

Received: 8 November 2022

Revised: 29 June 2023

Accepted: 21 October 2023

# EXPLORING THE KNOWLEDGE CLUSTERS IN SELF-COMPASSION RESEARCH: A BIBLIOMETRIC ANALYSIS

Gunchanon KHAWDA<sup>1</sup>, Chinun BOONROUNGRUT<sup>2</sup>, Gallayaporn NANTACHAI<sup>1,3</sup>  
and Nuttawut EIAMNATE<sup>4\*</sup>

1 Faculty of Medicine, Chulalongkorn University, Thailand;  
gunchanon.kh@gmail.com

2 Faculty of Education, Silpakorn University, Thailand; boonroungrut\_c@su.ac.th

3 Somdet Phra Sangharaj Nyanasamvara Geriatric Hospital, Thailand;  
gallayaporn@gmail.com

4 Faculty of Liberal Arts, Rajamangala University of Technology Srivijaya, Thailand;  
injustic9@hotmail.com (Corresponding Author)

## Handling Editor:

Professor Dr.ABDURRAHMAN

Universitas Lampung, Indonesia

(This article belongs to the Theme 1: Education in Covid-19 Era: Research, Policy and Practice)

## Reviewers:

1) Professor Dr.SUJAWANTO

Surabaya State University, Indonesia

2) Associate Professor Dr.Chilungamo M'MANGA KUHES, Malawi

3) Dr.Muhammad Aris ICHWANTO

Universitas Negeri Malang, Indonesia

## Abstract

The number of research in self-compassion has increased exponentially, thus scientific mapping with large and controversial research stream is required for better visualization of what researchers have already done. This study aims to explore the clusters in research related to self-compassion by using a Bibliometric Network Analysis. This was a literature-based descriptive study. This study included 1,764 publications from SCOPUS database, then analyzed the data using the VOSviewer software to present a bibliometric network analysis including the authors' keywords co-occurrence mapping, and authors' keywords co-occurrence temporal mapping. The results showed that most publications were published and cited in Mindfulness (10.71% and 4.49% respectively). Most publications were found in Psychology (68.14%), followed in Medicine (33.67%). The authors' keywords co-occurrence mapping was visualized, presenting five main clusters including psychological aspects, individual difference, adolescents and their self-concept, emotion and coping behavior, and study methods. Burnout, well-being, mental health, and resilience were found as examples of the latest terms of the authors' keywords co-occurrence temporal mapping, categorized in the cluster related to psychological aspects. These findings might usefully provide information about the clusters in self-compassion research toward completing of the literature.

**Keywords:** Self-Compassion, Cluster, Bibliometric, VOSviewer, Scopus

**Citation Information:** Khawda, G., Boonroungrut, C., Nantachai, G., & Eiamnate, N. (2023). Exploring the Knowledge Clusters in Self-Compassion Research: A Bibliometric Analysis. *Asian Education and Learning Review*, 1(1), 11-18. <https://doi.org/10.14456/aclr.2023.2>

## **Introduction**

Interest in self-compassion has increased exponentially since the construct was first defined and measured by Neff (2003). Generally, it refers to individuals' healthy ways of using them while suffering in hardship times, failures, or difficulties in life. Individuals with a self-compassion mindset represent balancing between their reduced uncompassionate and increased compassionate responses to their struggles. Several scholars proposed different models of self-compassion, for example, the six self-compassion components that explain self-kindness, common humanity, mindfulness, reduce self-judgment, isolation, and overidentification. In addition, two-, three- or five-component models were also found to explain self-compassion (Neff et al., 2021).

A large body of research indicates the positive relationships between self-compassion and healthy outcomes, such as Zessin et al. (2015) presented a meta-analysis of the relationship between self-compassion and well-being, which found that cognitive well-being and psychological well-being were strongly associated with self-compassion. (Zessin et al., 2015) The meta-analysis of Macbeth & Gumley (2012) found a large effect size for the relationship between self-compassion and psychopathology, including stress, depression, and anxiety symptoms. The review of Winders showed that the higher self-compassion presented, the lower PTSD symptomatology. (Winders et al., 2020) Moreover, Braun et al. (2016) reviewed that self-compassion might help protect against eating pathology and poor body image.

The majority of research on self-compassion has been cross-sectional and used the Self-Compassion Scale (SCS) to examine self-compassion scores among various mental health care samples. For example, the review of Crego et al. (2022) presented that the higher mental health professionals had, the higher levels of mental health and well-being they had. Self-compassion attitude could help mental health professionals to perceive their professionals' self-efficacy and competence. (Crego et al., 2022) In addition, self-compassion was studied in trauma-exposed populations. For example, the review of Winders et al. (2020) showed that the higher self-compassion, the lower PTSD symptomatology. Additionally, some scholars have examined self-compassion psychological based interventions using experimental research design. This research method can be regarded as another promising approach to studying self-compassion (Neff et al., 2021).

## **The Present Study**

According to previous studies, most studies were presented as original articles using various research methodologies. Thus, a review of a large and controversial research stream was required. However, these traditional reviews had a limitation which did not explain what the overview in research related to self-compassion was. These retrospective reviews offered a detailed viewpoint but needed a comprehensive literature overview. The term "bibliometrics" refers to the application of statistical approaches to the quantitative analysis of publications utilizing data or attributes, such as key terms and references. Technically, introducing a systematic, transparent, and reproducible review procedure via bibliometric analysis significantly improves the literature review quality (Nasir et al., 2020). This way of reviewing research articles gives readers a broad picture of dense documents, enabling them to comprehend what the researchers have accomplished or what is lacking in the literature. This method is widely accepted in domains ranging from the sciences to the arts (Boonroungrut et al., 2022; Boonroungrut & Toe-Oo, 2017; Knutas et al., 2015).

Accordingly, this study aimed to use bibliometric network analysis to explore the clusters of studies related to self-compassion. Specifically, the following research questions are addressed: 1) What journals and articles have attracted the most attention from self-compassion researchers? and 2) What are the main research clusters in publications related to self-compassion as a research front?

## **Research Method**

### **Data Collection and Samples**

This was a literature-based descriptive study involving a bibliometric analysis. As one of the largest abstract-indexed databases, the SCOPUS database was chosen as the objective for the research publications. (Hamidah et al., 2020) There were 1,764 records consisting of the words: “self-compassion” and “self compassion\*”. We used the Boolean search technique and limited to search only titles: “TITLE ("self-compassion" OR "self compassion\*")”. The study included all publication years which were found in the database (indexed up to September 23, 2022). The selected samples included 1,596 articles, 62 reviews, 27 book chapters, and others.

The main subject areas were Psychology (68.14%), Medicine (33.67%), and other Social Sciences (28.91%). The samples included articles published by 4,436 authors and co-authors and cited by 12,844 other documents. The top three authors and co-authors around the world were from the United States (12.83%), the United Kingdom (4.74%), and Canada (4.58%). The top three world-leading affiliations were the University of Texas at Austin, Universidade de Coimbra, and Universidade de Coimbra, Centro de Investigação do Núcleo de Estudos e Intervenção Cognitivo-comportamental. Moreover, it was found that the publication from scholars working at Universidade de Coimbra received the most cited publication related to self-compassion.

### **Data Analysis**

The bibliographic network analysis was applied to create a map of co-occurrences exploring the authors’ research keywords. Regarding the network calculations, the authors’ keywords were visualized without the key terms ‘self-compassion\*’ and ‘self compassion\*’. The mapping nodes and their associations were shown by using different color spots and lines to connect them as clusters. The circle size depended on the co-occurrences of the searched articles and terms. First, the cluster network mapping was visualized to present the latest authors’ key terms in this study. The colors of each circle referred to each cluster and association. Second, authors’ keywords co-occurrence temporal mapping was determined by calculating the number of documents associated with their publication years. The mapping was visualized by the spectrum of colors.

The bibliometric mapping’s visualized layout was affected by the ease of interpretation, which presented the most frequent units. Various occurrence threshold selections were conducted in the preliminary testing to present the full visibility of the primary study trends. To prevent possible arbitrariness, any inconsistent mappings were excluded. Normalization of each unit were set by using Fractional weight and Lin-Log modularity. The samples were analyzed by VOSviewer version 1.6.18 for Microsoft Windows systems (Perianes-Rodriguez et al., 2016).

### **Disclosure Statement**

The research did not involve human subjects. Therefore, neither intuitional review board approval nor informed consent was required. No conflict of interest was reported by the authors.

## **Research Findings**

To address the first research question, the article publications related to self-compassion which attracted the most attention from researchers around the world, were published in Mindfulness (10.71% of all publications), Current Psychology (2.94%), Personality and Individual Differences (2.89%), and Frontiers in Psychology (2.60%). Most of the publications were cited by other articles published in Mindfulness (4.49%), the followings were in Frontiers in Psychology (3.70%), and Current Psychology (2.02%). The most cited paper, research influencers, in self-compassion in the top 3 journals were presented in Table 1.

**Table 1** Top 3 most cited articles in Top 3 journals in the publication collection

Rank	Journal/Publishing house Title	Authors	Affiliations	TCS/TCG
1	<b><i>Mindfulness/ Springer (H-Index: 68)</i></b>			
	(1) The Self-Compassion Scale is a Valid and Theoretically Coherent Measure of Self-Compassion	Neff (2016)	University of Texas at Austin	322/803
	(2) Self-Compassion and Body Dissatisfaction in Women: A Randomized Controlled Trial of a Brief Meditation Intervention	Albertson et al. (2015)	Fielding Graduate University, University of Texas at Austin	237/665
2	<b><i>Current Psychology/ Springer (H-Index: 46)</i></b>			
	(1) Mental health of medical workers in Japan during COVID-19: Relationships with loneliness, hope and self-compassion	Kotera et al. (2021)	University of Derby, Jyoban Hospital, Medical Governance Research Institute, Kyoto University	26/43
	(2) Self-compassion mindsets: The components of the self-compassion scale operate as a balanced system within individuals	Phillips (2021)	University of New England	21/37
3	<b><i>Personality and Individual Differences/Elsevier (H-Index: 181)</i></b>			
	(1) Rumination and worry as mediators of the relationship between self-compassion and depression and anxiety	Raes (2010)	University of Leuven	285/817
	(2) Mindfulness, self-compassion, and happiness in non-meditators: A theoretical and empirical examination	Hollis-Walker & Colosimo (2011)	York University, Brock University	229/785
	(3) Self-compassion protects against the negative effects of low self-esteem: A longitudinal study in a large adolescent sample	Marshall et al. (2015)	University of Western Sydney, Australian Catholic University, University of New South Wales	94/291

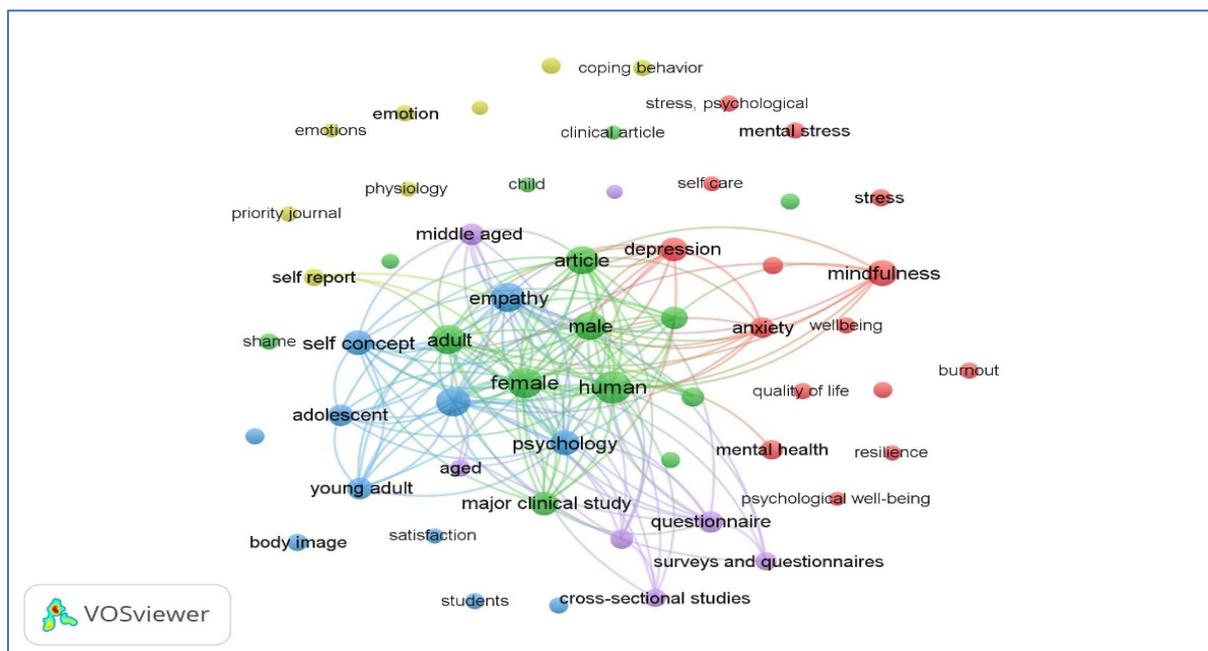
Note: Data on October 31, 2022, H-Index was adopted from [www.scimagojr.com](http://www.scimagojr.com), TCS: total citation in SCOPUS, TCG: total citation in Google Scholar

To visualize the knowledge clusters, this study presented the map of authors' co-occurrence mapping, calculated from a minimum of 50 occurrences per term presenting 57 thresholds from 4,661 keywords. Figure 1 presented the authors' keywords co-occurrence mapping, which was visualized by five main clusters, denoted by red, green, blue, yellow, and purple colors.

The red cluster represented terms related to psychological aspects. The example terms were "mental health", "depression", "anxiety", "stress", "burnout", "resilience", or "well-being". The green cluster represented terms related to individual differences. The terms were such as "human", "female", "male", "child", or "adult". The blue cluster represented terms related to adolescents and their self-concept, such as "adolescent", "young adult", "students", "self-concept", "body image", "empathy", "psychology", or "satisfaction". The yellow cluster represented terms related to emotion and coping behavior, such as "emotion", "emotion regulation", or "coping behavior". and the purple cluster represented terms related to study methods, such as "cross-sectional studies", or "survey and questionnaires". Additionally, top 20 most used keywords and their link strength were presented in Table 2.

**Table 2** Top 20 most keywords and link strength

No	Keywords	Occurrences	Link strength	No	Keywords	Occurrences	Link strength
1	Human	817	9497	11	Young adult	228	3312
2	Female	631	8218	12	Questionnaire	224	3117
3	Adult	551	7871	13	Middle aged	204	3038
4	Empathy	561	7060	14	Depression	284	2972
5	Male	505	6683	15	Mindfulness	370	2856
6	Article	495	6369	16	Adolescent	199	2770
7	Psychology	354	4969	17	Cross-sectional	156	2267
8	Self concept	355	4843	18	Anxiety	193	2061
9	Major clinical study	306	4099	19	Survey and questionnaire	123	1811
10	Controlled study	261	3507	20	Human experiment	159	1746



**Figure 1** The authors' keywords co-occurrence mapping



study self-compassion, intervention to improve self-compassion, or the specific factors related to self-compassion.

## References

- Albertson, E., Neff, K., & Dill-Shackleford, K. (2015). Self-compassion and body dissatisfaction in women: A randomized controlled trial of a brief meditation intervention. *Mindfulness*, *6*, 444-454.
- Boonroungrut, C., & Toe-Oo, T. (2017). Dark Triad Trends in Personality Studies: Systematic Review with Bibliometric Network Analysis. *Journal of Humanities and Social Sciences Mahasarakarm University*, *36*(6), 63-70.
- Boonroungrut, C., Saroinsong, W., & Eiamnate, N. (2022). Brief report: Visualizing scientific landscape on learning disabilities in SCOPUS between 2012 and 2021. In I. Maureen, E. Imah, S. Savira, S. Anam, M. Mael, & L. Hartanti. (eds.). *Innovation on Education and Social Sciences* (pp. 134-140). London: Routledge.
- Braun, T., Park, C., & Gorin, A. (2016). Self-compassion, body image, and disordered eating: A review of the literature. *Body image*, *17*, 117-131.
- Crego, A., Yela, J., Riesco-Matías, P., Gómez-Martínez, M., & Vicente-Arruebarrena, A. (2022). The Benefits of Self-Compassion in Mental Health Professionals: A Systematic Review of Empirical Research. *Psychology Research and Behavior Management*, *15*, 2599-2620.
- Ferrari, M., Hunt, C., Harrysunker, A., Abbott, M., Beath, A., & Einstein, D. (2019). Self-compassion interventions and psychosocial outcomes: A meta-analysis of RCTs. *Mindfulness*, *10*, 1455-1473.
- Halamová, J., Kanovský, M., Varšová, K., & Kupeli, N. (2021). Randomised controlled trial of the new short-term online emotion focused training for self-compassion and self-protection in a nonclinical sample. *Current psychology*, *40*, 333-343.
- Hamidah, I., Sriyono, S., & Hudha, M. (2020). A Bibliometric analysis of Covid-19 research using VOSviewer. *Indonesian Journal of Science and Technology*, *5*(2), 209-216.
- Hollis-Walker, L., & Colosimo, K. (2011). Mindfulness, self-compassion, and happiness in non-meditators: A theoretical and empirical examination. *Personality and Individual Differences*, *50*(2), 222-227.
- Knutas, A., Hajikhani, A., Salminen, J., Ikonen, J., & Porras, J. (2015). *Cloud-based bibliometric analysis service for systematic mapping studies*. A paper presented at the 16<sup>th</sup> International Conference on Computer Systems and Technologies, Dublin, Ireland.
- Kotera, Y., Ozaki, A., Miyatake, H., Tsunetoshi, C., Nishikawa, Y., & Tanimoto, T. (2021). Mental health of medical workers in Japan during COVID-19: Relationships with loneliness, hope and self-compassion. *Current Psychology*, *40*(12), 6271-6274.
- MacBeth, A., & Gumley, A. (2012). Exploring compassion: A meta-analysis of the association between self-compassion and psychopathology. *Clinical psychology review*, *32*(6), 545-552.
- Marshall, S., Parker, P., Ciarrochi, J., Sahdra, B., Jackson, C., & Heaven, P. (2015). Self-compassion protects against the negative effects of low self-esteem: A longitudinal study in a large adolescent sample. *Personality and individual differences*, *74*, 116-121.
- Nasir, A., Shaukat, K., Hameed, I., Luo, S., Alam, T., & Iqbal, F. (2020). A bibliometric analysis of corona pandemic in social sciences: a review of influential aspects and conceptual structure. *IEEE Access*, *8*, 133377-133402.
- Neff, K. (2003). The development and validation of a scale to measure self-compassion. *Self and identity*, *2*(3), 223-250.
- Neff, K. (2016). The self-compassion scale is a valid and theoretically coherent measure of self-compassion. *Mindfulness*, *7*, 264-274.

- Neff, K., Tóth-Király, I., Knox, M., Kuchar, A., & Davidson, O. (2021). The development and validation of the state self-compassion scale (long-and short form). *Mindfulness*, *12*(1), 121-140.
- Perianes-Rodriguez, A., Waltman, L., & Van Eck, N. (2016). Constructing bibliometric networks: A comparison between full and fractional counting. *Journal of Informetrics*, *10*(4), 1178-1195.
- Phillips, W. (2021). Self-compassion mindsets: The components of the self-compassion scale operate as a balanced system within individuals. *Current Psychology*, *40*(10), 5040-5053.
- Raes, F. (2010). Rumination and worry as mediators of the relationship between self-compassion and depression and anxiety. *Personality and Individual Differences*, *48*(6), 757-761.
- Winders, S., Murphy, O., Looney, K., & O'Reilly, G. (2020). Self-compassion, trauma, and posttraumatic stress disorder: A systematic review. *Clinical Psychology & Psychotherapy*, *27*(3), 300-329.
- Zessin, U., Dickhäuser, O., & Garbade, S. (2015). The relationship between self-compassion and well-being: A meta-analysis. *Applied Psychology: Health and Well-Being*, *7*(3), 340-364.

**Data Availability Statement:** The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

**Conflicts of Interest:** The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

**Publisher's Note:** All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.



**Copyright:** © 2023 by the authors. This is a fully open-access article distributed under the terms of the Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0).