STUDY PROTOCOL

Bibliometric analysis on workplace cyberbullying: study protocol [version 1; peer review: 2 not approved]

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Abstract

Cyberbullying behaviour is an international public health concern all around the world due to the increasing trend of working from home during COVID-19. The prevalence of workplace cyberbullying behaviour (WCB) has been shown to be increased prior to COVID-19 among allied health professionals, such as nurses and trainee doctors. There has been a lack of bibliometric analysis on scientific publications concerning this subject; therefore, the current articles presents a protocol for bibliometric analysis of WCB. An indicator-based search will have carried out from documents on PubMed and Scopus to retrieve data from primary peer-reviewed WCB research articles using relevant keywords. Articles that involve WCB research will be included in the analysis. The dataset will identify documents all around the world, and data will be validated using the VAKS assessment tool. Analysis will be carried out by comparing the relationship among institutions, authors, countries and keywords. The dataset will be publicly accessible in the Zenodo repository. There will be no involvement of human participants; therefore, the current research does not require an ethical review. Results will be publish in a peer-reviewed journal and at related conferences

Keywords

Workplace, Cyberbullying, health informatics, Information management, Human resource management, Organisational development

Open Peer Review

Approval Status

	1	2
version 1		
22 Mar 2021	view	view
1. Peter Kokol , University of Maribor, Maribor, Slovenia		
2. Ludo Waltman , Leiden University, Leiden, The Netherlands		
Any reports and responses or comments on the article can be found at the end of the article.		

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Introduction

Cyberbullying is defined as “an aggressive, intentional act carried out by a group or individual, using electronic forms of contact, repeatedly and over time against a victim who cannot easily defend him or herself”.¹ The past definition has a limited scope, not applicable to online workplace harassment and focussed on adolescents only. However, recent research concludes the definition of workplace cyberbullying behaviour (WCB) as “[involving] perceived unwanted or aggressive behaviour(s) perpetrated at any time through electronic media, that may harm, threaten, or demoralise the intended target(s) of this behaviour(s)”.²

Cyberbullying has become a critical youth issue worldwide.³ A recent death of 25-year-old Sulli Choi (October 14, 2019), who was a famous South Korean pop star has raised issues of growing cyberbullying. Before her death, Sulli had been long harassed by cyberbullying, including hate speech, stalking, and threats.^{4,5} Ministry of Education of the Republic of Korea and the National Research Foundation of Korea has recently funded several research projects on cyberbullying⁶ and workplace cyberbullying.⁷

There is a tremendous increase in the usage of mobile technology in the workplace. Several studies consider the positive influence of employees' in the perceived improvement of work performance,⁸ yet the extensive usage of mobile phone results in significant mental health issues (i.e. depression, sleep disturbance, stress and anxiety).⁹ The era of COVID-19 brings several challenges due to increased working from home (WFH), and may have a negative consequence on mental health.^{10,11}

A bibliometric study is an in-depth descriptive study investigating the characteristics of publications, helps in the identification of research gaps, and highlights trends in relevant research domains.¹² The inclusion of visualisation and data mining technique demonstrates a clear picture of a specific topic. The current protocol intends to discuss the research trends and characteristics published in WCB research. The study will determine the number of research publications; classify studies into themes and sub-themes; identify the research gap in WCB research; and demonstrate trends in author affiliations and institutional collaborations using qualitative methods.

Aims and objectives

This study aims to describe the literature available on Scopus and PubMed concerning workplace cyberbullying.

Objectives

1. Explore the bibliometric indicators on workplace cyberbullying.
2. Describe the trends between years (article published) correlated with the number of citations obtained.
3. Describe correlations between authors (in numbers), institutions, country collaborations, funding, and topics addressed.

Research questions

1. What significant issues have been discussed among selected articles on workplace cyberbullying?
2. Which articles and authors are highly cited in the topic of workplace cyberbullying?
3. Which universities/institution/organisation and funding agencies are involved in collaborating research on workplace cyberbullying?

Methods

Study design

The proposed study will investigate bibliometric indicators, with an emphasis on the quantitative synthesis of scholarly publication data. The research will evaluate the application of output and impact indicators for the evaluation of research published. Bibliometrics is essential for research evaluation, and there has been an increasing trend observed in this type of research since the mid-1980 in the field of natural and life sciences. It is additionally interesting for social sciences' scientists because many methods used in bibliometrics are from the social sciences' disciplines.¹³

Database selection

The researcher will use PubMed and Scopus databases to identify related papers. PubMed is known as a wide-ranging database in the field of mental health research¹⁴ and includes research on public health issues. PubMed is considered as a free text data source and can be used as a public health surveillance platform.¹⁵ Scopus is an abstract and indexing

database with full-text links that is produced by the Elsevier Co.¹⁶ It is a fast method to identify global scientific collaborations.¹⁷ Scopus used CiteScore as a journal based matrix that comprises of 22,256 journals, compared with the Journal Impact Factor (JIF), which only includes 11,365 journals.¹⁸ The selection of CiteScore is based upon the inclusion of a broader range of article types or documents.¹⁹

Investigation scope

The focal theme of the current study will investigate the bibliometric trends in workplace cyberbullying in healthcare professionals. The current research will examine articles published since the beginning of research by scholars till December 2021. 2

The study will cover academic articles published in PubMed indexed and Scopus indexed journals only. The current scope of articles will be limited to communication health, social health and mental health perspectives.

Search strategy

The researchers will perform a wide-ranging search for related publications that consists of all field terms and phrases relevant to cyberbullying and the workplace. The access to the article, i.e. Open Access format with full-text availability, will be considered to assess the visibility of articles.

Search terms for PubMed and Scopus

1. "Cyberbullying" AND "workplace" AND "office AND "work" AND "workroom" AND "workshop" AND "workstation" AND "place of work" AND "workspace" AND "studio" AND "working area" AND "atelier" AND "shop" AND "headquarters" AND "plant" AND "bureau" AND "department" AND "building" AND "station" AND "branch" AND "showroom" AND "occupation" AND "workforce" AND "workfellow" AND "workmates"
2. "Bullying online" AND "workplace" AND "office AND "work" AND "workroom" AND "workshop" AND "workstation" AND "place of work" AND "workspace" AND "studio" AND "working area" AND "atelier" AND "shop" AND "headquarters" AND "plant" AND "bureau" AND "department" AND "building" AND "station" AND "branch" AND "showroom" AND "occupation" AND "workforce" AND "workfellow" AND "workmates"
3. "Cyberharassment" AND "workplace" AND "office AND "work" AND "workroom" AND "workshop" AND "workstation" AND "place of work" AND "workspace" AND "studio" AND "working area" AND "atelier" AND "shop" AND "headquarters" AND "plant" AND "bureau" AND "department" AND "building" AND "station" AND "branch" AND "showroom" AND "occupation" AND "workforce" AND "workfellow" AND "workmates"
4. "Harassment online" AND "workplace" AND "office AND "work" AND "workroom" AND "workshop" AND "workstation" AND "place of work" AND "workspace" AND "studio" AND "working area" AND "atelier" AND "shop" AND "headquarters" AND "plant" AND "bureau" AND "department" AND "building" AND "station" AND "branch" AND "showroom" AND "occupation" AND "workforce" AND "workfellow" AND "workmates"
5. "Cyberstalking" AND "workplace" AND "office AND "work" AND "workroom" AND "workshop" AND "workstation" AND "place of work" AND "workspace" AND "studio" AND "working area" AND "atelier" AND "shop" AND "headquarters" AND "plant" AND "bureau" AND "department" AND "building" AND "station" AND "branch" AND "showroom" AND "occupation" AND "workforce" AND "workfellow" AND "workmates"

Inclusion criteria

The researcher will include conceptual studies, empirical analyses, theoretical contributions, methodological studies, data notes, study protocols, scoping reviews, meta-analyses, systematic reviews, narrative reviews, intervention studies, editorials, case studies, commentaries, brief reports and communications retrieved from PubMed and Scopus in the English language from the beginning of the database until December, 2021.

Exclusion criteria

Publications with irrelevant or out of scope topics will be excluded. Magazines, newspapers, articles, books, book chapters, monographs, and conference papers will be excluded from the analysis. The researchers will exclude publications categorised under corrections or retracted.

Indicators

For workplace cyberbullying among healthcare professionals, the researchers will extract the following data:

1. Documents type, classified as conceptual studies, empirical analyses, theoretical contributions, methodological studies, data notes, study protocols, scoping reviews, meta-analyses, systematic reviews, narrative reviews, intervention studies, editorials, case studies, commentaries, brief reports and communications.
2. Article access type, classified as Open Access with full-text availability to evaluate the accessibility of relevant documents.
3. Title, name of the first author, name of the corresponding author, h-index of the author (first/corresponding) given by Scopus, number of citations given by Scopus, name of journal/conference, journal ranking according to Scopus (CiteScore), year of publication, name of universities/organisation collaborated, keywords used in related publications and funding availability will be considered as crucial indicators for further scientific evaluation.
4. The top 50 cited papers will be listed.
5. Geographic distribution of publications.
6. Mapping of keywords.

Data extraction

The following data items will be extracted:

1. Title (Scopus)
2. Name, location and affiliation of first and corresponding author (Scopus)
3. H-index of first and corresponding author (Scopus)
4. Number of Scopus citation (Scopus)
5. Name of journal (Scopus)
6. Journal rank according to Scopus (CiteScore rank)
7. Date of publication, submission and acceptance given by the journal
8. Acceptance time calculated from the journal's information
9. Number of Universities/Organisation contributed to that publication (Scopus)
10. Name of Universities/Organisation contributed as an author
11. Journal impact factor (Cite Score) according to Scopus 2020
12. Type of Article given by journal or Scopus
13. Major topic/category, the subject area given by Scopus or journal
14. Keyword by journal
15. Major issue addressed will manually collect from the journal.
16. Number of countries involved in collaboration given by the journal.

17. Number of pages and reference provided by Scopus
18. Number of figures and tables
19. Funding and abstract information given by the journal

Validation

The current study will be internally validated by VAKS assessment tool, which is used as a validation tool for qualitative research to assess trustworthiness of qualitative research articles.²⁰

Data analysis

The researchers will export the data and analyse them using Microsoft Excel 2016 and IBM SPSS Statistics 27. Percentages of Citation analysis, characteristics of authors of exporting articles, Manuscript characteristics will be performed using IBM SPSS Statistics 27 where necessary. The qualitative assessment of indicators will be analysed using Orange software 3.27.1, QDA miner lite and VOSviewer software.

Database limitations

The current research will not contain documents from preprint servers to avoid the risk of misleading articles that have not been peer reviewed. Articles will be excluded from the list in-case of any conflict observed (i.e. data items) between journal and Scopus indexed articles.

Patient and public involvement

The proposed study does not directly involve human participants and has been exempt from ethical review.

Study Status

The current study has not been started yet.

Dissemination

The proposed study will identify the bibliometric research trends in workplace cyberbullying behaviour all around the world. Furthermore, the research draws attention to strengths, weaknesses and opportunities in research areas, for instance the type of research being conduct could provide suggestions to researchers on the allocation of research budgets on new themes or subthemes. The researcher proposed to publish the research article in an open access journal. The data will be stored under a publicly accessible Zenodo repository.²³ The results will be published in an open access journal after peer-review and will disseminated to the public through scientific conferences (symposium, workshop, or meeting). The published article will be share on scientific social media, such as ResearchGate.²⁴

Conclusions

Using bibliographic indicators, the proposed study will identify trends in workplace cyberbullying behaviour research publications, and will examine the extent and pattern of collaboration between researchers globally. A limitation of this study will be language bias due to the selection of English-only articles.

Data Availability

No data are associated with this article.

References

1. Smith PK, Mahdavi J, Carvalho M, *et al.*: **Cyberbullying: its nature and impact in secondary school pupils.** *J Child Psychol Psychiatry*. 2008; **49**: 376–385.
[PubMed Abstract](#) | [Publisher Full Text](#)
2. D'Souza N, Forsyth D, Tappin D, *et al.*: **Conceptualizing workplace cyberbullying: Toward a definition for research and practice in nursing.** *J Nurs Manag*. 2018; **26**: 842–850.
[PubMed Abstract](#) | [Publisher Full Text](#)
3. Kowalski RM, Giumetti GW, Schroeder AN, *et al.*: **Bullying in the digital age: A critical review and meta-analysis of cyberbullying research among youth.** *Psychol Bull*. 2014; **140**: 1073–1137.
[PubMed Abstract](#) | [Publisher Full Text](#)
4. Ling C, Stringhini G: **Examining the Impact of Social Distance on the Reaction to a Tragedy A Case Study on Sulli's Death.** *Assoc Adv Artif Intell*. 2020.
5. Yi HY, Cha S: **Cyber bullying, star suicides: The dark side of South Korea's K-pop world|The Star.** [Reference Source](#) [Accessed December 12, 2020]
6. Kim H, Han Y, Song J, *et al.*: **Application of Social Big Data to Identify Trends of School Bullying Forms in South Korea.**

- Int J Environ Res Public Health*. 2019; **16**: 2596.
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
7. Park M, Choi JS: **Effects of workplace cyberbullying on nurses' symptom experience and turnover intention.** *J Nurs Manag*. 2019; **27**: 1108–1115.
[PubMed Abstract](#) | [Publisher Full Text](#)
 8. Yueh H-P, Lu M-H, Lin W: **Employees' acceptance of mobile technology in a workplace: An empirical study using SEM and fsQCA.** *J Bus Res*. 2016; **69**: 2318–2324.
[Publisher Full Text](#)
 9. Thomée S, Härenstam A, Hagberg M: **Mobile phone use and stress, sleep disturbances, and symptoms of depression among young adults - a prospective cohort study.** *BMC Public Health*. 2011; **11**: 66.
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
 10. Gunawan J, Juthamane S, Aungsuroch Y: **Current Mental Health Issues in the Era of Covid-19.** *Asian J Psychiatr*. 2020; **51**: 102103.
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
 11. Torales J, O'Higgins M, Castaldelli-Maia JM, et al.: **The outbreak of COVID-19 coronavirus and its impact on global mental health.** *Int J Soc Psychiatry*. 2020;
[PubMed Abstract](#) | [Publisher Full Text](#)
 12. Ardito L, Scuotto V, Del Giudice M, et al.: **A bibliometric analysis of research on Big Data analytics for business and management.** *Manag Decis* 2019; **57**: 1993–2009.
[Publisher Full Text](#)
 13. Bornmann L: **"Bibliometric Indicators,"** In: *SAGE Research Methods Foundations*, eds. Atkinson P, Delamont S, Cernat A, et al.: 1 Oliver's Yard, 55 City Road, London EC1Y 1SP United Kingdom: SAGE Publications Ltd.
[Publisher Full Text](#)
 14. Löhönen J, Isohanni M, Nieminen P, et al.: **Coverage of the bibliographic databases in mental health research.** *Nord J Psychiatry*. 2010; **64**: 181–188.
[PubMed Abstract](#) | [Publisher Full Text](#)
 15. Natsiavas P, Maglaveras N, Koutkias V: **A public health surveillance platform exploiting free-text sources via natural language processing and linked data: Application in adverse drug reaction signal detection using PubMed and Twitter.** In: *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*.
[Publisher Full Text](#)
 16. Burnham JF: **Scopus database: a review.** *Biomed Digit Libr*. 2006; **3**(1).
[Publisher Full Text](#)
 17. Montoya FG, Alcaide A, Baños R, et al.: **A fast method for identifying worldwide scientific collaborations using the Scopus database.** *Telemat Informatics*. 2018; **35**: 168–185.
[Publisher Full Text](#)
 18. James C, Colledge L, Meester W, et al.: **CiteScore metrics: Creating journal metrics from the Scopus citation index.** *Learn Publ*. 2019; **32**: 367–374.
[Publisher Full Text](#)
 19. Roldan-Valadez E, Salazar-Ruiz SY, Ibarra-Contreras R, et al.: **Current concepts on bibliometrics: a brief review about impact factor, Eigenfactor score, CiteScore, SCImago Journal Rank, Source-Normalised Impact per Paper, H-index, and alternative metrics.** *Irish J Med Sci (1971)*. 2019; **188**: 939–951.
[PubMed Abstract](#) | [Publisher Full Text](#)
 20. Schou L, Høstrup H, Lyngsø EE, et al.: **Validation of a new assessment tool for qualitative research articles.** *J Adv Nurs*. 2012; **68**: 2086–2094.
[PubMed Abstract](#) | [Publisher Full Text](#)
 21. Kim YJ, Qian L, Aslam MS: **Development of a Personalized Mobile Mental Health Intervention for Workplace Cyberbullying Among Health Practitioners: Protocol for a Mixed Methods Study.** *JMIR Res Protoc*. 2020; **9**: e23112.
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
 22. Williams AE: **F1000: an overview and evaluation.** *Inf Learn Sci*. 2017; **118**: 364–371.
[Publisher Full Text](#)
 23. Sicilia M-A, García-Barriocanal E, Sánchez-Alonso S: **Community Curation in Open Dataset Repositories: Insights from Zenodo.** *Procedia Comput Sci*. 2017; **106**: 54–60.
[Publisher Full Text](#)
 24. O'Brien K: **ResearchGate.** *J Med Libr Assoc*. 2019; 107.
[Publisher Full Text](#)

Open Peer Review

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Ludo Waltman

Centre for Science and Technology Studies (CWTS), Leiden University, Leiden, The Netherlands

While I appreciate the efforts made by the authors to publish a protocol of their study, I am afraid I am not convinced that publishing a protocol is very useful for this specific type of study. Bibliometric analyses like the one proposed by the authors are of an exploratory (rather than confirmatory) nature. I, therefore, question the usefulness of publishing a study protocol. A bibliometric analysis like this one will inevitably require a number of iterations in which the search queries and other aspects of the methodological design are gradually being improved. It is for instance not possible to assess the quality of the search queries without observing the results obtained from the queries. I, therefore, feel that I am not able to evaluate this study protocol. For research projects that are of a confirmatory nature, publishing a study protocol can be a great way to improve the quality and reliability of the research, but for projects that are of a more exploratory nature, like this one, I do not see a clear benefit in publishing a study protocol and I am not sure how I can evaluate such a protocol.

I have decided not to approve this protocol. I would like to emphasize that this decision does not reflect any specific concerns I have about the content of the protocol under review. Instead, it reflects my general discomfort about evaluating a protocol for studies that are of an exploratory nature.

Is the rationale for, and objectives of, the study clearly described?

No

Is the study design appropriate for the research question?

No

Are sufficient details of the methods provided to allow replication by others?

No

Are the datasets clearly presented in a useable and accessible format?

Not applicable

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Bibliometrics, scientometrics, research evaluation

I confirm that I have read this submission and believe that I have an appropriate level of expertise to state that I do not consider it to be of an acceptable scientific standard, for reasons outlined above.

Reviewer Report 03 June 2021

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Peter Kokol

Faculty of Electrical Engineering and Computer Science, University of Maribor, Maribor, Slovenia

1. The authors didn't provide information on how the corpora from Pubmed and Scopus will be integrated, actually, PubMed is mentioned only in the introduction and not in the data extraction.
2. The presented search strings will probably result in empty corpora, due to too many ANDs in the strings.
3. The same search strings work differently in Scopus than in Pubmed.

Is the rationale for, and objectives of, the study clearly described?

Yes

Is the study design appropriate for the research question?

No

Are sufficient details of the methods provided to allow replication by others?

Yes

Are the datasets clearly presented in a useable and accessible format?

Not applicable

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Bibliometrics, knowledge synthesis, computer science

I confirm that I have read this submission and believe that I have an appropriate level of expertise to state that I do not consider it to be of an acceptable scientific standard, for reasons outlined above.

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