Published in final edited form as:
*Am J Ind Med*. 2014 May ; 57(5): 573–586. doi:10.1002/ajim.22221.

# Discrimination, Harassment, Abuse and Bullying in the Workplace: Contribution of Workplace Injustice to Occupational Health Disparities

**Cassandra A. Okechukwu, MSN, Sc.D**[1], **Kerry Souza, MPH, Sc.D**[2], **Kelly D. Davis, PhD**[3], and **A. Butch de Castro, MSN/MPH, PhD**[4]

[1] Department of Social and Behavioral Sciences, Harvard School of Public Health, Boston, Massachusetts, United States

[2] Division of Surveillance, Hazard Evaluations and Field Studies, National Institute for Occupational Safety and Health, Washington, District of Columbia, United States

[3] Department of Human Development and Family Studies, Pennsylvania State University, University Park, Pennsylvania, United States

[4] Department of Psychosocial and Community Health, University of Washington, Seattle, Washington, United States

## Abstract

This paper synthesizes research on the contribution of workplace injustices – discrimination, harassment, abuse and bullying – to occupational health disparities. A conceptual framework is presented to illustrate the pathways through which injustices at the interpersonal and institutional level lead to differential risk of vulnerable workers to adverse occupational health outcomes. Members of demographic minority groups are more likely to be victims of workplace injustice and suffer more adverse outcomes when exposed to workplace injustice compared to demographic majority groups. A growing body of research links workplace injustice to poor psychological and physical health, and a smaller body of evidence links workplace injustice to unhealthy behaviors. Although not as well studied, studies also show that workplace injustice can influence workers' health through effects on workers' family life and job-related outcomes. Lastly, this paper discusses methodological limitations in research linking injustices and occupational health disparities and makes recommendations to improve the state of research.

### Keywords

Workplace abuse; discrimination; health disparities; bullying; sexual harassment

## INTRODUCTION

The aim of this paper was to synthesize and evaluate research demonstrating how workplace injustice – discrimination, harassment, abuse and bullying –may contribute to occupational health disparities. Reflecting historical and current societal power imbalances, forces within and outside workplaces can result in the mistreatment of workers (individually or as a

Address communications and reprint requests to: Cassandra Okechukwu, Department of Social and Behavioral Sciences, Harvard School of Public Health 677 Huntington Avenue, Kresge 722, Boston, MA 02115 (USA) 617-432-4486 (office); 617-432-3123 (fax); cassandrao@post.harvard.edu.

**Conflict of Interest:** The authors have no conflict of interest.

group) through unjust practices [Jones 2000, Turney 2003, Hodson, et al. 2006, Lopez, et al. 2009]. We theorize that mistreatment of workers in the workplace may exacerbate health disparities between groups of workers. We reviewed the peer-reviewed literature reporting direct and indirect associations of workplace injustices with health outcomes. The extant literature contains a diffuse body of work on workplace injustice from different disciplines; many of which are unrelated to health. Our synthesis is limited to papers that present evidence of the contribution of workplace injustice to occupational health disparities. Our review led us to propose a conceptual framework (Figure 1) to illustrate the various relationships suggested by research studies. To complement conceptual models that illustrate relationships between other workplace factors and health, this model illustrates pathways between workplace injustices and health outcomes that are supported by the extant scientific literature. Our starting point for a conceptual framework for the contributions of work to health disparities is the Ecosocial approach advanced by Krieger [Krieger 1994, Krieger, et al. 2008].

In summarizing this evidence, we acknowledge the vast literature on *workplace/ organizational justice* that describes employees' perceptions of equity between workers' input and workplace procedures, interactions and outcomes [Elovainio, et al. 2002]. Although this literature is relevant to the health of workers, our discussion does not extend to this topic.

## Workplace Injustices: Definitions and Scope

Definitions and scope of workplace injustice(s) differ according to the discipline and body of literature reviewed. The United States Equal Employment Opportunity Commission (EEOC) protects workers from injustice based on age, disability, gender/sex, genetic information, national origin, pregnancy, race/color, or religion (2011). Though excluded from this EEOC definition, other federal agencies and some state and local laws also protect workers from workplace injustice based on sexual orientation and gender identity. For the purposes of this paper, we defined workplace injustice as workplace-related discrimination, harassment, abuse or bullying. We considered how these injustices, including bullying which is usually status-blind, might differentially impact workers who are socially disadvantaged. Perpetration of workplace injustice can occur at the institutional or interpersonal level.

**Institutional or structural injustice—**Jones' (2000) characterization of institutional racism as structurally constructed differential access to societal opportunities, goods and services can be applied to the characterization of institutional workplace injustice. This injustice is "normative, sometimes legalized" and "structural, having been codified in our institutions of custom, practice, and law, so there need not be an identifiable perpetrator" (p. 1212). Institutional injustice can persist even after levels of individual injustice have lessened in a society [Williams and Mohammed 2009].

**Interpersonal injustice—**At the individual/interpersonal level, workplace injustice can be intentional or unintentional and encompasses acts of commission and omission. Studies have documented a range of such unfair practices faced by vulnerable workers, from isolating or excluding socially/economically disadvantaged workers from workplace events and activities to subjecting them to overtly hostile actions and behaviors (e.g. being subjected to insults and jokes related to one's race/ethnicity). Studies suggest that African-American and other racial/ethnic minority workers are more likely to report being targets of derogatory comments and having their work duties and activities made difficult by others [Alleyne 2004; Raver and Nishii 2010].

### Types of Workplace Injustice

*Workplace discrimination* refers to actions of institutions and/or individuals within them, setting unfair terms and conditions that systematically impair the ability of members of a group to work [Rospenda, et al. 2009]. Often, it is motivated by beliefs of inferiority of a disadvantaged outgroup compared to a dominant group [Roberts, et al. 2004]. Racism, or discrimination based on race, justifies the mistreatment and dominance of members of a particular racial or ethnic group due to beliefs of their genetic and/or cultural inferiority; it also carries a history of societal power relationships between races [Williams 1997]. Discrimination can also occur between disadvantaged groups themselves. For example, de Castro et al. (2006) found that some ethnic groups were favored over others among immigrant worker groups. This favoritism was initiated and perpetuated by both coworkers and employers/supervisors alike [de Castro, et al. 2006]. Latino indigenous-speaking farm workers in Oregon reported differentially distributed hazardous work conditions, including lack of educational materials in languages they understood, between themselves and Spanish-speaking workers; they also reported that these conditions were often perpetrated by Spanish-speaking Latino former farmworkers who had risen through the ranks to become supervisors [Farquhar, et al. 2008]. Similarly, in a study of 356 African-American workers, 43% of the 219 workers who reported workplace discrimination reported that the perpetrators included fellow African-Americans [Din-Dzietham, et al. 2004].

Discrimination against workers with disabilities, younger and older workers, and gender persists, as well. Studies have shown that discrimination against workers with disabilities has both societal and historical influences and persists despite being prohibited by the Americans with Disabilities Act [Scheid 2005, Stuart 2006, Snyder, et al. 2010, Moore, et al. 2011]. Ageism, discrimination based on age, has been shown to have a curvilinear life course trajectory whereby it disproportionately impacts younger workers in their 20s and older workers above 50 [Gee, et al. 2007].

*Workplace harassment* differs from discrimination because it involves negative actions toward a worker due to attributes, such as race/ethnicity, gender etc., that lead to a hostile workplace whereas discrimination involves unequal treatment or limiting of opportunities due to these attributes [Rospenda et al, 2009]. Harassment must target workers' protected EEOC status in order to meet the US legal definition [Ehrenreich 1999, Carbo 2008]. Sexual harassment is a type of workplace harassment that is typically characterized along gender/sex lines [Pina et al, 2009]. Fitzgerald and colleagues (1999) delineated four types of sexual harassment—sexist behavior, sexual hostility, unwanted sexual attention, and sexual coercion. Sexist behaviors describe actions in which one's gender or sex is the primary target of discrimination [Fitzgerald, et al. 1999]. This overlap in definition can make distinguishing between gender discrimination versus harassment difficult. The other three describe experiences that are more physical and sexual in nature.

*Workplace bullying or abuse* involves actions that offend or socially exclude a worker or group of workers, or actions that have a negative effect on the person or group's work tasks [Grubb, et al. 2004]. These actions are often status-blind and occur repeatedly and regularly over a period of time [Grubb, et al. 2004]. The actions taken and workers' sensitivity to them can vary according to culture [Cassitto, et al. 2003].

## PATHWAYS: FROM INJUSTICE TO HEALTH DISPARITIES

### Conceptual Framework

Using Ecosocial theory of disease distribution as a basis [Krieger 1994, Krieger, et al. 2008], we present a working model (Figure 1) to illustrate potential pathways linking workplace injustice exposures and health disparities. In the following section, we define components of

our model and discuss evidence from the literature to support the pathways between them. Our model is not a causal diagram; presence of arrows between components in the model does not imply that causal analyses have been conducted.

**Labor stratification into Hazardous Positions—**Our conceptual model (Figure 1) shows labor stratification, in which minority and other disadvantaged workers are systematically hired into certain (usually lower power) positions [Landsbergis, Grzywacz, & LaMontagne, 2012]. Labor stratification has been documented to occur upstream, before entry into the labor force, through unfair access to or denial of employment opportunities. Experimental studies have documented employers responding negatively to job applicants based on age, gender, race, and sexual orientation, thereby discriminating against or preferentially hiring applicants for certain types of jobs [Crow, et al. 1998, Hebl, et al. 2002, Horvath and Ryan 2003, Pager 2003, Bertrand and Mullainathan 2004, Pager, et al. 2009]. Other studies, based on self-report, have also found discrimination and bias in hiring and/or promotion based on sexual orientation and age of applicants [Johnson and Neumark 1996, Badgett, et al. 2007]. An analysis of court cases showed that, in some fields, women may encounter a “maternal wall,” whereby they are denied employment and/or promotion due to pregnancy or childbirth [Williams and Westfall 2006].

The occupational health literature supports the observation that racial/ethnic minorities and immigrants are often over-represented in jobs with poorer working conditions [Frumkin, et al. 1999, Murray 2003, Agudelo-Suarez, et al. 2009, Berdahl 2008]. Among African-Americans, Haggerty and Johnson (1995) point out that labor stratification is part of broader societal level injustices, notably poor educational systems thereby predisposing African-American workers to limited, hazardous, poor-quality job opportunities in adulthood [Haggerty and Johnson 1995].

**Differential Assignment to Hazardous Duties—**Even when workers are in the same occupational position, some workers are directly exposed to more occupational hazards through assignment of the most hazardous duties to socially and economically disadvantaged populations, thus increasing their risk for work-related injury or illness [Murray 2003, de Castro, et al. 2006, Farquhar, et al. 2008, Delp, et al. 2009, Shannon, et al. 2009]. An early documented example is that of the Gauley Bridge/Hawk's Nest tunnel disaster in 1930 [Cherniack 1986]. Although various explanations for disproportionate incidence of pneumoconiosis and associated death among African-American compared to White workers were posited, an examination of job placement of workers in the mine revealed race-based job assignment as the root cause. African-American workers were *de facto* assigned to the deepest, dustiest parts of the tunnel, while White workers were more likely to be assigned to work outside.

Available evidence suggests that, after controlling for differences in education and experience, African-American and Hispanic workers are consistently more likely to be employed in occupations where serious injuries and illnesses are more likely to occur [Robinson 1984, Robinson 1987, Loomis and Richardson 1998, Shannon, et al. 2009]. However, the social forces behind disproportionate exposures of minority worker groups to occupational hazards may be complex. An analysis of illnesses and injury rates over a 10-year period showed that disparities were dynamic and sometimes disappear when researchers control for job characteristics such as work schedule, union representation, health insurance and job hours [Berdahl 2008].

A U.S. study of a unionized, multi-ethnic working class sample found that 85% of workers reported high exposure to at least one occupational hazard [Quinn, et al. 2007]. A similar proportion of this same group of workers was exposed to one of three workplace injustices

(bullying, sexual harassment, or racial discrimination) [Krieger, et al. 2006]. Analyses of the same sample showed that exposure to occupational hazards was unevenly distributed based on race and gender: Being a minority in any way increased workers' chances of being exposed to hazards [Barbeau, et al. 2007, Krieger, et al. 2005, Krieger, et al. 2006, Krieger, et al. 2008, Krieger, et al. 2010].

Though empirical evidence is limited, some researchers have suggested that differential enforcement of occupational health and safety regulations or policies in industries and occupations where minority workers predominate may be another mechanism for disparities. One example is the OSHA exemption for farms with less than ten employees. Somervell and Conway (2011) showed that worker fatality rates in states that observe this exemption were higher than in states that do not. U.S. farm workers are largely immigrant, Latino workers [Farquhar, et al. 2008, Somervell and Conway 2011]. Other researchers have noted that a majority of the workers impacted by the suspension of both prevailing wage policies and enforcement of occupational safety and health regulations during the Hurricane Katrina and Rita cleanup process were Hispanic day laborers [Delp et al, 2009; Pastor et al, 2006]. A more thorough analysis of the policies and decisions surrounding disaster cleanup events is needed to determine whether or not policies and decisions differentially impact minority workers.

The extent to which occupational factors contribute to overall health is inadequately described, but we hypothesize, based on our review of literature, that it is possible that differential exposure to occupational hazards among minority workers may be a significant contributor to the overall experience of health disparities. Several studies have explored the relative importance of work exposures to overall health, and the findings are intriguing. For example, a recent examination of government employees in an European city found that physical conditions at work explained most of the observed occupational class inequalities in health [Kaikkonen, et al. 2009]. Likewise, a French study found a social gradient in exposure to physical, ergonomic and chemical hazards in addition to a gradient in experiences of workplace bullying, in which managers and professionals were less likely to be exposed to any hazard compared to associate professionals/technicians, clerks/service workers, and blue-collar workers [Niedhammer, et al. 2008]. Similar studies with US samples could not be found. More research studies, in cohorts for which detailed occupation information is available, must be conducted to help explain observed differences in health outcomes.

## PATHWAYS FROM EXPOSURE TO OUTCOME

### Potential Modifiers

Some studies have identified factors that appear to modify observed effects of workplace injustices on health and other outcomes. In Figure 1, these factors are represented as potential modifiers. Workplace injustice may further contribute to health disparities by having differential effects on disadvantaged populations compared to dominant groups. For example, racial/ethnic minorities have been reported to have increased risks of the post-traumatic stress disorder (PTSD)-related effects when exposed to workplace bullying [Rodríguez-Muñoz, et al. 2010]. Similarly, in another study, even though experiences of workplace bullying were significantly associated with negative emotional reactions for all targets, African-Americans reported significantly higher emotional response to racial/ethnic bullying compared to other groups [Fox and Stallworth 2005]. Also, generalized bullying has been associated with higher numbers of psychological symptoms and increases in drinking to intoxication for women compared to men [Rospenda, et al. 2009]. In contrast, an Italian study found that men were more likely to develop depressive disorder with increasing severity of bullying [Nolfe, et al. 2010].

A study by Krieger (1990) demonstrated how keeping quiet about experiences of discrimination may take a toll on health. African-American women who did not tell others about the unfair treatment they received were four times more likely to report high blood pressure than women who told others (a similar association was not significant for White women) [Krieger 1990]. Likewise, one study found that while lack of equality was associated with poorer self-reported health for both men and women, women's health was influenced when inequality existed for men and/or women whereas men's was only affected when men were the victims of inequality [Bildt 2005].

### Stress-Mediated Pathway

In Figure 1, the main pathway linking exposures to workplace injustice and health outcomes is via stress. Evidence for this pathway in the model is derived from the psychological literature supporting the “stressor-stress-strain” framework. According to work by Lazarus and Folkman (1984), negative health effects result when an individual perceives situational demands as stressful and this stress experience exceeds their capacity to cope [Lazarus and Folkman 1984]. Experiences of discrimination, harassment and bullying in the workplace can operate as stressors provoking a psychological and/or physiological stress response. There is strong empirical evidence that psychological stress can affect biological host resistance through the activation of neuroendocrinological and immunological responses [Cohen, et al. 2007]. The activation of these responses can include disturbances in the circadian cortisol profile, which several studies have found among targets of workplace injustice [Kudielka and Kern 2004, Huebner and Davis 2005, Hansen, et al. 2006, Townsend, et al. 2011]. These types of disruptions in cortisol have been shown to lead to a multitude of chronic negative health conditions [Cohen, et al. 2007]. More studies are needed to directly and clearly show the link from exposure to workplace injustice to physiological responses and, in turn, to negative health outcomes.

## OUTCOMES: CONTRIBUTIONS OF INJUSTICE TO HEALTH DISPARITES

### Health Outcomes

The broader literature on stress and health has established links between experiences of discrimination and harassment and adverse health outcomes. Workplace injustices have been directly associated with three types of outcomes: psychological and physical health, health behaviors, and job outcomes. There is a small but suggestive body of evidence suggesting a fourth outcome—family well-being. These outcomes can be seen on the right-hand side of our model (Figure 1).

Several cross-sectional studies have found evidence of symptoms and diagnosis of PTSD among workers exposed to workplace bullying and sexual harassment [Leymann and Gustafsson 1996, Schneider, et al. 1997, Mikkelsen and Einarsen 2002, Matthiesen and Einarsen 2004, Tehrani 2004, Willness, et al. 2007, Buchanan and Fitzgerald 2008, Larsen and Fitzgerald 2010, Rodríguez-Muñoz, et al. 2010]. In explaining how bullying may lead to PTSD, Einarsen and colleague (2003) posit that although the experience of workplace injustice is often not life-threatening, the experience threatens the inner world of the target by shattering basic cognitive schema about fairness and justice and negatively influences one's social and personal identity leading to PTSD.

A meta-analysis of the antecedents and consequences of sexual harassment found evidence for the association of sexual harassment with general poor mental health [Willness, et al. 2007]. Although anxiety and depression were the most prevalent conditions, the strongest evidence of effect was found for PTSD [Willness, et al. 2007]. These symptoms may be worsened for minorities through an interactive effect of sexual and racial/ethnic harassment [Buchanan and Fitzgerald 2008].

Another mechanism through which minority workers might experience more severe outcomes is through attribution. A study, which included a meta-analysis, showed that social context (e.g. gender or racial composition of workplace) influenced workers' attribution of their experiences of injustice; attribution in turn impacted the severity of outcomes with internal and personal attribution leading to worse health outcomes [Hershcovis & Barling, 2010]. An association between workplace bullying and short- and long-term change in psychological distress and depression has been shown with both cross-sectional and longitudinal studies [Kivimäki, et al. 2003, Hogh, et al. 2005, Nolfe, et al. 2010]. One longitudinal study suggested the possibility of a cyclical relationship in which developing depression increased the risk of workers becoming targets of bullying, which then increased depressive symptoms [Kivimäki, et al. 2000]. However, worker inputs to injustice exposures are not represented on our conceptual model and are beyond the scope of this review.

Evidence from cross-sectional studies suggests that workers who experience racial/ethnic discrimination in the workplace suffer a range of negative psychological health outcomes, such as more days of poor mental health [Roberts, et al. 2004], psychological distress [Eaton 2003, Krieger, et al. 2010], anxiety and depression [Bhui et al, 2005, Agudelo-Suarez, et al. 2009, Hammond, et al. 2010, Raver and Nishii 2010], negative emotions [Fox and Stallworth 2005], and emotional trauma [Alleyne 2004]. Although these studies utilized self–report of discrimination, experimental research has provided added evidence for the influence of work-related racial discrimination on mental health [Salvatore and Shelton 2007]. Workplace ageism has been linked to psychological distress among older workers [Yuan 2007]. This might particularly impact older women [Encel and Studencki 1997, Handy and Davy 2007, Walker, et al. 2007]. A review of literature elucidated how ageism and sexism may operate concomitantly to negatively influence the health of older working women [Payne and Doyal 2010].

Other studies suggest somatic health effects of workplace injustice. An experimental study found that working under an unfavorable supervisor (whose actions included bullying) led to clinically significant increases in workers' blood pressure [Wager, et al. 2003]. Cross-sectional studies provide other evidence of an association between workplace injustice and somatic health. Those who experience racial discrimination may be at increased risk for work-related injury or illness [Murray 2003, de Castro, et al. 2006, Farquhar, et al. 2008, Delp, et al. 2009, Shannon, et al. 2009]. Racial/ethnic discrimination, sexual harassment and bullying have been negatively associated with self-rated health and unhealthy days [Krieger 1999, Nazroo 2003, Gunnarsdottir, et al. 2006, Fujishiro 2009, de Castro, et al. 2010] while racial discrimination and workplace bullying were associated with bodily pain [Burgess, et al. 2009, Saastamoinen, et al. 2009]. Sexual harassment has also been linked to a host of physical health symptoms, including headaches, stomach aches and disrupted sleep [Gutek and Koss 1993, Goldenhar, et al. 1998, Magley, et al. 1999, Wasti, et al. 2000, Willness, et al. 2007].

Non-targeted witnesses of workplace injustice may also be at risk for adverse health outcomes. Non-bullied witnesses to workplace bullying reported more anxiety [Hansen, et al. 2006], and, workers who witnessed repeated bullying in their workplace were almost twice more likely to report acute pain than those who did not witness it [Saastamoinen, et al. 2009]. A U.S. study found that bullying witnesses reported better outcomes (work quality and health) than bullying victims; however, witnesses' outcomes were worse than those of non-witnesses [Lutgen-Sandvik, et al. 2007]. Among a sample of female employees in a public utility and food processing plant, Glomb and colleagues found that observing sexual harassment was linked to lower psychological well-being, similar to individuals who experienced the harassment directly [Glomb, et al. 1997]. Another study found that observing the mistreatment was linked to poor psychological well-being, even after

controlling for one's own experiences [Miner-Rubino and Cortina 2004, Miner-Rubino and Cortina 2007]. Researchers have posited that the influence on bystander health is partly because bystanders develop a fear of becoming a target [Hoel, et al. 2004]. Yet to be evaluated is whether bystander effects are worse when the witnesses are members of the same disadvantaged group as the target.

### Health Behaviors

Experiencing workplace injustice may lead to unhealthy behaviors that likely operate as maladaptive coping mechanisms. Evidence from the stress and health literature suggests that stress influences health through changes in health behavior [Steptoe, et al. 1998, Droomers, et al. 1999, Epel, et al. 2000, Ng and Jeffery 2003]. Recent research suggests similar processes with workplace injustice. For example, workplace racial discrimination has been associated with smoking [Okechukwu, et al. 2010], and heavy alcohol use has been linked to sexual harassment among women [Gradus, et al. 2008] and to workplace bullying [Rospenda, et al. 2009].

### Job Outcomes

As illustrated in figure 1, negative job outcome is a potential outcome of workplace injustices. Workplace racial discrimination and bullying have been linked to both self-reported and medically-certified sickness absence, although the strongest associations were between bullying and medically-certified sickness absence [Kivimäki, et al. 2000, Alleyne 2004]. A cross sectional study found that sexual harassment explained the greater risk for sickness absence among female metal workers in male-dominated worksites compared to those in female dominated worksites [Hensing and Alexanderson 2004]. An important feature of bullying and discrimination includes restriction of information or services related to advancement [Alexis and Vydelingum 2004]. With exposure to workplace injustice, targets may become socially isolated and/or ostracized [Zapf, et al. 1996, Lutgen-Sandvik, et al. 2007], and, might engage in higher levels of counterproductive work behaviors (e.g., tardiness) and reduced productivity, and/or withdraw from seeking promotions, thus lessening their credibility and value at work [Spratlen-Price 1995, Day and Schoenrade 1997, Caver and Livers 2002, Fox and Stallworth 2005, Allan, et al. 2009].

Career advancement has also been shown to be hindered by workplace injustices leading directly to premature exit from the workforce, particularly among socially disadvantaged workers, or indirectly via sickness absence and other health consequences [Alexis and Vydelingum 2004, Giga, et al. 2008]. This premature exit may also result from behavioral hints encouraging them to quit their job, which disadvantaged workers may already be more likely to encounter in the workplace [Giga, et al. 2008].

Income has been linked to both physical and mental health [Pappas, et al. 1993, Marmot 2002]. Thus, workplace injustice could influence health disparities by reducing wages available to socially and economically disadvantaged groups. White men in the U.S. still earn considerably more than equally qualified women and men of other races/ethnicities [IWPR 2010]. Although the Equal Pay Act of 1963 prohibits employers from paying men and women who perform equal tasks at different pay rates, a gender wage gap persists [IWPR 2010, US Dept of Commerce 2011]. In some organizations, men are still promoted to management positions over their equal female counterparts [Blau and DeVaro 2007]. Also, many women encounter a “glass ceiling,” unable to move up the corporate ladder despite their achievements [Williams 2001]. A wage penalty between 9% and 18% per child has been noted among mothers [Gangl and Ziefle 2009]. In contrast, men seem to benefit in career advancement from having families [Friedman and Greenhaus 2000]. Studies have found that leaves of absence are associated with fewer promotions and smaller salary

increases [Poppleton, et al. 2008], and that women are more affected than men because of they usually have heavier caregiving burdens [Kelly 2005]. The wage penalty based on sexual orientation, though, is more complicated. A review of nine studies found that gay and bisexual men earned 10% to 32% less than heterosexual men [Badgett, et al. 2007]. However, the review also found no statistically significant difference in earnings by sexual orientation among male workers in California, demonstrating, in this case, that context at the state-level mattered. The results regarding wage differentials by sexual orientation among women is more equivocal with some studies finding that lesbians earned more while other studies found that they earned less than heterosexual women. [Badgett 1995, Black, et al. 2003, Badgett, et al. 2007].

### Family Well-Being

In Figure 1, family well-being is the final component that may be linked to exposure to workplace injustice. From a family systems perspective, family members are linked, and, thus, what happens to one member can influence others through their interactions and communications [Cox and Paley 1997]. As such, health outcomes of workplace injustice can extend beyond the worker via family interactions. One pathway, characterized as the “kick the dog” phenomenon by Hoobler and Brass (2010), occurs when an abused worker acts abusively towards family members. In one study, family members of workers who experienced bullying reported that the workers engaged in family undermining when they got home [Hoobler, et al. 2010]. Furthermore, the stress and well-being of the victim of injustice may cross over and influence family members’ well-being [Westman 2001]. For example, among Mexican-American families, Crouter and colleagues (2006) found that men's reports of workplace racism were associated with depressive symptoms for them and their wives. This effect was moderated by acculturation: the more workplace racism fathers in less acculturated families experienced, the more depressive symptoms family members reported. This association was not apparent in families with higher levels of acculturation [Crouter, et al. 2006]. Thus, workplace injustice may affect family members directly, due to lack of resources from deserved pay and promotions for example, or indirectly due to the disadvantaged workers’ distress or health.

## MEASUREMENT AND METHODOLOGICAL CONSIDERATIONS

Qualitative studies have provided rich perspectives from workers to explain how workplace injustice plays out in the labor market, within their jobs, and at worksites [Agudelo-Suarez, et al. 2009, de Castro, et al. 2006, Baillien, et al. 2008, Bowleg, et al. 2008, Farquhar, et al. 2008, Allan, et al. 2009, Delp, et al. 2009, van Heugten 2010]. Some studies have taken a grounded theory approach to allow for the emergence of themes explicitly or implicitly indicative of workplace injustice. Some of these qualitative studies did not necessarily have a predetermined aim of documenting the occurrence of a particular injustice, but rather initially set out to examine physical and/or psychosocial working conditions of a particular racial/ethnic minority group or groups. For example, de Castro and colleagues (2006) reviewed worker complaints received at a community-based workers’ rights center. The authors discovered that many complaints about working conditions and arrangements were tinged with experiences of discrimination based on workers’ race or ethnicity.

Other studies have quantified workplace injustices using either a self-labeling or operational method through surveys [Bond, et al. 2007]. With self-labeling, study participants indicate whether they have been exposed to a pre-defined type of injustice. The operational method commonly involves study participants indicating whether or not they have experienced different events in a list of acts within a specified period. The number and frequency of experienced acts is then used to classify whether one has or has not experienced a particular workplace injustice. Studies using both methods have shown that prevalence is consistently

lower in the self-labeling versus operational method [Mikkelsen and Einarsen 2001, Krieger, et al. 2005, Lutgen-Sandvik, et al. 2007, Chan, 2008, Hogh, et al. 2011].

An important issue for both methods relates to timing, duration, and severity of the experience, which are often not measured [Rospenda, et al. 2005, Badgett, et al. 2007, Bond, et al. 2007, Saunders, et al. 2007, Williams, et al. 2008, Estrada, et al. 2011]. Some measures have a wide window for capturing the timing of the injustice. For example, the widely used measure of sexual harassment (SEQ) has a 24-month reference period (see [Gutek, et al. 2004] for a critique). One-time assessments do not capture the ebb and flow of emotions and experiences related to workplace injustice occurring over time. Sampling and the timing of study participant recruitment poses a barrier to elucidating injustice-health linkages.

Other limitations of studies linking workplace injustices and health outcomes are inconsistencies in measuring different exposures and their outcomes. Currently, no authoritative definitions of the various types of workplace injustice exist. As a result, studies have measured discrimination, harassment, bullying and abuse using different definitions; with some strictly employing legal definitions whereas others use more inclusive definitions. Also, some assessments consist of a one-item measure (e.g., whether a person has been ever discriminated/harassed/abused against at work because of race, religion, sex, age, marital status, nationality, disability, or for any other reason). A key finding in the literature on stress and health is that such failure to develop measures for and comprehensively assess stressful experiences has the end result of understating the impact of stress on health [Thoits 2010].

Additionally, the majority of studies on workplace injustice have been cross-sectional. Although cross-sectional studies provide information about the distribution of disease and can suggest associations between exposures and health outcomes, they do not provide evidence of causality. Furthermore, cross-sectional designs provide little information in terms of temporality, severity of the injustice event(s), or predictability for worker health and organizational outcomes. Cross-sectional studies are valuable for describing the experience of specific worker groups at one point in time, but longitudinal study designs are needed to better understand the unfolding relationship of workplace injustice and health.

An added issue for occupational-related studies is that most samples are drawn from white-collar settings where fewer minority workers work [Harris, et al. 2011]. Few studies of workplace injustice have targeted workers in service settings and even fewer have been of blue-collar workers. Further, studies often fail to consider contextual and historical contributions to workplace injustices such as the historical and current ratio of men to women in the workplace and the race, age, sexual orientation, and gender of supervisors. For example, men might become targets of bullying and sexual harassment in occupations that are historically female. This has been found among nursing assistants where one study found that male nursing assistants reported prevalence of bullying that was twice the prevalence reported by female nursing assistants [Eriksen and Einarsen 2004].

More studies utilizing multiple reporters, such as manager, coworkers, and family members, are also needed. Experiencing injustice in the workplace may “ripple” beyond the parties involved through the work context and into the family and other contexts. Including a diverse sample of reporter perspectives could provide evidence of the extent to which incidents of workplace injustice occur, and, offer insight into possible interventions. Depending on the nature of the workplace injustice, obtaining multiple reports from others at work is not always feasible.

Studies examining interactions of more than one type of workplace injustice are needed. How much do workplace injustices co-occur and what are the health implications of

concomitant exposures? One methodological obstacle to such studies is that distinguishing between exposures, (e.g. bullying of racial minorities versus racial discrimination) can be difficult. Being a minority appears to increase the likelihood of being a target of injustice and both bullying and sexual harassment occur in racialized forms [Alexis and Vydelingum 2004, Woods, et al. 2009, Fielden, et al. 2010]. A study examining discrimination exposure among job applicants found that African-American male homosexual job candidates were the most likely target of discrimination while White female heterosexual candidates were the least likely to experience discrimination [Crow, et al. 1998]. Several studies addressing the additive influence of minority and immigration status on health are suggestive. A Danish study of the intersection of race/ethnicity and immigration status found that Western immigrants reported the same level of bullying as Danish workers while non-Western immigrants had 85% higher risk of experiencing workplace bullying than Danish workers [Hogh, et al. 2011].

One study suggested only a minimal additive effect of ethnic harassment, gender harassment, and generalized workplace harassment on mental and physical health [Raver and Nishii 2010]. The investigators theorized that workers adapt, thus further harassment does not yield significantly higher negative effects. This is a premise of the adaptation level theory, which posits that people subconsciously adjust to exposure to one form of workplace injustice by using coping strategies that buffer them from further harm [Raver and Nishii 2010]. However, other studies use comparisons of exposure to injustice to exposure to trauma to conclude that exposure to multiple injustices is associated with much greater distress (thus potentially more health harming) than exposure to one injustice [Yoder and Aniakudo 1995, Bowleg, et al. 2003, Krupnick, et al. 2004, Buchanan and Fitzgerald 2008]. These discrepant findings could be due to the timing, severity, and/or type of injustices experienced. The magnitude of additive or multiplicative effect of exposure to multiple workplace injustice is a question that can be answered empirically through more studies, particularly if designed longitudinally and informed by a lifecourse perspective. Studies could also incorporate recruitment strategies that allow the recruitment of study participants who have been exposed to the multiple exposures under study.

These study design issues may, in part, reflect the difficulties researchers face in gathering data on workplace injustice. As noted by Badgett and colleagues (2007), employers do not easily cooperate with research on workplace injustice compared to other types of workplace studies (e.g. worksite health promotion), and findings from such studies could have legal and financial implications and/or cause damage to employer's image.

## CONCLUSIONS AND RECOMMENDATIONS

The extant literature describes the phenomena of discrimination, harassment, abuse and bullying in the workplace and the potential outcomes of these exposures. Although there are exceptions, these unjust experiences are most often described as affecting workers in non-dominant and/or disadvantaged worker groups. Our review pointed out that these same worker groups often hold more hazardous jobs and have been shown to experience poorer general health. We explored how various forms of workplace injustice have been shown to operate and contribute to disparate health among these workers. Additionally, we suggested a conceptual model informed by current evidence to illustrate pathways between workplace injustice experiences and health disparities. The model is offered as a starting point for researchers to build upon in exploring the potential mechanisms between these exposures and health disparities and under what conditions these disparities occur. The intent of this conceptual model is to contribute to the “unpacking” of the complex contributions of workplace injustices to health disparities.

Prospective studies and refinement of methods for characterizing and quantifying workplace injustices are needed to establish causative roles and to disentangle the contributions of various exposures. Future studies should employ representative samples and oversample disadvantaged worker groups. The literature on workplace ageism and its health effects are lacking; as the workforce ages and workers delay retirement, this is a timely area for study.

Though the body of literature directly linking workplace injustice and health is small, we believe that our conceptual model is a working model that incorporates the evidence to date. While more research should be done to characterize the relationship between workplace injustice and health, the current evidence supports the pathways in this model and points to a potentially important role for workplace injustice in the health status of working people and likely their families.

## References


Agudelo-Suarez A, Gil-Gonzalez D, Ronda-Perez E, Porthe V, Paramio-Perez G, Garcia AM, Gari A. Discrimination, work and health in immigrant populations in Spain. Social Science & Medicine. 2009; 68:1866–1874. [PubMed: 19328608]

Alexis O, Vydelingum V. The lived experience of overseas black and minority ethnic nurses in the NHS in the south of England. Diversity in Health and Social Care. 2004; 1:13–20.

Allan HT, Cowie H, Smith P. Overseas nurses' experiences of discrimination: a case of racist bullying? J Nurs Manag. 2009; 17:898–906. [PubMed: 19793247]

Alleyne A. Black identity and workplace oppression. Counselling & Psychotherapy Research. 2004; 4:4–8.

Badgett M. The wage effects of sexual orientation discrimination. Industrial and Labor Relations Review. 1995:726–739.

Badgett, M.; Lau, H.; Sears, B.; Ho, D. Other Recent Work. The Williams Institute, University of California Los Angeles School of Law; 2007. Bias in the workplace: Consistent evidence of sexual orientation and gender identity discrimination.. Available from http://escholarship.ucop.edu/uc/item/5h3731xr

Baillien E, Neyens I, De Witte H. Organizational, team related and job related risk factors for bullying, violence and sexual harassment in the workplace: A qualitative study. International Journal of Organisational Behaviour. 2008; 13:132.

Barbeau EM, Hartman C, Quinn MM, Stoddard AM, Krieger N. Methods for recruiting white, black, and hispanic working-class women and men to a study of physical and social hazards at work: the United for Health study. Int J Health Serv. 2007; 37:127–144. [PubMed: 17436989]

Berdahl TA. Racial/ethnic and gender differences in individual workplace injury risk trajectories: 1988-1998. Am J Public Health. 2008; 98:2258–2263. [PubMed: 18235072]

Bertrand M, Mullainathan S. Are Emily and Brendan more employable than Latoya and Tyrone? Evidence on racial discrimination in the labor market from a large randomized experiment. American Economic Review. 2004; 94:991–1013.

Bhui K, Stansfeld S, McKenzie K, Karlsen S, Nazroo J, Welch S. Racial/Ethnic discrimination and common mental disorders among workers: findings from the EMPIRIC study of ethnic minority groups in the United Kingdom. American Journal of Public Health. 2005; 95:496. [PubMed: 15727983]

Bildt C. Sexual harassment: relation to other forms of discrimination and to health among women and men. Work. 2005; 24:251–259. [PubMed: 15912015]

Black DA, Makar HR, Sanders SG, Taylor LJ. The earnings effects of sexual orientation. Industrial and Labor Relations Review. 2003; 56:449–469.

Blau FD, DeVaro J. New evidence on gender differences in promotion rates: An empirical analysis of a sample of new hires. Industrial Relations: A Journal of Economy and Society. 2007; 46:511–550.

Bond, MA.; Kalaja, A.; Markkanen, P.; Cazeca, D.; Daniel, S.; Tsurikova, L.; Punnett, L.; Baron, S. [July 5th, 2011] Expanding our understanding of the psychosocial work environment: a

compendium of measures of discrimination, harassment and work-family issues. 2007. from http://www.cdc.gov/niosh/docs/2008-104/pdfs/2008-104.pdf

Bowleg L, Brooks K, Ritz SF. “Bringing home more than a paycheck:” an exploratory analysis of Black lesbians’ experiences of stress and coping in the workplace. J Lesbian Stud. 2008; 12:69–84. [PubMed: 19042294]

Bowleg L, Huang J, Brooks K, Black A, Burkholder G. Triple jeopardy and beyond: Multiple minority stress and resilience among Black lesbians. Journal of Lesbian Studies. 2003; 7:87–108.

Buchanan NT, Fitzgerald LF. Effects of racial and sexual harassment on work and the psychological well-being of African American women. J Occup Health Psychol. 2008; 13:137–151. [PubMed: 18393583]

Burgess DJ, Grill J, Noorbaloochi S, Griffin JM, Ricards J, Van Ryn M, Partin MR. The Effect of Perceived Racial Discrimination on Bodily Pain among Older African American Men. Pain Medicine. 2009; 10:1341–1352. [PubMed: 20021596]

Carbo, JA. The right to dignity at work: Critical management studies and corporate social responsibility insights into workplace bullying. 2008.

Cassitto, MG.; Fattorini, E.; Gilioli, R.; Rengo, C.; Gonik, V.; di Perfezionamento, IC.; Fingerhut, MA.; Kortum-Margot, E. Psychological Harassment at Work: WHO, Protecting Workers’ Series. 2003.

Caver KA, Livers AB. Dear White Boss... Harvard Business Review. 2002; 80:76–83. [PubMed: 12422791]

Chan DK. Examining the job related, psychological, and physical outcomes of workplace sexual harassment: A meta analytic review. Psychology of Women Quarterly. 2008; 32:362–376.

Cherniack, M. Hawk's nest incident: America's worst industrial disaster. 1986.

Cohen S, Janicki-Deverts D, Miller GE. Psychological stress and disease. JAMA: The Journal of the American Medical Association. 2007; 298:1685. [PubMed: 17925521]

Cox M, Paley B. Family as Systems. Annual Review of Psychology. 1997; 48:243–267.

Crouter AC, Davis KD, Updegraff K, Delgado M, Fortner M. Mexican American fathers’ occupational conditions: Links to family members’ psychological adjustment. Journal of Marriage and Family. 2006; 68:843–858. [PubMed: 18414596]

Crow SM, Fok LY, Hartman SJ. Who is at Greatest Risk of Work-related Discrimination—Women, Blacks, or Homosexuals? Employee Responsibilities and Rights Journal. 1998; 11:15–26.

Day NE, Schoenrade P. Staying in the closet versus coming out: Relationships between communication about sexual orientation and work attitudes. Personnel Psychology. 1997; 50:147–163.

de Castro AB, Fujishiro K, Sweitzer E, Oliva J. How immigrant workers experience workplace problems: a qualitative study. Archives of Environmental and Occupational Health. 2006; 61:249–258. [PubMed: 17967746]

de Castro AB, Rue T, Takeuchi DT. Associations of employment frustration with self-rated physical and mental health among Asian American immigrants in the U.S. labor force. Public Health Nursing. 2010; 27:492–503. [PubMed: 21087302]

Delp L, Podolsky L, Aguilar T. Risk amid recovery: Occupational health and safety of Latino day laborers in the aftermath of the Gulf Coast hurricanes. Organization & environment. 2009; 22(4): 479–490. [PubMed: 21394225]

Din-Dzietham R, Nembhard WN, Collins R, Davis SK. Perceived stress following race-based discrimination at work is associated with hypertension in African-Americans. The metro Atlanta heart disease study, 1999-2001. Soc Sci Med. 2004; 58:449–461. [PubMed: 14652043]

Droomers M, Schrijvers C, Stronks K, van de Mheen D, Mackenbach JP. Educational differences in excessive alcohol consumption: The role of psychosocial and material stressors. Preventive Medicine. 1999; 29:1–10. [PubMed: 10419792]

Eaton SC. If you can use them: Flexibility policies, organizational commitment, and perceived performance. Industrial Relations: A Journal of Economy and Society. 2003; 42:145–167.

EEOC. [May 13th, 2011] Laws, regulations and guidance MOUs.. Equal Employment Opportunity Commission. 2011. from http://www.eeoc.gov/laws/practices/harassment.cfm

Ehrenreich R. Dignity and Discrimination: Toward a Pluralistic Understanding of Workplace Harassment. Geo LJ. 1999; 88:1.

Elovainio M, Kivimaki M, Vahtera J. Organizational justice: evidence of a new psychosocial predictor of health. American Journal of Public Health. 2002; 92:105. [PubMed: 11772771]

Encel, S.; Studencki, H. Gendered ageism: Job search experiences of older women. NSW Committee on Ageing and the Department for Women (NSW); Sydney, New South Wales: 1997.

Epel ES, McEwen B, Seeman T, Matthews K, Castellazzo G, Brownell KD, Bell J, Ickovics JR. Stress and body shape: stress-induced cortisol secretion is consistently greater among women with central fat. Psychosomatic Medicine. 2000; 62:623. [PubMed: 11020091]

Eriksen W, Einarsen S. Gender minority as a risk factor of exposure to bullying at work: The case of male assistant nurses. European Journal of Work and Organizational Psychology. 2004; 13:473–492.

Estrada AX, Probst TM, Brown J, Graso M. Evaluating the Psychometric and Measurement Characteristics of a Measure of Sexual Orientation Harassment. Military Psychology. 2011; 23:220–236.

Farquhar S, Samples J, Ventura S, Davis S, Abernathy M, McCauley L, Cuilwik N, Shadbeh N. Promoting the occupational health of indigenous farmworkers. Journal of Immigrant and Minority Health. 2008; 10:269–280. [PubMed: 17668321]

Fielden SL, Davidson MJ, Woolnough H, Hunt C. A model of racialized sexual harassment of women in the UK workplace. Sex Roles. 2010; 62:20–34.

Fitzgerald LF, Magley VJ, Drasgow F, Waldo CR. Measuring sexual harassment in the military: The sexual experiences questionnaire (SEQ-DoD). Military Psychology. 1999; 11:243–263.

Fox S, Stallworth LE. Racial/ethnic bullying: Exploring links between bullying and racism in the US workplace. Journal of Vocational Behavior. 2005; 66:438–456.

Fox S, Stallworth LE. Building a framework for two internal organizational approaches to resolving and preventing workplace bullying: Alternative dispute resolution and training. Consulting Psychology Journal: Practice and Research. 2009; 61:220.

Friedman, SD.; Greenhaus, JH. What happens when business professionals confront life choices. Oxford University Press; USA: 2000. Work and family--allies or enemies?.

Frumkin H, Walker E, Friedman-Jimenez G. Minority workers and communities. Occupational Medicine. 1999; 14:495–517. [PubMed: 10378973]

Fujishiro K. Is perceived racial privilege associated with health? Findings from the Behavioral Risk Factor Surveillance System. Soc Sci Med. 2009; 68:840–844. [PubMed: 19136189]

Gangl M, Ziefle A. Motherhood, labor force behavior, and women's careers: An empirical assessment of the wage penalty for motherhood in britain, germany, and the united states. Demography. 2009; 46:341–369. [PubMed: 21305397]

Gee GC, Long JS, Pavalko EK. Age, cohort and perceived age discrimination: Using the life course to assess self-reported age discrimination. Social Forces. 2007; 86:265–290.

Giga, SI.; Hoel, H.; Lewis, D. A review of Black and minority ethnic (BME) employee experiences of workplace bullying. 2008. p. 36-44.Dignity at Work Partnership Retrieved from http://wwwamicustheunionorg/docs/Research

Glomb TM, Richman WL, Hulin CL, Drasgow F. Ambient sexual harassment: An integrated model of antecedents and consequences. Organizational Behavior and Human Decision Processes. 1997; 71:309.

Goldenhar LM, Swanson NG, Hurrell JJ Jr. Ruder A, Deddens J. Stressors and adverse outcomes for female construction workers. J Occup Health Psychol. 1998; 3:19–32. [PubMed: 9552269]

Gradus JL, Street AE, Kelly K, Stafford J. Sexual harassment experiences and harmful alcohol use in a military sample: Differences in gender and the mediating role of depression. Journal of Studies on Alcohol and Drugs. 2008; 69(3):348–351. [PubMed: 18432376]

Grubb PL, Roberts RK, Grosch JW, Brightwell WS. Workplace bullying: What organizations are saying. Empl Rts & Employ Pol'y J. 2004; 8:407–523.

Gunnarsdottir HK, Sveinsdottir H, Bernburg JG, Fridriksdottir H, Tomasson K. Lifestyle, harassment at work and self-assessed health of female flight attendants, nurses and teachers. Work: Journal of Prevention, Assessment & Rehabilitation. 2006; 27:165–172.

Gutek BA, Koss MP. Changed women and changed organizations: Consequences of and coping with sexual harassment. Journal of Vocational Behavior. 1993

Gutek BA, Murphy RO, Douma B. A review and critique of the Sexual Experiences Questionnaire (SEQ). Law and Human Behavior. 2004; 28:457–482. [PubMed: 15499825]

Haggerty M, Johnson C. The hidden barriers of occupational segregation. Journal of Economic Issues. 1995:211–222.

Hammond WP, Gillen M, Yen IH. Workplace discrimination and depressive symptoms: A study of multi-ethnic hospital employees. Race and Social Problems. 2010; 2:19–30. [PubMed: 20463846]

Handy J, Davy D. Gendered ageism: Older women's experiences of employment agency practices. Asia Pacific Journal of Human Resources. 2007; 45:85.

Hansen AM, Hogh A, Persson R, Karlson B, Garde AH, Orbaek P. Bullying at work, health outcomes, and physiological stress response. Journal of Psychosomatic Research. 2006; 60:63–72. [PubMed: 16380312]

Harris JR, Huang Y, Hannon PA, Williams B. Low–socioeconomic status workers: their health risks and how to reach them. Journal of Occupational and Environmental Medicine. 2011; 53:132. [PubMed: 21270663]

Hebl MR, Foster JB, Mannix LM, Dovidio JF. Formal and interpersonal discrimination: A field study of bias toward homosexual applicants. Personality and Social Psychology Bulletin. 2002; 28:815.

Hensing G, Alexanderson K. The association between sex segregation, working conditions, and sickness absence among employed women. Occupational and Environmental Medicine. 2004; 61:e7. [PubMed: 14739391]

Hershcovis M, Barling J. Comparing victim attributions and outcomes for workplace aggression and sexual harassment. Journal of Applied Psychology. 2010; 95(5):874. [PubMed: 20718532]

Hodson R, Roscigno VJ, Lopez SH. Chaos and the abuse of power. Work and Occupations. 2006; 33:382–416.

Hoel H, Faragher B, Cooper CL. Bullying is detrimental to health, but all bullying behaviours are not necessarily equally damaging. British Journal of Guidance & Counselling. 2004; 32:367–387.

Hoel, H.; Giga, SI. [July 5th, 2011] Destructive interpersonal conflict in the workplace: The effectiveness of management interventions.. Manchester Business School. 2006. from http://www.giy07.dial.pipex.com/downloads/bullyrpt.pdf

Hogh A, Carneiro IG, Giver H, Rugulies R. Are immigrants in the nursing industry at increased risk of bullying at work? A one year follow up study. Scandinavian Journal of Psychology. 2011:49–56. [PubMed: 21054415]

Hogh A, Henriksson ME, Burr H. A 5-year follow-up study of aggression at work and psychological health. Int J Behav Med. 2005; 12:256–265. [PubMed: 16262544]

Hoobler JM, Rospenda KM, Lemmon G, Rosa JA. A within-subject longitudinal study of the effects of positive job experiences and generalized workplace harassment on well-being. Journal of Occupational Health Psychology. 2010; 15:434. [PubMed: 21058857]

Horvath M, Ryan AM. Antecedents and potential moderators of the relationship between attitudes and hiring discrimination on the basis of sexual orientation. Sex Roles. 2003; 48:115–130.

Huebner DM, Davis MC. Gay and bisexual men who disclose their sexual orientations in the workplace have higher workday levels of salivary cortisol and negative affect. Annals of Behavioral Medicine. 2005; 30:260–267. [PubMed: 16336077]

IWPR. [May 13, 2011] The wage and gender gap: Institute for Women's Policy Research. 2010. from http://www.iwpr.org/publications/pubs/the-gender-wage-gap-2009

Johnson, R.; Neumark, D. Age discrimination, job separation, and employment status of older workers: Evidence from self-reports. National Bureau of Economic Research; Cambridge, Mass., USA: 1996.

Jones CP. Levels of racism: A theoretic framework and a gardener's tale. American Journal of Public Health. 2000; 90:1212. [PubMed: 10936998]

Kaikkonen R, Rahkonen O, Lallukka T, Lahelma E. Physical and psychosocial working conditions as explanations for occupational class inequalities in self-rated health. The European Journal of Public Health. 2009; 19:458.

Kelly E. Discrimination against caregivers? Gendered family responsibilities, employer practices, and work rewards. Handbook of Employment Discrimination Research. 2005:353–374.

Kivimäki M, Elovainio M, Vahtera J. Workplace bullying and sickness absence in hospital staff. Occupational and Environmental Medicine. 2000; 57:656. [PubMed: 10984336]

Kivimäki M, Virtanen M, Vartia M, Elovainio M, Vahtera J, Keltikangas-Järvinen L. Workplace bullying and the risk of cardiovascular disease and depression. Occupational and Environmental Medicine. 2003; 60:779. [PubMed: 14504368]

Krieger N. Racial and gender discrimination: risk factors for high blood pressure? Social Science & Medicine. 1990; 30:1273–1281. [PubMed: 2367873]

Krieger N. Epidemiology and the web of causation: has anyone seen the spider? Social Science & Medicine. 1994; 39:887–903. [PubMed: 7992123]

Krieger N. Embodying inequality: a review of concepts, measures, and methods for studying health consequences of discrimination. Int J Health Serv. 1999; 29:295–352. [PubMed: 10379455]

Krieger N, Chen JT, Waterman PD, Hartman C, Stoddard AM, Quinn MM, Sorensen G, Barbeau EM. The inverse hazard law: Blood pressure, sexual harassment, racial discrimination, workplace abuse and occupational exposures in US low-income black, white and Latino workers. Social Science & Medicine. 2008; 67:1970–1981. [PubMed: 18950922]

Krieger N, Kaddour A, Koenen K, Kosheleva A, Chen JT, Waterman PD, Barbeau EM. Occupational, social, and relationship hazards and psychological distress among low-income workers: implications of the 'inverse hazard law'. J Epidemiol Community Health. 2010

Krieger N, Smith K, Naishadham D, Hartman C, Barbeau EM. Experiences of discrimination: validity and reliability of a self-report measure for population health research on racism and health. Soc Sci Med. 2005; 61:1576–1596. [PubMed: 16005789]

Krieger N, Waterman PD, Hartman C, Bates LM, Stoddard AM, Quinn MM, Sorensen G, Barbeau EM. Social hazards on the job: workplace abuse, sexual harassment, and racial discrimination--a study of Black, Latino, and White low-income women and men workers in the United States. Int J Health Serv. 2006; 36:51–85. [PubMed: 16524165]

Krupnick JL, Green BL, Stockton P, Goodman L, Corcoran C, Petty R. Mental health effects of adolescent trauma exposure in a female college sample: Exploring differential outcomes based on experiences of unique trauma types and dimensions. Psychiatry: Interpersonal and Biological Processes. 2004; 67:264–279.

Kudielka BM, Kern S. Cortisol day profiles in victims of mobbing (bullying at the work place): preliminary results of a first psychobiological field study. Journal of Psychosomatic Research. 2004; 56:149–150. [PubMed: 14987978]

Landsbergis PA, Grzywacz JG, LaMontagne AD. Work organization, job insecurity, and occupational health disparities. American Journal of Industrial Medicine. 2012

Larsen SE, Fitzgerald LF. PTSD Symptoms and Sexual Harassment: The Role of Attributions and Perceived Control. Journal of Interpersonal Violence. 2010

Lazarus, RS.; Folkman, S. Stress, appraisal, and coping. Springer Publishing Company; 1984.

Leymann H, Gustafsson A. Mobbing at work and the development of post-traumatic stress disorders. European Journal of Work and Organizational Psychology. 1996; 5:251–275.

Loomis D, Richardson D. Race and the risk of fatal injury at work. American Journal of Public Health. 1998; 88:40. [PubMed: 9584031]

Lopez SH, Hodson R, Roscigno VJ. Power, status, and abuse at work: General and sexual harassment compared. Sociological Quarterly. 2009; 50:3–27.

Lutgen-Sandvik P, Tracy SJ, Alberts JK. Burned by bullying in the American workplace: Prevalence, perception, degree and impact. Journal of Management Studies. 2007; 44:837–862.

Magley VJ, Hulin CL, Fitzgerald LF, DeNardo M. Outcomes of self-labeling sexual harassment. Journal of Applied Psychology. 1999; 84:390. [PubMed: 10380419]

Marmot M. The influence of income on health: views of an epidemiologist. Health Affairs. 2002; 21:31. [PubMed: 11900185]

Matthiesen SB, Einarsen S. Psychiatric distress and symptoms of PTSD among victims of bullying at work. British Journal of Guidance & Counselling. 2004; 32:335–356.

Mikkelsen EG, Einarsen S. Bullying in Danish work-life: Prevalence and health correlates. European Journal of Work and Organizational Psychology. 2001; 10:393–413.

Mikkelsen EG, Einarsen S. Basic assumptions and symptoms of post-traumatic stress among victims of bullying at work. European Journal of Work and Organizational Psychology. 2002; 11:87–111.

Miner-Rubino K, Cortina LM. Working in a context of hostility toward women: implications for employees' well-being. J Occup Health Psychol. 2004; 9:107–122. [PubMed: 15053711]

Miner-Rubino K, Cortina LM. Beyond targets: Consequences of vicarious exposure to misogyny at work. J Appl Psychol. 2007; 92:1254–1269. [PubMed: 17845084]

Moore ME, Konrad AM, Yang Y, Ng ESW, Doherty AJ. The vocational well-being of workers with childhood onset of disability: Life satisfaction and perceived workplace discrimination. Journal of Vocational Behavior. 2011; 79:681–698.

Murray LR. Racial/ethnic bias and health. Sick and tired of being sick and tired: scientific evidence, methods, and research implications for racial and ethnic disparities in occupational health. American Journal of Public Health. 2003; 93:221–226. [PubMed: 12554573]

Nazroo JY. The structuring of ethnic inequalities in health: Economic position, racial discrimination, and racism. American Journal of Public Health. 2003; 93

Ng DM, Jeffery RW. Relationships between perceived stress and health behaviors in a sample of working adults. Health Psychology. 2003; 22:638. [PubMed: 14640862]

Niedhammer I, Chastang JF, David S, Kelleher C. The contribution of occupational factors to social inequalities in health: Findings from the national French SUMER survey. Social Science and Medicine. 2008; 67:1870–1881. [PubMed: 18851892]

Nolfe G, Petrella C, Zontini G, Uttieri S. Association between bullying at work and mental disorders: gender differences in the Italian people. Social Psychiatry and Psychiatric Epidemiology. 2010; 45:1037–1041. [PubMed: 19855910]

Okechukwu CA, Krieger N, Chen J, Sorensen G, Li Y, Barbeau EM. The association of workplace hazards and smoking in a U.S. multiethnic working-class population. Public Health Rep. 2010; 125:225–233. [PubMed: 20297749]

Pager D. The Mark of a Criminal Record1. American Journal of Sociology. 2003; 108:937–975.

Pager D, Western B, Bonikowski B. Discrimination in a low-wage labor market: A field experiment. American Sociological Review. 2009; 74:777. [PubMed: 20689685]

Pappas G, Queen S, Hadden W, Fisher G. The increasing disparity in mortality between socioeconomic groups in the United States, 1960 and 1986. The New England Journal of Medicine. 1993; 329:103. [PubMed: 8510686]

Pastor, M.; Bullard, RD.; Boyce, JK.; Fothergill, A.; Morello-Frosch, R.; Wright, B. In the wake of the storm: Environment, disaster and race after Katrina. Russell Sage Foundation; 2006.

Payne S, Doyal L. Older women, work and health. Occupational Medicine. 2010; 60:172. [PubMed: 20423947]

Pina A, Gannon TA, Saunders B. An overview of the literature on sexual harassment: Perpetrator, theory, and treatment issues. Aggression and Violent Behavior. 2009; 14:126–138.

Poppleton S, Briner RB, Kiefer T. The roles of context and everyday experience in understanding work-non-work relationships: A qualitative diary study of white-and blue-collar workers. Journal of Occupational and Organizational Psychology. 2008; 81:481–502.

Quinn MM, Sembajwe G, Stoddard AM, Kriebel D, Krieger N, Sorensen G, Hartman C, Naishadham D, Barbeau EM. Social disparities in the burden of occupational exposures: results of a cross-sectional study. Am J Ind Med. 2007; 50:861–875. [PubMed: 17979135]

Raver JL, Nishii LH. Once, Twice, or Three Times as Harmful? Ethnic Harassment, Gender Harassment, and Generalized Workplace Harassment. Journal Of Applied Psychology. 2010; 95:236–254. [PubMed: 20230066]

Roberts RK, Swanson NG, Murphy LR. Discrimination and occupational mental health. Journal of Mental Health. 2004; 13:129–142.

Robinson JC. Racial inequality and the probability of occupation-related injury or illness. The Milbank Memorial Fund Quarterly Health and Society. 1984:567–590. [PubMed: 6569359]

Robinson JC. Trends in racial inequality and exposure to work-related hazards, 1968-1986. The Milbank Quarterly. 1987:404–420. [PubMed: 3451063]

Rodríguez-Muñoz A, Moreno-Jiménez B, Vergel AIS, Hernández EG. Post-traumatic symptoms among victims of workplace bullying: Exploring gender differences and shattered assumptions. Journal of Applied Social Psychology. 2010; 40:2616–2635.

Rospenda KM, Richman JA, Ehmke JL, Zlatoper KW. Is workplace harassment hazardous to your health? Journal of Business and Psychology. 2005; 20:95–110.

Rospenda KM, Richman JA, Shannon CA. Prevalence and Mental Health Correlates of Harassment and Discrimination in the Workplace Results From a National Study. Journal of Interpersonal Violence. 2009; 24:819–843. [PubMed: 18463311]

Saastamoinen P, Laaksonen M, Leino-Arjas P, Lahelma E. Psychosocial risk factors of pain among employees. European Journal of Pain. 2009; 13:102–108. [PubMed: 18440254]

Salvatore J, Shelton JN. Cognitive costs of exposure to racial prejudice. Psychological Science. 2007; 18:810. [PubMed: 17760778]

Saunders P, Huynh A, Goodman-Delahunty J. Defining workplace bullying behaviour professional lay definitions of workplace bullying. International Journal of Law and Psychiatry. 2007; 30:340–354. [PubMed: 17692375]

Scheid TL. Stigma as a barrier to employment: Mental disability and the Americans with Disabilities Act. International Journal of Law and Psychiatry. 2005; 28:670–690. [PubMed: 16112732]

Schneider KT, Swan S, Fitzgerald LF. Job-related and psychological effects of sexual harassment in the workplace: Empirical evidence from two organizations. J Appl Psychol. 1997; 82:401–415. [PubMed: 9190147]

Shannon CA, Rospenda K, Richman J, Minich L. Race, racial discrimination, and the risk of work-related illness, injury, or assault: Findings from a national study. Journal of Occupational and Environmental Medicine. 2009; 51:441–448. [PubMed: 19339900]

Snyder LA, Carmichael JS, Blackwell LV, Cleveland JN, Thornton GC. Perceptions of Discrimination and Justice Among Employees with Disabilities. Employee Responsibilities and Rights Journal. 2010; 22:5–19.

Somervell PD, Conway GA. Does the small farm exemption cost lives? American Journal of Industrial Medicine. 2011; 54:461–466. [PubMed: 21400559]

Spratlen-Price L. Interpersonal conflict which includes mistreatment in a university workplace. Violence Vict. 1995; 10:285–297. [PubMed: 8703841]

Steptoe A, Lipsey Z, Wardle J. Stress, hassles and variations in alcohol consumption, food choice and physical exercise: a diary study. British Journal of Health Psychology. 1998

Stuart H. Mental illness and employment discrimination. Current Opinion in Psychiatry. 2006; 19:522. [PubMed: 16874128]

Tehrani N. Bullying: a source of chronic post traumatic stress? British Journal of Guidance & Counselling. 2004; 32:357–366.

Thoits PA. Stress and Health. Journal of Health and Social Behavior. 2010; 51:S41. [PubMed: 20943582]

Townsend SSM, Major B, Gangi CE, Mendes WB. From “In the Air” to “Under the Skin”: Cortisol Responses to Social Identity Threat. Personality and Social Psychology Bulletin. 2011; 37:151. [PubMed: 21239591]

Turney L. Mental health and workplace bullying: The role of power, professions and ‘on the job’ training. Australian e-Journal for the Advancement of Mental Health. 2003; 2:1–9.

US Dept of Commerce. Women in America: Indicators of social and economic well-being. US Department of Commerce Economics and Statistics Administration & Executice Office of the President; 2011.

van Heugten K. Bullying of Social Workers: Outcomes of a Grounded Study into Impacts and Interventions. British Journal of Social Work. 2010; 40:638–655.

Wager N, Fieldman G, Hussey T. The effect on ambulatory blood pressure of working under favourably and unfavourably perceived supervisors. Occupational and Environmental Medicine. 2003; 60:468. [PubMed: 12819279]

Walker H, Grant D, Meadows M, Cook I. Women's Experiences and Perceptions of Age Discrimination in Employment: Implications for Research and Policy. Social Policy and Society. 2007; 6:37–48.

Wasti SA, Bergman ME, Glomb TM, Drasgow F. Test of the cross-cultural generalizability of a model of sexual harassment. Journal Of Applied Psychology. 2000; 85:766. [PubMed: 11055148]

Westman M. Stress and strain crossover. Human Relations. 2001; 54:717.

Williams DR. Race and health: basic questions, emerging directions. Annals of Epidemiology. 1997; 7:322–333. [PubMed: 9250627]

Williams DR, Mohammed SA. Discrimination and racial disparities in health: Evidence and needed research. Journal of Behavioral Medicine. 2009; 32:20–47. [PubMed: 19030981]

Williams DR, Neighbors HW, Jackson JS. Racial/ethnic discrimination and health: Findings from community studies. American Journal of Public Health. 2008; 98:S29. [PubMed: 18687616]

Williams, J. Unbending gender: Why family and work conflict and what to do about it. Oxford University Press; USA: 2001.

Williams JC, Westfall ES. Deconstructing the Maternal Wall: Strategies for Vindicating the Civil Rights of Carers in the Workplace. Duke J Gender L & Pol'y. 2006; 13:31.

Willness CR, Steel P, Lee K. A meta-analysis of the antecedents and consequences of workplace sexual harassment. Personnel Psychology. 2007; 60:127–162.

Woods KC, Buchanan NT, Settles IH. Sexual harassment across the color line: experiences and outcomes of cross-versus intraracial sexual harassment among Black women. Cultural Diversity and Ethnic Minority Psychology. 2009; 15:67. [PubMed: 19209981]

Yoder JD, Aniakudo P. The responses of African American women firefighters to gender harassment at work. Sex Roles. 1995; 32:125–137.

Yuan ASV. Perceived age discrimination and mental health. Social Forces. 2007; 86:291–311.

Zapf D, Knorz C, Kulla M. On the relationship between mobbing factors, and job content, social work environment, and health outcomes. European Journal of work and organizational psychology. 1996; 5:215–237.

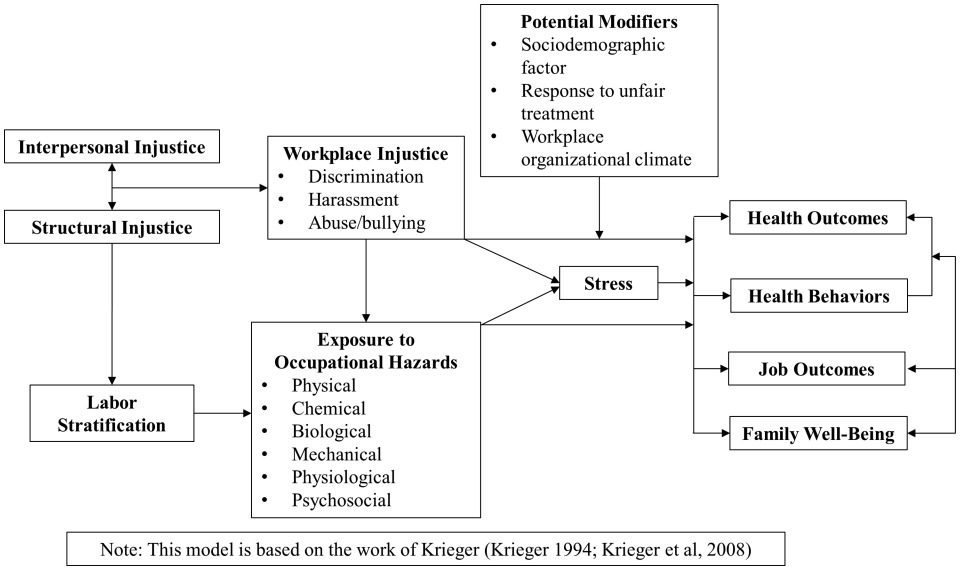


**Figure 1.**

A Model for understanding the contribution of workplace injustice to occupational health disparities

## Tables 1

Evidence for the influence of workplace injustices on health outcomes

| Health Outcome | PTSD | General poor mental health | Psychological distress | Anxiety | Depression | Poor self-rated health | Pain and symptoms | Increased blood pressue | Work-related injury/illness | Health behaviors | Job outcomes | Family well-being |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Injustice** | | | | | | | | | | | | |
| Workplace discrimination | | | | | | | | | | | | |
| Workplace Racial/ethnic discrimination | | x | x | x | x | x | x | | x | | x | |
| Workplace ageism | | | x | | | | | | | | | |
| Workplace harassment | | | | | | | | | | | | |
| Workplace sexual harassment | x | x | | x | x | x | x | | | | x | |
| Workplace bullying/abuse | x | | x | | x | x | x | x | | | x | x |
| bystanders | | | | x | | x | x | | | | | |