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VIEWPOINT

Global meta-analysis of physicians' experiences of workplace sexual harassment by patients

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Abstract

The World Health Organization recognises that sexual harassment is an occupational hazard in medicine, but the prevalence of sexual harassment by patients is unknown. This global meta-analysis found that a pooled prevalence of 45.13% of 18 803 physicians from several specialities (e.g. internal medicine and surgery) have ever experienced it. Hospitals should implement protective measures such as panic alarms for night shifts and isolated wards.

Introduction

The World Health Organization (WHO) recognises violence and sexual harassment as common occupational hazards affecting people who work in healthcare, and WHO encourages occupational health practitioners to implement preventive measures.[1] While previous reviews exposed the scale of violence from patients[2] and sexual harassment of nurses or combined groups of health workers by patients,[3,4] the global scale of patient-to-physician sexual harassment specifically is not yet known. WHO reports that 12% of healthcare workers are affected by workplace sexual harassment based on a previous review,[4] but a global review of patient-to-physician sexual harassment specifically is needed to determine whether WHO should issue updated guidance. Individual studies reported physicians' experiences of inappropriate touching by patients, unwanted sexual advances, patients making inappropriate requests for body examinations and patients inappropriately revealing private body parts as types of workplace sexual harassment.[5,6] Given that previous public health research reported workplace sexual harassment among university employees,[7] and occupational safety is acknowledged by the American Public

Health Association as an important component of public health,[8] the experiences of physicians deserve some attention as well. Synthesis of the evidence can help hospitals, clinics and occupational health practitioners understand whether such abuse should be considered in policies protecting physicians' health and safety. This was the first global systematic review and meta-analysis of the topic.

Methods

Publications eligible for inclusion were quantitative studies in any country and year published in PubMed (which includes MEDLINE), PsycINFO and the Web of Science Core Collection, with updated searches in July 2023 examining the Cochrane Library, PubMed, ProQuest One Dissertations and Scopus. This was part of a wider systematic review. Studies were included if they reported statistics about physicians' experiences of sexual harassment from patients, which included patients giving physicians unwanted sexual attention, telling them sexual jokes, asking them out on dates, sending romantic messages or letters, touching them inappropriately and having erections or making inappropriate comments about genitals during physical examinations. All eligible studies were included, and then subgroup analyses examined whether there were differences between studies in terms

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of whether they measured experiences within a certain time period (e.g. in the past year) or at any time in the past. The certainty of the evidence was assessed using the Cochrane GRADE method, where observational studies are always scored as having low certainty by default. Studies were downgraded if they had a high risk of bias, assessed using a 20-item tool for questionnaire studies where quality scores of less than 70% indicated a high risk.[9] Studies could be upgraded only if they met all GRADE criteria for upgrading (e.g. very large effect sizes). This method was used to arrive at the GRADE scores in Table S1.

Pooled prevalence was assessed by calculating summary effect sizes, significance using Z and p, heterogeneity using tau-squared (τ^2) and I-squared (I^2) and publication bias using Egger's test and funnel plots of logit-transformed data. Meta-analyses were conducted using random-effects models because of their advantages.[10] Fixed-effects models were unsuitable because the true effect sizes were unlikely to be identical across samples of physicians from different countries, sexes and fields of medicine. The maximum likelihood estimation (MLE) method was used because likelihood methods are recommended for random-effects models, and MLE methods lead to less mean squared error than other estimation methods.[11] Effect sizes were converted from percentages into proportions (p); then standard errors were calculated using the formula $(p*(1 - p)/n)$, where n was the relevant sample size.[12] Upper and lower confidence intervals (CIs) were calculated using the formula $p \pm z*\sqrt{(p*(1 - p)/n)}$ or $p \pm z*\sqrt{\text{(standard error)}}$, where $z = 1.96$ for a 95% CI.[10] Values were then back-transformed to percentages.

Results

Twenty-two publications, a total of 19 627 physicians, were eligible for inclusion in the meta-analysis of patient-to-physician sexual harassment. The overall certainty of the evidence (GRADE scores) was low because the Cochrane approach rightly downgrades the quality of observational studies compared to randomised controlled trials. Table S1 shows the characteristics of the studies and Cochrane GRADE scores, with the references listed in that file. The pooled prevalence of physicians who experienced sexual harassment from patients was 45.29% (95% CI = 35.77–54.81%, $Z = 9.33$, $P < 0.001$). All except two effect sizes represented physicians' experiences of being sexually harassed by patients at any point in the past, and only two studies (marked ^ in Table S1) asked physicians about their experiences over the past year. Excluding these two studies showed a

pooled prevalence of 45.13% (95% CI = 34.36–55.89; $Z = 8.22$, $P < 0.001$), which was a minimal difference of 0.16 from 45.29%; therefore, the decision was made to include the two studies within subsequent analyses.

Figure 1 shows results for male and female physicians. The pooled prevalence of male physicians who experienced sexual harassment from patients was 34.39% (95% CI = 21.81–46.97%, $Z = 5.36$, $P < 0.001$). The pooled prevalence of female physicians who experienced sexual harassment from patients was higher at 52.19% (95% CI = 39.55–64.83%, $Z = 8.96$, $P < 0.001$). Heterogeneity observed in both subgroups was unsurprising because of the range of countries and medical specialities represented in the meta-analysis. Across both sexes, comparing different regions (Table S2), the percentage of physicians who had experienced sexual harassment from patients was highest in the United Kingdom, followed by Canada, Australia, the United States, Israel, Germany and, finally, Malaysia.

To assess publication bias through a funnel plot, the logit of prevalence as a proportion was calculated as $\text{Log}(p/(1 - p))$; then its standard error was calculated as $(\text{logit}*(1 - \text{logit})/n)$. Figure 2 shows that there was publication bias in that high-precision studies were more likely to be published, and studies with large standard errors were less likely to have been published, which is a recognised problem in the 'file drawer' effect. This was supported by Egger's test, which was significant ($P < 0.05$).

Discussion

This meta-analysis extends previous literature highlighting the importance of occupational safety in public health[7,8] by showing that sexual harassment from patients is a type of abuse experienced by 45.29% of physicians. Some studies found that sexual harassment experiences were associated with physicians feeling physically unsafe. Philips reported that physicians resorted to locking their office doors when alone, installing CCTV or other forms of security at home, or moving jobs. Bratuskins *et al.*[6] reported that physicians in Australia who had been sexually harassed resorted to taking extra precautions during clinical practice, such as behaving more formally towards patients who had previously harassed them. Such experiences were found by Schneider and Philips to make physicians feel vulnerable when conducting body examinations of patients who had previously sexually harassed them or who were doing so during consultations. Few studies examined the incidence of stalking or rape, likely because of ethical concerns; therefore, future research should explore their prevalence and whether sexual harassment experiences
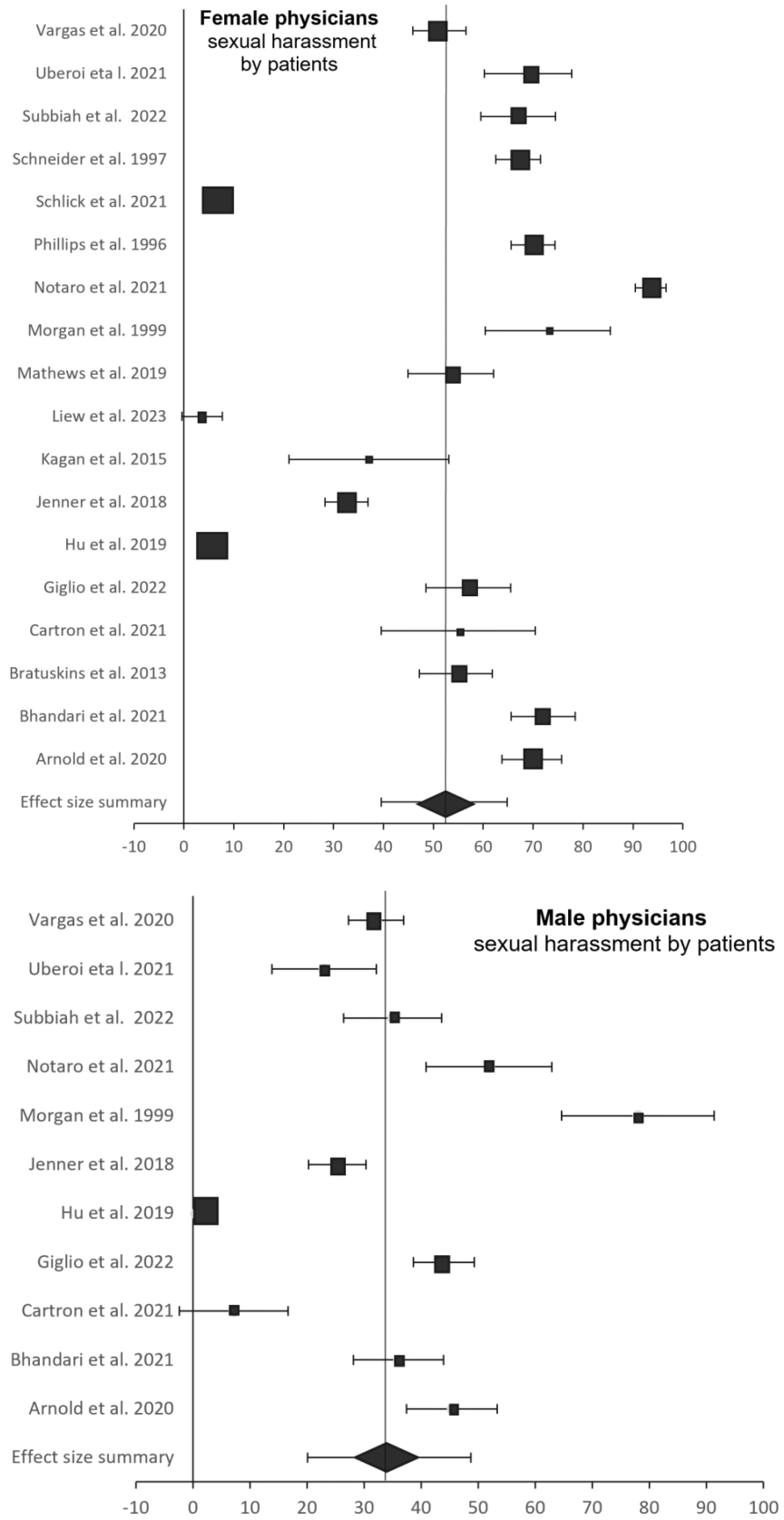
Figure 1 Forest plots from subgroup analyses involving female and male physicians.
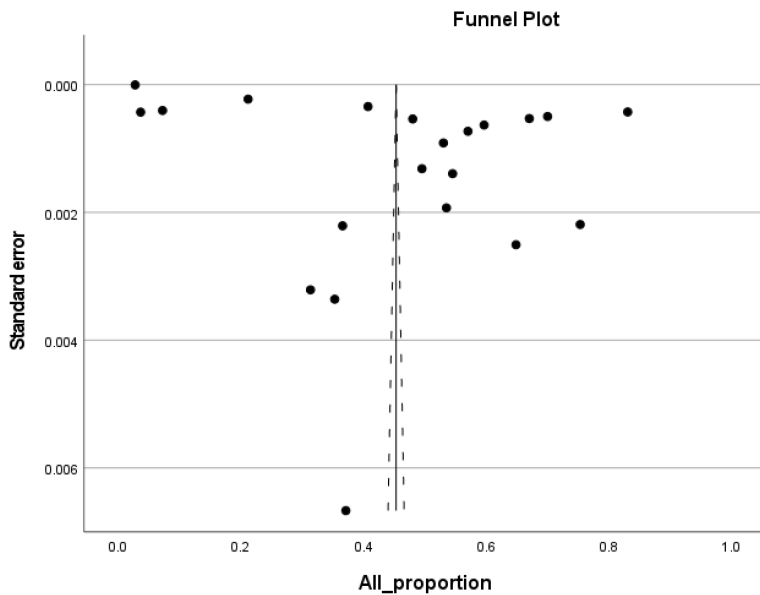
Figure 2 Funnel plot evaluating publication bias. (●) Primary studies; (–) 95% pseudo confidence intervals; (—) Estimated overall effect size (observed studies).

make physicians worried about patients escalating to rape, stalking or violence.

This meta-analysis of the evidence was needed to help policymakers understand the scale of the problem as a potential occupational hazard affecting physicians, extending previous reviews about violent patients and patient sexual harassment of nurses or combined groups of health workers.[2–4] The meta-analysis supports the WHO's[1] view that sexual harassment is an occupational hazard in healthcare work by revealing physicians' experiences while showing the need for future researchers to measure how often the experiences occur to clarify their frequency. The problem requires urgent solutions as well as more representation in journals to tackle previous publication bias. It shows that previous reviews[4] which combined different groups of health workers and types of abuse underestimated the prevalence of patient-to-physician sexual harassment specifically.

What works in preventing patient-to-physician sexual harassment was beyond the scope of this meta-analysis; therefore, future research should investigate suitable interventions. Studies are needed to test the WHO's recommendation that occupational health practitioners should tackle occupational hazards by implementing security measures such as CCTV, panic buttons, alarms and security escorts for staff at night.[1]

Future research should investigate whether safety mechanisms, such as chaperones for patients with a history of harassment, are effective, although resources might be limited in healthcare services suffering staff shortages, and CCTV might negatively impact innocent patients by making them reluctant to seek medical help. Studies are also needed to investigate whether patient education through leaflets or posters is effective and whether such education should include making patients aware of the consequences of violence or sexual harassment. Future research should examine whether hospitals and clinics which implement safety mechanisms have fewer incidents, in addition to exploring further support needs of physicians at risk of multiple types of abuse during individual consultations, night shifts and home visits to safeguard their occupational health and safety. This meta-analysis can help the WHO update its toolkit for health workers by highlighting the problem of sexual harassment by patients and providing updated estimates about its prevalence, but future intervention studies are needed to investigate ways of preventing the problem. These findings extend previous evidence about the prevalence of patient violence in hospitals[2] and will help hospitals and clinics recognise the need for better policies to protect physicians' safety.

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Supporting Information

Additional supporting information may be found in the online version of this article at the publisher's web-site:

Data S1. Supporting Information.