderly	54	426	12.22	2021
Verbal communication	11	88	10	2021.2
therapy	10	86	5.9	2024

The cluster extends the keyword "caregiver" through two demographically specific keywords: "middle-aged adult" and "elderly". Those keywords establish the caregiving dyad as adult children caring for aging parents or spouses caring for elderly partners. The specific disease and condition focus is marked by "dementia" and "dementia Alzheimer" (total 71 occurrences, 435 link strength) which makes neurodegenerative disease as the paradigmatic caregiving context. The substantial occurrences of these two dementia-related keywords indicates research concentration on one single disease.

This cluster also incorporates multiple dimensions of the caregiving experience: "narrative" (15 occurrences, citations 10.13) indicates biographical approaches to understanding how caregivers make meaning of their experiences; "therapy" (10 occurrences, citations 5.9) suggests therapeutic interventions addressing psychological impacts; "stress" appears across clusters but achieves particular prominence in dementia contexts; "gender" (11 occurrences, citations 11.0) indicates attention to how caregiving responsibilities and experiences differ across gender positions; and "policy" (7 occurrences, citations 9.29) suggests policy-oriented research addressing aging and caregiving systems.

### ***3.3.6 Cluster 6: Technology-Mediated and Transnational Caregiving***

Cluster 6 represents the smallest and most recently emerging cluster, yet achieves the highest average citations (23.13), indicating substantial scholarly impact despite limited keyword volume. The cluster encompasses technology and geographic transnationalism as emerging caregiving contexts.

**Table 7.** Top Keywords of Cluster 6 (cyan nodes).

<b>Top Keywords</b>	<b>Occ</b>	<b>TLS</b>	<b>Avg. Cit.</b>	<b>Avg. Pub. Year</b>
migrant	20	112	16.4	2022
covid-19	19	61	6,42	2022,8
telehealth	10	47	14,3	2022,8
family communication	9	42	13,11	2019,6
technology	8	29	34,62	2021,6
transnational family	7	16	35,43	2021,1
Transnational caregiving	6	11	44	2017,7

Keywords include "transnational caregiving" (6 occurrences, extraordinarily high citations 44.0) and "transnational family" (7 occurrences, citations 35.43), establishing transnational contexts as foundational to this emerging research area. These keywords' exceptional citation suggests that transnational caregiving represents theoretically sophisticated scholarship addressing novel caregiving configurations. Technology-related keywords establish the cluster's second dimension, like "technology", "ICT", "telehealth", and "family communication", indicating research attention to how digital platforms and virtual communication mediate caregiving relationships.

### **3.4. Keyword Density Analysis**

In VOSviewer, yellow areas indicate established, mainstream topics with a high volume of research, while blue/green areas indicate niche, emerging, or fragmented topics (low volume). There is a stark contrast between heavily saturated foundational concepts and underexplored peripheral research zones. The network's center is densely populated by broad terms such as "caregiver" (appears 193 times; 9.85% of occurrences), "child" (102 times; 5.21%), and "dementia" 59 times (3.01%). They indicate that generalized studies identifying care providers and recipients currently oversaturate the field.



family communication within caregiving contexts. Rather than presenting a fragmented collection of isolated studies, these clusters reveal patterns in how researchers organize, prioritize, and communicate about caregiving. through three complementary theoretical lenses drawn from family communication scholarship: Family Systems Theory (FST), Communication Privacy Management (CPM) theory, and Relational Dialectics Theory (RDT). These frameworks are applied post-hoc as interpretive lenses to interpret why the clusters cohere, not to validate the theories themselves, consistent with exploratory bibliometric methodology (Donthu et al., 2021; Klarin, 2024). Importantly, keyword co-occurrence measures lexical association and discourse structure, or what scholars talk about together, not whether any theoretical proposition is causally proven.

No single family communication theory captures the full range of relational processes involved in caregiving (Braithwaite et al., 2018). FST provides vocabulary to understand caregiving as a systemic, interdependent process where role shifts in one member change across the family unit (Yoshimura & Galvin, 2018). CPM depicts how families manage private health information; who discloses what, to whom, under which rules, and what happens when those rules break down (Petronio, 2018). Meanwhile, RDT shows dialectical tensions embedded in caregiving, between coping and loss, between connection and autonomy, between established frameworks and emerging contexts (Suter & Seurer, 2018). This discussion proceeds in four steps: interpreting the human dimensions of care across clusters (Section 4.1); mapping structural asymmetries and research gaps (Section 4.2); identifying emerging trajectories (Section 4.3); and drawing implications for communication studies (Section 4.4)

#### **4.1 How Family Caregiving Research Conceptualizes Human Dimensions of Care**

This sub-chapter interprets the thematic boundaries within the bibliometric network, acknowledging that these keyword mappings represent lexical trends within the Scopus database rather than absolute empirical validations of theoretical constructs. P1 Clusters 1 and 5, Child and Adolescent Development (595 occurrences) and Geriatric Caregiving & Illness Narratives (499 occurrences), together account for 55.9% of all keyword occurrences and represent the foundational demographic poles of family caregiving research. Read through an FST lens, the concentration of scholarly attention at these two life stages is consistent with FST's core proposition that family functioning is organized around interdependence. Caregiving constitutes a relational process where a change in one member's

health affects the entire family ecosystem (Brown & Errington, 2024; Wray, 2020; Yoshimura & Galvin, 2018).

The high co-occurrence of keywords like "child" (102 occurrences), "family relation" (83 occurrences), and "caregiver" (193 occurrences) reflects a research culture that frames caregiving primarily through relational and systemic lenses, rather than through the individual experience of burden or task completion. Although this map is not a direct test of FST, scholarly lexicon strongly mirrors its relational vocabulary that emphasizes self-differentiation, balancing between emotional and intellectual functioning within family discourse (Brown & Errington, 2024).

Researchers consistently organize caregiving around family dynamics, communication across developmental transitions, and the systemic demands placed on the caregiving unit. Cluster 1 further demonstrates this through its integration of psychological keywords: "anxiety" (10 occurrences, 20.6 average citations) and "depression" (7 occurrences, 30.71 average citations) appear alongside relational and developmental terms, suggesting scholars understand psychological vulnerability in children not as individual pathology but as a systemic caregiving concern. Cluster 5 mirrors this logic at the geriatric pole. "caregiver" (193 occurrences, 1,238 total link strength) dominates the network because adult caregiving for elderly parents and spouses is framed as a relational identity, not merely a task role. The structural organization of this vocabulary suggests that caregiving scholarship has internalized FST's relational worldview.

Cluster 2 (Interpersonal Dynamics & Decision Making, 280 occurrences) represents the communicative mechanisms through which families manage caregiving. Along with Cluster 4 (Professional-Patient Interaction & Health Literacy, 265 occurrences), these themes are best understood through the privacy boundary management framework. CPM defines private information as owned, with people believing they have rights to privacy ownership and privacy control. It means that disclosure creates "authorized co-owners" inside shared privacy boundaries (Petronio & Child, 2020; Vik & DeGroot, 2021). Cluster 2 is dominated by the keyword "interpersonal communication" (82 occurrences, 718 total link strength), which has the highest connectivity in the entire network after "caregiver". Alongside "decision making" (15 occurrences), "father" (10 occurrences), and "negotiating" (6 occurrences), this cluster highlights the current literature's preoccupation with how families communicate their way through information-rich caregiving situations. These keywords are lexically consistent with CPM's privacy rule negotiation processes. Family members treat health information as privately owned, and caregiving

situations generate persistent pressure on those privacy boundaries: who receives a diagnosis, who has the right to make medical decisions, what information is shared with healthcare professionals, and what remains protected within the family system (Lillie & Venetis, 2020; Petronio, 2018; Vik & DeGroot, 2021).

"Stress" (13 occurrences, 20.08 average citations) and "emotion" (10 occurrences) within this cluster conceptually can be interpreted through CPM's concept of privacy turbulence; disruption that occurs when privacy rules break down or when unwanted co-ownership of sensitive information is imposed (Petronio, 2018; Petronio & Child, 2020). Topic avoidance about parent well-being and caregiving role distribution, which is governed by privacy rule criteria including trust, liking, and risk-benefit assessment, is positively associated with depression and negatively with relationship satisfaction for both primary and secondary caregivers (Lillie & Venetis, 2020). This explains why "sibling" (8 occurrences) appears inside Cluster 2 alongside "negotiation" and "decision-making" rather than within the geriatric caregiving cluster. Sibling caregiving is not primarily a condition-specific or demographic phenomenon, but a communicative one, structured around who owns the right to disclose parent health information, who bears primary responsibility, and what the relational cost of avoidance is.

In Cluster 4 (Professional-Patient Interaction & Health Literacy, 265 occurrences), keywords such as "health literacy" (11 occurrences), "medical information" (13 occurrences), and "professional-family relation" (14 occurrences, 157 total link strength) directly map onto CPM's exterior boundary regulation: the processes through which families decide what private health information to share with healthcare providers, under what conditions, and with what degree of permeability (Petronio & Child, 2020; Vik & DeGroot, 2021). "Patient-centered care" (8 occurrences) and "healthcare professional attitude" (6 occurrences) further suggest scholarly attention to whether institutional communication practices support or disrupt families' privacy boundary coordination. Communication serves as the main tool for negotiating roles and managing privacy boundaries (Rothausen et al., 2023). Thus, these two clusters suggest that caregiving communication research is also about information ownership, disclosure negotiation, and the management of privacy boundaries between family systems and medical institutions.

Clusters 3 (Social Support & Palliative Contexts, 213 occurrences) and 6 (Digital Health, Migration & Crisis Contexts, 107 occurrences) can be analyzed through RDT's framework of competing discourses and dialectical tension. This theory holds that family communication is

inherently shaped by the tension between centripetal discourses (culturally dominant, normalized ways of understanding family) and centrifugal discourses (emerging, marginalized, or resistant meaning systems) (Baxter & Norwood, 2015; Suter & Seurer, 2018). In Cluster 3, the institutional terms like "health communication" (14 occurrences), "health care system" (10 occurrences), and "social support" (33 occurrences) anchor the interaction between families and professional systems. However, the presence of "social support" (33 occurrences), "coping behavior" (15 occurrences), "resilience" (9 occurrences), "palliative care" (19 occurrences), "bereavement" (6 occurrences), and "death" (5 occurrences) within the same cluster reflects a discursive struggle between the centripetal biomedical narrative of sustaining life and managing burden, as well as the centrifugal narrative of preparing for loss and finding meaning in dying (Rafferty & Hutton, 2019; Suter & Seurer, 2018). Interestingly, this pattern aligns with qualitative findings where families continuously navigate the tensions of dignified death (e.g., end-of-life care) versus medical intervention (e.g., life-prolonging treatment) (Symmons et al., 2023), balancing denial, bereavement, social support, and acceptance within the dyad (Hasdenteufel & Quintard, 2022; Näppä & Häggström, 2026). The high citation impact of palliative care keywords (14.84 average citations) suggests that the literature takes this tension seriously and tends to attract sustained scholarly engagement.

Similarly, RDT's lens offers a different but equally significant discursive tension of Cluster 6, where traditional norms of care meet modern crises. Keywords such as "transnational caregiving" (6 occurrences, 44.0 average citations), "transnational family" (7 occurrences, 35.43 average citations) are grouped alongside "telehealth" (10 occurrences), and "COVID-19" (19 occurrences). While these terms may not all share direct co-occurrence links, their thematic proximity within the network represents a collision between the culturally normative model of "being there" and the emerging centrifugal reality of geographically dispersed, digitally mediated care. Despite their low frequency, the high citation impact of transnational keywords (e.g., avg. 44.0 for transnational caregiving) underscores how these marginalized discourses generate significant engagement by exposing the limits of traditional family models. Scholars are actively negotiating what caregiving means when it can no longer assume physical co-presence or shared geographic context. These clusters demonstrate that digital tools and crises like the pandemic do not just replace physical presence; they create contradictory outcomes that Cabalquinto (2020) called "elastic carework". Mobile-mediated care can both deepen intimacy and generate frustration, marked by contradictions

of intimacy, guilt, and mediated support that redistribute what “being there” means by producing a hybrid model rather than a full replacement of co-presence (Ahlin et al., 2024; Cabalquinto, 2020; Hossain et al., 2025).

#### **4.2 Research Asymmetries and Identified Gaps**

Four structurally underrepresented domains emerge from the keyword density analysis. First, Cluster 5 (Geriatric Caregiving, 499 occurrences) and Cluster 1 (Child and Adolescent Development, 595 occurrences) together constitute 55.9% of all keyword occurrences, establishing geriatric and pediatric caregiving as the dominant research topics. Yet, the population bearing the greatest concurrent caregiving burden, adults in their 40s navigating obligations to both aging parents and dependent children, appears minimally through keywords like "middle-aged adult" (92 occurrences) without generating a distinct thematic cluster. This absence suggests that scholarship currently prioritizes the recipients of care over those providing it, creating a gap in both communication theory and intervention design. Second, within the 1,959 total keyword occurrences in the network, transnational and migration-related caregiving registers only 13 (combined occurrences of "transnational caregiving" and "transnational family"). This creates a 5:1 frequency disparity relative to dementia-related terms (71 occurrences, 3.6%) despite migration-driven caregiving affecting populations globally.

Third, informal and community-based support networks are similarly absent. The literature predominantly addresses formal healthcare interfaces (Cluster 4), while the everyday relational labor of neighbors, friends, and community members remains largely invisible in the indexed record. Fourth, cultural and economic diversity, though nominally present through keywords like "African American" (9 occurrences) and "Hispanic" (6 occurrences), remains thinly represented (0.56-0.9% of network) relative to disease-specific research, suggesting that cultural frameworks are treated as contextual variables rather than primary analytical categories. Following established bibliometric benchmarks, keywords appearing below 1% of total network occurrences are considered underrepresented relative to their theoretical importance (Donthu et al., 2021; Klarin, 2024). By this standard, transnational caregiving, gender-differentiated caregiving, and informal community support networks are all structurally underrepresented, reflecting dynamics of which caregiving populations are highlighted in international research.

These asymmetries reflect three structural mechanisms that determine research visibility. First, disciplinary integration differences shape publication volume. Dementia research sits at the intersection of gerontology, medicine, and nursing, three high-publication-volume

disciplines with established journal networks. Transnational caregiving, by contrast, requires synthesis across migration studies, anthropology, and critical family studies, each with lower-publication disciplines with fragmented journals that reduce both article volume and visibility in Scopus-indexed social science literature (Caputo & Kargina, 2022).

Second, geographic research infrastructure concentration shapes what Scopus indexes. This dataset shows 66% of publications originating from five high-income countries, with the United States alone representing 51.8%. This concentration reflects research infrastructure advantages rather than demographic necessity: dementia, predominantly studied in well-funded healthcare systems, benefits from incentive structures that reward publication in high-impact Anglophone, European, and North American journals, a pattern consistent with prior bibliometric work on database indexing bias (Asubiaro et al., 2024; Mongeon & Paul-Hus, 2016; Sweileh, 2024). Third, these two mechanisms combine to produce inequities in knowledge dissemination. Insights from dementia research proliferate globally through well-resourced dissemination channels, while context-specific knowledge about caregiving in lower-income, non-Anglophone contexts remains structurally invisible to the international peer-reviewed record that Scopus captures.

The scale of this disparity becomes clear when indexed research is set against global population data. Dementia currently affects an estimated 55 million people worldwide (Alzheimer's Disease International, 2026), a figure that justifies sustained and well-funded research attention. Yet an estimated 281 million international migrants (The International Organization for Migration, 2024) navigate caregiving across national borders without co-present family support, generating an indexed publications fraction. This geographic-intellectual divide does not reflect the distribution of caregiving need; it reflects which caregiving realities are structurally visible to the international scholarly infrastructure. Addressing these gaps requires not simply replicating existing frameworks across new populations, but developing funding mechanisms and publication channels that support locally-grounded, contextually-specific caregiving research in underrepresented regions (Asubiaro et al., 2024).

### **4.3 Emerging Trajectories**

The asymmetries identified in Section 4.2 do not simply reflect random scholarly neglect; they are embedded in a broader pattern of thematic convergence and fragmentation that characterizes how the field has developed over the past decade. Research concentration within specific caregiving contexts, like dementia, and the dominance of North American and European scholars aligns with patterns identified in prior bibliometric

studies of health care and gerontology research (Neto et al., 2023; Sweileh, 2024; Zhylybekova et al., 2024). Family caregiving research demonstrates convergence around caregiver-centric frameworks and communication-centered perspectives. However, the field exhibits greater thematic fragmentation across demographic contexts, as pediatric, adult, and geriatric caregiving research develops largely in parallel, with limited cross-cluster theoretical exchange.

Cluster 6 (Digital Health, Migration & Crisis) constitutes the most responsive area of the field. Despite their low frequency, two keywords in this cluster exhibit remarkable citation impact, namely 'transnational caregiving' (6 occ, 44.0 avg. citations) and 'transnational family' (7 occ, 35.43 avg. citations). These high citation counts indicate that scholars addressing geographically dispersed family care have locate care flows across macro (state), meso (community), and micro (family) levels, arguing distance and absence should be treated as regular, theorized features of family life (Al-Hamad et al., 2025; Baldassar et al., 2016). "Technology" (8 occurrences, 34.62 average citations) similarly suggests that communication scholarship focused on technology-based caregiver support (Ahlin et al., 2024; Zhai et al., 2023), emerging yet theoretically promising area of research.

Additionally, Cluster 6 represents recently accelerated research activity with 70% of its keywords appearing for the first time after 2020, even though this trend reflecting external events rather than novel theoretical development. "COVID-19" (19 occurrences, avg. pub. year 2022.8, 6.42 citations) for instance, is a temporal marker of pandemic-related research, not a research innovation. Similarly, "telehealth" (10 occurrences, avg. pub. year 2022.8, 14.30 citations) emerged post-2020 because the technology itself scaled during lockdowns, not merely because scholars developed a new understanding of family communication in care contexts (Klarin, 2024; Murghayah et al., 2025). As foundational frameworks emphasizing relational caregiving dynamics (Clusters 1-5) remain dominant, Cluster 6 suggests expansion and specialization of existing paradigms.

#### **4.4 Implication for Communication Studies**

The cross-cluster presence of negotiation-related keywords (e.g. "negotiating" and "decision making" in Cluster 2; and "professional-family relation" in Cluster 4) indicates that researchers are progressively conceptualizing caregiving not as role assignment but as a continuous communicative negotiation. Read through CPM lens, these patterns suggest that families are not merely communicating about care; they are negotiating the "ownership" of health information and the privacy rules

that determine whether disclosure happens at all (Lillie & Venetis, 2020; Petronio & Child, 2020; Vik & DeGroot, 2021). Consequently, intervention design should move beyond increasing communication frequency to targeting the underlying privacy rule infrastructure, like trust, risk-benefit assessments, and liking, which governs family disclosure patterns within the healthcare interface (Vik & DeGroot, 2021).

Moreover, the dominant presence of the "caregiver" keyword (93 occurrences, 1,238 total link strengths, across multiple clusters 5, 2, and 3) signals how family caregiving research conceptualizes its primary subject. Rather than treating the caregiver as a secondary informant and prioritizing the caregiver's lived experience, current research is moving away from seeing care as a one-sided task and toward a set of dynamic family processes. Through growing citation impact of mental health keywords like "anxiety" (20.6 average citations) and "depression" (30.71 average citations) in Cluster 1, psychological well-being is acknowledged as a fundamental caregiving issue rather than just a mere peripheral burden (Wallace & Sterns, 2022). This reorientation aligns with FST, which views caregiving as a complex web of relational responsibilities and mutual influences (Stuart et al., 2022; Wray, 2020). Future research should operationalize this reorientation by designing longitudinal studies that examine how family communication patterns predict mental health across the caregiving dyad, rather than treating caregiver distress as a one-directional response to care demands.

While the data are currently organized around demographic contexts (child, adolescent, middle-aged, elderly), care conditions (dementia, autism, pediatrics), relationship types (parent, sibling, spouse), and processes (communication, decision-making, coping), this organization is not inherently systemic. Relational Dialectics Theory (RDT) and CPM offer the necessary vocabulary to bridge these fragmented rooms. CPM's privacy boundary constructs correspond precisely to the professional interfaces in Clusters 2 and 4, while RDT's centripetal-centrifugal tensions map onto the competing biomedical and palliative logics in Clusters 3 and 6. This suggests that the field has achieved conceptual maturity in its core domains but remains theoretically fragmented at its frontiers. To move forward, bibliometric work should explicitly test whether theory-labeled research (e.g., "CPM-informed" vs. "RDT-based") produces distinct cluster formations, providing stronger evidence for theoretical influence beyond mere lexical alignment.

Overall, the field is currently using the same toolkit but working in different rooms. It possesses the theoretical vocabulary to bridge its fragmented research communities, but lacks a cross-disciplinary

infrastructure to apply that vocabulary consistently across caregiving populations. To bridge these gaps, future research should pursue three concrete directions: (1) Integrate CPM into clinical and geriatric contexts to examine privacy rules around end-of-life information control; (2) Apply RDT to transnational and digitally-mediated caregiving to manage the dialectical tensions of "virtual intimacy"; and (3) Develop cross-cluster longitudinal designs that track communication patterns across the full caregiving lifespan, from pediatric dependency to geriatric end-of-life. By consistently applying the rich theoretical insights of FST and RDT across diverse populations, scholars can ensure that the shared language of communication mechanisms translates into a unified understanding of the human caregiving experience.

## **5. Conclusion**

Publication patterns over the past decade reveal three phases of research response driven by external global shifts. Initial foundational work (2016–2019; 79 articles) focused on documenting caregiver burden, which then transitioned into a crisis-responsive phase (2020–2021; 114 articles) characterized by pandemic-related disruptions and the rapid adoption of telehealth. The recent acceleration from 2022 to 2025 (228 articles) indicates a field maturing in capacity, though not necessarily undergoing a "paradigm shift." Rather than theoretical replacement, this growth reflects the field's adaptation to contemporary caregiving configurations through technological integration and a focus on specialized care conditions.

However, certain limitations still shape caregiving in the communication field. Currently, 81% of all publications come from English-speaking countries, which creates a bias and leaves out important research written in other languages. Similarly, the concentration of research in dementia (24% of keyword occurrences) versus the relative invisibility of transnational caregiving (1.2%) and informal community networks mirrors established funding infrastructures. Dementia research benefits from its position at the intersection of well-resourced disciplines like gerontology and medicine, while transnational and informal caregiving research remains distributed across more fragmented social science venues. These patterns represent structural inequities in knowledge production that future scholarship must consciously address.

Several limitations inherent to the methodology must be acknowledged. First, the study relies exclusively on Scopus metadata. While Scopus offers extensive coverage of social science journals (Caputo & Kargina, 2022) The exclusion of other databases (e.g., Web of Science or

PubMed) and non-English publications may result in a geographic and linguistic bias, as evidenced by the 81% dominance of Anglophone literature. Furthermore, as the search was conducted in mid-December 2025, the data for the final year remains incomplete, potentially underestimating the most recent emerging trends. In addition, the technical constraints of VOSviewer significantly influence the interpretation of the results, as its highly sensitive data input cannot autonomously correct metadata inconsistencies, which can occasionally fragment keyword clusters (Korde et al., 2023). Moreover, the resulting maps are sensitive to user-defined parameters, so different inclusion thresholds (e.g., setting minimum keyword occurrences to 3 instead of 5) could yield slightly altered cluster structures (Boonroungrut et al., 2022). Finally, this software identifies "popular" thematic clusters through co-occurrence links but does not evaluate the empirical quality, theoretical depth, or causal validity of the underlying studies. Consequently, the identified "hotspots" represent the field's visibility and frequency rather than a qualitative hierarchy of scientific rigor.

Based on our network mapping of 4,926 co-occurrence links, we propose three concrete directions for future research:

1. Regarding methodological testing of theory, scholars should conduct comparative bibliometric analyses that explicitly label studies as "CPM-informed" or "RDT-based." This would determine whether communication theories truly organize the research field or merely provide a lexical vocabulary for describing family processes.
2. Future work is suggested to bridge the current demographic groups by tracking communication patterns across the caregiving lifespan (from pediatric dependency, midlife "sandwich generation" care, to geriatric end-of-life). Therefore, it can identify whether relational mechanisms remain consistent across these stages.
3. In terms of multilingual mapping to reduce current Anglophone bias, future studies should triangulate findings with Global South databases (e.g., LILACS or Redalyc). This is essential for capturing the missing scholarship on transnational caregiving and informal support networks that are likely more prevalent in non-Western contexts.

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