



Contents lists available at ScienceDirect

## Safety and Health at Work

journal homepage: [www.e-shaw.net](http://www.e-shaw.net)

## Review Article

## Prevalence of Workplace Microaggressions and Racial Discrimination: A Systematic Review and Meta-analysis

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## ARTICLE INFO

## Article history:

Received 6 December 2023

Received in revised form

2 May 2024

Accepted 11 May 2024

Available online 15 May 2024

## Keywords:

Microaggression

Prevalence

Racial discrimination

Workplace

## ABSTRACT

**Background:** In recent years, the rise of workplace racial discrimination and microaggressions has decreased the efficiency and productivity of organizations and institutions, and realization of organizational goals globally. Accordingly, it was decided to conduct a systematic review and meta-analysis in the present study with the aim of investigating the prevalence of microaggression and racial discrimination in the workplace.

**Methods:** The PubMed, Scopus, Web of Science, ScienceDirect and Google Scholar databases were systematically searched for studies that had reported the effects of work stress among managers. The search did include a lower time limit and was conducted in June 2023. The heterogeneity of the studies was investigated using the  $I^2$  index, and accordingly random effects method was adopted for meta-analysis. Data analysis was conducted with the Comprehensive Meta-Analysis (v.2) software.

**Results:** In the review of seven studies with a sample size of 2998 people, the overall prevalence of microaggression and racial discrimination in the workplace was found to be 73.6% and 18.8%, respectively. Publication bias within the selected studies was examined with the Egger's test, which indicated the absence of publication bias for the pooled prevalence of workplace microaggression ( $p$ : 0.264) and for the pooled prevalence of workplace racial discrimination ( $p$ : 0.061).

**Conclusion:** The results obtained from this report indicate the high impact of micro-aggression and racial discrimination in the workplace. Considering the negative effects of such behaviours, the findings from this study will be helpful to managers and health policymakers.

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## 1. Background

While racial discrimination is a well-known occurrence in the workplace [1], microaggression is a comparatively recent concept in research [2]. It can be argued that microaggression is a new moral category that refers to subtle yet harmful forms of

discriminatory behavior that it is experienced by members of marginalized groups [3]. Accordingly, implicit bias often underlies such behavior, indicating aggressors are insensible to the harm they have inflicted [3].

Microaggression can be defined as communicative slights or actions, verbal, non-verbal, impacting a marginalized individual's

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emotional and mental well-being, and degrades the victim's identity [4,5]. It is an atypical offensive action, which is typically subtle in nature, and can play a disproportionately harmful role in affecting the victim [2]. Moreover, microaggressions can often be unintentional behaviors based on implicit prejudices, however, they are considered harmful by marginalized groups [6].

Apart from microaggression, there are other concepts and associated acts that are also discussed. Racism is one of the most significant terms in contemporary sociological culture, however, defining it proves to be challenging [7]. In the sociology of race and ethnicity, the concept of racism entails a wide range of social phenomena such as systemic inequality, institutional discrimination, internalized stereotypes, and racial attitudes [7].

Microaggressions present some key theoretical challenges about the nature of intention as well as evidence for the meanings of actions that speakers can or should be responsible for [4]. Considering that micro-aggressions are not immediately evident, and may have occurred unintentionally, it can be challenging for the victim to cognize whether what was faced was a micro-aggression or not [4]. Therefore, an individual's assessment of the level of discrimination is based on their own perception, and this is also related to inherent inclination to create impressions of others [8].

Organizations attempt to create inclusive working environments with high levels of employee participation as well as social interaction among work groups, to benefit from the diversity and the full potential of workforce [9]. Nonetheless, despite all the efforts, organizations often face pertinent challenges of unwanted acts or behaviors that result in the reduction of organizational productivity [10].

In the United States, racial, ethnic, and linguistic minority workers experience elevated rates of work-related injuries and illnesses compared to their white counterparts. Reasons associated with this include potential socioeconomic factors e.g., education, income, and wealth, and their segregation into more hazardous jobs [10].

In the discourse revolving around microaggressions, a key focus is on whether or not the individuals responsible for the micro-aggression behaviors are morally responsible for the harm they cause [2]. Perpetrators of microaggressions can claim that these actions are nothing more than misunderstandings and the intentions of the speaker have been misconstrued, which is both theoretically and practically valid [4]. Nonetheless, even if the person responsible claims no offensive intentions, labeling an unintentional microaggression as “just a misunderstanding” minimizes the detrimental effects on the victims, and also reinforces underlying unconscious attitudes in society [4,10].

Existing research indicates that racial discrimination increases the psychological stress of employees. This is particularly evident among marginalized groups, such as racial minorities, leading to a negative impact on their organizational commitment, overall productivity, and performance [10–15]. This can also have destructive effects on reducing the probability of being hired [1], decreasing job security, and declining employee job satisfaction [8,10]. Furthermore, it is crucial to acknowledge that racial discrimination is an important obstacle to the development and advancement of inclusive working environments [16,17].

In human service organizations (HSOs), microaggressions can lead to reduced therapeutic alliance, and high staff turnover, which ultimately lead to negative outcomes [5]. Similarly, micro-aggression can result in a degree of disorganization within the work environment that may lead to reduced productivity, negative work atmosphere, high staff turnover, and organizational costs related to internal and external investigations [6]. Job satisfaction and job security are among the vital aspects of adults' daily lives [8]

Therefore, it is essential to give special attention to the factors related to job dissatisfaction within organizations.

In recent years, there has been a significant attention and focus on the rising prevalence of microaggressions and racial discrimination. Such behaviours result in destructive effects within the work environment, the negative consequences of which not only make it difficult for organizations to achieve their goals, but also affect the employees' lives within the wider societal context [12–22]. Considering the heterogeneity presented in the studies that have dealt with these concepts, the main question of this research is, what is the prevalence of microaggressions in the workplace and racial discrimination? Accordingly, considering the importance of this topic, it was decided to conduct a systematic review and meta-analysis on relevant studies in the field.

## 2. Methods

To obtain relevant studies through a systematic review, the PubMed, Web of Science, Google Scholar, Scopus, and ScienceDirect databases and repositories were searched in June 2023. The keywords used for the searches include Burden, Outbreak, Prevalence, Workplace, Microaggression, Worksite, Jobsite, Racial Prejudice, Racial Discrimination, and Microassault. To maintain the comprehensiveness of the search, no restrictions were considered in choosing the year of publication of the articles. The information of all identified studies was then transferred into the EndNote reference management software. In order to maximize the number of relevant studies, the lists of references used within the identified articles were manually searched and reviewed for grey literature. The searches were last updated within the same month, i.e., June 2023.

The research was conducted to answer the research question based on the PICO framework, including population, intervention, comparison, and results: The study population (Population) includes: Workers in the workplace, Intervention: Without intervention, but among workers in the workplace who have faced microaggressions and racial discrimination in the workplace, Comparison: Compared with workers who have not faced micro-aggressions and racial discrimination at work, Outcomes: The overall prevalence of workplace microaggressions and racial discrimination.

## 3. Inclusion and exclusion criteria

The selected articles within this study had reported the prevalence of micro-aggressions and racial discrimination in the workplace. Furthermore, we only included studies for which we had full-text access and that were written in English. Non-English language articles with English abstracts were also included in the study, cross-sectional studies, mixed methods and pilot studies.

In terms of exclusion, firstly, duplicates and irrelevant studies were skipped. Studies that had not provided sufficient evidence were also omitted. Lastly, case-control, cohort studies and case-series studies were omitted from the systemic review.

## 4. Study selection

The study selection was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. As the first step, identified studies that were duplicates in various databases and repositories were removed, and only a copy of each was retained. Subsequently, the review of titles and abstracts of the remaining articles identified a number of irrelevant studies which were then removed based on the inclusion and exclusion criteria. In the eligibility evaluation

stage, the full text of the remaining articles was evaluated in accordance with the inclusion and exclusion criteria, and at this stage, a number of further unrelated studies were omitted. To eliminate bias, all the steps of reviewing sources and data extraction were completed by two researchers independently. Cases of disagreement were then resolved with the assistance of a third reviewer to reach consensus.

## 5. Quality evaluation

The remaining articles underwent a round of quality assessment. In order to evaluate the quality of the articles, a checklist suitable for observational studies was adopted. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) checklist includes six scales: title, abstract, introduction, methods, results, and discussion. In total, this checklist contains 32 items/subscales. The 32 items denote different methodological aspects of a study e.g., title, statement of the problem, type of study, methods of statistical analysis and findings, determination of the appropriate sample size, sampling method, statistical population of study, definition of variables and procedures, means of data collection, and study objectives. Consider fulfilling any of the 32 items gets a point, then the maximum score that can be awarded would be 32. Accordingly, articles that scored 16 or higher are classed as medium or high-quality articles. Articles that scored below 16 were considered to be of lower methodological quality, and were therefore omitted.

## 6. Data extraction

Data extraction was completed by two researchers through a different pre-prepared checklist. The fields within the checklist include first author's name, year of publication, location of study, prevalence, sample size, age group of participants, and study instrument.

## 7. Statistical analysis

The extracted quantitative evidence was entered into the Comprehensive Meta-Analysis (v.2) software, and the heterogeneity of studies was examined using the  $I^2$  test. The Egger's test was used at a significance level of 0.05 to assess existence of publication bias, and corresponding Funnel plots were drawn.

## 8. Results

On the whole, 460 articles were found after searching the specified repositories and databases, and the identifying information of the articles were transferred into the EndNote reference management software. A total of 119 duplicate articles were removed. In the screening phase, the titles and abstracts of the remaining studies were reviewed, and 155 further articles were excluded based on the inclusion and exclusion criteria. In the eligibility evaluation phase, 179 articles were omitted following the full text review, and in accordance with the inclusion and exclusion criteria. In the quality evaluation phase, based on the scores obtained from the STROBE checklist, studies with poor methodological quality were removed, and finally, seven studies were retained for final evaluation. The information of these seven studies is reported in Fig. 1, Tables 1 and 2.

According to the study characteristics outlined in Tables 1 and 2, 6 cross-sectional studies, an experimental, and a mixed methods study were included. The highest prevalence (microaggression) was related to the study of Sudol et al, in which among 259 participants with an average age of  $\leq 20$  years, 245 (94%) reported

microaggression at work [18]. Additionally, the lowest prevalence (racial discrimination) was reported in the study of Avery et al, where 3.3% of all 763 participants, with an average age of 41 years, reported racial discrimination at work [19].

## 9. The prevalence of workplace microaggressions

In the review of three studies with a sample size of 966 people, the  $I^2$  heterogeneity test showed high heterogeneity ( $I^2$ : 99.1), thus, random effects method was adopted to conduct the meta-analysis. Accordingly, the pooled prevalence of workplace microaggression was found to be 73.6% (95%CI: 30.7%–94.6%) (Fig. 2). Publication bias assessment using the Egger's test shows the absence of publication bias in the studies ( $p$ : 0.264) (Fig. 3).

Based on the findings of a meta-regression analysis, it was observed that as the sample size increased, there was a decline in the overall occurrence of microaggressions in the workplace ( $p < 0.05$ ) (Fig. 4). Moreover, with the increase in the year of publication of studies, the prevalence workplace microaggression increased ( $p < 0.05$ ) (Fig. 5).

### 9.1. The prevalence of racial discrimination in the workplace

A meta-analysis of four other studies with a sample size of 2032 that provided the necessary information for analysis was performed, the examination of the  $I^2$  heterogeneity test showed high heterogeneity ( $I^2$ : 98.6). Thus, random effects method was adopted to analyze the results. Accordingly, the pooled prevalence of racial discrimination in the workplace was found as 18.8% (95%CI: 7.4–40.1%) (Fig. 6). The Egger's test result indicates the absence of publication bias in the studies ( $p$ : 0.061) (Fig. 7).

Similarly, based on the findings from the meta-regression analysis, with the increase in the sample size, a decline in the prevalence of racial discrimination in the workplace was observed ( $p < 0.05$ ) (Fig. 8). Moreover, with the increase in the year of publication, the prevalence racial discrimination in the workplace increased ( $p < 0.05$ ) (Fig. 9).

## 10. Discussion

This systematic review and meta-analysis aimed to find the pooled prevalence of racial discrimination and microaggression in the workplace. Based on the findings in our meta-analysis, the overall pooled prevalence of microaggression and racial discrimination in the workplace was found to be 73.6% and 18.8%, respectively.

Considering existing literature, Krieger et al reported racial discrimination as 37% [26], whilst Vecormak et al found the rate of racial discrimination, considered in the study as the most common type of discrimination, as 40.6% [27]. Nonetheless, Kim et al, reported racial discrimination as the third most common source of discrimination from management, and found its prevalence to be 31.4% [24]. Donovan et al reported the prevalence of microaggression at 69% [28], whilst Hong et al reported this as 30.9% [29]. Similarly, Samura et al found in their research that 74% of the participants had experienced some form of microaggression [21].

Microaggressions are often subtle insults that appear verbally, non-verbally or visually [30–32]. Microaggressions can be directed intentionally or unconsciously towards members of a marginalized group [33]. Accordingly, microaggression includes behaviors that arise from implicit bias and occur at the interpersonal level [34]. In other words, microaggressions are humiliation or destructive insults that are manifested towards individuals or groups of individuals who are members of a marginalized community [35]. These obstinacies in behaviours essentially demonstrate the

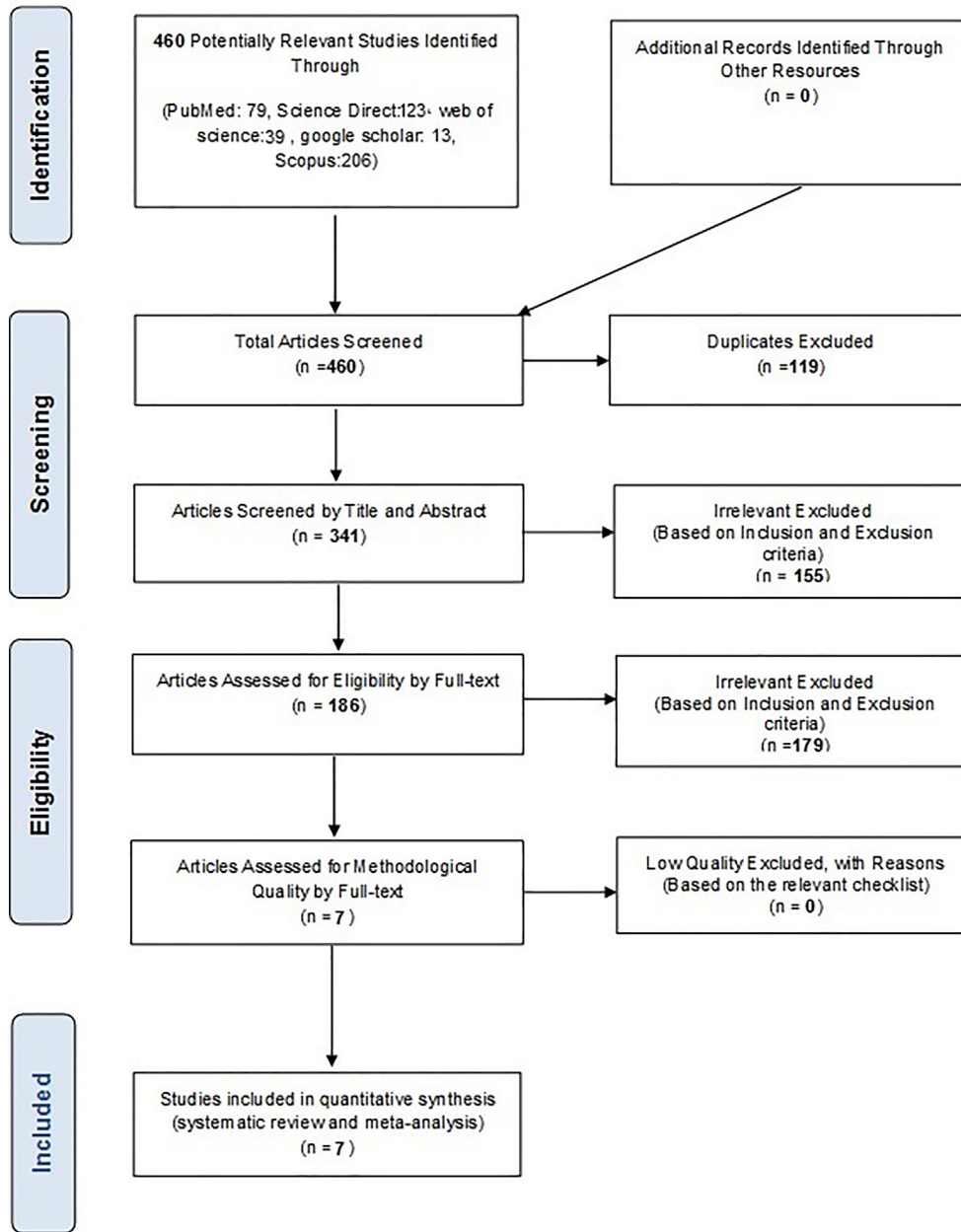


Fig. 1. PRISMA flow diagram for study selection.

dominance of the privileged group and reaffirm the subordinate status of the marginalized community [33].

Racial discrimination can be faced on day-to-day basis and can be both in the form of overt behaviors, for instance, being called by derogatory names, and in the form of subtle behaviors, e.g., being stared at by a retailer security while shopping [36–39]. In addition

to changes in racial attitudes, changes in the political and legal landscape are likely to reduce overt forms of discrimination in the workplace and create more subtle manifestations of prejudice [40].

While racial discrimination appears to be a common experience for many ethnic minorities, there are likely individual differences in the extent to which individuals rate any negative

**Table 1**  
Summary of characteristics of included studies of prevalence of microaggression

Author	Year	Location	Age	Type of study	Sample size	Prevalence of microaggression	Instrument
Nadal [20]	2011	United States	24.83	cross-sectional	443	%31.1	(REMS-I)*
Samora et al [21]	2020	United States	≤21	cross-sectional	264	74%	32-item survey
Sudol et al [18]	2021	United States	≤20	cross-sectional	259	94%	Anonymous electronic survey

\* Racial and Ethnic Microaggression Scale-Initial Version.

**Table 2**  
Summary of characteristics of included studies of prevalence of racial discrimination

Author	Year	Location	Age	Type of study	Sample size	Prevalence of racial discrimination	Instrument
Avery et al [19]	2008	United States	41	cross-sectional	763	3.30%	Single question (Yes & No)
Enoksen [23]	2016	Norway	42.5	pilot study	224	15%	"He or she likes to spoil himself/herself," questionnaire
Kim et al [24]	2013	United States	≤30	cross-sectional	502	34%	Questionnaire analyzed with STATA 11
Zambrana et al [25]	2017	United States	42.8	mixed methods study	543	44%	Web-based/individual and group interviews/and survey comments

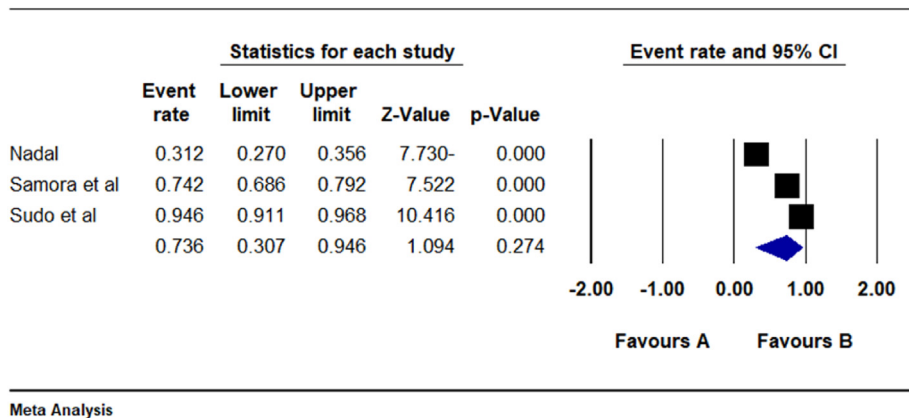
incident as discriminatory [41]. Some individuals are vigilant in paying attention to instances of discrimination and are likely to highlight the incidents even in the absence of much evidence, while others may not be so attentive and are likely to overlook the discriminatory actions despite existence of clear evidence [42,43]. Research has shown that racism is not fading away but has been replaced by less obvious actions [44]. It is worth noting that other titles that are applied to racial discrimination include "modern racism" [45], "abhorrent racism" [46] and "double-sided racism" [47].

Employment discrimination can affect an employer's ability to recruit qualified employees, retain top talent, improve performance, and market products or services to consumers [48]. Survey studies

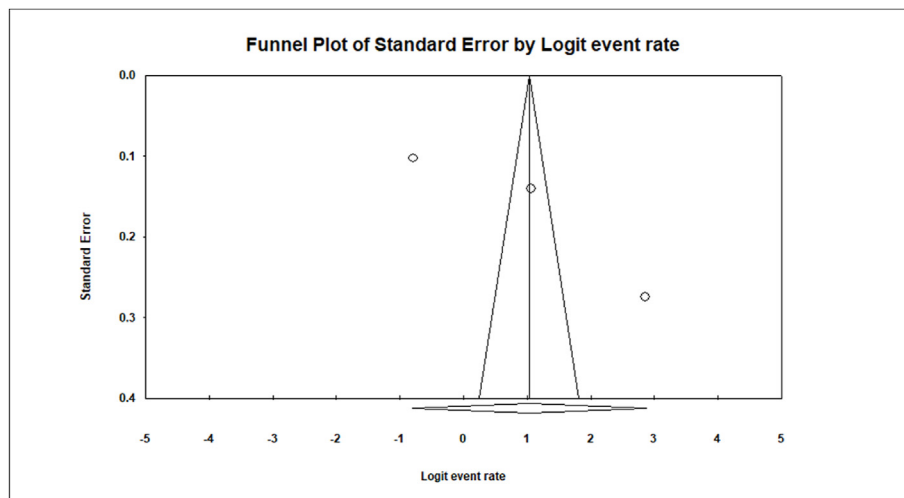
show that during the recruitment process, African Americans and Hispanics are less likely to be invited for interviews or receive job compared to their White counterparts [49–51].

Microaggressions negatively impacts the receiver, and this can disrupt existing structures and hierarchies [52]. Additionally, discrimination in the workplace leads to widespread destructive effects [53]. The effects of discrimination can also have a negative impact on individual's attitude around their jobs [54]. In addition, the intangible costs associated with the effects of racial discrimination are significant [55].

Racial discrimination also extends beyond interpersonal interactions and is manifested at the institutional level in discriminatory policies, regulations and practices. This is also referred to as



**Fig. 2.** Forest plot of the prevalence of workplace microaggressions based on random effects method.



**Fig. 3.** Funnel plot of publication bias in reviewed studies related to microaggression in the workplace.

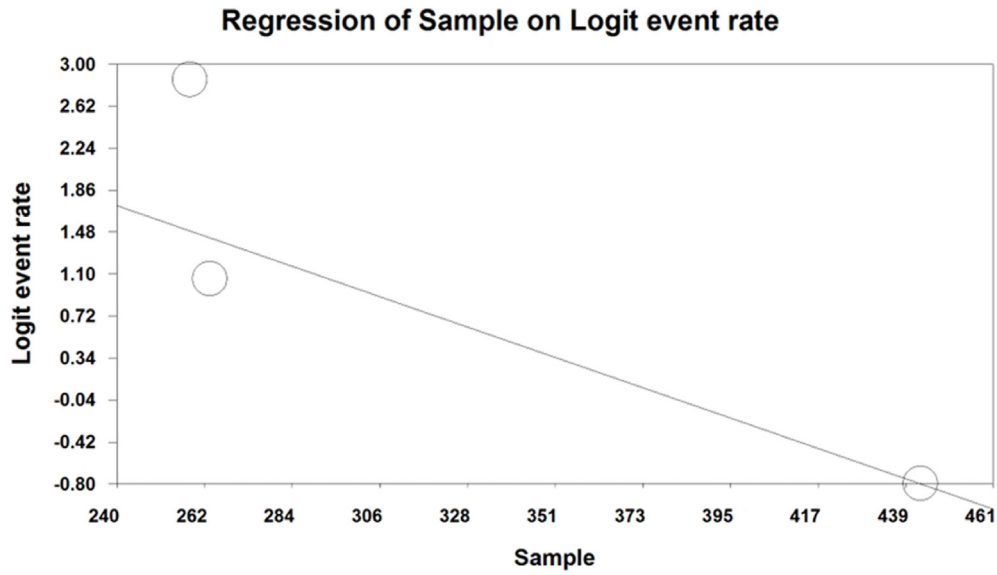


Fig. 4. Meta-regression of the effect of sample size on the prevalence of workplace microaggressions.

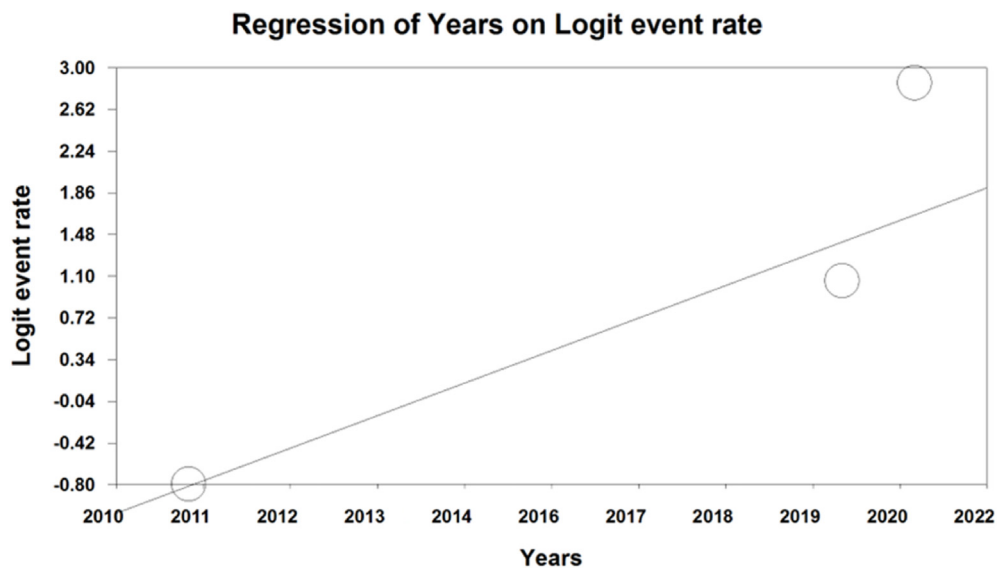


Fig. 5. Meta-regression of the effect of year of study on the prevalence of workplace microaggressions.

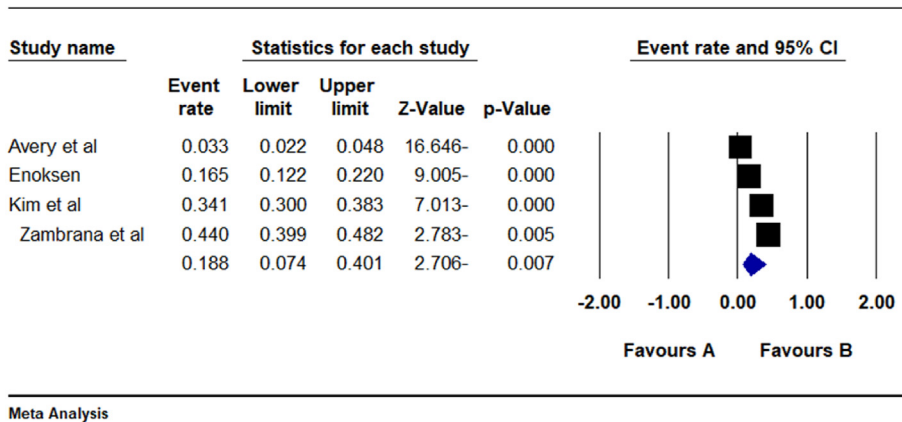


Fig. 6. Forest plot of the prevalence of racial discrimination in user location based on random effects method.

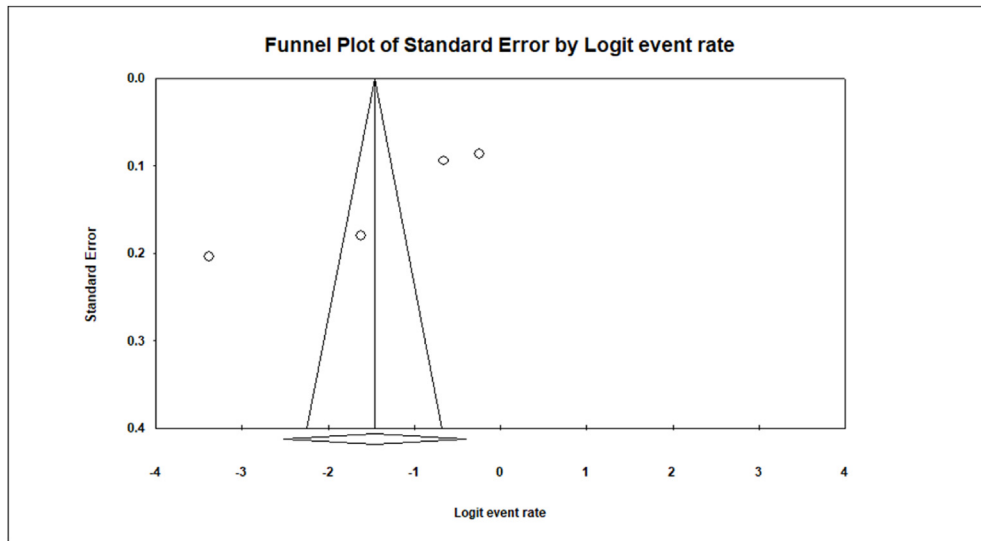


Fig. 7. Funnel plot of publication bias in reviewed studies related to racial discrimination in the workplace.

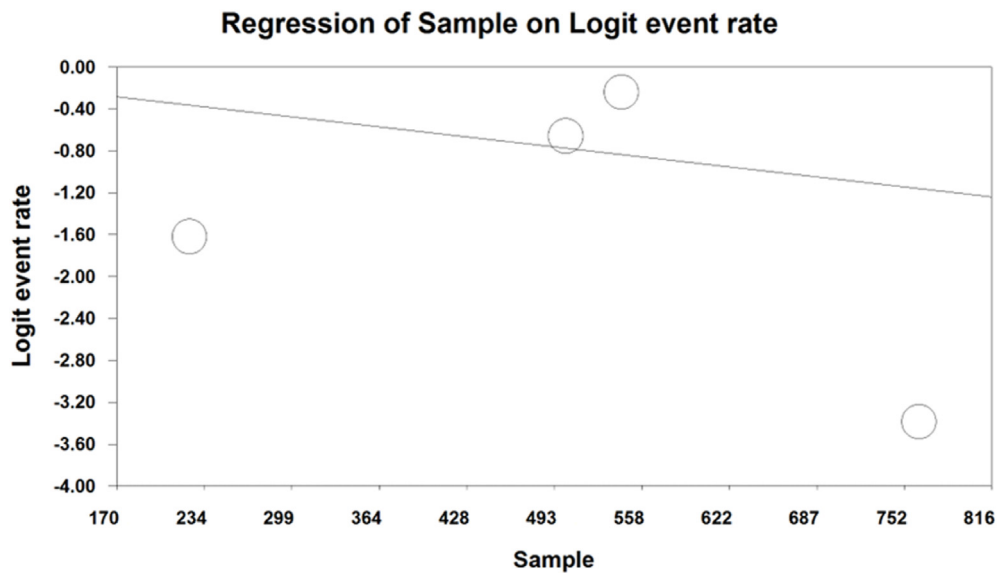


Fig. 8. Meta-regression of sample size effect on the prevalence of racial discrimination in the workplace.

structural or institutional racism [56–60]. In addition, studies show that exposure to occupational, ethnic, and racial discrimination leads to severe mental health consequences, including psychological distress [61], depression [62], and trauma [63]. Furthermore, some studies have linked discrimination to a range of adverse negative health outcomes, including respiratory conditions, diabetes [64], complaints of physical conditions [65], and chronic health diseases [66,67]. Discrimination also leads to unequal access to social, educational and material resources, which has a direct and indirect effect on health status [68–70].

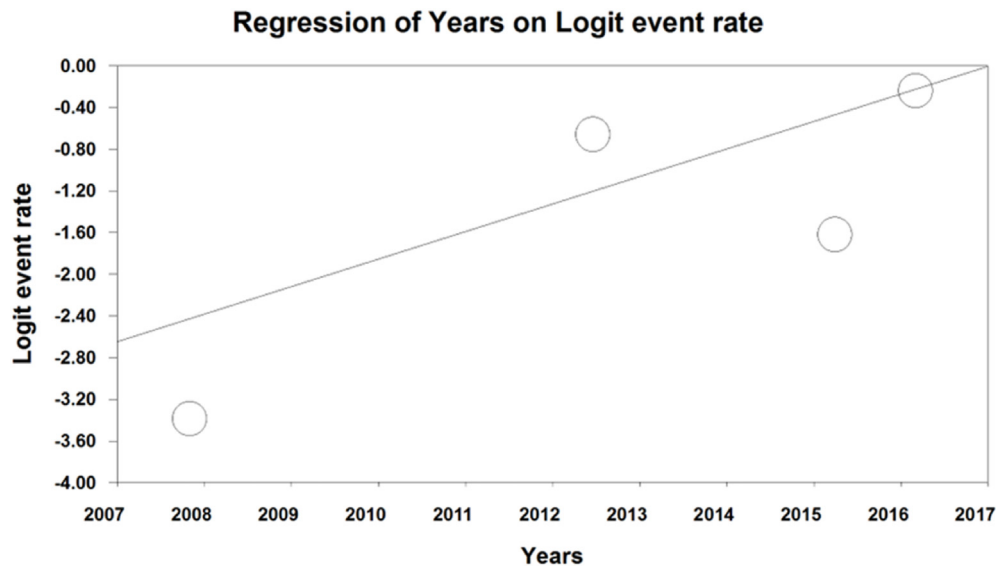
The economic consequences of racial discriminatory experiences extend beyond the individuals who have been discriminated against [71] and even include the perpetrators themselves [72–74]. Accordingly, research finds racial discrimination as a persistent

source of labor market disadvantage for minorities and marginalized groups [75].

In line with the results obtained from the existing literature, and considering the findings of this study, there is a high prevalence of racial discrimination and microaggression in the workplace.

### 11. Limitations

One of the key limitations of this study was related to the exclusion of possible other related literature published in a language other than English. Moreover, a number of studies were excluded due to their lower methodological quality. It should also be noted that racial discrimination and microaggressions in the workplace can have factors beyond what was discussed within this



**Fig. 9.** Meta-regression of the effect of the study year on the prevalence of racial discrimination in the workplace.

article. The occurrences of workplace racial discrimination and microaggressions were not examined regarding factors such as the childhood experiences of both the individuals facing discrimination and those engaging in discriminatory behavior, variations in how anger is manifested in different individuals, as well as the presence of mental disorders and their potential influence.

## 12. Conclusion

Based on the findings of our meta-analysis, the overall pooled prevalence of microaggression and racial discrimination in the workplace was 73.6% and 18.8%, respectively. Microaggression and racial discrimination directly affect the physical and mental health of employees, which can leave long-term and at the same time irreparable consequences for the individuals involved. Additionally, such behaviours reduce workplace productivity and can negatively affect the realization of organizational goals. Therefore, managers may find the results of our meta-analysis useful for devising appropriate mechanism and techniques for prevention, management, and/or response to incidence of microaggression and racial discrimination in the workplace. Moreover, health policymakers and mental health researchers may find the study useful, in terms of causal tracing of related negative health outcomes.

## Abbreviation

PRISMA: The Preferred Reporting Items for Systematic Reviews and Meta-Analyses

STROBE: The Strengthening the Reporting of Observational Studies in Epidemiology

## Funding

Not applicable.

## Ethics approval and consent to participate

Not applicable.

## Consent for publication

Not applicable.

## Availability of data and materials

Datasets are available through the corresponding author upon reasonable request.

## CRedit authorship contribution statement

**Nader Salari:** Conceptualization. **Ahoura Fattah:** Writing – review & editing, Writing – original draft, Investigation. **Amin Hosseinian-Far:** Writing – review & editing, Supervision, Investigation. **Mojdeh Larti:** Writing – review & editing, Supervision. **Sina Sharifi:** Writing – original draft, Supervision, Conceptualization. **Masoud Mohammadi:** Writing – review & editing, Writing – original draft, Supervision, Software, Methodology, Investigation, Formal analysis, Conceptualization.

## Conflicts of interest

The authors declare that they have no conflict of interest.

## Acknowledgments

By Student Research Committee of Kermanshah University of Medical Sciences.

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