

## A Bibliometric Analysis of Online Prosocial Behavior Research

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**Abstract.** Online prosocial behavior is an important topic in digital psychology, yet bibliometric studies on this subject remain limited. This study aimed to analyze publication trends and map key themes in online prosocial behavior research. Descriptive bibliometric analysis and thematic mapping were conducted using Biblioshiny (Bibliometrix) in the R software package. Additionally, international collaboration networks were examined through VOSviewer using a country-based co-authorship method. A total of 40 bibliographic records were retrieved from the Scopus database using keywords related to online prosocial behavior from 2011 to 2025. The findings highlight research landscapes, including the most influential authors, leading affiliations and countries, emerging research trends, temporal development, and frequently cited articles. Thematic mapping reveals core themes, such as online prosocial behavior, human, motivation, well-being, behavioral, and social interaction. This study highlights global trends and research directions on online prosocial behavior, emphasizing the importance of context in examining this phenomenon, particularly within the Indonesian setting. Furthermore, from a practical perspective, the findings may serve as a reference for the development of digital literacy programs for adolescents.

**Keywords:** bibliometrics; cyberpsychology; online prosocial behavior

### Introduction

Individual changes in social interaction and behavior are inevitable consequences of the advancement in digital technology and the internet. One phenomenon that has emerged is online prosocial behavior (OPB). Wispe (1972) as cited in Vaughan and Hogg (2018) defined prosocial behavior as behavior that has positive social consequences, influencing the physiological or psychological well-being of others. Therefore, online prosocial behavior refers to voluntary actions intended to benefit others through digital platforms.

As of April 2025, there are 5.64 billion internet users worldwide, equivalent to 68.7% of the total global population (Datareportal, 2025). Meanwhile, in Indonesia, there were 143 million social media users as of January 2025, equivalent to 50.2% of the nation's population (Haryanto, 2025). With a large internet user base, the forms of online prosocial behavior are increasingly diverse. Examples include

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involvement in prosocial behaviors through social networking sites (Wright & Li, 2011), volunteering and activism (Slattery et al., 2021), crowdfunding and online petitions (Wright & Pendergrass, 2016), and providing material and emotional assistance in online games (Lehdonvirta et al., 2011).

Online prosocial behavior cannot be separated from cyberpsychology, which is the study of human behavior and the internet (Attrill & Fullwood, 2016). The online context shows that prosocial behavior takes place in cyberspace, a virtual space where social interactions occur. Asynchronous and anonymous interactions are very likely to occur in cyberspace due to various digital features that have been developed today (Attrill & Fullwood, 2016). This is in line with Sproull (2011) research, which found that the online environment can reduce barriers to helping others and make prosocial behavior more visible and known to the public.

Online prosocial behavior is helpful behavior in the digital environment that is influenced not only by the media itself but also by individual dispositional factors. In relation to online prosocial behavior, the differential susceptibility to media effects model (DSMM) (Valkenburg & Peter, 2013; Valkenburg et al., 2016) explains that media's influence on individuals is conditional and depend on dispositional factors (e.g., personality, motivation, attitude), developmental factors (e.g., age, developmental stage), and social factors (e.g., family, peers, culture). Furthermore, this theory assumes that media use and its effects are mediated by three types of responses: cognitive, emotional, and arousal/physiological. Based on this assumption, the media can trigger prosocial effects through these three responses. For example, stories of natural disaster victims on social media can spark empathy, which in turn encourages certain media effects, such as an online donation, which is a form of prosocial behavior.

The influence of dispositional factors in online prosocial behavior, as explained by the DSMM, is in line with a classic concept in social psychology, namely the empathy-altruism hypothesis. Empathy, as one of the dispositional factors, is theorized to play an important role in determining how someone responds to the media. Based on the empathy-altruism hypothesis, empathic concern, which is the response to the suffering of others, can encourage altruistic motivation, where the main goal is to improve the welfare of others in need (Batson & Oleson, 1991; Batson et al., 1987). Eisenberg and Miller (1987) also stated that empathy is one of the emotional skills that form the basis of prosocial behavior. Farrelly and Bennett (2018) supported this hypothesis, finding that empathy can encourage involvement in an online charity task. In addition, empathy mediates the relationship between media consumption and helping behavior among prosocial content enthusiasts on social media (Plante et al., 2018).

The first study with the most citations using the term online prosocial behavior was conducted by Wright and Li (2011). However, before that, there was a study by Wang and Wang (2008) that examined the relationship between altruism and prosocial behavior in online games. Wright and Li (2011) found a relationship between direct (face-to-face) prosocial behavior and online behavior. This finding highlighted the tendency for prosocial behavior in the real world to extend to the digital world, while also indicating that the term online prosocial behavior began to be used specifically in 2011. Therefore, in general, this phenomenon is relatively new to the field of psychology. Indications of

theoretical limitations, such as integration with classic social psychology theory and cross-variable conceptual modeling, encouraged the researchers to conduct bibliometric studies to map the landscape of online prosocial behavior research and identify research gaps for future studies.

Bibliometric analysis of online prosocial behavior is still quite limited. Yi and Mahmud (2022) conducted a bibliometric analysis on prosocial behavior, but this research did not specifically address the online context. Previous literature reviews with meta-analyses, such as the research by Thielmann et al. (2020), have only focused on prosocial behavior in general. In addition, the scoping review by Nuttall et al. (2025) only focused on prosocial behavior in general, specifically in adolescents. Therefore, bibliometric analysis on the topic of online prosocial behavior is considered important to fill the research gap and establish a direction for future research in cyberpsychology (Donthu et al., 2021).

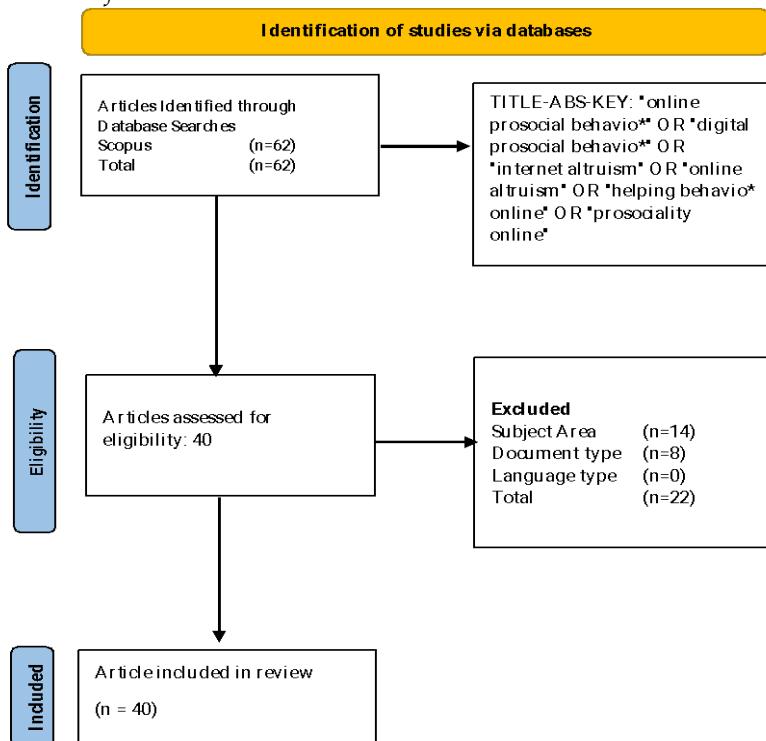
## Method

This literature review employed a bibliometric approach. Bibliometric analysis is a quantitative method used to evaluate scientific productivity and identify trends in specific research fields. This method involves statistical analysis of articles, books, and other forms of publication to measure the performance of individuals, groups, organizations, and countries (Marvi & Foroudi, 2023). This method aims to map the relationships between concepts, research directions, and trends, and provide insights into future research areas, topics, and issues (Saputro et al., 2023). See Figure 1

### Procedure

Data was collected from the Scopus database covering the period from 2011 to 2025. This period was chosen because the term online prosocial behavior was first used and published in 2011 (Wright & Li, 2011). The author did not use other databases due to constraints in the analysis process, where the Biblioshiny of the Bibliometrix package in R could only load one database in an analysis session. Combining multiple databases requires further metadata standardization, so using a single database ensures more consistent data and minimizes errors in the analysis. In addition, the Scopus database was used because it covers more journals and articles than other databases, enabling a more comprehensive and representative analysis, as well as providing faster and more complete citation analysis features for recent publications (Visser et al., 2021). Before the literature search process, the author looked for synonyms of online prosocial behavior and determined keyword combinations using Boolean operators, which is a method of combining keywords using basic logic (AND, OR, or NOT) to obtain more accurate search results.

The literature search was conducted on June 14, 2025, based on the search syntax parameters TITLE-ABS-KEY: “online prosocial behavio\*” OR “digital prosocial behavio\*” OR “internet altruism” OR “online altruism” OR “helping behavior\* online” OR “prosociality online,” resulting in 62 articles.

**Figure 1***Diagram Flow of the Literature Search*

Next, the author filtered the articles based on subject areas (scope: social science and psychology), document type (scope: articles), and language type (scope: English). The criteria of social science and psychology were chosen because online prosocial behavior was first introduced and extensively researched in psychology and social science. The language type criterion, namely English, was chosen to suit the author's language ability. A total of 22 articles were eliminated in this screening. Therefore, based on the screening results, there were 40 articles on online prosocial behavior that were suitable and could proceed to the next analysis stage (Figure 1).

#### *Data Analysis*

Before conducting the analysis, bibliographic data collected from Scopus were first processed using Zotero reference management software. This process was carried out to clean up inconsistent metadata, remove duplicate entries, and refine information, e.g., author names, affiliations, article titles, and keywords. After the curation process was complete, the data was then exported in .bib (BibTeX) format and analyzed using a bibliometric approach and Vosviewer to display network visualizations. The types of analysis used included co-occurrence analysis, co-authorship, country collaboration, citation analysis, and thematic mapping. The bibliometric analysis was conducted using the R Studio 2025.05.1-513 program, with the Bibliometrix (Biblioshiny) package (Aria & Cuccurullo, 2017) and the VOSviewer application version 1.6.20 (van Eck & Waltman, 2010).

## Results

The bibliometric analysis results include the most influential researchers in the online prosocial behavior study, a list of the most productive universities and countries based on the publications produced, trends in online prosocial behavior research, the evolution of online prosocial behavior research and publication sources over time, the most relevant sources, the most frequently cited articles, and a thematic map of online prosocial behavior-related keywords.

The number of publications produced directly reflects how active and productive an academic is in producing scientific work (Carpenter et al., 2014). Based on Table 1, in terms of the number of publications, it is known that the most productive researcher in researching the topic of online prosocial behavior is Sara Erreygers, with four publications. Meanwhile, nine other researchers each have three publications, namely Elfi Baillien, Hans De Witte, Li Linwei, Yolanda Pastor, Vanesa Pérez-Torres, Heidi Vandebosch, Ivana Vranjes, Pengcheng Wang, and Yinlan Wang, which shows a relatively even leadership among the main researchers.

**Table 1**

*List of Ten Researchers With The Most Publications*

Researcher	Total publications
Erreygers, S.	4
Baillien, E.	3
De Witte, H.	3
Li, L.	3
Pastor, Y.	3
Pérez-Torres, V.	3
Vandebosch, H.	3
Vranjes, I.	3
Wang, P.	3
Wang, Y.	3

Furthermore, to identify centers of excellence and patterns of global collaboration on the research topic, the researchers mapped institutional and country affiliations. Based on Table 2, Beijing Normal University and North-West University are the most productive institutions, each with four publications. However, there are several other universities that are also quite active—publishing three works each—including Fujian Normal University, Hong Kong Polytechnic University, Renmin University of China, and the University of Antwerp. This relatively even distribution shows that research is not dominated by one large institution, but is spread across several major research centers in various countries.

**Table 2***Ten Universities with the Highest Productivity in Online Prosocial Behavior Research*

Affiliates	Total Publications
Beijing Normal University	4
North-West University	4
Fujian Normal University	3
Hong Kong Polytechnic University	3
Renmin University of China	3
University of Antwerp	3
Zhejiang Normal University	3
Complutense University	2
Henan University	2
King Juan Carlos University	2

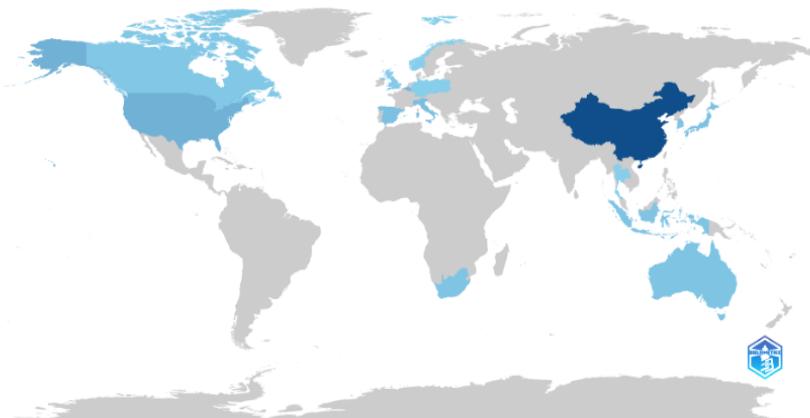
The presence of the University of Antwerp (Belgium) among Chinese universities in the list indicates strong international collaboration in this research topic, in which researchers from various countries come together to produce high-quality scientific works. Countries with the highest number of researchers producing publications on online prosocial behavior can be seen in Table 3 and Figure 2. Based on Table 3, China ( $n=44$ ) significantly dominates the online prosocial behavior research

**Table 3***Countries With The Highest Number of Publications in Online Prosocial Behavior Research*

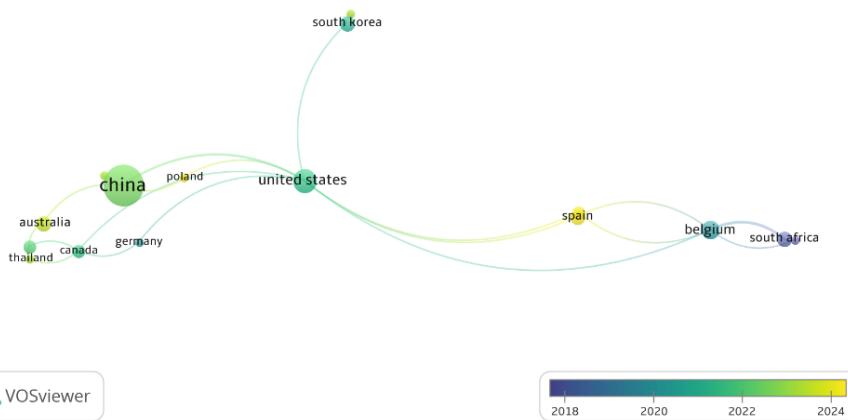
Country	Total publications
China	44
United States	10
Belgium	9
Italy	6
Japan	5
Spain	5
Australia	4
Indonesia	4
South Africa	4
South Korea	4

landscape, far surpassing other countries such as the United States ( $n=10$ ) and Belgium ( $n=9$ ). This is followed by Italy ( $n=6$ ), Japan and Spain ( $n=5$ ), then Australia, Indonesia, South Africa, and South Korea ( $n=4$ ).

Figure 3 visualizes the interconnectedness of countries on their online prosocial behavior publications, which can be seen through the direction of the lines connecting one circle to another. The United States

**Figure 2***Map of Country Productivity in Research on Online Prosocial Behavior*

is a central country that has relationships with nine other countries spread across several continents, such as China, South Korea, South Africa, Poland, Spain, Germany, Belgium, Canada, Australia, and Thailand (as listed in Table 3).

**Figure 3***Inter-country Collaboration Network in Online Prosocial Behavior Research*

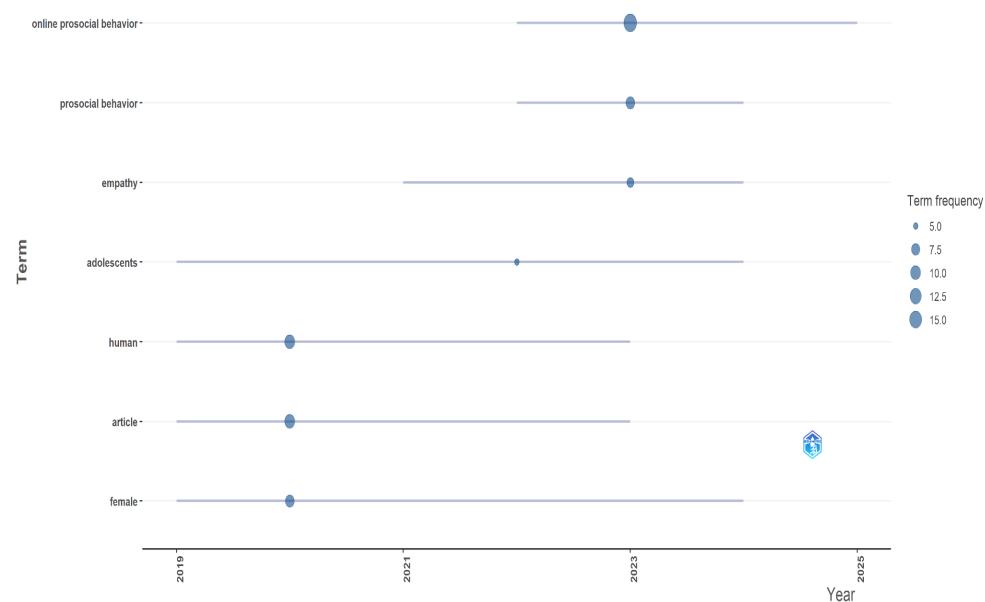
The trend of online prosocial behavior research topics can be seen through the visualization shown in Figure 4. The length of the line explains the time range of the research topic trend, while the size of the circle refers to the frequency of words that are often used. Based on the research topic trends for online prosocial behavior shown in Figure 4, the term that appears most frequently is “online prosocial behavior” with 17 appearances. This is followed by “article” and “human,” which appeared 10 times each. The next most frequent terms are “female,” “male,” and “prosocial behavior,” which appeared

eight times each. Then, the word “empathy” made six appearances. Next are “adolescents,” “adult,” and “human experiment,” each making five appearances during the search. Based on the visualization of topic trends, the online prosocial behavior research trends lean toward studies about “human” and “female.” Furthermore, the development of research trends led to adolescent-related topics in 2022. From 2023 to the present, research topic trends have further developed with dominant topics leading to online prosocial behavior, prosocial behavior, and empathy.

**Figure 4**

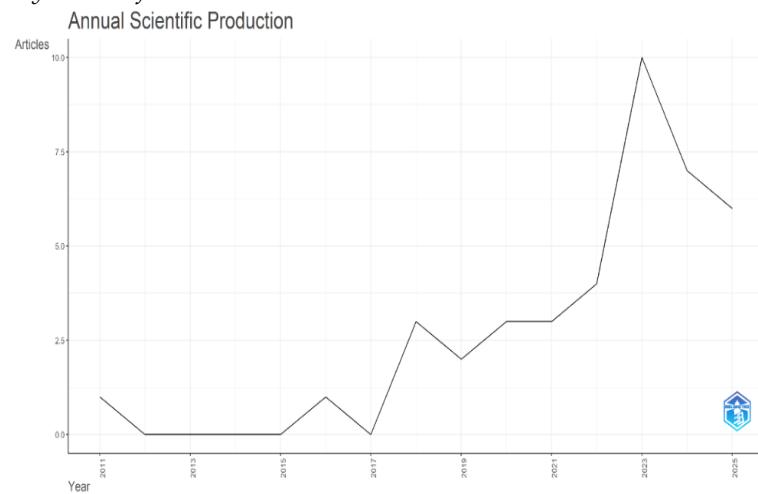
*Trends in Topics of Online Prosocial Behavior Research*

Trend Topics



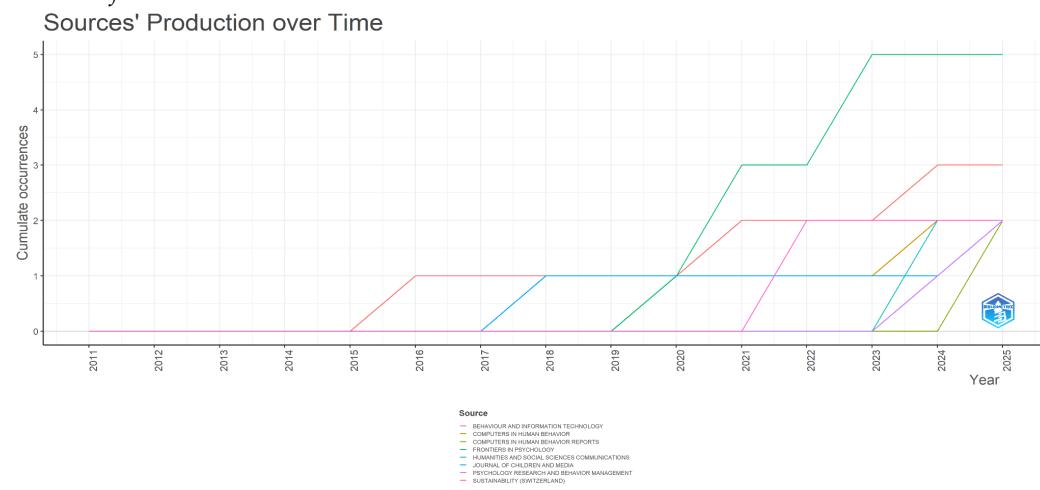
Based on the visualization in Figure 5, there is a fluctuating dynamic in online prosocial behavior research over time. In 2011, there was one article published, but this trend was inconsistent because there were no articles produced from 2013 to 2015. Although the research development trend shows fluctuating progress, the development trend of online prosocial behavior slowly increased and peaked in 2023. Furthermore, until June 2025, there were six publications on online prosocial behavior, which means that until December 2025, there is still a possibility of a larger number of publications compared to 2024.

The development of research on online prosocial behavior can also be seen in Figure 6, which shows the development of sources over time. There are eight reference sources in the research on this topic.

**Figure 5***Dynamics of Online Prosocial Behavior Research Over Time*

The first is Behavior and Information Technology, which began to publish about this topic in 2016, and then in 2021 and 2023, with a total of three publications. The second is Computers in Human Behavior, which appeared on the map from 2018 to 2020, with a total of three publications. Computers in Human Behavior Reports began publishing in 2023 and added another publication on the topic in 2024, for a total of two publications. Frontiers in Psychology contributed to the topic from 2020 and experienced a surge in publications, reaching five publications in 2023, but there were no additions after that. Humanities and Social Sciences Communications first appeared in 2024, contributing one publication. Similarly, the Journal of Children and Media Psychology Research and Behavior Management appeared in 2024 but showed stagnation in 2025, contributing two publications each. Sustainability (Switzerland) became active in 2015 and has remained stable with two publications to date. Table 4 lists the ten articles with the most citations on the topic of online prosocial behavior. The most cited study was published by Erreygers et al. (2019), with 56 citations. It was followed by Erreygers et al. (2018a), with 44 citations, and Son et al. (2016), with 34 citations.

Based on the most relevant and frequently cited sources for the topic of online prosocial behavior (Figure 7), Frontiers in Psychology is the most relevant source (five articles), followed by Behavior and Information Technology (three articles), and Computers in Human Behavior, Computers in Human Behavior, Humanities and Social Communications, Journal of Children and Media, Psychology Research and Behavior Management, and Sustainability (two articles each).

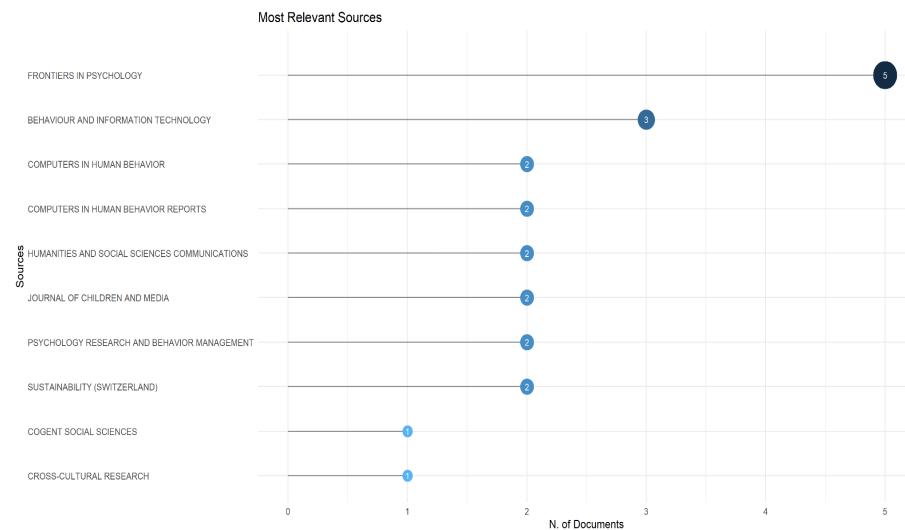
**Figure 6***Sources of Publications Over Time***Table 4***List of ten articles with the most citations*

Researcher	Article title	Total citations	Citations per year
Erreygers et al. (2019)	Feel good, do good online? Spillover and crossover effects of happiness on adolescents' online prosocial behavior	56	8.0
Erreygers et al. (2018a)	Development of a measure of adolescents' online prosocial behavior	44	5.5
Son et al. (2016)	Examining online citizenship behaviors in social network sites: A social capital perspective	34	3.4
Zeng et al. (2020)	Moral perfectionism and online prosocial behavior: The mediating role of moral identity and the moderating role of online interpersonal trust	33	5.5
Leng et al. (2020)	Bridging personality and online prosocial behavior: The roles of empathy, moral identity, and social self-efficacy	29	4.83
Guo et al. (2018)	Shyness and online prosocial behavior: A study on multiple mediation mechanisms	28	3.5
Erreygers et al. (2018b)	Positive or negative spirals of online behavior? Exploring reciprocal associations between being the actor and the recipient of prosocial and antisocial behavior online	24	4.0
Yu and Zhang (2022)	The determinants of purchase intention on agricultural products via public-interest live streaming for farmers during COVID-19 pandemic	22	5.5
Sproull (2011)	Prosocial behavior on the net	22	1.47
Aresi et al. (2022)	Prosocial behaviors under collective quarantine conditions: A latent class analysis study during the 2020 COVID-19 lockdown in Italy	11	5.5

The thematic map in Figure 8 explains the concepts within the online prosocial behavior research scope. There are four quadrants, namely motor, basic, emerging or declining, and niche themes (Cobo et al., 2011). Motor themes refer to topics that are developed and most relevant in the search. These topics are online prosocial behavior, human, motivation, well-being, behavioral, and social interaction. The second quadrant is basic themes, meaning topics that should be explored in more depth. These

**Figure 7**

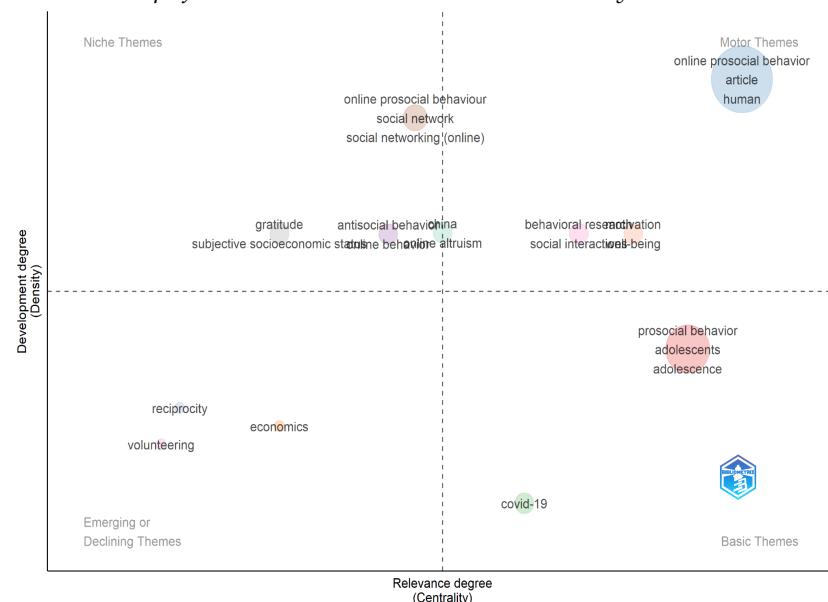
*Most Relevant Publication Sources*



topics are prosocial behavior, adolescents, and COVID-19. The third quadrant is emerging or declining themes, which are topics that are less developed and not internally and externally related to the topics of reciprocity, economics, and volunteering. The last quadrant is niche themes, which are specialized or developing topics less connected to other themes, e.g., social network, social networking, gratitude, subjective socioeconomic, antisocial behavior, online behavior, and online altruism.

**Figure 8**

*Thematic Map of Online Prosocial Behavior Research Keywords*



## Discussion

This study aimed to map trends, actors, and main themes in online prosocial behavior research during 2011–2025 using bibliometric analysis. A total of 40 articles were analyzed bibliometrically to identify the most influential researchers, the most productive affiliations and countries, research topic trends, research developments, the most frequently cited articles, and the main topics frequently discussed in online prosocial behavior studies. Sara Erreygers is the most influential researcher in this topic, with a total of four publications from 2018 to 2025.

Erreygers's research topics indicate opportunities for future research interests. Based on her published articles, Erreygers has an interest in online prosocial behavior in adolescents, as almost all of her studies have focused on this age group (Erreygers et al., 2016, 2018a, 2018b, 2019). This is in line with Valkenburg and Peter (2009) internet-enhanced self-disclosure hypothesis, which states that adolescents tend to easily share their thoughts or feelings with others, thanks to the Web 2.0 technology that emerged in this century, which is designed to encourage communication with existing friends. Healthy self-disclosure can strengthen emotional responses and trigger online prosocial behavior.

Erreygers has also examined emotional factors, such as positive emotions and feel-good, do-good mechanisms, in some of her studies. The link between positive emotions and prosocial behavior can be explained by the broaden-and-build theory (Fredrickson, 2004), which posits that positive emotions broaden a person's perspective on their world and build long-term resources, such as strengthening interpersonal relationships through prosocial behavior. Erreygers' study also examined social dynamics, such as the reciprocal relationship between actors and online behavior. Referring to the reinforcing spirals model theory (Slater, 2007), media use can influence individual attitudes and behavior. A feedback loop (spiral) occurs, in which media use and behavior reinforce each other over time, in this case used to explain repetitive prosocial behavior in adolescents.

Erreygers's latest collaborative research highlights cross-country and gender differences in online prosocial behavior. The study found that Peruvian adolescents showed the highest frequency of performing and receiving online prosocial behavior, while Japanese adolescents showed the opposite. This finding is interesting because Japan, as an Eastern country, is closely associated with collectivist values, yet it shows the lowest frequency of online prosocial behavior (Pastor et al., 2025). When referring to cultural context, Western cultures are associated with independence, while non-Western cultures are associated with interdependence and connection with others (Kim & Park, 2006). The findings of Pastor et al. (2025) align with those of Feygina and Henry (2015), where participants from Japan more often exhibited prosocial behavior when they knew that their actions had consequences or were being monitored by others. Therefore, anonymity, which is typical in online prosocial behavior, may explain why cultural context alone cannot explain this phenomenon.

The study by Pastor et al. (2025) also found that, in various countries, adolescent girls are more often involved in online prosocial behavior than boys. This is in line with gender role theory (Eagly & Wood, 2016), which states that male and female behaviors are influenced by social expectations, such as women being expected to be more caring and emotional and men being expected to be more

courageous and protective. Xiao et al. (2019) explained variations in prosocial behavior based on gender that are useful for future research, namely that women tend to engage in emotionally charged prosocial behavior (e.g., providing emotional support) and men tend to engage in instrumentally charged prosocial behavior that is practical or physical in nature (e.g., lending a hand in dangerous situations).

Based on the results of the study, Beijing Normal University, located in China, was found to be the most productive institution in online prosocial behavior research publications. It is in line with the findings that the country that contributes the most to researching topics related to online prosocial behavior is China, with 44 publications. China's dominance in online prosocial behavior research aligns with the global trend, in which China has become a leader in various fields of academic research (Ganpatsingh, 2025). Although there is a high concentration at the country level, especially in China, a more even distribution is found at the institutional and researcher levels. This shows that even though some countries are very dominant, research is not dominated by just one or two large institutions. Likewise, the presence of researchers and institutions from various countries indicates strong international collaboration networks, which can encourage the exchange of ideas and innovation in online prosocial behavior research. The findings showing that Asian countries dominate online prosocial behavior research are interesting because a bibliometric study by Yi and Mahmud (2022) showed that the United States dominated the prosocial behavior research landscape, followed by Italy and Canada. This finding is thought to be related to the number of internet users, where, according to data from Statista (2025), China ranks first in the world in terms of the number of internet users. This shows that the development of online prosocial behavior research has begun to shift to the Asian region, which is thought to be influenced by the increasing use of the internet and social media in Asia, especially China.

Furthermore, this study also identified trends in online prosocial behavior research topics. Based on the results of the study, from 2011 to 2025, the term "online prosocial behavior" appeared 17 times. This trend indicates that this topic has become a major focus in research, and with the existing fluctuations in trends, online prosocial behavior can be said to have gained space and become an interesting topic to study in cyberpsychology. In addition, keywords like "human" appeared 10 times, "female" and "male" eight times, "prosocial behavior" eight times, "empathy" six times, "adolescents" five times, "adult" five times, and "human experiment" also five times.

These findings indicate that research on online prosocial behavior also considers gender aspects and dynamics, as well as other factors in general. In 2023, research began to focus on online prosocial behavior, followed by prosocial behavior and empathy. This shift in research focus shows significant attention to how digital spaces are beginning to influence prosocial behavior, which is no longer limited to the real world. Previous research examined how websites can encourage individuals to perform prosocial actions, such as donating or volunteering (Slattery et al., 2021).

Interestingly, the trend in online prosocial behavior research has shifted. Initially, in 2020, the dominant topic was related to how digital spaces provide opportunities for individuals to channel prosocial actions online, which then continued with positive studies focusing on the impact of social

behavior in digital spaces on real life. Zhang et al. (2022) examined how online prosocial behavior (e.g., helping others through the internet) shapes a positive online environment and can have a positive impact, namely, subjective well-being for adolescents, as well as spillover effects into real life and crossover effects to parents.

In 2023, based on current trends, the shift in research direction begins with the study on how internet use has different effects depending on the type of behavior one engages in. Whereas in 2022 the focus was on the positive impacts of online prosocial behavior, the research by Tandoc Jr et al. (2023) tested and compared the impacts of behavior in the digital space, namely prosocial behavior (e.g., helping others) on life satisfaction and antisocial behavior (e.g., bullying) on loneliness in the digital space.

Furthermore, in 2024, the focus of online prosocial behavior research shifted to practical implications in the context of education. One Scopus-indexed study on online prosocial behavior in Indonesia was found, namely the study by Shodiq et al. (2024), which found a positive influence of social networks, moral identity, belongingness, and social self-efficacy on the prosocial behavior of Yogyakarta teenagers on the internet. The examination of moral identity, belongingness, and social self-efficacy as study variables shows the efforts of Indonesian researchers to conceptualize online prosocial behavior by formulating path hypotheses, integrating multiple variables (cross-variables), and conducting empirical model testing with structural equation modeling (SEM). The findings suggested that schools should integrate moral and empathy education into the learning curriculum, particularly in relation to internet use policies, and that there is a need for social efficacy training programs to encourage confidence among Indonesian adolescents in spreading kindness in the digital space (Shodiq et al., 2024).

By 2025, with the rapid advancement of technology providing a wider variety of platforms in the digital space, studies on online prosocial behavior have also begun to explore preferences for this behavior among various age groups. Findings by Au et al. (2025) indicated that as the types of platforms advance, the design of platforms and online campaign programs should also be tailored in accordance with specific age groups because each age group has certain preferences in motivation to do good.

Based on the analysis of the development of online prosocial behavior research over time, the first study published as an article about prosocial behavior in the online context was "Prosocial Behavior on the Net," in 2011 (Sproull, 2011). This study is one of the classic studies in social psychology that explored how prosocial behavior develops on the internet, which at that time still used the term "net" to describe the digital space. The role of the internet (net) in expanding access to online prosocial behavior was elaborated, among other things, by the virtual group dynamic theory (McKenna & Green, 2002), which refers to the ways in which interaction, communication, and support develop in online groups.

The increase in research trends since 2018 is thought to be due to advances in the internet and the emergence of various online platforms that support online prosocial behavior and widespread internet access, making it more accessible (Au et al., 2025; Slattery et al., 2021). In addition, there have

been social and behavioral changes in society due to the significant influence of social network sites (SNS) along with the growth of their users. As stated in the research by Son et al. (2016), the significant impact of social media requires the introduction of the online citizenship behavior, a concept known as SNS citizenship behavior, as a foundation and reference to maintain harmony in the digital space. SNS citizenship behavior provides understanding for users of the digital space so that they can use social media more wisely and responsibly, not only limited to oneself but also collectively, one of which is by implementing online prosocial behavior.

As a relatively new topic, the development of sources over time varies considerably based on the publication sources of online prosocial behavior research. The three sources with the most publications are *Frontiers in Psychology*, *Behavior and Information Technology*, and *Computers in Human Behavior*. Based on the year of publication, these three sources have been active since 2015, indicating that opportunities to explore this research topic are wide open. Erreygers et al. (2018a) developed a measurement scale for adolescent online prosocial behavior, meaning that online prosocial behavior now has a valid psychometric instrument that can be used in other cultural contexts. The third most cited article is the relationship between online prosocial behavior and digital citizenship behavior, using the perspective of social capital. Therefore, future research can explore the relationship between online prosocial behavior and other indicators of online citizenship.

Based on the results of thematic mapping, “online prosocial behavior” is a topic that has high relevance and a high level of conceptual development, confirming the position of this construct in the study of social behavior in the digital space. The keywords “adolescents” and “adolescence” are in the basic theme quadrant, indicating that studies of prosocial behavior in the context of adolescents have been conducted extensively, but still require further exploration and development. The keywords “social network” and “social networking” fall into niche themes, meaning that both are specialized themes that are quite developed in the context of online prosocial behavior research, but have not contributed much to this research topic in general. These two themes provide scope for more in-depth follow-up studies in online prosocial behavior research.

An example of this is exploring the role of digital platforms (e.g., social networks) in facilitating online prosocial behavior based on specific age, gender, or cultural characteristics. In the emerging or declining theme quadrant, themes like “reciprocity,” “economics,” “volunteering,” and “COVID-19” appeared. This means that these themes are either new or have declined in relevance in the latest psychological research trends. Upon further examination, the themes of “reciprocity” and “volunteering” have the potential to be explored further in online prosocial behavior, even though these two terms may not yet be directly integrated into the general literature on online prosocial behavior. Additionally, the “COVID-19” context may have been dominant in early 2020 but has begun to diminish due to its relevance in post-pandemic individual online behavior patterns.

#### *Limitations*

The bibliometric method used is not without limitations in measuring the quality of article content and language, or data bias. Another limitation of this study is the use of a single database, namely

Scopus. Although Scopus has advantages in terms of the comprehensiveness and quality of articles, it is possible that there is research on online prosocial behavior that is not included in Scopus.

## Conclusion

This bibliometric analysis provides an overview of the development of research, which also explains how the transformation of the digital world has had a significant impact on Online Prosocial Behavior. This study contributes to the movement of research topic trends that can be further elaborated to gain a broader and deeper understanding of online prosocial behavior in the future. Findings related to the movement of online prosocial behavior studies through mapping the most influential researchers, the most productive affiliations and countries, the most relevant sources, and developing topic trends provide crucial preliminary information and a foundation for developing online prosocial behavior research.

### *Implications*

Despite the limitations described above, this study offers empirical and practical implications. Empirically, this study can be used as a reference by future researchers exploring the phenomenon of online prosocial behavior, particularly in terms of potential research directions for future study. Practically, this study can be used as a reference in the development of digital literacy programs on online prosocial behavior. A social media utilization module containing material on positive relationships and social self-efficacy can be developed to build healthy online communities and a sense of confidence in helping others virtually, especially among adolescents. In addition, the findings of this study also emphasize the importance of international collaboration to strengthen cross-cultural research networks and enrich global understanding of the online prosocial behavior phenomenon.

### *Recommendations*

Online prosocial behavior is a relatively new topic, so researchers need to conduct further research in line with the development of digital technology. The researchers suggest further exploration of online prosocial behavior in the Indonesian context and cross-cultural comparisons. In addition, the researchers recommend using other research methods, such as a mixed quantitative-qualitative approach, to explore the meaning of online prosocial behavior in greater depth. Although this study used the Scopus database as its main source, future researchers need to consider other databases to examine literature diversity.

## Declarations

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#### *Conflict of Interest Statement*

The authors declare no conflicts of interest in the writing of this article.

#### *Statement on the Use of Artificial Intelligence*

The authors declare that no generative AI technology was used in the preparation or writing of this manuscript. All content was produced entirely by the authors without any automated assistance.

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