

## Bibliometric Analysis of Workplace Bullying

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### ABSTRACT

*This article presents a bibliometric analysis on workplace bullying which have been analysed using the VOSviewer 1.6.15 to evaluate the global research trends, specifically the publication growth, publication outputs by countries, topics of interest, and co-occurrences of author keywords. Approximately 1,828 articles published between 1995 to 2020 were retrieved from the Scopus database. The findings have shown a growing trend in terms of publication outputs. Most of the publications were by the researchers from the United States followed by Australia and the United Kingdom. India was the only Asian country listed which implies a scarcity of research on workplace bullying by Asian background researchers. The keyword 'bullying' has the highest occurrence in the publications followed by 'workplace bullying'. A closer look at the co-occurrences of author keywords revealed that 'workplace bullying' has 582 links whereby, the highest total link strength was with the 'psychology' keyword. This corroborates the arguments of past studies that workplace bullying could affect a person's psychological well-being. It can be concluded that the results from the analysis could be used by future researchers to explore under research areas related to workplace bullying.*

**Keywords:** Bibliometric Analysis, Scopus Database, VOS Viewer, Workplace Bullying.

### 1. INTRODUCTION

Works of literature have used various terms in explaining abusive behaviour at the workplace. This includes bullying, violence, aggression, abuse, harassment, and mobbing (Branch, 2008). According to Escartin et al. (2011), the definition of bullying is varied and largely depending on how bullying is interpreted by the victims and influenced by the cultural context. The role of individual perception towards bullying can be explained by the theory or learning using Novak's (1998) theory of learning (Altman, 2010). Based on this theory, the concept of workplace bullying is conceived by an individual when the person has had the experience of witnessing a bullying act. This experience will not only influence the person's view towards bullying but also how the person responds to the bullying act.

In the European context, bullying is defined as a repeated act of harassing over a certain period (Escartin *et al.*, 2011) whereas, in the US, bullying is regarded as 'emotional abuse' (Keashly, 1998). Meanwhile, workplace bullying is defined as a type of abusive behaviour that occurs in the workplace and brings negative impact on the victims, the organizations, as well as the witness (Branch, 2008; Matthiesen & Einarsen, 2001, Vartia, 2001). In specific, workplace bullying could affect the victim's mental and physical health, lead to post-traumatic stress and intention to leave, cause burnout, job dissatisfaction and reduced commitment towards the organization (Nielsen & Einarsen, 2012). Based on Blomberg & Rosander (2019), the negative health effect of workplace

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bullying could be reduced if the affected individuals believed that they have support from their co-workers.

As for the assessment to measure workplace bullying, an instrument named NAQ (Negative Act Questionnaire) was first constructed by Einarsen & Rakness (1991,1997) but they found that the instrument had several weaknesses including its usage in other settings. Einarsen et al. (2009) then revised the instrument and tested the validity of the Negative Acts Questionnaire-Revised (NAQ-R) instrument before affirming the NAQ-R as a standardized and valid instrument to measure bullying at the workplace. Using the questionnaire, researchers would be able to measure three types of bullying, that are: person-related bullying, work-related bullying, as well as physically intimidating bullying.

A meta-analytic review on workplace bullying by Nielsen & Einarsen (2012) found several limitations in past studies. Firstly, they highlighted the lack of theoretical basis for the concept of bullying. Secondly, they suggested that future researchers to investigate moderating and mediating variables to explain how and when the act of workplace bullying could affect a person. Thirdly, they recommended employing longitudinal research designs to understand the cause and effect of the relationships between variables. Fourthly, they argued that workplace bullying instruments tend to be biased due to its self-reported nature, and thus, future studies are encouraged to incorporate objective data such as registered sick leave to reduce bias. Finally, they highlighted the scarcity of research that investigates the measures to prevent bullying in the workplace.

Thus, the objective of this article is to complement the findings from past studies, specifically by conducting a bibliometric analysis to describe the patterns of publications on workplace bullying using the Scopus database. This analysis aims to evaluate the types of publications in terms of access type, language, subject area, source title, as well as to identify top-cited publications, trends of publication, leading countries, and finally the author keyword co-occurrence. This analysis is expected to be of value to future researchers as it gives an insight into the global research trends on 'workplace bullying' and provides guidance on future research directions.

## **2. METHODS**

A bibliometric analysis study was conducted in this research. In specific, this analysis allows the researchers to evaluate the global research trends by analysing the publication outputs within the Scopus database. This analysis differs from a review paper as the former evaluate the technical aspects of a paper, whereby the latter performs more comprehensive reviews of the past literatures. Data mining from the Scopus database was conducted on 13 July 2020. The query string used for the search was: (TITLE-ABS (workplace bullying)). This query string yielded 1,828 articles from the oldest publication in 1995 to publications in 2020. The Scopus search result was then analysed based on access type, year, country, subject area, language, and source title. The researchers also looked at the total citation for ranking purposes. From the search result, the researchers then exported the citation, bibliographic, and abstract information to VOSviewer version 1.6.15. Using the software, the researchers analysed the co-occurrence of author keywords by creating a bibliometric map to first, identify the item with the highest occurrence and second, to analyse the item in relation as well as the strength of the link.

## **3. RESULTS AND DISCUSSION**

This section presents the result from the search analysis based on the Scopus database, as well as the bibliometric analysis using the VOSviewer version 1.6.15.

### 3.1 Analysis of Access Type, Language, Subject Area, And Source Title

As indicated earlier, the search result using the query string yielded 1,828 results in the Scopus database. These were the articles published from 1995 up till 2020, that is for a period of 25 years. Out of that, 1,621 are journal articles, whereby only 298 are open access articles which may influence the citation scores. English was the main language used in most of the articles, specifically 1740 documents followed by Spanish (23 documents), and German (16 documents). In terms of subject area, the publications were mainly dominated by the field of medicine (579 documents), followed by business, management, and accounting (471 documents), social sciences (441 documents), and psychology (437 documents). Figure 1 illustrates the documents by subject area.

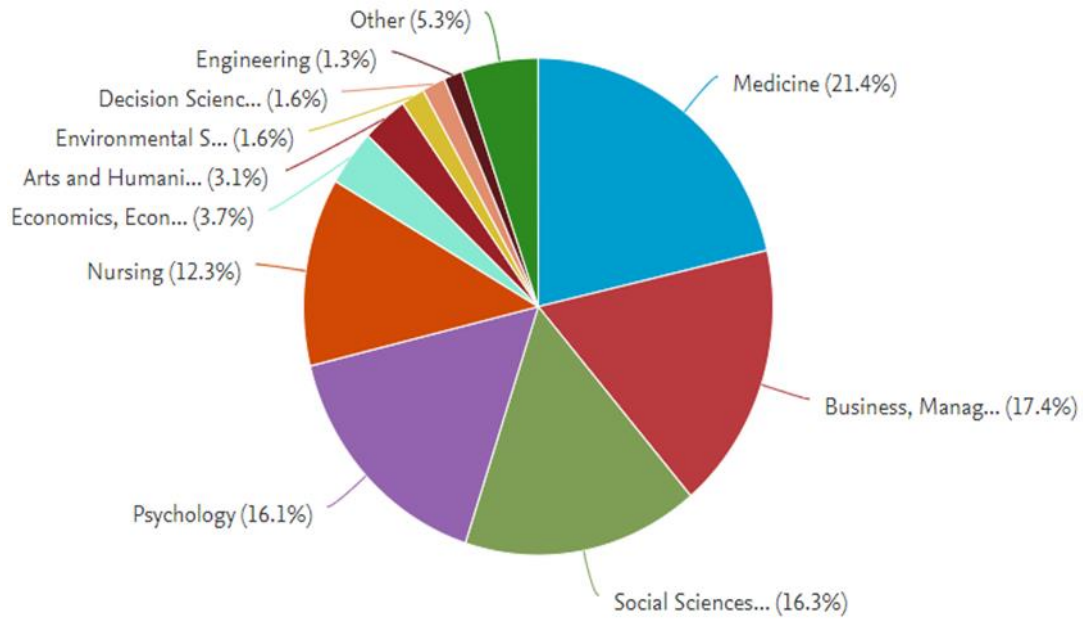


Figure 1. Documents by Subject Area.

Figure 2 below illustrates the documents by source title. Top three publication outlets are Journal of Nursing Management (29 documents), Work and Stress (26 documents), and European Journal of Work and Organizational Psychology (22 documents).



Figure 2. Documents by Source Title.

### 3.2 Analysis of Citation Scores

As mentioned earlier, most of the publications on ‘workplace bullying’ have been published in the field of medicine. Hence, researchers were interested to look at the types of the studies conducted. Table 1 shows the document title for top ten articles within the ‘medicine’ subject area with the highest citation scores. It can be implied from this table that workplace bullying has been studied within health institutions since the 1990s. Indirectly, it also highlights the high prevalence of ‘workplace bullying’ towards healthcare workers. In fact, the first article on ‘workplace bullying’ was published in 1995 and in 1999. [12] published their survey which has been cited 357 times.

**Table 1** The top ten highest cited publication in the medicine subject area

No	Document title	Year	Source	Citation Score
1.	Workplace bullying in NHS community trust: Staff questionnaire survey (Quine, 1999)	1999	British Medical Journal	357
2.	Workplace bullying and the risk of cardiovascular disease and depression (Kivimäki <i>et al.</i> , 2003)	2003	Occupational and Environmental Medicine	343
3.	The destructiveness of laissez-faire leadership behaviour (Skogstad <i>et al.</i> , 2007)	2007	Journal of Occupational Health Psychology	307
4.	Workplace bullying and sickness absence in hospital staff (Kivimäki <i>et al.</i> , 2000)	2000	Occupational and Environmental Medicine	307
5.	Consequences of workplace bullying with respect to the well-being of its targets and the observers of bullying (Vartia, 2001)	2001	Scandinavian Journal of Work, Environment and Health	297
6.	Measuring workplace bullying (Cowie <i>et al.</i> , 2002)	2002	Aggression and Violent Behavior	164
7.	Physical, psychosocial, and organizational factors relative to sickness absence: A study based on Sweden Post (Voss <i>et al.</i> , 2001)	2001	Occupational and Environmental Medicine	157
8.	20 Years of workplace bullying research: A review of the antecedents and consequences of bullying in the workplace (Samnani and Singh, 2012)	2012	Aggression and Violent Behavior	151
9.	Psychosocial safety climate as a lead indicator of workplace bullying and harassment, job resources, psychological health, and employee engagement (Law <i>et al.</i> , 2011)	2011	Accident Analysis and Prevention	151
10.	Workplace bullying in junior doctors: Questionnaire survey (Quine, 2002)	2002	British Medical Journal	150

The researchers also evaluated the citation scores for top-five publications from the overall search result. Its main purpose is to delineate the topic of interest within the ‘workplace bullying’ literature. Table 2 presents the top five articles with the highest citation scores. In Table 2, the article by Einarsen *et al.* (2009) has been cited 537 times. This study validates the revised NAQ-R instrument which can be used to measure workplace bullying. The second article with 484 citations was published in 2003 by Salin. This article reviewed the literature on workplace bullying and found that bullying happens as a result of three different structures namely enabling (such as power imbalance within the organizational structure), motivating (such as internal competition), and triggering factors (such as organizational changes). Finally, the third article

which received 410 citations was authored by Jackson et al. (2007). The authors published a review article which looks at the concept of personal resilience as a strategy in responding to workplace bullying.

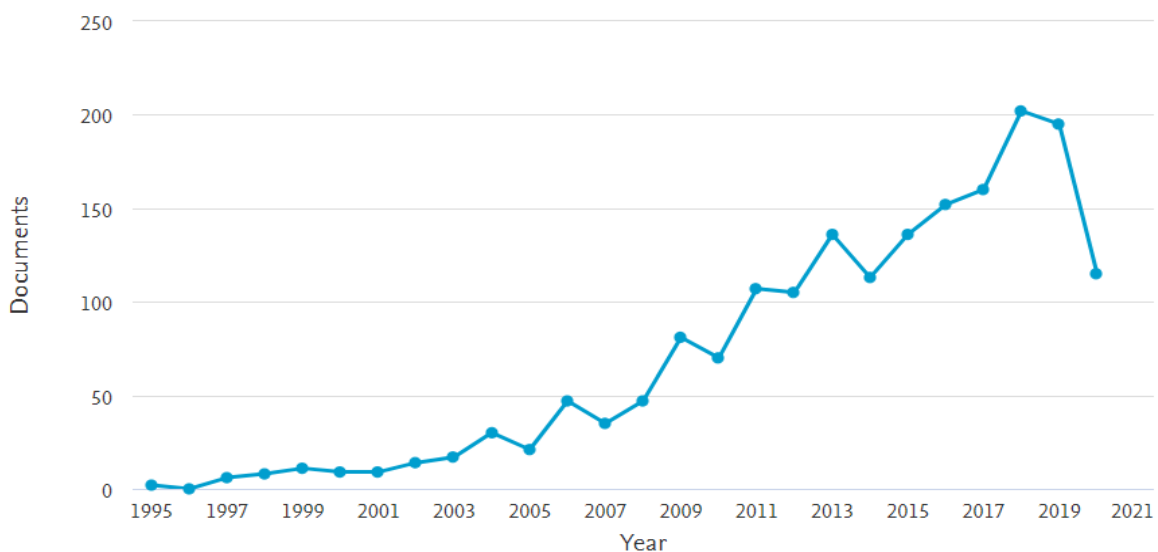
**Table 2** The top five highest cited publication

No	Document title	Year	Source	Citation Score
1.	Measuring exposure to bullying and harassment at work: Validity, factor structure and psychometric properties of the negative act questionnaire-revised (Einarsen <i>et al.</i> , 2009)	2009	Work and Stress	537
2.	Ways of explaining workplace bullying: A review of enabling, motivating and precipitating structures and processes in the work environment (Salin, 2003)	2003	Human Relations	485
3.	Personal resilience as a strategy for surviving and thriving in the face of workplace adversity: A literature review (Jackson <i>et al.</i> , 2007)	2007	Journal of Advanced Nursing	410
4.	"Incivility, social undermining, bullying...oh my!": A call to reconcile constructs within workplace aggression research (Hershcovis, 2011)	2011	Journal of Organizational Behavior	366
5.	Workplace bullying in NHS community trust: Staff questionnaire survey (Quine, 1999)	1999	British Medical Journal	357

### 3.3 Analysis of Citation Scores

Based on the Scopus database, the researchers found that most of the documents have been published in 2018 (202 documents) while the least number of publications was in 1995 (2 documents). The average publications for the duration of 25 years between 1995 to 2020 are approximately 73 documents. The publication growth as depicts by Figure 3 suggests that 'workplace bullying' is a research area that continues to gain favourable attention by the scholars.

Documents by year



**Figure 3.** Publication Growth.

### 3.4 Analysis of Productive Countries

In term of the document by country, as illustrated in Figure 4, most of the documents, that is 441 documents have been published by researchers from the United States of America, followed by Australia and the United Kingdom, 247 documents each. As for Asian countries, India is the only country in Asia that has published in this topic with 53 documents. This implies a scarcity of research on 'workplace bullying' by Asian researchers and within the Asian region context. This trend is quite intriguing as countries with higher power distance such as in Asian countries are more likely to experience workplace bullying than countries with lower power distance. Furthermore, national cultures are found to be influencing the perceptions of workplace bullying (Moreno-Jiminez *et al.*, 2008). This highlights the need to study the prevalence of workplace bullying within Asian countries to further validate the relationship between culture and bullying behaviour.

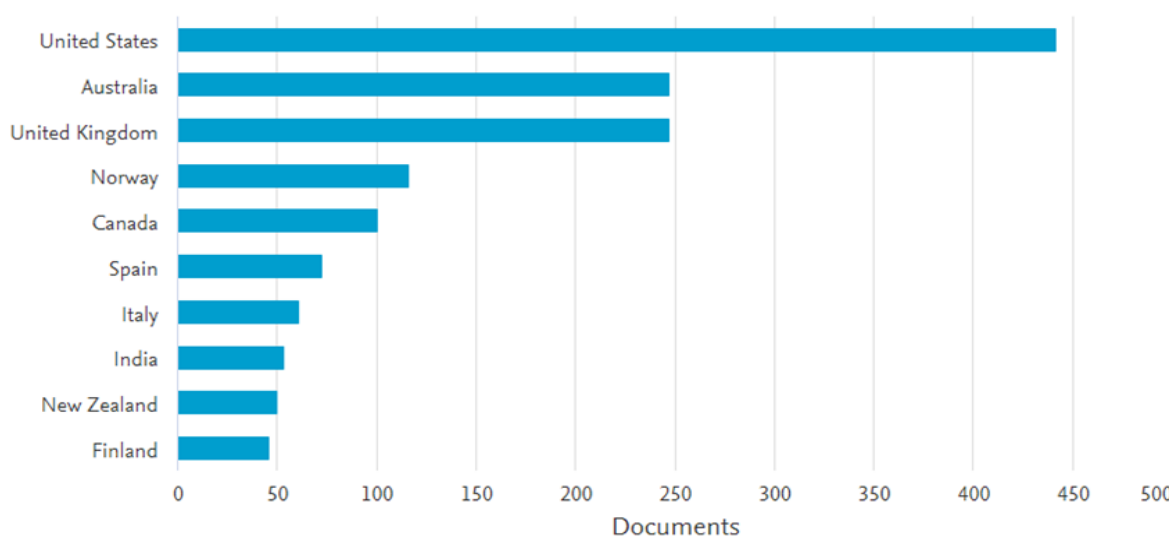


Figure 4. Documents by Country.

### 3.5 Analysis of Keyword Co-Occurrence

To observe the keyword co-occurrence, a visualised bibliometric map for 'workplace bullying' was created using the VOSviewer version 1.6.15. Figure 5 illustrates the bibliometric map for author keyword co-occurrence. The researchers entered 5 as the minimum threshold for keyword co-occurrence. The keyword 'bullying' has the highest occurrences, that is 893 times, followed by 'workplace bullying' which occurred 578 times in the publications. A closer look towards 'workplace bullying' revealed 3 cluster, 582 links, and 4887 total link strength.

Table 3 summarizes the link strength for the selected topic of interest for workplace bullying. Based on Khudzari *et al.* (2018), the link between items is considered strong when the value is high. Hence, among the author keyword co-occurrence, 'workplace bullying' has the most links with 'psychology' which implies the detrimental effect of workplace bullying towards a person's mental health. Workplace bullying has also been studied from the aspects of its antecedents such as 'work environment', and 'leadership', as well as being associated with the outcomes of workplace bullying such as 'mental health', 'job satisfaction', 'depression', and 'job stress'.

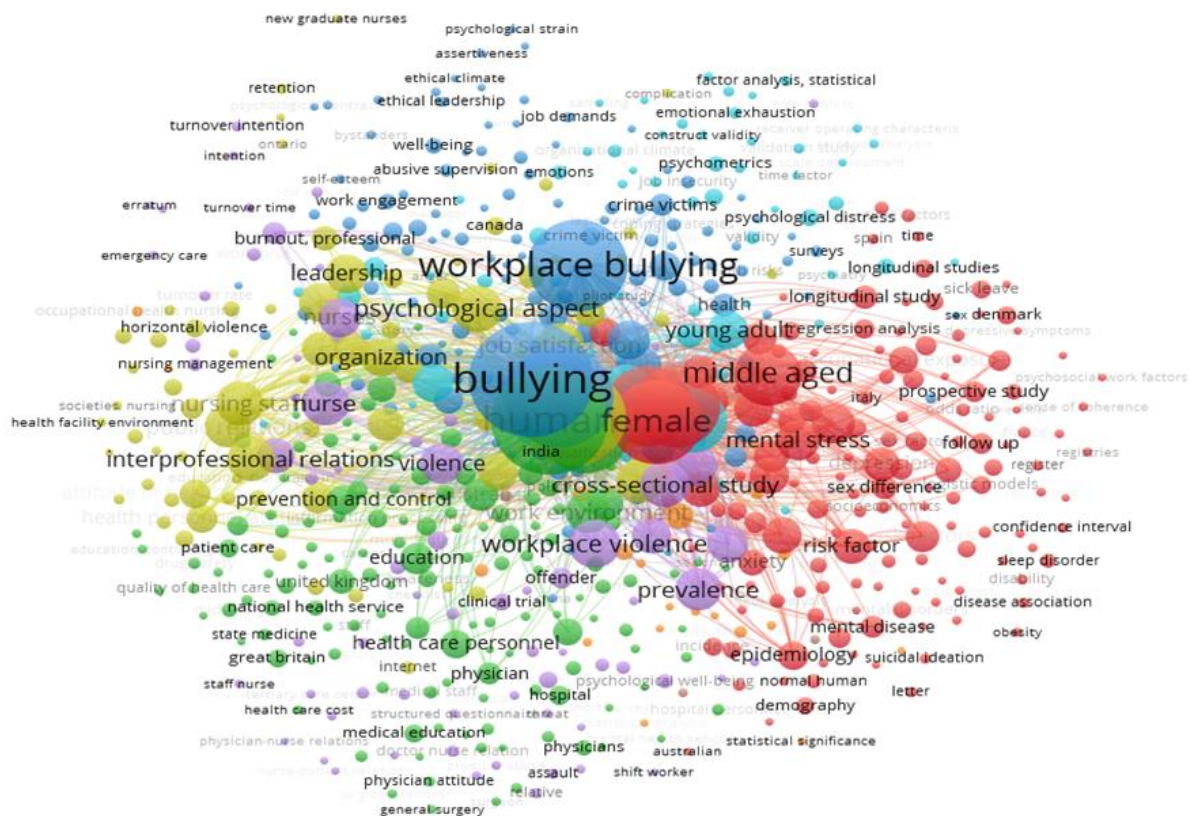


Figure 5. Bibliometric Map by VOSviewer

Table 3 Summary of Selected Topic of Interest for Workplace Bullying

No	Item	Link Strength
1.	Psychology	85
2.	Work environment	40
3.	Job satisfaction	37
4.	Mental health	33
5.	Workplace violence	31
6.	Leadership	31
7.	Occupational health	31
8.	Depression	30
9.	Job stress	28
10.	Harassment	26

Apart from the above keywords, links between ‘workplace bullying’ and ‘young adult’ (33 total links), ‘middle aged’ (89 total links), ‘adult’ (143 total links), ‘male’ (145 total links), ‘female’ (151 total links), and ‘nurses’ (30 total links) are found. These results suggest that equal attention have been given towards both female and male. However, in terms of age, it appears that past studies have been more focused on mature adult as compared to young adult. About 30 links were also found between ‘workplace bullying’ and ‘nurses’, and 81 links between ‘bullying’ and ‘nurses’. The considerable focus on these links implies that nurses are often found to be bullied at work. ‘Mobbing’ was also found to link with workplace bullying, with a total link strength of 43.

#### 4. CONCLUSION

This article has explained workplace bullying in terms of the definition, causes and effects on the bullied persons. Based on the bibliometric analysis conducted, it can be concluded that the number of publications on this topic continues to gain attention from the researchers due to its increment in the number of publications worldwide. However, there is a scarcity of research on workplace bullying by Asian researchers which implies a limited number of researches on workplace bullying within the Asian countries.

Based on the bibliometric analysis, the researchers recommend that more studies should be conducted on the topic of workplace bullying, particularly in the Asian context – Malaysia included. This is supported by Chan et al. (2019) who argued that workplace bullying is understudied in the context of Malaysia despite the attention given at the global scale. In their studies towards more than 5000 employees in Malaysia, they found that more than one in three employees has experienced workplace bullying, particularly among female employees. Moreover, since current findings have shown evidence of workplace bullying within the health institution and towards health workers, future researchers may want to investigate the prevalence of workplace bullying in other work settings and towards different professions. Based on a study by Hassan et al. (2015), 14% out of 231 employees from various industries in Malaysian firms have experienced workplace bullying. This suggests that workplace bullying is an issue in Malaysia and warrant further investigations. Besides that, past researches within the Malaysian context have mainly reported on the frequency of bullying behaviour. Thus, very little is known about the severity of workplace bullying and its short and long-term effect on the victims (Al Bir & Hassan, 2014). Moreover, the existing workplace bullying instrument has been argued to be unsuitable for the Malaysian context. As a result, Kwan et al. (2020) has recently developed an instrument for measuring workplace bullying, particularly in the eastern context. This newly developed instrument named the Malaysian Workplace Bullying Index (MWBI) is argued to be more culturally fit to the eastern context. This instrument may be of interest to researchers to further the research on workplace bullying in Malaysia particularly.

In sum, the results from this study could not be generalized as it only analysed publications within the Scopus database and are also limited by the query string used for the search. Nevertheless, this study has provided a snapshot of publications on workplace bullying which could be used by future researchers as guidance to explore under research areas related to workplace bullying.

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