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POSTTRAUMATIC STRESS AND POSTTRAUMATIC GROWTH: A BIBLIOMETRIC ANALYSIS OF RESEARCH TRENDS

Mohamad Izwan Buang^{1*}, Norshaffika Izzaty Zaiedy Nor², Nor Ba'yah Abd Kadir³

¹Center for Research in Psychology and Human Well-Being, Faculty of Social Science and Humanities, The National University of Malaysia, Bangi, Selangor, Malaysia

 p160994@siswa.ukm.edu.my



<https://orcid.org/0009-0009-6461-5649>

²Center for Research in Psychology and Human Well-Being, Faculty of Social Science and Humanities, The National University of Malaysia, Bangi, Selangor, Malaysia

 shaffika.izzaty@ukm.edu.my



<https://orcid.org/0009-0002-6899-4761>

³Center for Research in Psychology and Human Well-Being, Faculty of Social Science and Humanities, The National University of Malaysia, Bangi, Selangor, Malaysia

 aknbayah@ukm.edu.my



<https://orcid.org/0000-0002-4439-1221>

*Corresponding Author

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Abstract:

The body of literature on posttraumatic stress and Posttraumatic Growth (PTG) has grown significantly within recent decades due to the growing interest of scholars in both negative and positive psychological outcomes of being exposed to traumatic events. With the ever-increasing volume of publications, it has become increasingly challenging to trace changing fashions, identify contributory forces, and chart the development of themes in the field as a whole. In order to overcome this issue, the current research conducts an extensive bibliometric search of international research on posttraumatic stress and PTG. The search strategy employed was an advanced search of the Scopus database, which retrieved 996 relevant documents as of the time the data were extracted. Publication trajectories, document categories, source outlets, authorship characteristics and national productivity, along with citation performance, were assessed with the help of Scopus Analyzer. To increase the reliability of the data, the cleaning, standardization, and harmonization of bibliographic data were supported by OpenRefine, especially when it comes to the identities of the authors, institutional affiliation, and consistency of the keywords. The bibliometric networks were then created by VOSviewer, which allows visualization of international co-authorship networks, source co-citation networks, and keyword co-occurrence networks that display

hegemonic collaborations and intellectual clusters. The results indicate a steadily increasing tendency in production, and the production and cited impact of the United States, the United Kingdom, and China are the main ones. The keywords also reveal that PTG is directly related to trauma, PTSD, resilience, coping, and social support, which indicates an integrative framework between psychological distress and adaptive transformation. In general, this research provides a systematic review of the knowledge architecture that can guide current trauma studies and shape future theoretical and empirical applications.

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Keywords:

Posttraumatic Stress, Posttraumatic Growth, Trauma, Resilience, Trends



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Introduction

Exposure to traumatic events brings about a wide range of psychological reactions that can be disabling, stress to untapped sources of personal development. Posttraumatic Stress Disorder (PTSD) research has traditionally been concerned with debilitating symptoms of trauma, but another significant complementary effect has also been discovered: Posttraumatic Growth (PTG). Collectively, these results indicate that trauma does not necessarily cause dysfunction but can also cause positive psychological change. Initial research tended to focus on the symptoms of PTSD. In contrast, in the near past, research studies have emphasized the duality of trauma responses, in which negative experiences may accompany the transformative changes. This developing question indicates clinical significance and theoretical depth, as the even-handed nature of trauma recovery trajectories can inform more effective interventions and resilience (Cao et al., 2018; Klosky et al., 2014; Zhou & Zhen, 2024).

The simultaneous analysis of PTSD and PTG has enhanced both the theoretical frameworks and the empirical evidence, suggesting that negative events can be the drivers of tremendous development when people are involved in adaptive coping behaviors, cognitive reevaluation, and meaningful social interactions. There are slight variations in measurement and conceptualization, which have caused arguments on whether there is real growth or artificial growth. Additionally, recent studies note that the relationship between the levels of stress and growth is curvilinear, implying that moderate levels of distress may also play a crucial role in cultivating new insights into the self and life priorities. Through comparing the trend evolution of research in PTSD to that of PTG, this paper aims to shed light on common and distinct processes that explain such posttraumatic reactions and, in the process, enhance the integrated approach to trauma healing (McCaslin et al., 2009; Weber & Schulenberg, 2022; Zhou & Zhen, 2024).

Literature Review: The Research Trends

An overview of the literature indicates that both the PTSD and the PTG studies have strong conceptual frameworks. The initial theoretical approaches focused on trauma-related symptoms and their pathological consequences. Meanwhile, later research studies have incorporated cognitive, emotional, and social aspects to describe the dual effects of stress and development. Theories, including the three-phase process model, combine theories of trauma, emotion regulation and social support to explain how intermediate levels of distress can induce PTG by means of intentional rumination and adaptive coping responses. In essence, these models lay emphasis on the need to study both personal mental operations as well as the social environment at large when explaining the response to trauma (Elena Magrin et al., 2007; Gendre et al., 2025; Shuwiekh et al., 2018; Zhou & Zhen, 2024).

The PTSD-PTG nexus is further complicated, as demonstrated by empirical studies. Network analyses have indicated certain clusters of symptoms, including intrusion and avoidance, which are bridges between pathological distress and further growth. On the other hand, longitudinal data suggest that, although the presence of severe symptoms can be predictive, the correlation between the two is usually curvilinear; a moderate amount of PTSD symptoms seems to be the best predictor of transformative cognitive and emotional processing. This subtle connection implies that bad and good things cannot occur in mutual exclusion but will be interwoven as an element of a dynamic recovery process (Elena Magrin et al., 2007; Graziano et al., 2023; Klosky et al., 2014; Schuettler & Boals, 2011; Xie et al., 2024; Yuan et al., 2021).

Recent studies on person-centered approaches have provided a deeper insight into our knowledge through the demonstration of unique PTSD/PTG profiles. Accordingly, the research papers have emphasized that the presence of such factors as social support, personality traits, and cultural context moderates the distress and growth paths. Furthermore, cross-cultural modifications of PTG measurement have attempted to touch the Western prejudices in the conventional conceptualizations and, in doing so, provide more culturally sensitive frameworks. The methodological inventions highlighted such a necessity as the development of refined, context-specific models that would recognize the individual differences in the recovery process of trauma (Kashyap & Hussain, 2018; Splevins et al., 2010; Taku, 2013).

Regardless of progress, there are still major gaps. There is minimal research on the long-term stability of PTG in various types of traumas, and limited research in the literature which has correlated the biological markers with the growth. The possibility of neurobiological and genetic factors to mediate the PTSD/PTG interaction has been proposed by emerging studies, but the interaction of this work with psychological data remains in its infancy. Hence, mixed-method and longitudinal designs will be essential in addressing these gaps to unravel the multiple-layered dynamics of responses to trauma and create specific clinical interventions that are not only preventive of distress but also encourage actual growth (Anders et al., 2015; Glazebrook et al., 2023; Majdandzic & du Plooy, 2025; Sbisa et al., 2023; Schubert et al., 2016).

Aims of the Study

The current research paper will focus on undertaking a complete bibliometric study to investigate the intellectual and scientific situation of the research on posttraumatic stress and PTG. In particular, it aims at conducting the investigation of the trends in annual publications,

the most influential and frequently referred to articles that have shaped the field, and the overall position of the leading countries that have contributed to the literature. Also, this research will identify the most commonly used and most influential keywords that present the main research themes and conceptual focus of the area. Finally, it explores trends in international cooperation using co-authorship network analysis to offer an understanding of global research cooperation that contributes to the development of posttraumatic stress and PTG research.

Methodology

Bibliometric analysis involves the process in which bibliographic data, as the result of scientific publications, are systematically gathered, compiled, and analyzed (Alves et al., 2021; Assyakur & Rosa, 2022; Verbeek et al., 2002). In addition to fundamental descriptive indicators, including the publication sources, publication years, and notable authors (Wu & Wu, 2017), bibliometrics can use advanced analytical tools like document co-citation analysis. The intensive literature review relies on a strict, repetitive process that includes the extensive selection of keywords, an extensive literature search and analytical assessment. The process allows building a vast and trustworthy reference base (Fahimnia et al., 2015). In line with this, the current research has focused on high-impact publications since these documents would provide great information on the theoretical premises that inform the research area. In order to increase the reliability of the data, Scopus was used as the main data extraction database (Al-Khoury et al., 2022; di Stefano et al., 2010; Khiste & Paithankar, 2017). Moreover, to maintain academic rigor, the review was limited to studies published in peer-reviewed journals, deliberately excluding books and lecture notes (Gu et al., 2019). The Scopus database, published by Elsevier, was used, known to have an extensive coverage, to identify relevant publications from 2006 to December 2025, on which the present paper was analyzed.

Data Search Strategy

The bibliometric dataset was compiled based on a formatted, open Scopus advanced search strategy that aimed to retrieve the academic overlap between PTSD and PTG. However, the search strategy was to limit the search to PTSD-related words in the title of the article and PTG-related words in titles, abstracts, and keywords in order to be conceptually relevant and extensive in terms of topics. Restricting the years of publication to 2006 to 2026 created an opportunity to find almost 20 years of research evolution, as the concept of PTG was growing to maturity, and the research on PTSD was already developed. They further filtered by subject areas (Psychology, Social Sciences, and Arts and Humanities) and language (English) to increase the relevance of the disciplines to the analysis and reduce noise produced by irrelevant biomedical or technical literature.

The resulting set was 996 documents, which implies that the dual processes of trauma-related distress and growth are significantly and persistently studied. This collection of works indicates a growing acknowledgement of the fact that traumatic experiences can not only cause psychopathology but also healthy psychological change. Bibliometrically, the data is large enough to conduct powerful studies of trends in publications, influential journals and authors, thematic development, and scholarly networks. In addition, the narrow, albeit interdisciplinary, nature of the search strategy enhances the validity of comparative trend analyses between PTSD and PTG-oriented research. This ultimately offers valuable insights into how the field has progressively shifted from a deficit-focused model toward a more integrative and resilience-informed understanding of trauma outcomes.

Table 1: The Search String

Scientific Abstract and Citation Database	Query Builder
Scopus	(TITLE-ABS-KEY ("posttraumatic stress disorder" OR PTSD OR "post-traumatic stress")) AND TITLE-ABS-KEY (("posttraumatic growth" OR PTG OR "post-traumatic growth")) AND (LIMIT-TO (PUBYEAR , 2006) OR LIMIT-TO (PUBYEAR , 2007) OR LIMIT-TO (PUBYEAR , 2008) OR LIMIT-TO (PUBYEAR , 2009) OR LIMIT-TO (PUBYEAR , 2010) OR LIMIT-TO (PUBYEAR , 2011) OR LIMIT-TO (PUBYEAR , 2012) OR LIMIT-TO (PUBYEAR , 2013) OR LIMIT-TO (PUBYEAR , 2014) OR LIMIT-TO (PUBYEAR , 2015) OR LIMIT-TO (PUBYEAR , 2016) OR LIMIT-TO (PUBYEAR , 2017) OR LIMIT-TO (PUBYEAR , 2018) OR LIMIT-TO (PUBYEAR , 2019) OR LIMIT-TO (PUBYEAR , 2020) OR LIMIT-TO (PUBYEAR , 2021) OR LIMIT-TO (PUBYEAR , 2022) OR LIMIT-TO (PUBYEAR , 2023) OR LIMIT-TO (PUBYEAR , 2024) OR LIMIT-TO (PUBYEAR , 2025) OR LIMIT-TO (PUBYEAR , 2026)) AND (LIMIT-TO (SUBJAREA , "PSYC") OR LIMIT-TO (SUBJAREA , "SOCI") OR LIMIT-TO (SUBJAREA , "ARTS")) AND (LIMIT-TO (LANGUAGE , "English"))

Table 2: The Selection Criterion is Searching

Criterion	Inclusion	Exclusion
Language	English	Non-English
Timeline	2006 - 2026	< 2005
Subject	Psychology, Social Sciences, and Arts and Humanities	Others

Data Analysis

VOSviewer is a simple bibliometric analysis tool created by Nees Jan van Eck and Ludo Waltman of Leiden University, the Netherlands (van Eck & Waltman, 2010, 2017). The software has extensive use in visualizing and analyzing scientific literature, having notably strong capabilities of forming network-based visualizations, grouping similar entities and generating density maps. Moreover, it has an analytical flexibility that allows analyzing the co-authorship, co-citation, and co-occurrence networks of keywords and therefore provides a detailed overview of research structures and intellectual landscapes. The interactive interface, which is accompanied by periodic updates, facilitates effective searching of big bibliometric collections. Furthermore, the ability of VOSviewer to compute bibliometric measures, tailor visual results, and combine data across a variety of bibliographic databases makes it a useful resource among researchers who study sophisticated areas of research.

One of the reasons VOSviewer is an advantageous tool is its ability to transform complex bibliometric data into visual maps that are easy to observe and comprehend. The software allows connecting similar objects by focusing on network visualization, processing trends in

the co-occurrence of keywords, and producing visualizations of density. At the same time, its easy interface eases the analysis of its end-users, both beginners and professionals. Continuous software development makes VOSviewer stay ahead of bibliometric research, delivering meaningful insights due to its sophisticated metrics computation and customizable visualization options. On the same note, the fact that it can be used with a wide range of bibliometric data, such as authorship and citation networks, further strengthens its flexibility and academic applicability.

In the current research, the bibliometric data, which included information on the years of publications, the title of the articles, names of the authors, the journal sources, the number of citations, and the keywords, were extracted through the Scopus database in PlainText format that covered the timeframe between 2006 and December 2025. The data was further analyzed with VOSviewer software version 1.6.19. The software allowed for the systematic generation and analysis of bibliometric maps through the use of VOS-based clustering and mapping techniques. VOSviewer can also be used as an alternative to the Multidimensional Scaling (MDS) methodology, though the focus of the latter is on the position of the items in the low-dimensional space in a way that the distance between the items is useful in determining the level of relatedness and similarity (van Eck & Waltman, 2010). In this respect, VOSviewer has conceptual advantages similar to MDS (Appio et al., 2014). The methodological difference of the former is the use of a more suitable normalization procedure to process co-occurrence information. In particular, VOSviewer uses the association strength (AS_{ij}) (Van Eck & Waltman, 2007), calculated as:

$$AS_{ij} = \frac{c_{ij}}{w_i w_j},$$

in which the strength of the association is proportional to the proportion of the number of times the items i and j co-occurred to the number of co-occurrences expected in case the two items were independent (Van Eck & Waltman, 2007).

Result and Discussion

Annual Publication Trend in Research

The trend of publication 2006-2026 demonstrates a definite growth over a long period of time in research that combines posttraumatic stress and PTG and suggests the growing scholarly significance of analyzing trauma in both deficit and strength-based terms. In particular, the period between 2006 and 2012 was comparatively low and imbalanced in terms of output, and the initial efforts in this field were still going on and were mainly investigative. Since 2013, publications have started increasing steadily as a sign of increased theoretical convergence and increased acceptance of PTG as an adjunct construct to posttraumatic stress. This trend remained positive post-2016, when the resilience, meaning-making, and positive psychological outcomes after trauma gained growing popularity across clinical and health psychology.

Following this, it is observed that a steep increase is witnessed between 2019 and 2022, reaching its peak of 106 publications in 2022. This spike is probably due to the heightened interest of the global community in trauma-related studies during and after the COVID-19 pandemic, as well as the high-level interest in healthcare personnel, shared trauma, and adjusting psychological mechanisms. In spite of publication numbers slightly declining after

2022, they remained consistently high through 2025, indicating sustained research momentum rather than a temporary spike. Thus, the significantly low number in 2026 can be best described as an indexing artefact, as opposed to an actual decline. On the whole, the tendency indicates that studies on posttraumatic stress and PTG have entered the niche and are becoming a mature and dynamic field with enduring scholarly interest.

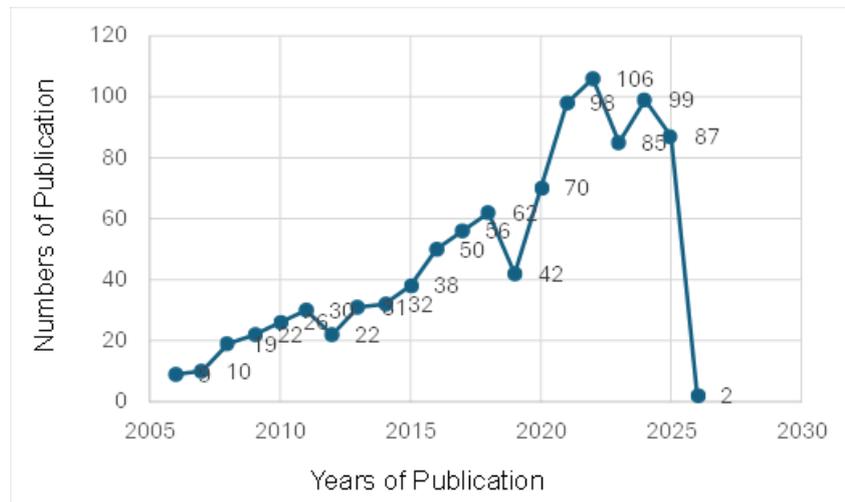


Figure 1: Trend of research in Posttraumatic Stress and Posttraumatic Growth by Years

Influential Articles in PTS-PTG Research via Citation Analysis

The 10 most-referenced articles indicate that the theoretical development and refinement of measurement are a very strong influence on the intellectual basis of research on posttraumatic stress and PTG, especially in the mid-2000s. The list was dominated by seminal works published in 2006, hence highlighting the year as a pivotal point in the conceptualization of PTG. Among others, the article by Zoellner and Maercker (Zoellner & Maercker, 2006), which developed a two-component model of PTG, is the most influential, with more than 1,000 references, and was the prime contributor to future theoretical discussions. In the same manner, by providing groundwork for growth in clinical practice, resilience, and systemic recovery, Joseph and Linley (Joseph & Linley, 2006) and Walsh (Walsh, 2007) aligned with the field by presenting the initial integration of positive adaptation into the trauma models.

In addition to theory-building, the most referenced empirical and methodological studies indicate a long-time interest of the scholarly community in establishing PTG as a valid and meaningful construct to measure. The significance of psychometric rigor in the development of the field is illustrated in articles relating to assessment instruments, including the Event Related Rumination Inventory (Cann et al., 2011) and PTG Inventory revision and factor analyses (Tedeschi et al., 2017);(Taku et al., 2008). In the meantime, meta-analytic and critical reviews of the PTG-posttraumatic stress symptom association (e.g., (Shakespeare-Finch & Lurie, 2014); (Frazier et al., 2009)) demonstrate that there are ongoing attempts to demystify conceptual ambiguities and respond positively to the question of skepticism about the validity of reported growth. Taken together, these highly referenced articles demonstrate that the study of posttraumatic stress and PTG has been achieved through a balance of theoretical consolidation, methodological validation, and critical evaluation, which has made the field mature and has had a lasting influence on it.

Table 3: Top 10 Most Cited Articles on Posttraumatic Stress and Growth

Authors (Year)	Title	Source title	Cited by
Tedeschi et al. (2017)	The Posttraumatic Growth Inventory: A Revision Integrating Existential and Spiritual Change	Journal of Traumatic Stress	278
Shakespeare-Finch & Lurie. (2014)	A meta-analytic clarification of the relationship between posttraumatic growth and symptoms of posttraumatic distress disorder	Journal of Anxiety Disorders	447
Cann et al. (2011)	Assessing posttraumatic cognitive processes: The event related rumination inventory	Anxiety, Stress and Coping	487
Frazier et al. (2009)	Does self-reported posttraumatic growth reflect genuine positive change?	Psychological Science	393
Taku et al. (2008)	The factor structure of the posttraumatic growth inventory: A comparison of five models using confirmatory factor analysis	Journal of Traumatic Stress	273
Walsh (2007)	Traumatic loss and major disasters: Strengthening family and community resilience	Family Process	494
Joseph & Linley (2006)	Growth following adversity: Theoretical perspectives and implications for clinical practice	Clinical Psychology Review	390
Zoellner & Maercker (2006)	Posttraumatic growth in clinical psychology - A critical review and introduction of a two component model	Clinical Psychology Review	1003
Barakat et al. (2006)	Posttraumatic growth in adolescent survivors of cancer and their mothers and fathers	Journal of Pediatric Psychology	387
Bellizzi & Blank (2006)	Predicting posttraumatic growth in breast cancer survivors	Health Psychology	305

Leading Countries in PTS-PTG Publication Output

The United States is the dominant country in terms of publications, and it is at the forefront by a huge margin, with a contribution of 422 publications. This eminence is a manifestation of the robust history of trauma studies in United States psychology and psychiatry, which features long-established research centers, funding systems, and initial theoretical studies in posttraumatic development. In the next rank, after the United States, come China, the United Kingdom, and Israel, signifying that research on posttraumatic stress and PTG has achieved significant worldwide momentum. It is especially interesting to note the high work of Israel, which is probably the result of a long-term academic interest in trauma-related experiences in the conditions of constant confrontation and communal stress.

In addition to the major contributors, a second tier of contributors, including Australia, Turkey, Canada, Germany, Spain, and Italy, indicates how the field of research is becoming increasingly global. Notably, the existence of Western and non-Western nations implies the development of

cross-cultural interest in studying relations between trauma and growth processes in various sociocultural and clinical settings. Nevertheless, the rapid decline in the number of publications following the leading countries also suggests that the world presents an unequal distribution of research output, with little coverage of those areas, which are low- and middle-income. Such an imbalance indicates the necessity of more extensive international cooperation and more comprehensive research to reflect culturally varied views on posttraumatic stress and PTG.

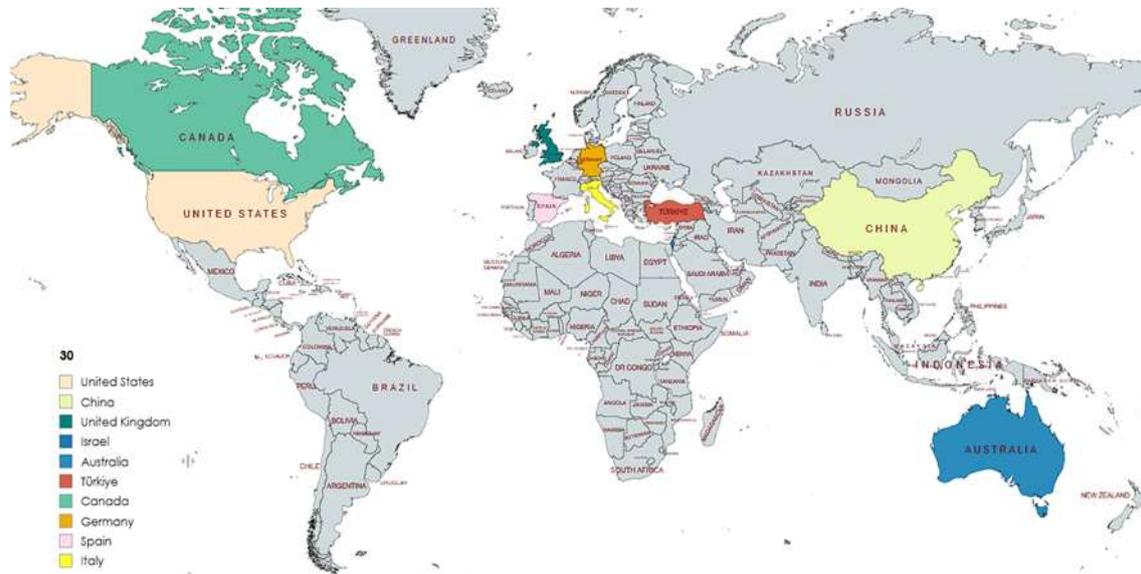


Figure 2: Leading Countries in PTS-PTG Publication Output

Core Keywords and Themes in PTS-PTG Research

Concept of Co-Occurrence by Keywords in VOSviewer

The co-occurrence by keywords in VOSviewer is a bibliometric approach that is employed to analyze the frequency of co-occurrence of certain keywords among the same group of publications. The general assumption is that two keywords with a high frequency of co-occurrence are conceptually or thematically related. VOSviewer represents such relationships in a network diagram, where nodes are keywords, the size of nodes corresponds to the number of instances, and links are used to highlight co-occurrences between keywords. These links (total link strength) indicate the level of connectedness of a keyword to others in the dataset, enabling the researcher to determine the prevalent themes in the research, the main concepts of the research, and the intellectual organization of a field, in this case, research on PTG, trauma, and the psychological constructs involved.

Settings Used to Generate the Map

The network diagram was created using the full-counting technique, which implies that each instance of a pair of keys found in a document is equally counted, irrespective of the number of additional keys present in the same document. The number used was five occurrences, so only keywords that appear five or more times in the dataset were included to increase interpretability by eliminating marginal or idiosyncratic terms. Among 1,308 overall keywords, 133 keywords passed this criterion, a very small number of keywords that can be considered a densely concentrated core of common topics. The keywords with high frequency, including

knowledge production, the way in which international cooperation is organized, and the degree to which the study of a domain is interconnected in the world.

Settings Used to Generate The Map

A co-authorship network was constructed using full counting, which implies that any country involved in a multi-country publication receives all the credit for the document and its collaborative links. The minimum number of five documents per country was used as the requirement to guarantee analytical strength and to target countries with consistently active research and manufacturing. Consequently, 32 nations were included in a total of 75 in the first place, meaning that not half of the contributing nations went above the productivity level. This environment eliminates randomizers and puts the main clusters of states that actively publish and cooperate in this field of research into focus. This, in turn, results in a more manageable understanding of the pattern of collaboration and impact on citation.

Contribution of the Findings to the Body of Knowledge

The results indicate that the United States is the leader in productivity (424 documents), impact of citation (16,756 citations), and the intensity of collaboration (total link strength = 131), making it the global center of research and worldwide cooperation. Strong research performance and a significant network of collaboration are also observed in other major influential nations like the United Kingdom, China, Germany, Australia, and Israel. This indicates a North American, European and part of Asian concentration of expertise. Following this, the significance of collaboration rather than sheer volume is emphasized in countries with fewer documents but of significant strength of link (e.g., Portugal, Germany, Australia). Altogether, this study of co-authorship helps fill the knowledge gap by illustrating the international pattern of scientific collaboration, defines the main and future-oriented contributors, and highlights the influence of international cooperation on the knowledge sharing and research influence of the discipline.

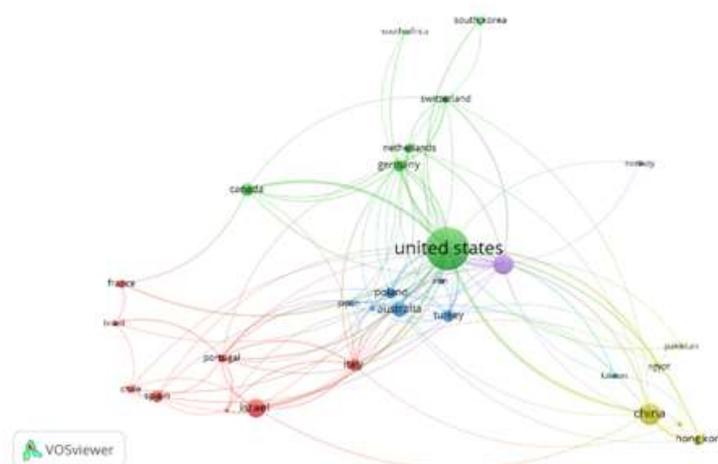


Figure 4: Country Co-authorship Network in PTS-PTG Research

Conclusion

The objective of the current article was to map and synthesize the intellectual structure of the body of literature regarding the research on posttraumatic stress and PTG using a systematic bibliometric review. In particular, it aimed at investigating the patterns of publications, articles and countries with the most data, the key research topics based on co-occurrence of keywords, and the findings of collaboration among countries. Thus, by uncovering responses to these research questions, this paper will make a systematic review of the time-evolving approaches toward the dual outcomes of trauma, psychological distress and positive transformation attainable.

The results reveal a definite and consistent increase in publications since 2006, with a significant increase after 2016, and the highest point is around 2022, indicating increased interest in the world in research on trauma. This is especially evident during and after the COVID-19 pandemic. Moreover, the analysis of citations indicates that theoretical and methodological background texts published in the mid-2000s, as a means of influence, remain strong, and the relevance of initial conceptualizations and measurement models of PTG is demonstrated. Specifically, the United States was the most productive, impacted the most in citations, and had the strongest collaboration at the country level, followed by the United Kingdom, China, Israel, and some European and Asia-Pacific countries. In line with this, keywords co-occurrence analysis suggests that PTG is at the center of the research network and is inextricably connected with PTSD, resilience, coping, social support, and meaning making, which indicates an integrative and more balanced view of the results of traumas.

This paper makes a contribution to the discipline by providing a macro-level synthesis of research trends which elucidate the co-conceptualization and study of posttraumatic stress and PTG in terms of disciplines, populations, and settings. Accordingly, it combines productivity, impact, thematic, and collaboration analysis to expand existing narrative reviews and empirical studies with an overview of the field structure and development, which is data-driven. The research results also possess practical implications for researchers and practitioners, as the value of interdisciplinary collaboration, longitudinal designs, and interventions to reduce distress and promote growth in populations exposed to trauma is noted.

This study has weaknesses despite its contributions. The English-language articles in Scopus were analyzed, which may have led to the omission of relevant research in other databases or in non-English settings. Similarly, bibliometric techniques are sensitive to patterns of publication and citation rather than the substantive quality of results. In response, future studies might use multiple databases, employ a longitudinal bibliometric method to monitor changes in themes over time, and use qualitative or mixed-methods to enhance the interpretation of differences in how PTG and stress are experienced across cultures. All in all, this bibliometric analysis provides an excellent basis for advancing theory, research, and practice in the field of trauma and psychological adaptation.

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References

- Al-Khoury, A., Hussein, S. A., Abdulwhab, M., Aljuboori, Z. M., Haddad, H., Ali, M. A., Abed, I. A., & Flayyih, H. H. (2022). Intellectual Capital History and Trends: A Bibliometric Analysis Using Scopus Database. *Sustainability (Switzerland)*, *14*(18). <https://doi.org/10.3390/su141811615>
- Alves, J. L., Borges, I. B., & De Nadae, J. (2021). Sustainability in complex projects of civil construction: Bibliometric and bibliographic review. *Gestao e Producao*, *28*(4). <https://doi.org/10.1590/1806-9649-2020v28e5389>
- Anders, S. L., Peterson, C. K., James, L. M., Engdahl, B., Leuthold, A. C., & Georgopoulos, A. P. (2015). Neural communication in posttraumatic growth. *Experimental Brain Research*, *233*(7), 2013–2020. <https://doi.org/10.1007/s00221-015-4272-2>
- Appio, F. P., Cesaroni, F., & Di Minin, A. (2014). Visualizing the structure and bridges of the intellectual property management and strategy literature: a document co-citation analysis. *Scientometrics*, *101*(1), 623–661. <https://doi.org/10.1007/s11192-014-1329-0>
- Assyakur, D. S., & Rosa, E. M. (2022). Spiritual Leadership in Healthcare: A Bibliometric Analysis. *Jurnal Aisyah : Jurnal Ilmu Kesehatan*, *7*(2). <https://doi.org/10.30604/jika.v7i2.914>
- Barakat, L. P., Alderfer, M. A., & Kazak, A. E. (2006). Posttraumatic growth in adolescent survivors of cancer and their mothers and fathers. *Journal of Pediatric Psychology*, *31*(4), 413–419. <https://doi.org/10.1093/jpepsy/jsj058>
- Bellizzi, K. M., & Blank, T. O. (2006). Predicting posttraumatic growth in breast cancer survivors. *Health Psychology*, *25*(1), 47–56. <https://doi.org/10.1037/0278-6133.25.1.47>
- Cann, A., Calhoun, L. G., Tedeschi, R. G., Triplett, K. N., Vishnevsky, T., & Lindstrom, C. M. (2011). Assessing posttraumatic cognitive processes: The event related rumination inventory. *Anxiety, Stress and Coping*, *24*(2), 137–156. <https://doi.org/10.1080/10615806.2010.529901>
- Cao, C., Wang, L., Wu, J., Li, G., Fang, R., Cao, X., Liu, P., Luo, S., Hall, B. J., & Elhai, J. D. (2018). Patterns of posttraumatic stress disorder symptoms and posttraumatic growth in an epidemiological sample of Chinese earthquake survivors: A latent profile analysis. *Frontiers in Psychology*, *9*(AUG). <https://doi.org/10.3389/fpsyg.2018.01549>
- di Stefano, G., Peteraf, M., & Veronay, G. (2010). Dynamic capabilities deconstructed: A bibliographic investigation into the origins, development, and future directions of the research domain. *Industrial and Corporate Change*, *19*(4), 1187–1204. <https://doi.org/10.1093/icc/dtq027>
- Elena Magrin, M., Scignaro, M., & Steca, P. (2007). Challenge through adversity: Threat or growth transitions? *Psicologia della Salute*, *2007*(1), 11–32. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85013430084&partnerID=40&md5=ecfb7dbdc9414b95488fb263b29c1aad>
- Fahimnia, B., Sarkis, J., & Davarzani, H. (2015). Green supply chain management: A review and bibliometric analysis. In *International Journal of Production Economics* (Vol. 162, pp. 101–114). <https://doi.org/10.1016/j.ijpe.2015.01.003>
- Frazier, P., Tennen, H., Gavian, M., Park, C., Tomich, P., & Tashiro, T. (2009). Does self-reported posttraumatic growth reflect genuine positive change? *Psychological Science*, *20*(7), 912–919. <https://doi.org/10.1111/j.1467-9280.2009.02381.x>
- Gendre, E., Soubelet, A., & Callahan, S. (2025). Trajectories of posttraumatic growth identified from person-centered analyses: A systematic review. *European Journal of Trauma and Dissociation*, *9*(1). <https://doi.org/10.1016/j.ejtd.2024.100485>

- Glazebrook, A. J., Shakespeare-Finch, J., Andrew, B., & van der Meer, J. (2023). Posttraumatic growth EEG neuromarkers: translational neural comparisons with resilience and PTSD in trauma-exposed healthy adults. *European Journal of Psychotraumatology*, 14(2). <https://doi.org/10.1080/20008066.2023.2272477>
- Graziano, R. C., Brown, W. J., Strasshofer, D. R., Yetter, M. A., Berfield, J. B., Haven, S. E., & Bruce, S. E. (2023). Posttraumatic stress symptoms, posttraumatic growth, and personality factors: A network analysis. *Journal of Affective Disorders*, 338, 207–219. <https://doi.org/10.1016/j.jad.2023.06.011>
- Gu, D., Li, T., Wang, X., Yang, X., & Yu, Z. (2019). Visualizing the intellectual structure and evolution of electronic health and telemedicine research. *International Journal of Medical Informatics*, 130. <https://doi.org/10.1016/j.ijmedinf.2019.08.007>
- Joseph, S., & Linley, P. A. (2006). Growth following adversity: Theoretical perspectives and implications for clinical practice. *Clinical Psychology Review*, 26(8), 1041–1053. <https://doi.org/10.1016/j.cpr.2005.12.006>
- Kashyap, S., & Hussain, D. (2018). Cross-Cultural Challenges to the Construct “Posttraumatic Growth.” *Journal of Loss and Trauma*, 23(1), 51–69. <https://doi.org/10.1080/15325024.2017.1422234>
- Khiste, G. P., & Paithankar, R. R. (2017). Analysis of Bibliometric term in Scopus. *International Research Journal*, 01(32), 78–83.
- Klosky, J. L., Krull, K. R., Kawashima, T., Leisenring, W., Randolph, M. E., Zebrack, B., Stuber, M. L., Robison, L. L., & Phipps, S. (2014). Relations between posttraumatic stress and posttraumatic growth in long-term survivors of childhood cancer: A report from the childhood cancer survivor study. *Health Psychology*, 33(8), 878–882. <https://doi.org/10.1037/hea0000076>
- Majdandzic, N., & du Plooy, D. R. (2025). Posttraumatic Growth, Coping, and Distress: A Systematic Review of Longitudinal Studies. *Journal of Loss and Trauma*, 30(8), 1170–1188. <https://doi.org/10.1080/15325024.2025.2487483>
- McCaslin, S. E., De Zoysa, P., Butler, L. D., Hart, S., Marmar, C. R., Metzler, T. J., & Koopman, C. (2009). The relationship of posttraumatic growth to peritraumatic reactions and posttraumatic stress symptoms among Sri Lankan University students. *Journal of Traumatic Stress*, 22(4), 334–339. <https://doi.org/10.1002/jts.20426>
- Sbisa, A. M., Madden, K., Toben, C., McFarlane, A. C., Dell, L., & Lawrence-Wood, E. (2023). Potential peripheral biomarkers associated with the emergence and presence of posttraumatic stress disorder symptomatology: A systematic review. *Psychoneuroendocrinology*, 147. <https://doi.org/10.1016/j.psyneuen.2022.105954>
- Schubert, C. F., Schmidt, U., & Rosner, R. (2016). Posttraumatic Growth in Populations with Posttraumatic Stress Disorder—A Systematic Review on Growth-Related Psychological Constructs and Biological Variables. *Clinical Psychology and Psychotherapy*, 23(6), 469–486. <https://doi.org/10.1002/cpp.1985>
- Schuettler, D., & Boals, A. (2011). The path to posttraumatic growth versus posttraumatic stress disorder: Contributions of event centrality and coping. *Journal of Loss and Trauma*, 16(2), 180–194. <https://doi.org/10.1080/15325024.2010.519273>
- Shakespeare-Finch, J., & Lurie, J. (2014). A meta-analytic clarification of the relationship between posttraumatic growth and symptoms of posttraumatic distress disorder. *Journal of Anxiety Disorders*, 28(2), 223–229. <https://doi.org/10.1016/j.janxdis.2013.10.005>
- Shuwiekh, H., Kira, I. A., & Ashby, J. S. (2018). What are the personality and trauma dynamics that contribute to posttraumatic growth? *International Journal of Stress Management*, 25(2), 181–194. <https://doi.org/10.1037/str0000054>

- Splevins, K., Cohen, K., Bowley, J., & Joseph, S. (2010). Theories of Posttraumatic Growth: Cross-Cultural Perspectives. *Journal of Loss and Trauma, 15*(3), 259–277. <https://doi.org/10.1080/15325020903382111>
- Taku, K. (2013). Posttraumatic growth in American and Japanese men: Comparing levels of growth and perceptions of indicators of growth. *Psychology of Men and Masculinity, 14*(4), 423–432. <https://doi.org/10.1037/a0029582>
- Taku, K., Cann, A., Calhoun, L. G., & Tedeschi, R. G. (2008). The factor structure of the posttraumatic growth inventory: A comparison of five models using confirmatory factor analysis. *Journal of Traumatic Stress, 21*(2), 158–164. <https://doi.org/10.1002/jts.20305>
- Tedeschi, R. G., Cann, A., Taku, K., Senol-Durak, E., & Calhoun, L. G. (2017). The Posttraumatic Growth Inventory: A Revision Integrating Existential and Spiritual Change. *Journal of Traumatic Stress, 30*(1), 11–18. <https://doi.org/10.1002/jts.22155>
- van Eck, N. J., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics, 84*(2), 523–538. <https://doi.org/10.1007/s11192-009-0146-3>
- van Eck, N. J., & Waltman, L. (2017). Citation-based clustering of publications using CitNetExplorer and VOSviewer. *Scientometrics, 111*(2), 1053–1070. <https://doi.org/10.1007/s11192-017-2300-7>
- Van Eck, N. J., & Waltman, L. (2007). Bibliometric mapping of the computational intelligence field. *International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems, 15*(5), 625–645. <https://doi.org/10.1142/S0218488507004911>
- Verbeek, A., Debackere, K., Luwel, M., & Zimmermann, E. (2002). Measuring progress and evolution in science and technology - I: The multiple uses of bibliometric indicators. *International Journal of Management Reviews, 4*(2), 179–211. <https://doi.org/10.1111/1468-2370.00083>
- Walsh, F. (2007). Traumatic loss and major disasters: Strengthening family and community resilience. *Family Process, 46*(2), 207–227. <https://doi.org/10.1111/j.1545-5300.2007.00205.x>
- Weber, M. C., & Schulenberg, S. E. (2022). The Curvilinear Relationships Between Posttraumatic Growth and Posttraumatic Stress, Depression, and Anxiety. *Traumatology, 29*(2), 249–260. <https://doi.org/10.1037/trm0000398>
- Wu, Y. C. J., & Wu, T. (2017). A decade of entrepreneurship education in the Asia Pacific for future directions in theory and practice. In *Management Decision* (Vol. 55, Issue 7, pp. 1333–1350). <https://doi.org/10.1108/MD-05-2017-0518>
- Xie, T., Huang, J., Liu, X., & Xu, W. (2024). Posttraumatic Stress Symptoms and Posttraumatic Growth in Chinese Adolescents After Tornado: Cross-Lagged Panel Network Analysis. *Psychological Trauma: Theory, Research, Practice, and Policy, 16*(6), 1010–1018. <https://doi.org/10.1037/tra0001531>
- Yuan, G., Park, C. L., Birkeland, S. R., Yip, P. S. Y., & Hall, B. J. (2021). A Network Analysis of the Associations Between Posttraumatic Stress Symptoms and Posttraumatic Growth Among Disaster-Exposed Chinese Young Adults. *Journal of Traumatic Stress, 34*(4), 786–798. <https://doi.org/10.1002/jts.22673>
- Zhou, X., & Zhen, R. (2024). A Three-Phase Process Model of Posttraumatic Stress Disorder and Growth: Understanding the Mechanisms Underlying Posttraumatic Reactions. *Psychological Trauma: Theory, Research, Practice, and Policy, 16*(6), 1033–1043. <https://doi.org/10.1037/tra0001666>

Zoellner, T., & Maercker, A. (2006). Posttraumatic growth in clinical psychology - A critical review and introduction of a two component model. *Clinical Psychology Review*, 26(5), 626–653. <https://doi.org/10.1016/j.cpr.2006.01.008>