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ORIGINAL PAPER

Workplace Harassment and Morbidity Among US Adults: Results from the National Health Interview Survey

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Abstract Most research on workplace harassment originates from European countries.Prevalence of workplace harassment and associated morbidity has not been well studied in the United States. The purpose of this study was to assess in a sample of US workers the prevalence of workplace harassment and the psychological and physical health consequences of workplace harassment. The 2010 National Health Interview Survey data were analyzed in 2014 for this study. We computed the prevalence of workplace harassment, assessed the demographic and background characteristics of victims of harassment, and tested the association between harassment and selected health risk factors by using logistic regression analysis. Statistical significance was established as $p < 0.01$. A total of 17,524 adults were included in our study (51.5 % females and 74.9 % Whites). A little <1 in 10 (8.1 %) reported being harassed in the workplace in the past 12 months. The odds of harassment were significantly higher for females (OR 1.47, $p < 0.001$),multiracial individuals (OR 2.30, $p < 0.001$), and divorced or separated individuals (OR 1.88, $p < 0.001$). Victims of harassment were significantly more likely to: be obese, sleep less, and smoke more. In addition, harassment was associated with psychosocial distress, pain disorders, work loss, bed days, and worsening health of employees in the past 12 months. Analysis was stratified by gender and distinct health risk patterns for men and women victims were observed. Workplace harassment in the US is associated with significant health risk factors and morbidity. Workplace policies and protocols can play a significant role in reducing harassment and the associated negative health outcomes.

Keywords Violence · Workplace harassment · Bullying · Occupational health

Introduction

Workplace harassment research began in the 1980s and has been based primarily on studies from Europe [1]. The term used to originally describe this destructive form of interaction at work was "mobbing" [1]. Over the past three decades a proliferation of terms has been used to describe workplace harassment, including: workplace bullying, workplace aggression, workplace hostility, workplace psychological violence and numerous other terms [2]. In addition, workplace harassment researchers have defined the condition in a variety of ways. Single negative acts against a person are not considered workplace harassment. Instead, the destructive interaction between a perpetrator and a victim must consist of repeated and persistent negative acts, often defined as occurring over 6 months or longer [3, 4].

Workplace harassment creates a hostile work environment for the victim and the witnesses of such harassment. Workplace harassment often consists of a gradually escalating deliberate and destructive form of interactions that become more open and direct. The harassment consists of a variety of hostile behaviors, including; constant criticism, public ridicule and humiliation, verbal insults, isolation, intimidation, providing meaningless tasks, spreading rumors, name-calling, and belittling individuals are among

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the most common examples. It is rare for perpetrators to use physical violence as part of their harassment [4, 5].

In the United States, workplace harassment is not illegal. However, Title VII (civil rights act of 1964) provides legal protection against harassment and discrimination for individuals who are members of one or more of protected-status groups identified in this law (e.g. based on gender, race, age, religion, ethnicity or disability) [1–3]. The consequence of not having a legal solution to these destructive interactions caused by workplace harassment is that a significant portion of workers are harassed to the point that they become ill or leave the organization.

The prevalence rates for workplace harassment in the United States are inconsistent and unclear for a variety of reasons. First, the majority of workplace harassment studies have been conducted in Western Europe. The prevalence of workplace harassment reported in these European studies has ranged between 2 and 30 % [6–11]. Second, some researchers have used extensive definitions of harassment and asked employees whether these behaviors have happened to them while other researchers have asked a more generic harassment question and had the employee use their own definition. Third, some researchers have used different time frames regarding how long the harassment may have occurred (e.g. 1, 6, or the past 12 months). Fourth, the sizes of the samples used to assess workplace harassment in the US have been small to modest, ranging from a couple of dozen to a few hundred individuals. Fifth, there has been a widespread use of non-representative samples in most of the studies. From the few studies conducted in the US, the prevalence of reported workplace harassment ranged from 9.4 to 71 % (the latter figure used the past 5 years as a time frame) [4, 12–15].

Workplace harassment harms the victims, the witnesses, and the organizations where such interactions occur. The harm to victims of harassment includes psychological, physical, and work orientation harms. Strong associations have been found between workplace harassment and victim anxiety, stress, depression, sleep problems, symptoms of PTSD and physician diagnosed psychiatric morbidity [16–20]. The stress of such a negative working environment has been associated with increased use of psychotropic drugs and misuse of alcohol [21–23]. The humiliation and ridicule of workplace harassment causes the victims to have low self-esteem, concentration difficulties, anger, lower life satisfaction, frustration, burnout, reduced productivity, increased absenteeism, and greater intentions to quit their jobs [16, 17, 24]. Finally, the persistent exposure to such detrimental behavior and the perception of organizational injustice has been significantly associated with medically confirmed sickness absences and coronary heart disease, including angina, first nonfatal myocardial infarcts, and coronary heart disease deaths [25, 26].

The aforementioned prevalence statistics and consequences of workplace harassment have not been confirmed in an adequate sample size that was representative of the US workforce. Thus, the purpose of this study was to assess the prevalence and selected health consequences of workplace harassment in a large, nationally representative sample of US workers. More specifically, answers to the following questions were examined: What is the prevalence of workplace harassment? What are the psychological and physical health consequences of workplace harassment? Is workplace harassment in the US associated with chronic disease risk factors? Do the consequences of workplace harassment differ by demographic characteristics of victims?

Methods

Study Design and Participants

For this study we analyzed the National Health Interview Survey (NHIS) 2010 data. The NHIS is a survey of civilian non-institutionalized population in the United States, involving multistage clustered sampling of households and is conducted by the National Center for Health Statistics (NCHS) of the US Centers for Disease Control and Prevention (CDC). Details about the survey methods, sampling, and response rates have been published by the US CDC [27]. For our analysis, we included all adults who participated in the survey and had continuous employment in the past year. This study relied on secondary data containing no personal identifiers; therefore, no institutional review board approval was necessary.

Measures

In 2010, the NHIS had a question that asked adult respondents, "During the past 12 months, were you threatened, bullied or harassed by anyone while you were on the job?" which served as the independent study variable for our analysis [27].

The NHIS 2010 also measured nonspecific psychological distress over a 30-day recall period with the Kessler 6 Scale (K6). The K6 scale asks respondents about six manifestations of psychological distress: "During the past 30 days, how often did you feel (a) So sad that nothing could cheer you up? (b) Nervous? (c) Restless or fidgety? (d) Hopeless? (e) That everything was an effort? and (f) Worthless?" Possible responses were "All of the time," "Most of the time," "Some of the time," "A little of the time," and "None of the time." First, we examined each domain individually and dichotomized the responses to the six questions by combining "All of the time" and "Most of

the time" into one response category and "Some of the time," "A little of the time," and "None of the time" into another category. Subsequently, scoring of the individual questions was based on a scale of 0–4 (low to high frequency of the problem). The six item responses were then added to create a score which had a potential range of 0–24. According to scoring criteria established by Kessler, this score was used to establish serious mental illness (SMI) status. A score of $\geq$13 equalizes false positives and false negatives, creating a total classification accuracy of 0.92. Thus persons with a score of $\geq$13 are considered to be likely cases of SMI [28, 29].

To test the association between workplace harassment and chronic disease risk factors, we assessed health and lifestyle behaviors (tobacco use, alcohol use, overweight and obesity, and sleep duration). Overweight and obesity prevalence were based on self-reported height and weight. Using a body mass index (BMI) assessment, a BMI of 25–29.9 was used as the cutoff for being overweight and a BMI of 30 or greater was used as a cutoff for being obese. In addition, to assess the influence of harassment on general health we considered variables such as work loss days (<2 vs. >2 weeks), bed days (<2 vs. >2 weeks), perceived general health status in the past year, and prevalence of work-family life imbalance [27].

To assess whether workplace harassment was associated with chronic diseases, we analyzed variables such as prevalence of pain disorders in the past 3 months (headache, low back pain, and neck pain), prevalence of asthma and ulcers in the past year, and lifetime history of stroke, heart attacks, diabetes, angina pectoris, and hypertension. For each of the variables, respondents were asked specific questions (e.g. have you ever been told by a doctor or other health professional that you had ulcers/asthma; during the past 3 months did you have severe headache or migraine). The response options were yes, no, don't know, with an option to refuse answering [27].

Detailed demographic data were available for all study participants [27]. Information on participants' age, gender, race, ethnicity, and marital status were used to assess if risk of workplace harassment differed based on demographic characteristics. In addition, employment characteristics of participants' such as employer type, work schedule, number of jobs held and number of employees at work were also considered in the analysis to assess risk of harassment.

Data Analysis

In the primary approach, we conducted descriptive analyses of demographic and employment characteristics of study participants. In addition, the odds of being harassed in the workplace for participants based on their demographic and employment characteristics were assessed. In the secondary approach, a logistic regression analyses assessed the odds of having health risk factors, psychosocial distress, or chronic diseases for individuals who were harassed in the workplace within the past year (compared to those who were not harassed). Separate multiple logistic regression models that controlled for sociodemographic factors were also used to compare victims of harassment with those who were not harassed. Finally, the analysis was stratified by gender to compare specific outcomes in male and female workers. Adjusted odds ratios (AORs) and 99 % confidence intervals (CIs) were computed.

All calculations were performed using the Statistical Package for the Social Sciences (SPSS), version 22.0, with the Complex Samples add-on module that adjusted for the sample design including stratification, clustering, and weight [27, 30]. Statistical significance was established as $p < 0.01$.

Results

Prevalence of Workplace Harassment

A total of 17,524 adults were included in this study (51.5 % females, 74.9 % Whites, 46.3 % married, and 73.3 % worked for a private company). A little <1 in 10 (8.1 %) reported being harassed in the workplace in the past 12 months. The odds of harassment were statistically significantly higher for females (OR 1.47, $p < 0.001$), multiracial individuals (OR 2.30, $p < 0.001$), and divorced or separated individuals (OR 1.88, $p < 0.001$), compared to their counterparts. Individuals who worked for state/local government, worked night shifts, had more than one job, and paid hourly were also significantly more likely to report harassment in the workplace when compared to their counterparts (Table 1).

Association of Workplace Harassment with Health Risk Factors

Logistic regression analyses were conducted to assess the association between workplace harassment and health risk behaviors, psychosocial distress, and chronic disease conditions. Whether or not an individual reported harassment was the binary independent variable (yes vs. no). Individuals who reported workplace harassment had statistically significantly higher odds of: having serious mental illnesses (OR 4.92, $p < 0.001$), being obese (OR 1.38, $p < 0.01$), sleeping less than 6 h (OR 2.28, $p < 0.001$), and smoking everyday (OR 1.52, $p < 0.001$). In relation to work life and general health status, those who reported harassment were significantly more likely to have: work loss for more than 2 weeks, more than 2 weeks of bed days, asthma attacks,

Table 1 Characteristics of the study participants and their odds of being harassed in the worksite

	N (%)	OR (99 % CI)
Demographic characteristics		
Gender		
Male	8,500 (48.5)	1 (Ref)
Female	9,024 (51.5)	1.47 (1.26–1.73)**
Age (years)		
18–24	2,045 (11.7)	1 (Ref)
25–44	7,981 (45.5)	1.16 (0.86–1.57)
45–64	6,506 (37.1)	1.23 (0.90–1.71)
≥65	992 (5.7)	0.47 (0.27–0.82)*
Race		
White	13,134 (74.9)	1 (Ref)
Black/African American	2,735 (15.6)	1.04 (0.81–1.34)
AIAN	138 (0.8)	1.33 (0.80–2.99)
Asian	1,171 (6.7)	0.66 (0.44–0.98)**
Multiple race	320 (1.8)	2.30 (1.43–3.69)**
Ethnicity		
Not hispanic	14,060 (81)	1 (Ref)
Hispanic/Spanish origin	3,464 (19)	0.93 (0.73–1.18)
Marital status		
Married	8,105 (46.3)	1 (Ref)
Never married	4,661 (26.6)	1.17 (0.93–1.50)
Divorced/separated	2,983 (17)	1.88 (1.50–2.35)**
Widowed	514 (2.9)	1.26 (0.77–2.05)
Living with a partner	1,232 (7)	1.58 (1.17–2.13)*
Employment characteristics		
Paid hourly		
Yes	10,459 (59.7)	1.30 (1.10–1.55)**
No	7,019 (40.1)	1 (Ref)
Have more than one job		
Yes	1,339 (7.6)	1.38 (1.01–1.94)*
No	14,287 (81.5)	1 (Ref)
Employer type		
Private company	12,853 (73.3)	1 (Ref)
Federal government	544 (3.1)	1.37 (0.88–2.11)
State government	1,156 (6.6)	1.74 (1.28–2.37)**
Local government	1,235 (7)	1.73 (1.30–2.30)**
Self-employed	1,581 (9)	0.61 (0.42–0.90)*
Work Schedule		
Not regular	3,397 (19.4)	1 (Ref)
Regular day shift	12,525 (71.5)	0.73 (0.58–0.90)*
Regular evening shift	908 (5.2)	1.12 (0.78–1.63)
Regular night shift	668 (3.8)	1.74 (1.16–2.62)*
Number of employees		
1–9	4,569 (26.1)	1 (Ref)
10–99	6,157 (35.1)	1.25 (0.98–1.59)
100–999	4,053 (23.1)	1.45 (1.13–1.87)*
>1,000	2,128 (12.1)	1.18 (0.86–1.62)

N = 17,524, numbers in columns may not add up to 100 % due to missing values, Ref = Reference group

OR, (99 % CI) = odds ratios with 99 % confidence intervals for being Harassed/Bullied in the Workplace

* $p < 0.01$; ** $p < 0.001$

ulcer diagnosis, and worsening of general health in the past year (Table 2). Victims of harassment were also more likely to have pain disorders such as headache, neck pain, and low back pain (compared to those who were not harassed). We adjusted our analysis for demographic and employment characteristics associated with being harassed in the workplace to compute the association between harassment and health outcomes mentioned above. Adjusted odds ratios (AORs) were computed. Adjustment for potential confounders (e.g. age, race, gender, marital status, employment type, and work schedule) did not alter most of the results. Most of the adverse health outcomes remained significantly associated with harassment in the workplace (Table 2).

Gender Based Differences in Health Outcomes for Victims

As indicated in Table 1, female workers were 47 % more likely to report being harassed in the workplace. We assessed the differences in health outcomes between males and females who reported being harassed, given the difference in harassment prevalence between males and females. AORs were computed via a logistic regression analysis for the association between health outcomes and being harassed. Poor health outcomes were associated with being harassed in both males and females (while comparing victims with non-victims for each gender group). However, there were some distinct patterns for health risks (Table 3). Compared to those females who did not report being harassed, females who reported being harassed were statistically significantly more likely to: have psychosocial distress, smoke cigarettes, be obese, sleep less, and have pain disorders. These associations were stronger in females, compared to males (Table 3). In contrast, compared to males who did not report being harassed, males who reported being harassed were statistically significantly more likely to have: >2 weeks of work loss, >2 weeks of bed days, asthma, ulcers, and worsening of general health in the past year. In addition, male victims (compared to men who were not harassed) were significantly more likely

Table 2 Association of Workplace Harassment with Psychosocial Distress, Pain Disorders, Chronic Diseases, and Lifestyle Behaviors (comparing victims vs. non-victims)

Features of distress	OR (99 % CI) for victims	AOR (99 % CI) for victims
Psychosocial distress symptoms all of the time or most of the time in the previous 30 days (Kessler's scale)		
Persistent sadness	4.87 (3.40–7.00)	4.18 (2.69–6.50)**
Nervousness	3.70 (2.73–5.02)	3.32 (2.38–4.63)**
Restless/fidgety	3.43(2.58–4.55)	3.18 (2.31–4.36)**
Hopelessness	4.89 (3.32–7.20)	3.71 (2.30–5.98)**
Everything is an effort	2.63 (1.95–3.57)	2.31 (1.62–3.29)**
Worthlessness	6.63 (4.23–9.40)	5.72 (3.38–9.00)**
Likely serious mental illness (based on Kessler's 6 item scale above)	4.92 (3.52–6.90)	4.48 (2.97–6.76)**
Lifestyle Behaviors (current)		
BMI		
Overweight	1.17 (0.93–1.46)	1.32 (1.03–1.70)*
Obese	1.38 (1.11–1.71)	1.41 (1.12–1.78)*
Sleep		
<6 h	2.28 (1.75–2.97)	2.24 (1.69–2.95)**
>9 h	1.70 (1.07–2.72)	1.83 (1.05–3.20)*
Current tobacco & alcohol use		
Smoking every day	1.52 (1.21–1.92)	1.41 (1.10–1.80)**
Smoking some days	1.64 (1.14–2.36)	1.55 (1.02–2.28)*
Current heavy drinking	1.54 (1.01–2.37)	1.12 (0.77–1.62)
Health and work (past 12 months)		
Work loss days (>2 weeks)	1.79 (1.27–2.54)	1.74 (1.20–2.54)**
Bed days (>2 weeks)	2.03 (1.36–3.04)	1.67 (1.07–2.58)*
Work family life imbalance	2.36 (1.96–2.85)	2.32 (1.88–2.83)**
General health worsened	2.64 (2.01–3.51)	2.29 (1.66–3.21)**
Chronic diseases		
Pain conditions (past 3 months)		
Headache	2.25 (1.85–2.72)	1.92 (1.55–2.38)**
Neck pain	2.31 (1.89–2.83)	2.32 (1.87–2.89)**
Low back pain	1.78 (1.52–2.70)	1.68 (1.40–2.02)**
Cardiovascular disease (ever diagnosed)		
Hypertension	1.20 (1.02–1.38)	1.28 (1.05–1.53)*
Angina pectoris	2.87 (1.82–4.52)	4.14 (2.12–8.09)**
Heart attack	1.57 (0.90–2.81)	1.53 (0.76–3.09)
Stroke	1.19 (0.63–2.41)	1.18 (0.49–2.89)
Other diseases		
Asthma (past year)	1.65 (1.07–2.56)	1.64 (1.01–2.72)*
Ulcer (past year)	2.21 (1.24–3.94)	2.73 (1.43–5.23)**
Diabetes (ever)	1.34 (0.98–1.74)	1.48 (1.03–2.15)*

OR, (99 %CI) = odds ratios with 99 % confidence intervals for a particular outcome in those who were Harassed/Bullied in the Workplace compared to those who were not

AOR, (99 %CI) = adjusted Odds ratios with 99 % confidence intervals for a particular outcome in those who were Harassed in the workplace. Adjustments were made for demographic characteristics in Table 1 found to be associated with bullying in workplace (i.e. race, gender, age, marital status, type of job, number of employees at workplace, salary type, and work schedule)

* $p < 0.01$; ** $p < 0.001$

to have ever been diagnosed with hypertension and angina pectoris. These associations were stronger for harassed males than harassed females (Table 3).

Discussion

Our finding that 8.1 % of the sample reported being harassed at work in the past 12 months is lower than that found in previous studies from the US with smaller samples [4, 12–15]. It could be that some who were seriously harassed in the recent past had not worked in the past 12 months, a requirement for inclusion in our sample. It could also be that our findings are due to having a much larger and broader sample of employees from both public and private organizations.

Many of our findings are in agreement with previous studies from Europe. We found workplace harassment to be associated with significantly higher rates of serious mental illnesses, disrupted sleep patterns, and psychosocial distress symptoms [16, 20–23]. The finding from a previous study with a small sample of health workers that reported increased alcohol consumption was not confirmed in our study [22]. Again, this could be due to the larger and broader sample of employees in our study. We did find a new association between workplace harassment and smoking. This is disconcerting since tobacco use remains the leading cause of preventable deaths in the US [31]. Additionally, victims of harassment in this study were more likely than the non-harassed to report a variety of pain disorders (e.g. headaches and back pain). Chronic stress could possibly explain the association between harassment and outcomes such as smoking and pain disorders.

Our findings in relation to cardiovascular disease and workplace harassment only partially confirm the findings from previous studies on cardiovascular disease and harassment [25, 26]. We found that both hypertension and angina pectoris were increased in male victims of harassment but only angina pectoris was increased in female victims. The difference could be due to the fact that our study considered self-reports of disease whereas the findings in the aforementioned European studies were based on assessment of medical records [25, 26].

Reducing Workplace Harassment

Workplace harassment could be significantly reduced in organizations and governments if they were willing to accept the prevalence of the problem and its costs to employees and employers. Public health experts systematically design interventions based on the three stages of

Table 3 Gender differences for association of workplace harassment/bullying with health outcomes (comparing male and female victims with males and females not victimized)

Features of distress	AOR (99 % CI) for male victims (compared to males not victimized)	AOR (99 % CI) for females (compared to females not victimized)
Psychosocial distress symptoms all of the time or most of the time in the previous 30 days (Kessler's scale)		
Persistent sadness	3.98 (1.95–7.12)**	4.32 (2.45–7.66)**
Nervousness	2.99 (1.66–5.38)**	3.67 (2.45–5.51)**
Restless/fidgety	3.02 (1.83–5.00)**	3.39 (2.23–5.11)**
Hopelessness	3.66 (1.58–8.50)**	3.84 (2.01–7.31)**
Everything is an effort	2.19 (1.28–3.75)**	2.55 (1.68–3.90)**
Worthlessness	8.45 (3.67–12.45)**	4.23 (2.13–8.41)**
Likely serious mental illness (based on Kessler's 6 item scale above)	3.81 (1.87–7.76)**	4.83 (2.90–8.10)**
Lifestyle behaviors (current)		
BMI		
Overweight	1.40 (0.93–2.11)	1.26 (0.90–1.76)
Obese	1.47 (0.98–2.22)	1.35 (1.01–1.82)*
Sleep		
<6 h	1.93 (1.27–2.93)**	2.51 (1.75–3.58)**
>9 h	2.03 (0.88–4.70)	1.76 (0.79–3.89)
Current tobacco & alcohol use		
Smoking every day	1.36 (0.93–1.99)	1.44 (1.05–1.99)*
Smoking some days	1.32 (0.73–2.39)	1.75 (1.02–3.01)*
Current heavy drinking	1.05 (0.47–1.53)	1.37 (0.86–2.18)
Health and work (past 12 months)		
Work loss days (>2 weeks)	1.82 (1.06–3.15)*	1.69 (1.04–2.75)*
Bed days (>2 weeks)	1.46 (0.60–3.54)	1.98 (1.07–2.94)*
Work family life imbalance	2.06 (1.48–2.86)**	2.51 (1.90–3.29)**
General health worsened	2.57 (1.43–4.63)**	2.48 (1.67–3.70)**
Chronic diseases		
Pain conditions (past 3 months)		
Headache	1.83 (1.43–2.34)**	2.10 (1.41–3.11)**
Neck pain	2.10 (1.50–2.95)**	1.74 (1.36–2.22)**
Low back pain	1.58 (1.17–2.15)**	2.47 (1.85–3.30)**
Cardiovascular disease (ever diagnosed)		
Hypertension	1.60 (1.20–2.31)*	1.02 (0.74–1.39)
Angina pectoris	4.72 (1.91–8.10)**	3.68 (1.49–7.02)**
Heart attack	1.79 (0.66–4.87)	1.37 (0.50–3.44)
Stroke	1.25 (0.47–3.27)	1.06 (0.18–4.05)
Other diseases		
Asthma (past year)	2.63 (1.27–5.46)**	1.33 (0.81–2.19)
Ulcer (past year)	4.24 (1.59–7.20)**	2.23 (1.12–4.43)*
Diabetes (ever)	1.59 (0.90–2.77)	1.36 (0.81–2.29)

OR, (99 % CI) = odds ratios with 99 % confidence intervals for a particular outcome in those who were harassed/bullied in the workplace. AOR, (99 % CI) = adjusted Odds ratios with 99 % confidence intervals for a particular outcome in those who were harassed/bulloied in the workplace. Adjustments were made for demographic characteristics in Table 1 found to be associated with bullying in workplace (i.e. race, age, marital status, type of job, number of employees at workplace, salary type, and work schedule)

* $p < 0.01$; ** $p < 0.001$

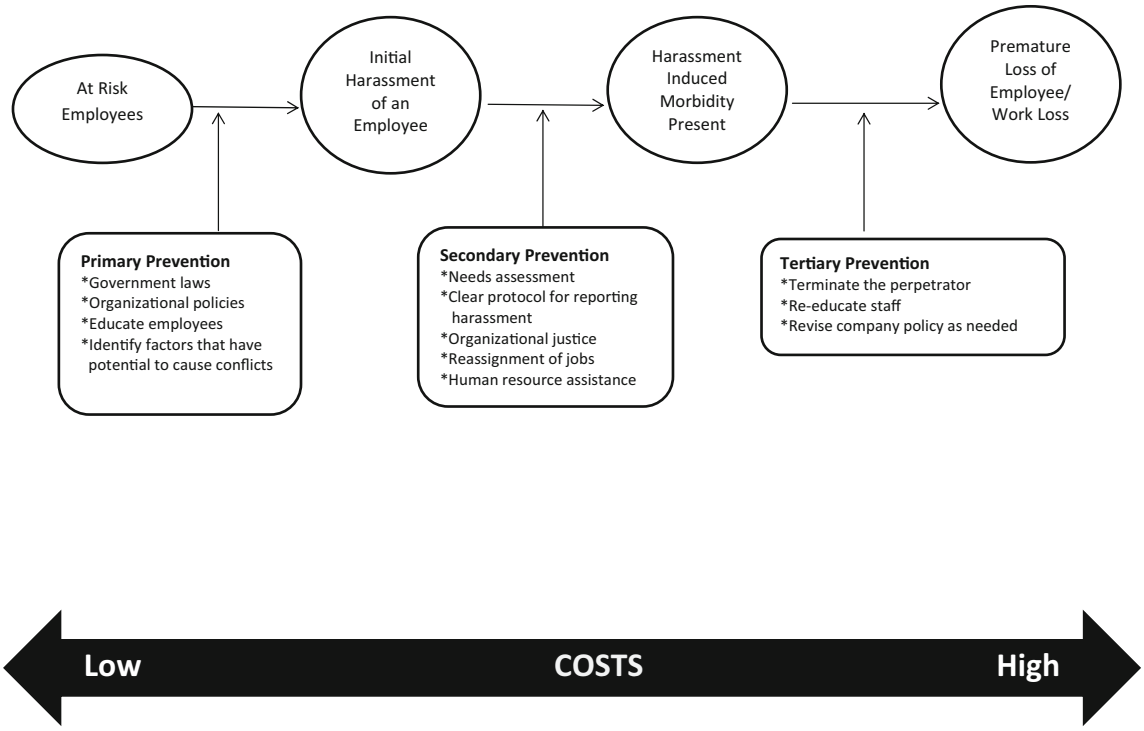

Fig. 1 Stages of prevention of workplace harassment

prevention: primary, secondary, and tertiary (Fig. 1) [32]. Primary prevention consists of activities that are implemented before any risks to health occur. Federal and state governments could create laws protecting workers from workplace harassment. Workplaces could develop policies, even in the absence of laws, making it clear what constitutes harassment and that such behaviors will not be tolerated. In addition, formal education of employees is needed at initial hiring to make sure every employee understands that hostile work environments will not be tolerated and what are the potential repercussions of engaging in harassment [33]. Secondary prevention seeks to minimize the severity of the damage caused by harassment. Thus, a clear protocol for reporting harassers needs to be a part of all workplace policies so that early interventions can be initiated. Workplaces also need to periodically assess employees regarding their experiences with workplace harassment (needs assessment). Research has shown that the presence of organizational justice can ameliorate some of the consequences of harassment [34]. It is important that organizations not simply tell the victim and perpetrator of harassment that "you are adults, just work it out." There will most likely be a need for the organization to reassign the perpetrator to a new work environment. Because the victims of harassment have been stressed to varying degrees, depending on the actions and length of time, the human resources division of an organization needs to have a protocol for assisting such employees. Finally, if all of these efforts fail to correct the workplace harassment interactions, tertiary prevention would be the last resort. Tertiary prevention could involve terminating the perpetrator so that others will not have to suffer at the hands of such an employee. In addition, there needs to be a re-education of all employees to make sure they understand the company policy and why an employee was terminated. Research has shown that some of those who witness workplace harassment will themselves become perpetrators of harassment [35].

Limitations

This study has demonstrated statistically significant relationships between workplace harassment and numerous health risks in a large and representative sample of US workers. However, there is the potential that a variety of factors may have imposed limitations on the results. First, relying on self-report as a method of data collection always poses a risk of underestimation of the problems (e.g. social desirability and recall bias). If so, this might have attenuated the reported prevalence of harassment and the strength of the association between health risks and harassment. Second, the cross-sectional design of the study does not allow us to make conclusions of a causal nature. It is possible that workers with some of these health risks were more likely to be harassed, known as reverse causation. Third, another limitation may have been the rather crude

measure of workplace harassment, a one-item assessment. However, a single item measure may be acceptable if the item represents a homogenous and unidimensional construct (e.g. job satisfaction) [36, 37]. Finally, work often has a variety of simultaneous stressors impacting employees. Measuring and controlling for a wide range of job stressors might have affected the strength of the relationships found between workplace harassment and health risks.

Conflict of interest None.

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