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REPORT



## Worker versus Employer Perspectives on Safety in the Forestry Services Industry

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### ABSTRACT

Forestry services work presents high risk for injury, illness, and fatality. How worker and employer views of workplace safety compare influences the strategies to address hazardous working conditions. Interviews with forestry services workers and employers revealed themes about occupational hazards and ways to prevent work-related injury. Workers identified hazards related to the social and natural environments, and injury prevention solutions focused on interventions beyond their control and based on employer responsibility. Employers characterized hazards within job task contexts and tied solutions to worker behaviors to improve job task performance. Discordance between worker and employer reports indicates inconsistent views about what safety measures should be provided and pursued to effectively reduce injury risk. Because many workers in the forest services industry are marginalized due to their immigrant documentation status and being racially/ethnically minoritized, power differentials between workers and employers can also influence how workplace safety and health measures are determined and implemented.

### KEYWORDS

Latinos; minority health; occupational health; underserved populations; work environment

## Introduction

A goal of workplace safety is that employees and employers have shared understanding about what hazards exist in the work setting and the strategies needed to reduce injury, illness, and fatality risks. Should these perspectives not align, worker well-being can be compromised, and consequences can be especially grave for workers in highly dangerous industries.

Forestry services work occurs nationwide across government- and private-owned lands, yet is hidden from the public eye. Forest upkeep is very hazardous with job tasks involving operating chainsaws, felling and burning trees, lifting heavy loads, and frequent awkward and repetitive motions. Additional hazardous working conditions include navigating rough terrain; enduring extreme temperatures and inclement weather; being exposed to poisonous plants (i.e., poison ivy, oak, and sumac); encountering attacks from ticks, mosquitoes, and wild animals; drinking untreated water and ingesting waterborne pathogens (e.g., *Escherichia coli*); handling or inhaling pesticides; braving inadequately maintained equipment and

transportation vehicles; and bearing constant pressure to work harder and faster.<sup>1,2</sup> These conditions, combined with insufficient safety and skills training, routinely put workers at tremendous risk for work-related injury, illness, and fatality.

Low-level job status, job insecurity, and chaotic work environments further contribute to organizational practices and employment arrangements that threaten worker health. Moreover, forestry services workers in the Pacific Northwest are largely young, immigrant laborers from Mexico and Central American countries with limited English skills, having varying forms of documentation status and lower educational attainment,<sup>1,2</sup> making them subject to exploitive treatment because of the marginalization of these identities in many U.S. societal contexts.

Given the need to elucidate factors that result in health disparities among marginalized populations, this study examines how dynamics in the work environment, an understudied social determinant of health, shape the risk for injury and illness. More specifically, this analysis aims to gain insight into how employers

and workers share or differ in their characterizations and expectations of workplace safety and health. In general, comparing perspectives of workplace hazards and safety solutions between employers and workers, including factors that contribute to commonalities or differences, has not been systematically investigated. Useful in considering the degree of shared understanding between employers and workers is the theoretical construct of team mental models. The idea of team mental models asserts that group members' collective, shared understanding about their circumstances contributes to and determines the group's views and actions about it.<sup>3</sup> Furthermore, this cross-understanding can evolve and improve via communications, interactions, observations, and biographical knowledge between group members.<sup>4</sup> Reflecting the value and benefit of creating shared understanding (or team mental model), the U.S. Occupational Safety and Health Administration recommends that the top management be visibly involved in implementing a company's safety and health program, so all employees understand management's commitment is serious and that employees be involved in the structure and operation of the program and in decisions that affect their safety and health.<sup>5</sup> The present study provides a step toward exploring the notion of shared understanding about workplace risk and injury/illness prevention by focusing on an industry where provision of workplace health and safety measures often goes unchecked and demographic differences exist between employers and the workforce.

## Methods

### Design and sample

This brief report is derived from a larger project involving a partnership between the Northwest Forest Worker Center, the Pacific Northwest Agricultural Safety and Health Center at the University of Washington, and the Labor Occupational Health Program at the University of California, Berkeley. The focus of the overarching project was to assess perceptions and experiences related to workplace safety and injury incidents to inform the development of training materials tailored to forestry services workers' needs in Oregon. Details about methods and results for the overarching project are reported elsewhere.<sup>6</sup> The present analysis solely focuses on

comparing worker and employer conceptualizations of workplace hazards and solutions and does not report on the major project aims to characterize the worker experience and the development of culturally responsive training materials.

For this cross-sectional analysis, data come from 99 workers recruited through worker and community networks using combined snowball and canvas-style sampling. To be eligible to participate, workers were asked to self-report that they were at least 18 years old and have either been injured on the job in the previous two years or attempted in any way to improve working conditions in the previous five years. The average age of worker participants was 31.8 years; all identified as men; were born in Mexico (94%), El Salvador (4%), and the United States (2%); all reported Spanish as their first language; and average number of years working as a forestry service worker was 9.2 years.

Worker participant recruitment and interviews were conducted in person, by community health educators (promotoras) of the Northwest Forest Worker Center, all in Spanish at non-worksites locations (e.g., residences, parking lots, organization office, or other public meeting locations). Four employers from the forestry services industry were recruited via industry network contacts and interviewed in person at a worksite or other convenient location by other native-English-speaking staff of the Northwest Forest Worker Center. For all interviews, participant responses were documented in written form on hard copy interview guides and entered into an electronic spreadsheet. Each worker and employer participant was offered a \$20 gift card for participating in the overarching project, which was approved by the University of Washington Human Subjects Division.

### Measures

Workers were presented a list of workplace conditions and job tasks and asked, in the context of forestry services work, *What three things do you struggle with the most?* and those who had experienced a work-related injury in the past two years were also asked, *What do you think your employer could have done to prevent this accident?* Employers were asked, *Thinking about the forestry services industry in general, what do you see as the top three hazards for forest workers?* and to explain why, as well as the question, *Are there*

*solutions you have adopted to reduce hazards?* Altogether, these questions allowed comparison of workplace safety perceptions between workers and employers. The full interview guide used can be requested from the corresponding author.

### Analytic strategy

Guided by content analysis methods,<sup>7</sup> responses were tallied into categories based on similar characterizations of safety risk and suggested solution employers could have taken (among workers) or solution adopted (among employers). Two authors (BdC and SP) separately reviewed data and developed categories for grouping responses and then convened together to refine categories and compare how responses fit into them. The final iteration of categories and groupings were reviewed by another author (CW) and an independent scholar with experience in forest worker safety as a check.

### Results

Table 1 lists categories of perceptions of work-related challenges and solutions. The most frequently reported worker responses focused on environmental conditions, both social (being yelled at) and natural

(hot and cold weather and steep slope). Employer responses were primarily oriented around a job task (heavy lifting and chainsaw use) or consequence of a job task (trip hazard and back strain). One category was similar across employers (trip hazards) and workers (steep slope).

Also listed are categories representing reports from injured workers of what they think employers could have done to prevent their injury incident and employer-adopted solutions to reduce workplace hazards. Worker responses were oriented more to efforts beyond their own ability to control working conditions. For example, workers viewed injury as inevitable (e.g., “I don’t believe anything could have been done differently. It’s something that is part of day labor” and “It was simply a bad moment. Accidents happen.”) and pointed out the need for stronger employer accountability for hazardous working conditions, including assuring worksite assessments to better understand the terrain they would be working on. Employers focused on worker behaviors to improve job task performance, rather than addressing environmental conditions. For example, employers reported pre-shift meetings to explain and remind workers about safety procedures and techniques (e.g., “have continuous communication up and down the hierarchy . . .”), the importance of accountability conversations with workers to impress upon them their role (“If you have high injuries, talking about it; making people accountable.”) and responsibility in working safely, and the need for drug testing workers.

### Discussion

Findings suggest that workers and employers in the forestry services industry perceive approaches and responsibility for workplace safety differently. That workers reported things external to their locus of control (i.e., injury inevitability and worksite assessments) aligns with how they orient hazard recognition. Though workers were asked what employers could have done regarding injury prevention, workers did not so much report things employers could have provided, so workers themselves could directly address dangerous job tasks and work settings, further reflecting an external orientation to hazard control. On the other hand,

**Table 1.** Employer and worker perceptions of work-related challenges and solutions.

Workers (n= 99)	Employers (n = 4)
Top struggles on the job	Top hazards on the job
Being yelled at by supervisor (n = 41)	Trip, fall hazards (n = 3)
Steep terrain (n = 32)	Back strain (n = 3)
Hot weather (n = 31)	Heavy lifting (n = 3)
Cold weather (n = 25)	Chainsaw use (n = 2)
What could be done to prevent injury (n = 48 participants having experienced forestry services work-related injury in past two years)	Employer-adopted solutions
Injury is inevitable (n = 23)	Pre-shift meetings about safety actions workers can take (n = 4)
Worksite assessments (n = 3)	Drug testing among employees (n = 1)
Employer accountability to address work safety issues (n = 16)	Accountability conversations about workers’ role and responsibility to work safely and reduce injury risk (n = 2)
Improved safety training (n = 3)	Having third party perform safety evaluations (n = 2)
Improved equipment (n = 3)	Vehicle inspections (n = 2)

that employers' responses principally reflected worker-based actions (i.e., pre-shift meetings to inform worker actions, impressing upon workers their accountability to work safely, and drug testing suggesting workers come to work under the influence) indicates a view that workers are responsible and have control for preventing injury. Findings are consistent with a common employer expectation that individual workers are responsible for workplace safety and health risk and control of work hazards.<sup>8</sup>

Discordance between employer and worker perspectives can hinder efforts to reduce exposure to on-the-job hazards and risk for injury, illness, and fatality. Employers may have misguided ideas of how resources and attention should be directed to address critical, priority concerns from worker perspectives and insights gleaned from the front lines. Conversely, workers may not subscribe to, heed, or support employer-initiated safety measures, even if well established. Differential views about workplace safety presents the potential for misalignment between what safety measures employers provide and that which workers want and need resulting in failure to effectively address dangerous working conditions.

Prior reports have suggested that lack of shared understanding about workplace risks can be problematic.<sup>9</sup> Holmes et al.,<sup>10</sup> studying small-scale construction firms in Australia, asserted that differences in attribution of the causation of workplace risk influence meanings of how to control that risk and whether such risk is deemed acceptable. Workers in the present project focused more on aspects of risk control that were more external to themselves, which might explain resignation that injuries are inevitable, thus indicating an acceptance of injury risk.

Furthermore, differences in perceptions of workplace safety may be influenced by sociodemographic identity. Hlatywayo and Nel,<sup>11</sup> studying platinum miners in South Africa, found that race distinguished workers' views of management's commitment and understanding of workplace safety risks and needs. White workers, compared to Black workers, reported more favorable ratings of management support, promotion, and implementation of workplace safety and health measures. The authors posited that how safety training is structured by management might differ along racial lines prompting Black workers to have less confidence in management's commitment to

worker safety. This raises consideration for how racial identity can play a role in how workplace safety is perceived, valued, and implemented based on social status. The majority of forestry services workers in the Pacific Northwest identify as Latino men, are immigrant with varying types of documentation status, have lower socioeconomic status, and speak limited English. Because of societal marginalization, these forestry services workers may be systematically exploited, work in fear, and subject to unsafe working conditions that set them up for higher risk for work-related injury, illness, and fatality, as has been generally reported for Latino workers.<sup>12,13</sup> Further research to examine such a phenomenon would be helpful, particularly to inform how work settings can operate more equitably based on worker demographics. Compounding disproportionate conditions and burden of disadvantage, the degree to which forestry services employers expect workers to take actions and behave in ways that reduce injury incidents can be an inequitable proposition further contributing to how harmful working conditions lead to health disparities. This employer expectation creates an inequity because these workers have marginalized identities, do not possess organizational power, and are not provided proper training and equipment which constrains their ability to influence and operate under safe conditions. Opportunities to identify and address workplace hazards with shared understanding can be facilitated through joint employer/manager-employee safety committees, as well as safety huddles before and after each work shift. The U.S. Occupational Safety and Health Administration (OSHA) calls out worker participation as a core element of all workplace safety and health programs because workers "often know the most about potential hazards associated with their jobs" and that "successful programs tap into this knowledge base".<sup>14</sup>

## Limitations

The number of both worker and employer participants was limited, so may not be representative of their respective groups in the industry. In particular, employer participants were from among those in the known industry network of the Northwest Forest Worker Center, so may not reflect the range of large- to small-scale employers and perhaps be attentive to worker safety. Lengthy



interviews with fewer participants, however, were conducted to capture rich narratives to gain breadth of perspective and depth of understanding of workplace safety and health issues. And, because the overarching project's goal was to develop training materials and resources in specific response to local industry interest, we limited the universe of possible employers and workers recruited as study participants to those in the local counties proximate to the Northwest Forest Worker Center office in Oregon. We also acknowledge that the questions utilized for this specific analysis were not worded in exactly the same way between workers and employers. However, the goal here was to gain some insight into how both think about and experience hazards and risks in forestry services work; and the questions asked served to accomplish this.

## Conclusion

Our findings suggest the need to more deeply investigate alignment between worker and employer viewpoints about workplace safety and health in the forestry services industry and beyond in order to better inform the development of interventions to reduce risk for injury, illness, and fatality. A natural next step would be to explore, refine, and evaluate the joint management-worker safety and health committee model as a means to establish shared understanding and priorities about workplace hazards. Another angle worth investigating are factors that motivate worker and employer thinking about workplace safety. How and where workers and employers learn about workplace safety can reveal whether they are relying on outdated, "traditional" practices or latest evidence-based or industry best practices.

Moreover, because of their sociodemographic identities, forestry services workers are typically subject to insecure employment arrangements and exploitive working conditions.<sup>1,2,6</sup> Harsh treatment and aggressive bullying from employers and supervisors are routine experiences for these workers, raising the question as to the role that bias and discrimination play into how safety is valued throughout the forestry services industry or other industries with similarly marginalized workforces.<sup>2,6,15,16</sup> Utilizing a racial and worker

justice framework to orient research of this industry can additionally elucidate how social status power differentials and unfairness influence how workplace safety and health are conceptualized.

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