



A Bibliometric Analysis of Team Resilience Research

Takım Dayanıklılığı/Rezilyansı Araştırmalarının Bibliyometrik Analizi

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Abstract

Purpose: The aim of this research is to examine scientific articles on team resilience using bibliometric analysis methods.

Design/Methodology: In the study, articles on team resilience in the Web of Science database were examined in terms of publication year, author, research area, country of publication, keywords, and references.

Findings: As a result of the analysis, it has been determined that research on team resilience has increased in recent years, especially in the fields of social sciences, sports sciences, and business administration. It has been seen that the countries with the most studies are the United States, England, and the Netherlands.

Limitations: One of the limitations of the research is that the sample only consists of articles related to team resilience in the Web of Science database.

Originality/Value: Although the concept of resilience is a subject that has been studied countless times in different disciplines all over the world, it is seen that the subject of resilience at the team level has only recently started to be the focus of attention. It can be said that team-level studies can make meaningful contributions in areas where intragroup interactions are important.

Keywords: Team Resilience, Group Level Resilience, Resilience, Collective Resilience, Bibliometric Analysis

Öz

Amaç: Bu araştırmanın amacı, takım dayanıklılığı/rezilyansı konusunda yapılan bilimsel makalelerin bibliyometrik analiz yöntemleriyle incelenmesidir.

Tasarım/Yöntem: Araştırmada Web of Science veri tabanında yer alan takım dayanıklılığı konusunda yapılan makaleler yayın yılı, yazar, araştırma alanı, yayın yapılan ülke, anahtar kelimeler ve referanslar açısından incelenmiştir.

Bulgular: Analizler sonucunda; takım dayanıklılığı ile ilgili araştırmaların son yıllarda giderek arttığı, özellikle sosyal bilimler, spor bilimleri ve işletme alanlarında yürütüldüğü belirlenmiştir. En çok çalışma yapılan ülkelerin Amerika Birleşik Devletleri, İngiltere ve Hollanda olduğu görülmüştür.

Sınırlılıklar: Örneklemin sadece Web of Science veri tabanında takım dayanıklılığı ile ilgili olan makalelerden oluşması araştırmanın sınırlılıklarıdır.

Özgünlük/Değer: Dayanıklılık/Rezilyans kavramı tüm dünyada farklı disiplinlerde sayısız kez çalışılan bir konu olmakla birlikte, takım düzeyinde dayanıklılık/rezilyans konusunun henüz yeni yeni ilgi odağı olmaya başladığı görülmektedir. Grup içi etkileşimlerin önemli olduğu alanlarda takım düzeyinde yapılacak çalışmaların anlamlı katkılar yapabileceği söylenebilir.

Anahtar Kelimeler: Takım Dayanıklılığı/Rezilyansı, Grup Düzeyinde Dayanıklılık, Dayanıklılık, Kolektif Dayanıklılık, Bibliyometrik Analiz

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1. INTRODUCTION

Globalization, the information age, and the network economy in which we live have elevated the level of interaction between actors by tightly connecting all actors in the business environment (Lee & Koshi, 2016). As a result, negativity in any external environmental variable has a domino effect on other actors. As a result, it's fair to say that both businesses and departments or business divisions with sub-systems are continuously on high alert. In a complicated, changeable, and uncertain business environment, businesses are attempting to solve problems with cross-functional and cross-departmental teams while executing operational and relational processes.

The increasing complexity and turbulence experienced by today's business environment bring challenges and crises that require more than individual leaders' or employees' capacities (Siggelkov & Rivkin, 2005). Those multi-faceted and multi-layered complexities and uncertainties necessitate collective sense-making and understanding to overcome and adjust. That is team resilience. In addition, although major problems mostly threaten the overall system right from the beginning, other problems disrupt sub-systems initially before they increase their effects (Kahn et al., 2018). This signals the importance of departmental and cross-functional teams' resilience to contribute to the overall organizational resilience. Collective efforts of people may have critical roles in any organizational context (Allsop et al., 2016). However, it was considered that there was a lack of research on which aspects develop team resilience from a psychological-behavioral standpoint (Rodríguez-Sánchez & Perea, 2015).

The purpose of this study is to assess the current status of the research on team resilience. Whereas individual resilience has received the majority of attention, team resilience has received more theoretical and empirical attention (Kennedy et al., 2016). Although there has been an increase in interest in investigating team resilience in recent years, research on the topic has been plagued by inconsistencies in conceptual and methodological methods (Hartwig et al., 2020). Therefore, this study aims to shed light on team resilience research, as well as to provide insights for future research on the subject. The current study examines the literature published in prestigious journals using bibliometric methodologies. Using these methodologies, it was hoped to discover and analyze the relationships and effects of the primary articles and contributors to team resilience, as well as the current basis for the issue and compare the papers and citations used by researchers in their studies. For this purpose, publications related to team resilience in the Web of Science database were analyzed with the VOSviewer package program in terms of year, country, keyword, publisher, author and citations using bibliometric analysis methods. The findings of this study disclose the distribution of publications on the concept of team resilience by year, the subjects with which they are associated, the journals in the literature in which they are published, the number of citations to the studies, and other related topics. The findings are expected to reveal information on the theoretical framework of the concept of team resilience.

2. LITERATURE REVIEW

2.1. Organizational Resilience

Resilience, according to Carmeli et al. (2013), is a two-dimensional structure that includes the ability to cope with challenges and adapt to them. The ability to create or retain cognitive, emotional, relational, or functional resources that enable organizational learning and coping with unexpected occurrences is known as resilience capability. This capability is built on processes, structures, and practices that help organizations enhance organizational competence, increase productivity, and grow and develop new capabilities (Vogus & Sutcliffe, 2007). Businesses gain survival and sustainability abilities in this way by learning how to deal with the negative events they encounter.

Organizational resilience is defined in a variety of ways. Individuals, groups, and organizations overcome problems, continue their activities despite difficulties, and get stronger, according to Sutcliffe and Vogus (2007). According to Välikangas (2010), resilience should be linked to daily routines rather than how to deal with crises. As a result, further research is needed to learn how companies avoid unexpected and unpleasant events, as well as how this form of organizational resilience manifests over time.

The resilience capacity of an organization, according to Lengnick-Hall and Beck (2009), is an integrated set of individual-level knowledge, skills, and abilities, as well as organizational routines, that enables an organization to progress steadily and overcome the disabling consequences of disruptive events.

Both within and between companies, organizational resilience capability serves as a protective role (Bhambra & Burnard, 2011). The reason for this is that crises can occur not just within the business itself, but also with external stakeholders. In other words, incidents that could harm the organization could involve internal activities, customer relations, employee relations, and all external environmental actors with whom the firm interacts. From this perspective, the concept of resilience might be seen as having far-reaching consequences.

Although most resilience research focuses on organizational resilience, it is frequently mentioned to crisis prediction (Linnenluecke, 2017). Organizational resilience capability is a set of cognitive abilities, behavioural characteristics, and environmental circumstances that enable the organization to not only return to its previous state but to improve upon it (Lengnick-Hall et al., 2011). An unexpected, disruptive, and demanding event or crisis must occur before we can talk about organizational resilience. A crisis is a situation that can be understood in a variety of ways. Natural disasters, such as earthquakes, hurricanes, or floods, can cause a crisis, as can human-caused disasters, such as bribery, immorality, product failure, or sabotage.

Organizational resilience capacity can be evaluated at three different levels. These are the organizational, group, and individual levels. The organizational level encompasses the broad routines, procedures, and competencies that the entire organization should possess. The resilience capacity of sub-systems such as units, departments, and teams/groups that make up the organization is referred to at the group level.

2.2. Team Resilience

At the team level, resilience refers to a team's ability to bounce back from setbacks, difficulties, conflicts, or other threats (West et al., 2009). Furthermore, resilience refers to a group's ability to respond rapidly and generate new chances in the face of crises in their relationships with one another and with the outside world. As a result, resilience refers to the ability to compensate for interruptions in inter-unit coordination. For teams functioning in high-risk environments, such as firemen, soldiers, nuclear and space research, and emergency medicine teams, resilience is an essential resource (Alliger et al., 2015).

The ability of a team to withstand stress is a favourable trait that will aid recovery when faced with adversity. Teams that can improvise and adapt in changing and stressful environments can recover from negative experiences and gain the self-efficacy needed to deal with similar occurrences in the future. Although most teams do not face such adversity, they must overcome obstacles that necessitate regeneration and resilience to attain the goal and sustain the team's health (Flint-Taylor & Cooper, 2017). Because challenges can both hinder the team's ability to achieve its purpose and harm its cohesion, as well as resurrect the team with the ability to rise from the ashes of resilience.

In their study, Stephens et al. (2013) emphasize the impact of interpersonal ties on resilience. While they emphasize the importance of relationships in helping people cope with stress, they also point out that not all relationships are created equal. Relationships can both help and hinder the development of the required solutions for information exchange, learning, and adaptability. Individuals manage unpleasant situations better in groups, according to research (Stephens et al., 2013).

According to West et al. (2009), teams with the resilience capacity to survive challenging conditions, improvise and adapt in the face of considerable change, or simply go back to the past despite unfavourable experiences will be less affected by threatening events.

Even if they have made blunders and missteps, resilient teams emerge from crises and challenges by learning from them and building their resilience (Lengnick-Hall & Beck, 2005). They investigate and identify which tactics and technologies they employ that lead to failure. Revisions and the quest for new sources and approaches for future issues may become more important as a result of

this learning. Observing how team members help or do not support one another, as well as comprehending the value of being a team, can also be regarded as a benefit. Both a resilient and non-resilient team can overcome the challenges they confront in this situation, but a resilient team's collective efficacy (Bandura, 1998; Sutcliffe & Vogus, 2007) and potential energy, or resilience capacity, improve (Alliger et al., 2015).

Today's complexity and uncertainty management understanding to survive, adapt, and thrive when faced with challenges requires multi-level efforts. Since the individual and organizational levels have been studied for comparatively longer periods than the team level, research on team resilience and its inter-relations with the other levels of resilience should be given more attention (Gucciardi et al., 2018). Towards that end, it is necessary to understand the profile and concentration of the team resilience studies.

The major goal of this research is to present a broad qualitative view of team resilience research by employing the most commonly used bibliometric approaches, such as visual mapping. To achieve this goal, bibliometric processes are used on a variety of units of analysis, including authors, journals, countries, keywords, and citations. The research questions of this study are as follows:

- What is the distribution of publications on team resilience by years?
- What is the distribution of journals and research areas in which publications on team resilience are published?
- What are the geographic regions where publications on team resilience are published?
- What are the keywords and their frequencies in the publications about team resilience?
- Which authors and publications are most cited in publications on team resilience?
- What is the co-occurrence of citations in publications on team resilience?

3. METHOD

3.1. Database

The dataset for this study was retrieved from the Clarivate Web of Science on December 10, 2021. As it is the most widely regarded and commonly used database for analyzing scientific publications, the Web of Science, which is accepted among the largest databases, has been selected for data collection (Mongeon & Paul-Hus, 2016). Web of Science is a database for bibliometric analysis that is widely utilized. Keywords used in the search strategy included phrases such as "team resilience", "resilient teams", "group resilience", "resilience in teams", "resilience in groups", "team resiliency", "group resiliency", "group-level resiliency", "group-level resilience", "team resiliency", "group resiliency" and "collective resiliency" in the title or abstract. The robustness of the search results is ensured by this tighter criterion (Liu et al., 2013).

3.2. Data Analysis

Bibliometrics is a branch of study that employs mathematical and statistical techniques to explore publishing trends in the distribution of information, and it is a set of tools that academics can use to analyze published data (Pritchard, 1969; McCain, 1991). Impact indicators, citation and co-citation analysis, and bibliometric mapping are examples of such methodologies. The quantitative examination of bibliographical materials is referred to as "bibliometric analysis". The use of bibliometric methodologies based on content or citation analysis is common (Wallin, 2005).

The publication selection criteria were defined in the first step of the research. The publications to be analyzed were determined to be conceptual or research articles in an attempt to analyze the concept of resilience on a collective or group level. The database for this project was chosen to be the Clarivate Analytics Web of Science (WoS) database. The database was accessed and examined using the researchers' institutional IDs to retrieve the data. Only research articles were selected. The publications found through the search were verified to see if they met the research requirements and any that did not were discarded from the study. During the analysis, the data were examined in the context of the given criteria using the WoS database and the VOSviewer program. Tables and graphs are used to present the findings.

There were 590 articles found in total that were relevant to team resilience. However, 421 of them were not completely relevant to the team resilience concept so they were eliminated. For example, in an article, the phrases "group" and "resilience" appear one after the other, but if the body of the research does not address team resilience, the article is not included in the study. Therefore, only 69 of the publications fit the criteria. These 69 articles' data were exported as plain text files from Web of Science. All of them are articles and part of the Web of Science Core Collection. A text file was imported to VOSviewer (Van Eck & Waltman, 2010) to analyze the following topics: publication output and growth trend, authors and their cooperation, journals publishing on team resilience, geographical and institutional distribution and cooperation, research areas, and co-citation analysis.

3.3. Visualization and Mapping

To analyze and visualize interactions between authors, countries, co-citations, and keywords, the free software application VOSviewer was employed. The VOS (Visualization of Similarities) mapping approach was used to determine and identify the distance between two elements, accurately indicating their similarity or connectedness (van Eck et al., 2010; Waltman et al., 2010). The number of occurrences is represented by the size of the circles and the font of the label, clusters are represented by the colours, and the distance between two circles exposes their relatedness and similarity (Khalil & Gotway Crawford, 2015). Maps help to clarify what has been done, the communities engaged, and hint at potential avenues of future research.

4. FINDINGS

4.1. Publications Per Year

According to the findings, there has been a rise in the number of studies on team resilience throughout time. Table 1 shows that the year 2020 had the largest number of publications on team resilience with 15 publications.

Table 1: Publications on Team Resilience Per Year

Year	Record Count	%
2021	12	17.391
2020	15	21.739
2019	7	10.145
2018	9	13.043
2017	6	8.696
2016	8	11.594
2015	5	7.246
2013	2	2.899
2012	1	1.449
2011	2	2.899
2010	1	1.449
2009	1	1.449
Total	69	100

When looking at the distribution of papers by year, it can be seen that since 2009, the number of studies on team resilience has increased. The interest in team resilience has expanded dramatically in recent years, particularly in the last two years. This condition can be explained by the increasing severity of crises as a result of economic, social, and technological changes, as well as the efficacy of cooperation in resolving crises. The recent calls for papers to study multi-level resilience concepts with possible inter-relations among individual, organizational, and team levels also contributed to this increase in team resilience studies.

Although there is ever-increasing attention to the resilience concept and research, the studies are mainly concentrated on the individual and organizational levels. That is why there have been recent calls for studies and papers to question the multi-level nature of the resilience phenomenon.

4.2. Journals Publishing on Team Resilience and Research Areas

As a result of the analysis conducted by the Web of Science, the journals that publish the most frequent studies on team resilience are "Gruppe. Interaktion. Organisation. Zeitschrift für Angewandte

Organisationspsychologie (GIO)” (n = 4); “Frontiers in Psychology” (n = 3) and “Psychology of Sport and Exercise” (n = 3).

Table 2: Journals Publishing on Team Resilience

Journals	Record Count	%
Gio Gruppe Interaktion Organisation Zeitschrift	4	5.797
Fuer Angewandte Organisationspsychologie		
Frontiers in Psychology	3	4.348
Psychology of Sport and Exercise	3	4.348
Group Organization Management	2	2.899
International Journal of Project Management	2	2.899
Journal of Organizational Behavior	2	2.899
Journal of Sport Psychology in Action	2	2.899
Organization Studies	2	2.899
Personnel Review	2	2.899
Reliability Engineering System Safety	2	2.899
Others (1 publication per journal)	48	69.552
Total	69	100

Table 3 displays the fields in which team resilience publications were published. The data suggest that psychology (n=36) is the most relevant research area in the field of team resilience. Business economics (n =24), social sciences (24), and sports sciences (n=10) follow psychology. Furthermore, because groups and teams are significant analytical levels in psychology, social sciences, and sports sciences, it's conceivable that research on team resilience is concentrated in these fields.

Table 3: Research Areas on Team Resilience

Research Areas	Record Count	%
Psychology	36	52.174
Business Economics	24	34.783
Social Sciences Other Topics	10	14.493
Sport Sciences	6	8.696
Public Environmental Occupational Health	4	5.797
Engineering	3	4.348
Computer Science	2	2.899
Education Educational Research	2	2.899
Health Care Sciences Services	2	2.899
Operations Research Management Science	2	2.899
Psychiatry	2	2.899
Science Technology Other Topics	2	2.899
Behavioral Sciences	1	1.449
Communication	1	1.449
Environmental Sciences Ecology	1	1.449
Information Science Library Science	1	1.449
Mathematics	1	1.449
Nursing	1	1.449
Substance Abuse	1	1.449
Total	69	100

4.3. Geographical Distribution of Publications

As a result of the analysis made by Web of Science, it was determined that the countries with the most frequent studies on team resilience were the USA (n = 39), England (n = 23), Australia (n = 19), and the Netherlands (n = 10) (Table 4). It's worth noting that the investigations were mostly conducted in industrialized countries. This could be owing to the authors' ability to collaborate on a group level in different nations or the communication networks between them. The United States, the United Kingdom, the Netherlands, and Australia are developed countries with highly complicated projects. In multi-person, multi-national diversity studies, team resilience to overcome crises may have risen to the spotlight.

Table 4: Geographical Distribution of Publications

Regions	Record Count	%
USA	20	28.986
England	9	13.043
Spain	7	10.145
Netherlands	6	8.696
Australia	5	7.246
Belgium	4	5.797
France	4	5.797
Germany	4	5.797
China	4	5.797
Canada	3	4.348
Israel	3	4.348
Portugal	3	4.348
Turkey	3	4.348
Italy	2	2.899
New zealand	2	2.899
Russia	2	2.899
Others (1 publication per country)	11	15.939
Total	69	100

4.4. Keywords Analysis

The authors of the research papers in our sample classified their investigations using 244 distinct keywords. The most frequently used keywords were mainly “team resilience” (n=25), “resilience” (n=16), “organizational resilience” (n=7), and “performance” (n=6). Considering that most of the studies on team resilience are conducted in the field of psychology and social sciences, it is meaningful that the keywords are related to this field.

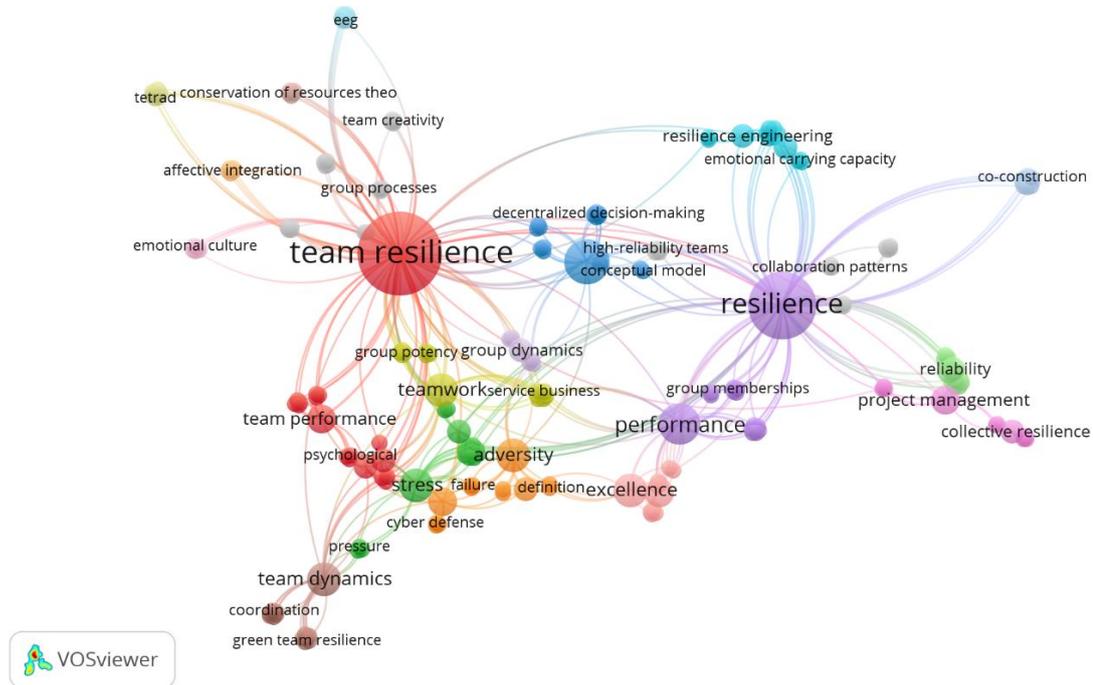
Table 5: Occurrence of Keywords

Keyword	Occurrences
Team resilience	24
Resilience	16
Organizational resilience	7
Performance	6
Adversity	4
Excellence	4
Stress	4
Team dynamics	4
Teamwork	4
Group	3
Project management	3
Team cognition	3
Team performance	3
Collective resilience	2
Gender	2
Group dynamics	2
Positive adaptation	2
Reliability	2
Resilience engineering	2
Team	2
Team effectiveness	2
Team training	2
Teams	2
Others (1 per publication)	221
Total	224

In the map created by VOSviewer (Figure 1), it is seen that there are strong connections between concepts such as “team resilience” and “team performance” and “group processes”. It is seen that words such as “resilience”, “group memberships” and “performance” are linked to each other. When comparing groups with low resilience capacity to those with strong resilience capacity, it becomes clear that the latter can adjust more flexibly to opposing conditions. Alternative solutions are

developed and narrow perspectives are abandoned in teams with strong group resilience abilities, rather than focusing on only a limited number of answers by individuals fascinated with certain characteristics of the challenges (Carmeli & Schaubroeck, 2008).

Figure 1: Co-occurrence of Keywords



In a complex and uncertain business environment, organizations face challenges and crises that disrupt their performance. Sustainable performance requires the ability to overcome and cope with those challenges; that is resilience. Team resilience is a group-level construct, and, understandably, the team resilience research pays attention to the group-level processes.

4.5. Citing and Co-citation Analysis

Author co-occurrence enhances comprehension of the conceptual framework of team resilience. In addition to an analysis of the authors, a study of the references they used in their papers helps to draw the discipline's intellectual map. There are 1127 citations in total and 871 citations without self-citation from 69 unique articles in our sample. “*Defining and characterizing team resilience in elite sport*” by Morgan et al. (2013) received the most citations, with 131 total.

Table 6: Most Cited Publications

Title of Articles	Year/Author	Citations
Defining and characterizing team resilience in elite sport	2013/Mogan et al.	131
Team level positivity: investigating positive psychological capacities and team level outcomes	2009/West et al.	128
Relationship quality and virtuousness: Emotional carrying capacity as a source of individual and team resilience	2013/Stephens et al.	121
Feeling good makes us stronger: How team resilience mediates the effect of positive emotions on team performance	2016a/Meneghel et al.	78
Understanding team resilience in the world's best athletes: A case study of a rugby union World Cup winning team	2015/Morgan et al.	73
Team resilience: How teams flourish under pressure	2015/Alliger et al.	66
Team cognition as interaction	2015/Cooke et al.	45
Job-related antecedents of team resilience and improved team performance	2016b/Meneghel et al.	40
Team resilience as a second-order emergent state: A theoretical model and research directions	2017/Bowers et al.	35
The emergence of team resilience: A multilevel conceptual model of facilitating factors	2018/Gucciardi et al.	34

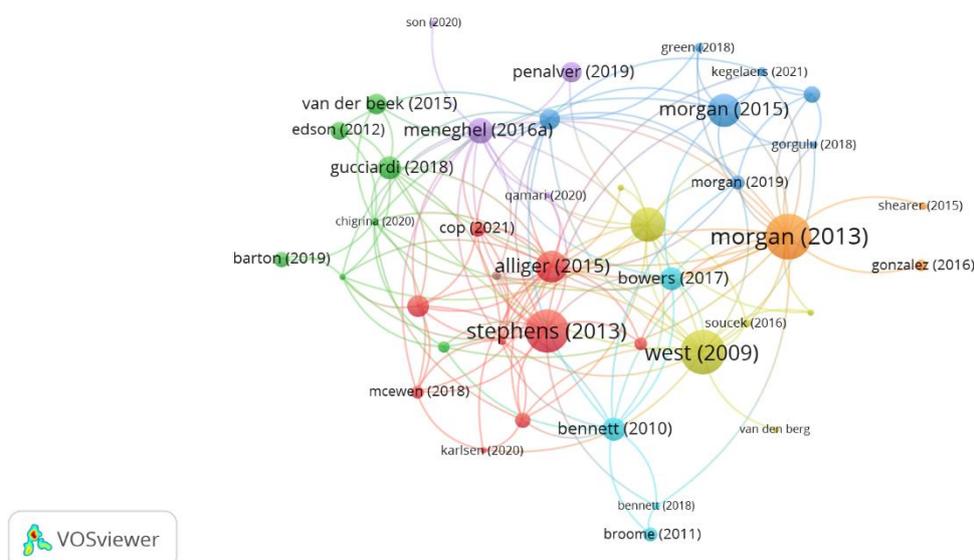
“*Defining and characterizing team resilience in elite sport*” by Morgan et al. (2013) aims to come up with a concept for team resilience and to determine the robust qualities of great sports teams. Study findings revealed four main resilient characteristics of elite sports teams: group structure, mastery approaches, social capital, and collective efficacy. “*Team level positivity: investigating positive psychological capacities and team level outcomes*” by West et al. (2009) presents that team optimism appears to be an important predictor of team outcomes when teams are freshly created, but team resilience and efficacy show more explanatory value after numerous team encounters, according to the findings from 101 teams. “*Relationship quality and virtuousness: Emotional carrying capacity as a source of individual and team resilience*” by Stephens et al. (2013) reveals how emotional expression in relationships is a critical mechanism in understanding resilience, a core element for individuals and teams seeking long-term virtuousness. It is noteworthy that the most cited studies are important in conceptualizing team resilience and have multiple authors.

Table 7: Most Cited Authors with Over 100 Citations

Authors	Publication Number	Citations
Sarkar, Mustafa	7	262
Fletcher, David	5	256
Morgan, Paul B.C.	5	256
Salanova, Marisa	4	157
Martinez, Isabel M.	3	142
Carsten, Melissa K.	1	125
Patera, Jaime I.	1	125
West, Bradley J.	1	125
Carmeli, Abraham	3	122
Dutton, Jane E.	1	119
Heaphy, Emily D.	1	119
Spreitzer, Gretchen M.	1	119
Stephens, John Paul	1	119

As seen in Table 7, the first two most cited studies in the field of team resilience are in the field of sports sciences, with the publications of Sarkar, Fletcher, and Morgan. Mustafa Sarkar is an Associate Professor of Sport and Performance Psychology. David Fletcher, Senior Lecturer in Performance Psychology, is working on sports performance and performance leadership. Paul B.C. Morgan works in the fields of psychological and team resilience. The work of the three of them together is also the most cited article in the field of team resilience.

Figure 2: Co-occurrence of Citations



The minimum number of citations for a document was set at 1. Of the 69 documents, 47 met the threshold. If there is a line between the names of two authors, it means that these two authors are

working together. The thicker this line, the more the authors worked together. Colors indicate the authors who worked together the most. The first cluster (circled in red) includes Alliger (2015), Cop (2021), Karlsen (2020) and so on. Their studies cover team level resilience from an organizational perspective and were published in the field of management. The second cluster with the strongest links includes Barton (2019), Chigrina (2020), Edson (2012), and so on. Publications in this group also cover the field of management, but from a more psychological perspective. The third cluster represents the publications of Decroos (2017), Gorgulu (2018), Green (2018) and others, which are in the field of sports sciences. Cluster four includes the studies of Cavrak (2019), Meneghel (2016), Schulte (2016) and others in the field of organizational behaviour. Other clusters show similar groupings.

5. CONCLUSION AND DISCUSSION

The purpose of this study is to investigate publications on team resilience using bibliometric methodologies. Towards that end, we searched the Web of Science database for studies on team resilience and evaluated the publications by year, author, study area, geographical region, keywords, and references. The findings show that in psychology, social science, and sports science, team resilience is becoming increasingly significant.

Although numerous articles in the analysis findings use the concepts of team and resilience, the number of articles dealing with the concept of team resilience is fairly low ($n=69$). This situation leads us to believe that, while the concept of resilience has a wide range of applications, it is still a relatively new area to be dealt with on a team level. According to the findings, studies on team resilience have shown an increase in the years leading up to 2021. There was only partially regular growth from 2009 to 2021. It may be projected that team resilience will be a topic that receives greater attention from researchers in the coming years, and resilience researchers will deal with the group level as an important analytical level itself and also as part of multi-level studies.

There are more publications in the fields of psychology, organizational behaviour, management, and sports sciences when looking at the journals where studies on team resilience are published. At the team level, the most common research areas have been determined to be psychology, business, and sports sciences. This is because, in social sciences and sports sciences, the group level is regarded as an important unit of analysis. In sports teams, for example, team resilience is critical for achieving group level success.

As a result of the research, the terms “team resilience,” “team performance,” and “group processes” are frequently used in articles about team resilience. It can be seen that phrases like “resilience,” “group memberships,” and “performance” are commonly used and have strong relationships. “Adversity,” “stress,” and “team,” among other terms encountered, are considered major indicators of resilience. The terms “cognition” and “adaptation” are also mentioned. Since team resilience is a concept related to group membership and group performance, it has been determined that concepts such as “team creativity” and “emotional culture” are also included in the studies.

Findings on the most cited authors and links between authors on team resilience are in line with the most cited publications and other findings. The most cited authors and articles are in psychology, business, and sports sciences. In these articles, it is seen that similar author groups work together.

There are a few drawbacks to this study that must be addressed. To begin with, no bibliometric study is completely comprehensive because bibliometric analysis only uses one database to accomplish the study's purpose. Second, due to the high number of documents retrieved, no manual verification could be performed, which leaves the risk of false positives and negatives. While dealing with team resilience, conceptual and research articles that deal with the concept of resilience at the group level are discussed. Any conference proceedings or book chapters were not included in the research. In addition, only the Web of Science database was used. In future research, the scope of the research can be expanded.

The most significant contribution of this research to the field is that team resilience research is still a growing and relatively new topic. Furthermore, the authors regard it as a very helpful notion, particularly in sports sciences. It is reasonable to believe that the concept of team resilience has a

promising future. Future research could investigate the concept of general resilience in an organizational or psychological setting, as well as how the team level was included in this area.

Ethics Statement: In this study, no experiments were conducted on humans and no data were collected from humans.

Author Contributions Statement: 1st author's contribution rate is 60%, 2nd author's contribution rate is 40%.

Conflict of Interest: There is no conflict of interest among the authors.

Etik Beyan: Bu çalışmada insanlar üzerinde deney veya insanlardan veri toplama çalışması yapılmamıştır.

Yazar Katkı Beyanı: 1. Yazarın katkı oranı %60, 2. Yazarın katkı oranı ise %40'dır.

Çıkar Beyanı: Yazarlar arasında çıkar çatışması yoktur.

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