Research Hotspots and Emerging Trends in Physical Aggression and PTSD: A Bibliometric Study

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Abstract

Physical aggression and post-traumatic stress disorder (PTSD) represent a critical intersection in psychological research, given their profound implications for mental health, interpersonal functioning, and social well-being. As the volume of research addressing trauma-related aggression has expanded substantially, a systematic synthesis of the field's intellectual structure has become increasingly necessary. The present study provides a comprehensive bibliometric analysis of English-language psychological research on physical aggression and PTSD published between 2000 and 2025. Using data retrieved from the Scopus database (n = 221 articles) and analyzed with Bibliometrix and VOSviewer, this study examines publication trends, influential journals, authors, and institutions, as well as conceptual patterns through keyword co-occurrence networks and Multiple Correspondence Analysis (MCA). Results reveal a marked growth in scientific output over the past decade, alongside a strong concentration in clinical psychology and trauma-focused journals. Conceptual mapping identifies PTSD as a central transdiagnostic hub linking interpersonal violence, aggression, emotional dysregulation, and broader mental health outcomes. The MCA highlights a unified trauma–violence–psychopathology framework, while also indicating that aggression and veteran-related contexts remain peripheral to dominant diagnostic paradigms. Overall, the findings underscore a paradigm shift toward integrative, process-oriented, and trauma-informed models, while pointing to the need for developmentally sensitive and cross-cultural research to better explain the emergence of physical aggression in the context of PTSD.

Keywords: post-traumatic stress disorder, physical aggression, violence, trauma, emotion regulation, bibliometric analysis

Introduction

Physical aggression and Post-Traumatic Stress Disorder (PTSD) remain key areas of focus in psychological research, given their significant impact on mental health, social relationships, and long-term well-being. PTSD is classified as a trauma-related disorder that can develop after experiencing or witnessing life-threatening or violent events. It is commonly linked to emotional dysregulation, heightened irritability, and aggressive behavior (American Psychiatric Association, 2013). Studies have shown that physical aggression can act both as a risk factor for trauma exposure and as a behavioral outcome of unresolved traumatic stress (Elbogen et al., 2014).

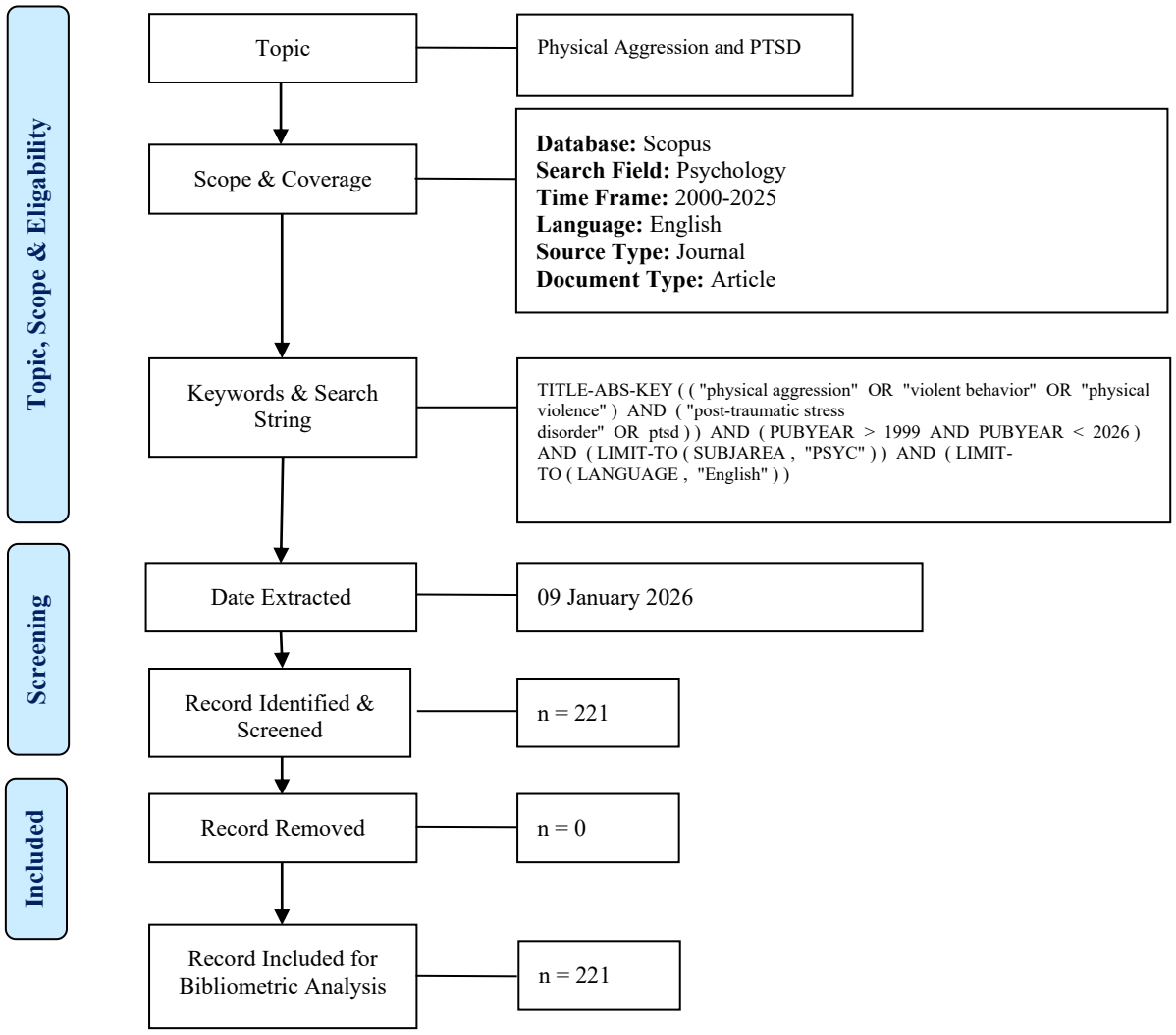
Over the past two decades, researchers have increasingly explored the underlying mechanisms that connect PTSD and physical aggression, including difficulties with emotional regulation, hyperarousal, impulsivity, and the role of social and environmental contexts (Miles et al., 2015; Orth & Wieland, 2006). This expanding body of work spans several branches of psychology—clinical, forensic, and social—highlighting the complex and multidimensional nature of trauma and aggression.

Yet, with the rapid growth in publications, gaining a clear understanding of the field's intellectual structure, major themes, and emerging directions has become more challenging. Bibliometric analysis offers a systematic, quantitative approach for navigating this complexity by examining publication patterns, citation dynamics, and keyword networks (Donthu et al., 2021). These tools help pinpoint influential studies, track evolving trends, and highlight key areas of focus within the literature.

In this context, the present study aims to provide a comprehensive bibliometric review of English-language psychological research on physical aggression and PTSD from 2000 to 2025. Specifically, it seeks to (1) analyze patterns in publication and citation activity, (2) identify leading journals, authors, and institutions, and (3) uncover research hotspots and thematic developments shaping the field.

Methods

Figure 1
Adapted from Zakaria et al. (2020)



Results

Figure 2
Annual Scientific Production

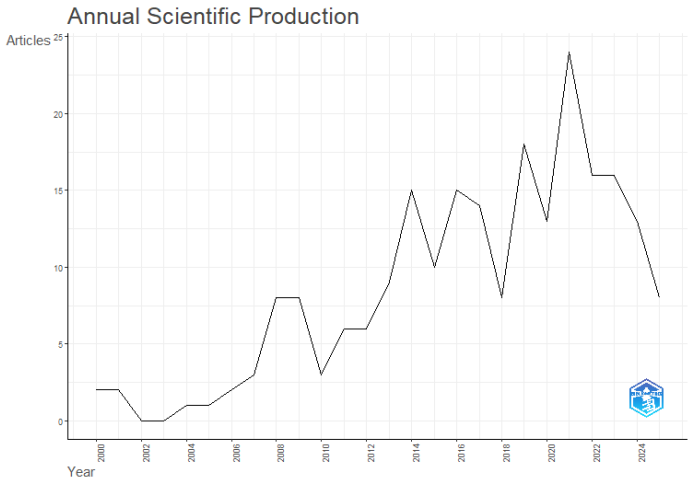


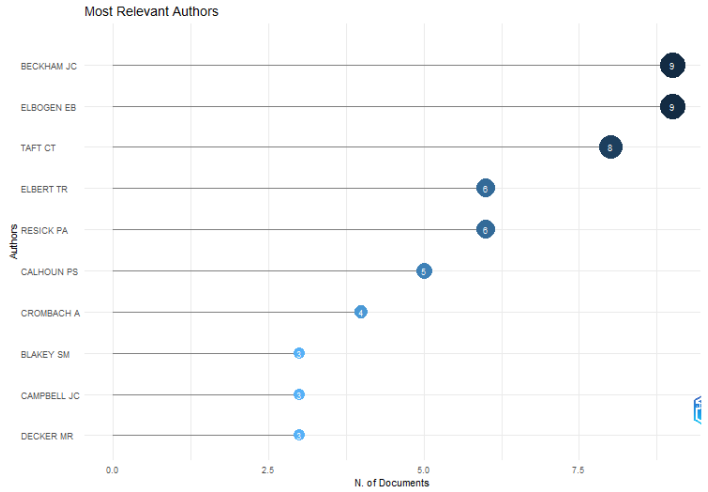
Figure 2 illustrates the annual growth of scientific publications exploring the link between physical aggression and Post-Traumatic Stress Disorder (PTSD) from 2000 to 2025. Research output was relatively modest in the early 2000s but has shown a steady rise over time, with a notable acceleration in the past decade. This upward trend signals increasing academic interest in the complex interplay between trauma exposure and aggressive behavior. From a psychological standpoint, this growth aligns with a broader shift in how PTSD is conceptualized—moving beyond a purely internalizing disorder to one that includes significant externalizing symptoms such as irritability, impulsivity, and physical aggression. The recent surge in publications may also reflect heightened global exposure to collective traumatic events, including armed conflicts, terrorism, forced displacement, and interpersonal violence. These developments have intensified the urgency of understanding trauma-related aggression not only within clinical settings but also in broader social and public health contexts. Overall, the publication trajectory underscores a field responding to evolving global challenges and expanding conceptual models of trauma.

Figure 3

Most Relevant Sources

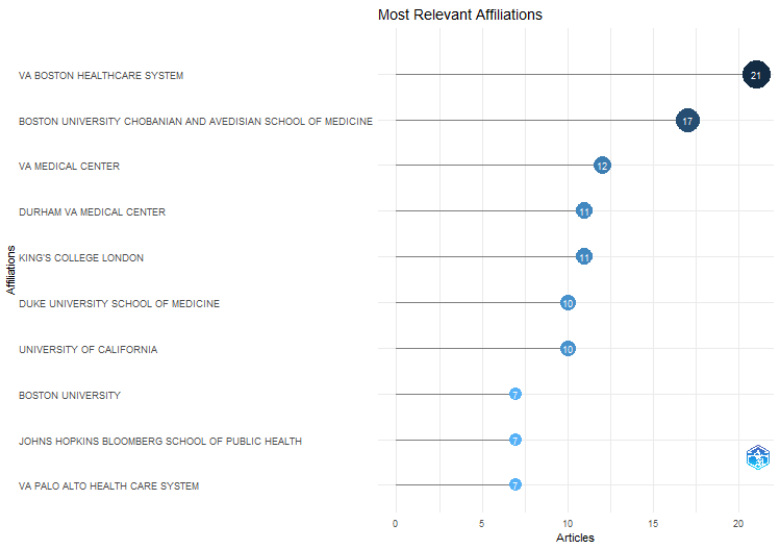
The above figure highlights the most influential academic journals contributing to research on physical aggression and PTSD. The predominance of journals in clinical psychology, trauma studies, psychiatry, and behavioral sciences suggests that this field is largely grounded in applied psychological and clinical perspectives. From a psychological lens, this concentration implies that aggression related to PTSD is primarily viewed as a clinical issue—one that necessitates careful diagnosis and targeted therapeutic intervention. The strong presence of trauma-specific journals further emphasizes the value of integrative frameworks that address psychopathology, emotional regulation, and behavioral control. This publishing pattern reflects the pivotal role of psychological science in shaping evidence-based strategies designed to reduce aggression and enhance emotional functioning in individuals affected by trauma.

Figure 4
Most Relevant Authors



The analysis identifies the most prolific authors in the area of physical aggression and PTSD. The repeated appearance of certain researchers points to the emergence of a core group of experts who have consistently shaped both the theoretical and empirical landscape of this field. From a psychological standpoint, their work reflects the development of specialized research paths centered on key mechanisms such as emotional dysregulation, hyperarousal, anger, and impulsivity. These scholars have been instrumental in reframing aggression—not merely as a behavioral symptom, but as a trauma-related coping strategy rooted in disrupted affect regulation and maladaptive stress responses. Their continued contributions signal the field's growing maturity and the solidification of trauma-informed frameworks for understanding and addressing aggression in the context of PTSD.

Figure 5
Most Relevant Affiliations

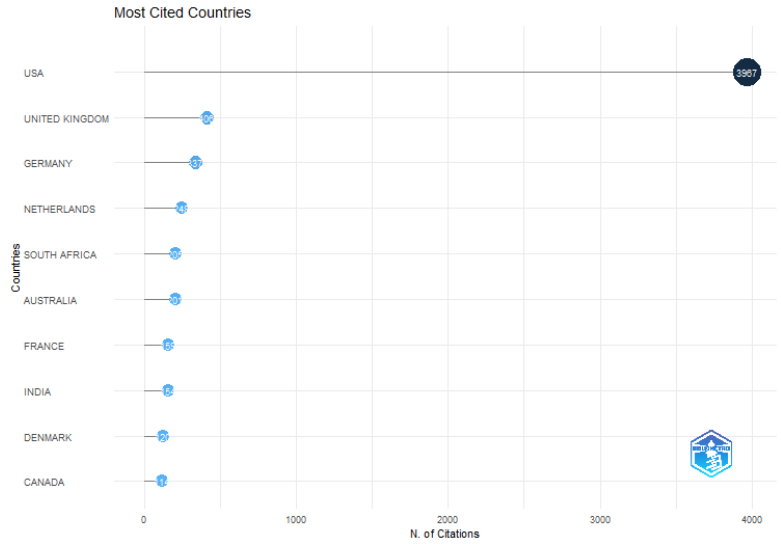


The analysis highlights the most productive institutional affiliations in this area of research, showing a strong presence of universities and research centers with expertise in psychology, psychiatry, and behavioral health. This distribution reflects how the study of trauma and aggression has become firmly embedded within academic and clinical institutions. From a psychological viewpoint, the prominence of these affiliations indicates that research

on PTSD-related aggression is closely tied to clinical training, therapeutic practice, and applied mental health services. Many of these institutions support multidisciplinary teams, enabling a more integrated approach to understanding trauma through cognitive, emotional, and behavioral lenses.

Figure 6

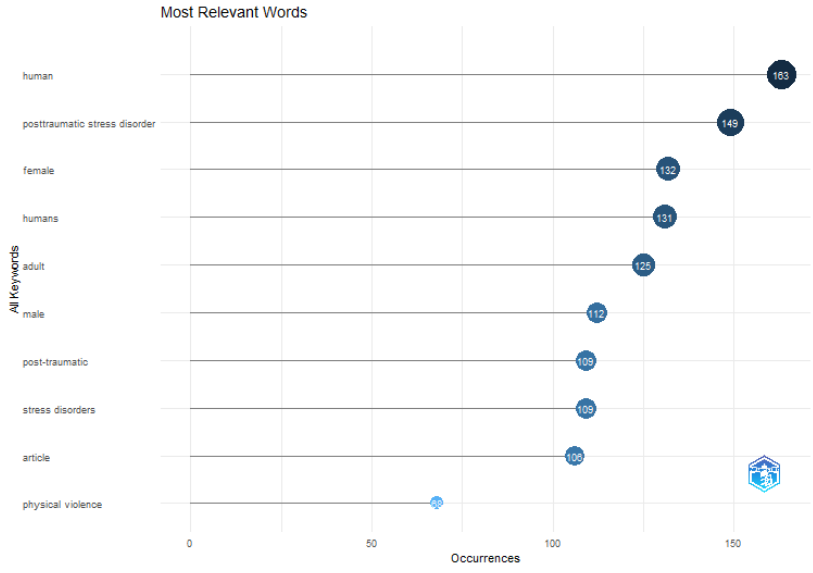
Most Cited Countries



The analysis displays the countries with the highest citation impact in research on physical aggression and PTSD. The leading positions of nations like the United States and several European countries reflect the influence of well-established mental health research infrastructures and greater access to trauma-focused funding. From a psychological perspective, these patterns may also relate to higher rates of trauma exposure in these regions—linked to military engagement, community violence, and large-scale crises. The strong citation impact indicates that theoretical models and clinical practices developed in these contexts have played a central role in shaping global perspectives on PTSD-related aggression.

Figure 7

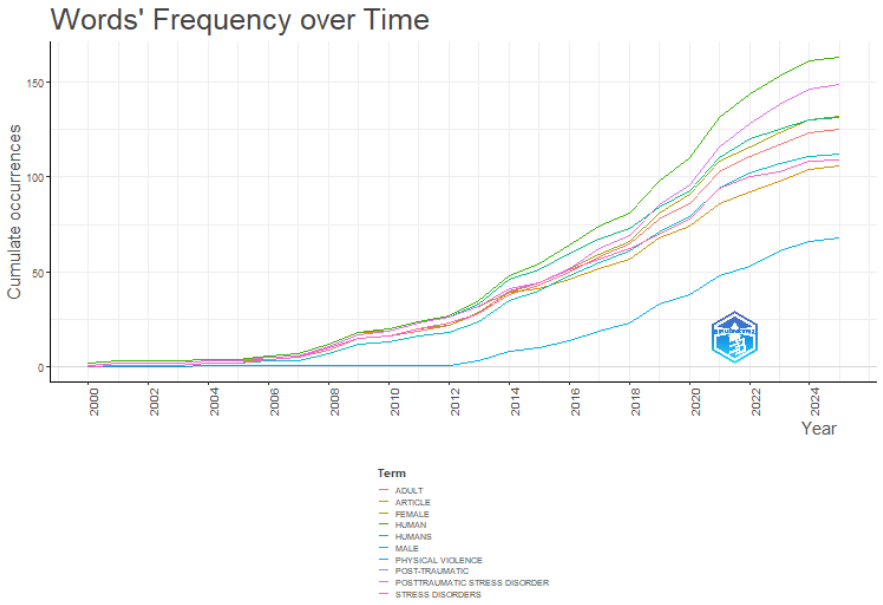
Most Relevant Words



The analysis of the data showed in the figure 7 presents the most frequently occurring keywords in the dataset, offering insight into the conceptual backbone of the research field. Prominent terms like PTSD, aggression, violence, anger, and emotion regulation point to a strong emphasis on emotional and behavioral dysregulation. From a psychological standpoint, this pattern reinforces the view that aggression is studied within the broader context of trauma-related dysregulation. The repeated appearance of emotion-focused keywords underscores the pivotal role of affective processes in understanding how exposure to traumatic stress can contribute to aggressive responses and difficulties with emotional control.

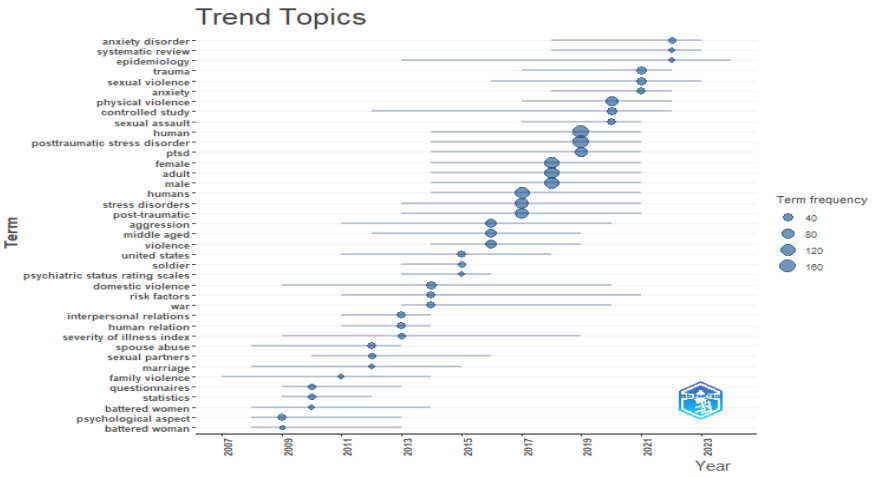
Figure 8

Words Frequency Over Time



The analysis illustrates how key terms have evolved over time throughout the study period. Earlier research tended to focus on diagnostic categories and symptom descriptions, while more recent studies emphasize underlying mechanisms such as emotion regulation, impulsivity, and coping strategies. This shift marks a meaningful psychological progression—from descriptive accounts of psychopathology to process-based models. Current research aims to understand the pathways linking PTSD and aggression, moving beyond surface-level associations and aligning with modern, transdiagnostic, and dimensional frameworks that emphasize underlying processes across psychological conditions.

Figure 9
Trend Topics



The analysis identifies both emerging and declining research topics over time. The growing prominence of themes such as emotion regulation, trauma-informed care, and intervention strategies points to a shift toward prevention and treatment-focused research. From a psychological perspective, this trend reflects a move toward applied, solution-driven approaches that emphasize functional recovery and improved behavioral regulation. The rise of these topics signals increasing interest in addressing the emotional mechanisms that contribute to aggression in individuals affected by PTSD.

Figure 10
Conceptual Structure Map

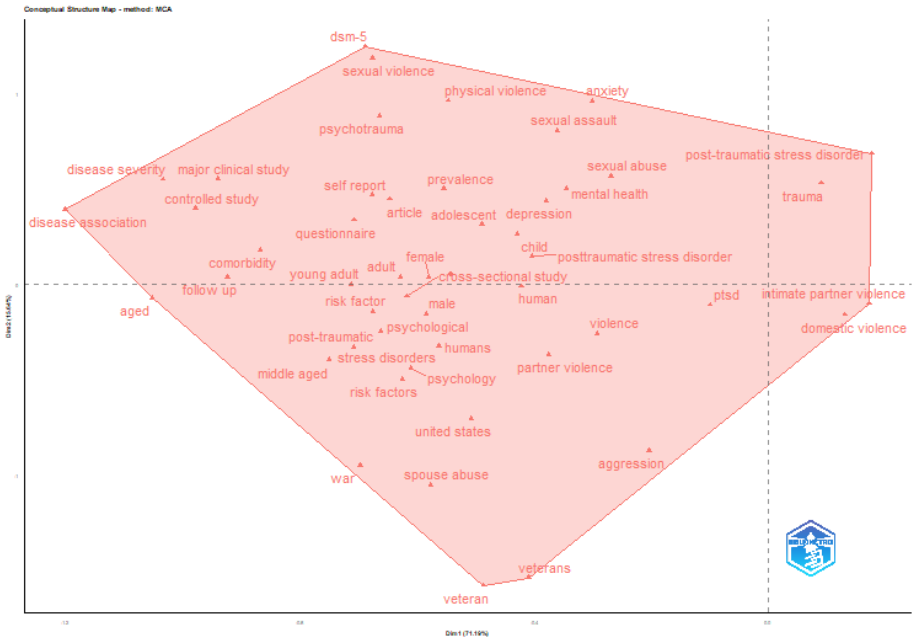


Table 1

Factorial Structure of the PTSD–Violence Research Landscape Based on MCA

Word	Dim1	Dim2	cluster
Human	-0,42	-0,01	1
posttraumatic stress disorder	-0,4	0,14	1
Female	-0,58	0,04	1
Humans	-0,56	-0,33	1
Adult	-0,63	0,04	1
Male	-0,58	-0,16	1
post-traumatic	-0,71	-0,33	1
stress disorders	-0,71	-0,33	1
Article	-0,65	0,45	1
physical violence	-0,55	0,96	1
Ptsd	-0,1	-0,11	1
Psychology	-0,61	-0,44	1
major clinical study	-0,94	0,55	1
Depression	-0,38	0,43	1
Aggression	-0,2	-0,87	1
middle aged	-0,75	-0,4	1
Violence	-0,29	-0,26	1
young adult	-0,71	0	1
Adolescent	-0,49	0,31	1
partner violence	-0,38	-0,37	1
controlled study	-0,98	0,4	1
mental health	-0,35	0,5	1
Trauma	0,09	0,53	1
intimate partner violence	0,17	-0,1	1
Veterans	-0,41	-1,54	1

Word	Dim1	Dim2	Cluster
domestic violence	0,13	-0,16	1
Child	-0,43	0,26	1
risk factors	-0,62	-0,5	1
Aged	-1,05	-0,07	1
Prevalence	-0,55	0,5	1
sexual assault	-0,36	0,8	1
Anxiety	-0,3	0,96	1
dsm-5	-0,69	1,25	1
comorbidity	-0,87	0,18	1
disease severity	-1,03	0,55	1
self report	-0,68	0,47	1
united states	-0,51	-0,7	1
War	-0,7	-0,95	1
cross-sectional study	-0,62	-0,06	1
questionnaire	-0,71	0,34	1
sexual abuse	-0,27	0,57	1
psychological	-0,66	-0,25	1
disease association	-1,2	0,39	1
follow up	-0,92	0,04	1
post-traumatic stress disorder	0,18	0,68	1
psychotrauma	-0,66	0,88	1
spouse abuse	-0,58	-1,05	1

Figure 10 and Table 1 The Multiple Correspondence Analysis (MCA) presents a clear and cohesive conceptual structure within the literature, revealing that all keywords cluster around a single dominant group—indicating strong thematic integration rather than fragmentation. Dimension 1 (Dim1) appears to capture a methodological–population axis, with high negative loadings for terms related to study design and participant characteristics, including “controlled study,” “major clinical study,” “article,” “questionnaire,” “follow-up,” and demographic descriptors such as “adult,” “young adult,” “middle aged,” “aged,” “human,” “female,” and “male.” This dimension reflects the field’s empirical and epidemiological grounding, highlighting its reliance on standardized clinical research conducted largely with adult human populations.

Dimension 2 (Dim2) distinguishes between trauma severity and violence typologies. High positive loadings for terms like "sexual violence", "sexual assault", "physical violence", "anxiety", "depression", "DSM-5", "psychotrauma", and "mental health" indicate a clinical-diagnostic pole focused on psychiatric classification and symptom severity. In contrast, strong negative loadings -such as "veterans", "war", "spouse abuse", "aggression", and "intimate partner violence"- define a contextual–exposure pole, rooted in chronic, interpersonal, or institutionalized violence, particularly in military and domestic environments.

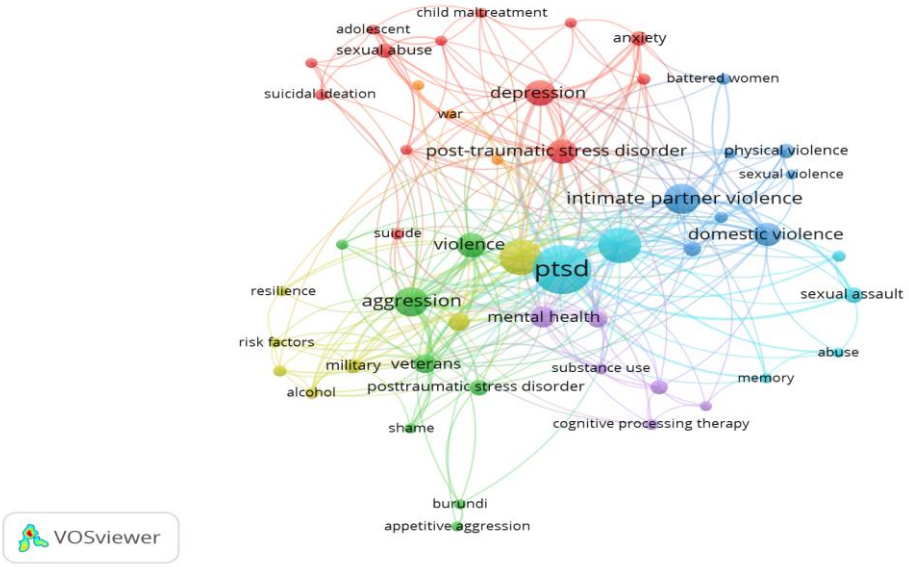
Crucially, PTSD-related terms ("post-traumatic stress disorder", "PTSD", "post-traumatic") are located near the center of the factorial map, underscoring PTSD’s role as a conceptual bridge—linking methodological design, demographic profiling, trauma exposure, and both internalizing outcomes (e.g., anxiety, depression) and externalizing behaviors (e.g., aggression, partner violence).

The absence of multiple clusters may reflect strong conceptual convergence, but may also result from database indexing practices and dominant clinical taxonomies.

Overall, the MCA reveals a literature organized around a unified trauma–violence–psychopathology framework. Yet, it also shows that aggression and veteran-related contexts remain somewhat peripheral to dominant diagnostic and methodological paradigms. This suggests a continued need for more integrative, developmentally informed models that connect trauma exposure, emotion regulation processes, and the emergence of aggressive behavior.

Figure 11

Network Visualization Ptsd and Aggression



This network visualization of keyword co-occurrences related to PTSD and aggression, generated using VOSviewer, maps the conceptual structure of the research field. In the visualization, node size reflects the frequency of keyword usage, while the connecting lines represent the strength of co-occurrence between terms. PTSD emerges as the most central and dominant node in the network, confirming its pivotal role in shaping the field's intellectual landscape. Strongly connected terms—such as violence, aggression, intimate partner violence, and mental health—indicate that aggression is consistently studied as an integral part of trauma-related psychopathology, rather than as a standalone behavioral issue.

From a psychological perspective, the dense web of connections among these terms supports theoretical frameworks that view aggression as a consequence of trauma-related emotional dysregulation, heightened arousal, and impaired inhibitory control. Keywords like depression, anxiety, suicide, and substance use appear closely linked to PTSD and aggression, reinforcing the view that these behaviors often occur alongside broader internalizing and externalizing symptom clusters. This pattern is consistent with transdiagnostic models in psychology, which highlight shared underlying mechanisms -particularly difficulties with emotion regulation- across multiple mental health conditions.

The network also reveals several distinct thematic subclusters. One cluster focuses on interpersonal and gender-based trauma, with terms like intimate partner violence, domestic violence, sexual violence, and battered women. This reflects a strong research focus on chronic interpersonal trauma and its cumulative effects on emotional functioning and behavioral control. Another cluster highlights developmental and early-life trauma, featuring keywords such as child maltreatment, sexual abuse, and adolescent, pointing to the lasting

psychological effects of early adversity on later vulnerability to aggression and PTSD. A further subcluster centers on high-risk groups and contextual influences, including military veterans, alcohol use, and risk factors, suggesting that trauma exposure in specific social and occupational settings plays a critical role in shaping aggressive behaviors.

Overall, the network visualization shows that research on PTSD and aggression is both conceptually dense and highly interconnected. Psychologically, this structure reinforces the understanding that aggression arises from complex interactions between traumatic experiences, emotional regulation, cognitive interpretations, and social context. These findings underscore the importance of comprehensive trauma-informed models that integrate both emotional and behavioral dysregulation in explaining and addressing aggression in individuals with PTSD.

Figure 12

Overlay Visualization Ptsd and Aggression

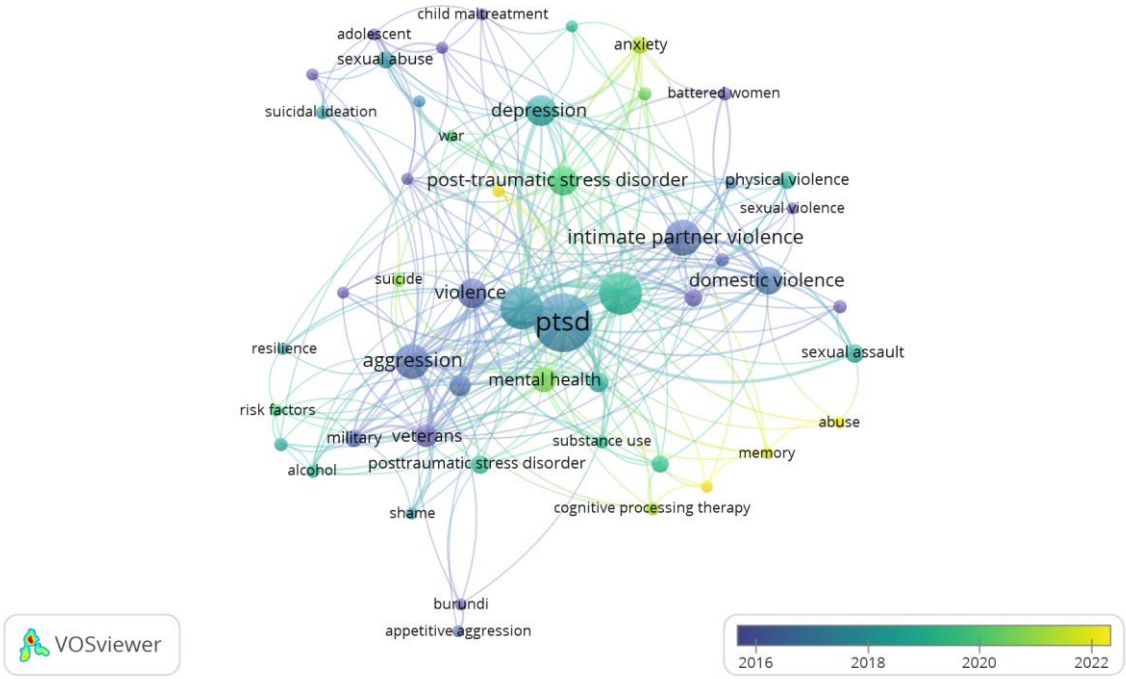


Figure 12 illustrates how research themes in the PTSD and aggression literature have evolved over time. In this map, node colors reflect the average publication year of each keyword, making it possible to distinguish between earlier and more recent areas of focus. Older terms tend to cluster around broad constructs such as violence, military veterans, and post-traumatic stress disorder, while newer keywords are increasingly linked to cognitive, emotional, and intervention-based topics.

From a psychological standpoint, this temporal progression marks a meaningful shift in the field's focus. Earlier research was largely centered on documenting associations between trauma exposure, PTSD, and aggressive behavior, often within high-risk populations like combat veterans. In contrast, more recent work emphasizes the underlying psychological mechanisms behind these associations. This shift is evident in the rising prominence of keywords such as emotion regulation, memory, mental health, and cognitive processing therapy—indicating a transition from descriptive models to more explanatory, process-oriented frameworks.

The appearance of therapy-related terms suggests growing interest in how psychological interventions can modify trauma-related cognitive and emotional patterns to

reduce aggressive outcomes. This trend aligns with modern clinical psychology's emphasis on evidence-based, trauma-informed treatments that target core processes such as maladaptive trauma memories, emotional avoidance, and affective dysregulation. Additionally, the increasing visibility of terms like abuse and sexual assault in more recent years reflects expanded scholarly attention to the long-term consequences of interpersonal trauma, particularly its links to aggression and cycles of revictimization.

Taken together, the overlay visualization underscores the dynamic and evolving nature of PTSD and aggression research. Psychologically, it captures a broader paradigm shift toward integrative, mechanism-focused, and intervention-driven approaches. These emerging directions reflect a growing consensus that effectively addressing aggression in PTSD requires more than symptom tracking- it demands targeted strategies that engage with the emotional, cognitive, and social processes at the heart of trauma-related behavior.

Analysis

The bibliometric analysis of psychological research on physical aggression and Post-Traumatic Stress Disorder (PTSD) reveals a dynamic and rapidly advancing field, marked by growing scientific attention and increasing conceptual complexity. The steady rise in annual publications—especially over the past decade—reflects a heightened awareness of aggression as a significant externalizing expression of trauma-related psychopathology. This trend aligns with evolving psychological perspectives that recognize PTSD not only as an internalizing condition, but also as one that deeply impacts behavioral regulation and interpersonal functioning.

The prominence of clinical psychology and trauma-specific journals among the leading sources underscores the applied focus of this research area. Within this framework, PTSD-related aggression is predominantly viewed as a clinical concern—one that requires structured assessment, accurate diagnosis, and targeted intervention. This emphasis reinforces the central role of psychological science in shaping trauma-informed approaches that address both emotional dysregulation and problematic behavioral responses.

Analyses of authorship and institutional affiliations point to a stable core group of researchers and organizations that have significantly influenced the field's development. These contributors have advanced theoretical models highlighting emotion dysregulation, hyperarousal, anger, and impulsivity as key mechanisms connecting trauma exposure to aggressive behavior. The concentration of leading research within resource-rich countries also suggests that disparities in infrastructure, funding, and access to trauma-affected populations continue to shape patterns of scientific output.

Keyword and network analyses offer further insight into the field's conceptual structure. The frequent co-occurrence of terms such as PTSD, aggression, anger, violence, and emotion regulation reinforces the idea that aggression is understood within a broader dysregulatory framework. The evolution of keyword trends over time reveals a shift away from purely descriptive or diagnostic models toward more process-oriented and transdiagnostic approaches. Recent work increasingly focuses on mechanisms like emotional regulation and coping strategies, alongside interventions designed to reduce aggression and enhance psychological well-being.

Taken together, these bibliometric patterns signal a maturing field—one characterized by greater theoretical cohesion, improved methodological tools, and a deepening focus on real-world, applied psychological outcomes.

Conclusion

This bibliometric study offers a comprehensive overview of psychological research on physical aggression and PTSD between 2000 and 2025, shedding light on publication trends, key contributors, and emerging thematic directions. The findings reveal significant growth in scholarly output over the past two decades, signaling increased recognition of the complex interplay between trauma exposure and aggressive behavior.

From a psychological standpoint, the results highlight a meaningful shift in the field's focus. Research has evolved beyond simply identifying associations between PTSD and aggression to building integrative models that conceptualize aggression as a result of trauma-related emotional dysregulation, cognitive appraisals, and contextual influences. This shift has been accompanied by a growing emphasis on trauma-informed, mechanism-driven interventions designed to reduce aggression and foster healthier emotional regulation.

At the same time, the analysis points to ongoing gaps, including limited representation from low- and middle-income countries and a lack of cross-cultural perspectives. Addressing these limitations will require future studies to incorporate longitudinal approaches, more diverse populations, and intervention-based designs that better capture the developmental and situational complexities of aggression in the context of PTSD.

Beyond summarizing publication trends and thematic convergence, this bibliometric analysis also makes it possible to identify structural blind spots within the field.

First, developmental perspectives remain markedly underrepresented. Although keywords related to childhood and adolescence appear in the network, they occupy a peripheral position, suggesting that aggression is predominantly conceptualized as an adult clinical outcome rather than as a developmental process unfolding across the lifespan. This limits the field's capacity to account for early regulatory vulnerabilities, socialization processes, and the long-term trajectories linking early trauma to later aggressive behavior.

Second, the literature is strongly shaped by dominant clinical and diagnostic frameworks, particularly DSM-based conceptualizations of PTSD. While this contributes to methodological standardization, it may also constrain theoretical innovation by privileging symptom-based classifications over process-oriented or ecological models that integrate relational, developmental, and sociocultural dimensions of aggression. As a result, aggression is often framed as a secondary or comorbid manifestation of PTSD, rather than as a dynamic behavioral adaptation emerging from disrupted regulatory systems.

Third, the geographical and cultural concentration of highly cited research points to an epistemic imbalance. The predominance of studies from high-income Western countries suggests that current models of trauma-related aggression may insufficiently capture the lived realities of populations exposed to chronic adversity, collective violence, or structural trauma in low- and middle-income contexts. This gap raises important questions about the cross-cultural validity and generalizability of prevailing theoretical frameworks.

Taken together, these blind spots highlight the need for future research to move beyond descriptive convergence and toward integrative models that explicitly incorporate developmental timing, cultural context, and multilevel regulatory processes. Addressing these gaps is essential for advancing a more comprehensive and globally relevant understanding of physical aggression in the context of PTSD.

In conclusion, this bibliometric analysis reinforces the pivotal role of psychology in advancing the understanding of trauma-related aggression. By mapping the field's intellectual structure and highlighting its evolving research directions, the study provides a valuable platform for future inquiry and supports the development of evidence-based, trauma-informed strategies to more effectively address physical aggression among individuals affected by PTSD.

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