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RESEARCH ARTICLE

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A method to assess bullying and harassment as an upstream determinant of construction worker mental health

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Abstract

Background: Bullying and harassment in the workplace are increasingly recognized as hazardous exposures associated with poor mental health and suicidality. The construction sector has one of the highest rates of suicide among all occupations and is actively engaged in efforts to destigmatize mental health support. However, there has been less focus on reducing factors that may be contributing to poor well-being among construction workers.

Methods: As a step toward addressing work-related determinants of mental health in construction, we collaborated with a large construction union to survey members about their experiences of abusive conduct. We adapted standardized questionnaires to better suit the sector, such as by assessing "hazing that went too far" and apprenticeship status. Additionally, we included questions on reporting of abuse, concern about the impacts of abuse, and an open-response to allow participants to share their perspectives.

Results: We developed and tested a carefully-tailored survey of abusive conduct. The responses to the survey (over 3300, including 500 narrative responses) will facilitate data-driven interventions with the potential to prevent and address abuse. This paper describes the survey development process in collaboration with the union, domains of abuse that are relevant to the construction context, and the survey protocol.

Conclusion: Through a collaborative effort, we developed an instrument to understand abusive conduct in construction and benchmark success in reducing adverse experiences of bullying and harassment. We recommend its use throughout the sector to reduce exposure to this well-being hazard.

KEYWORDS
bullying, construction, mental health, survey methods

1 | INTRODUCTION

Workplace bullying, harassment, and other abusive behavior are remarkably common in American workplaces. While definitions and measures differ, experiences of bullying, hostile work environments, harassment, and other abusive behavior at work have been reported by over 30% of employees in diverse surveys.[1–3] Rates in the construction sector may be considerably higher. Dennerlein et al.'s survey of construction workers in the Boston area found almost 60% had experienced workplace harassment.[4] Apprentices are particularly impacted. Nearly one-third of construction apprentices in a 2019 Australian survey experienced bullying in the prior 6 months.[5] The dynamics of abusive behavior toward apprentices is described in this focus group report from the Boston study:

> As one apprentice said, "you've got a lot of other people way higher up in the food chain than you, like, yelling at you. Sometimes, some foremen will take it out on apprentices or just people lower on the food chain." Others described being yelled at or blamed for problems on the site. These dynamics were often shaped by the position-hierarchy in construction, with foremen feeling pressure from site managers, and workers feeling pressure from foremen.[4]

Minoritized populations experience disproportionate abuse, often targeted by race, ethnicity, and/or gender. In a small study of welding and electrical workers in Canada, 73% of female trainees reported experiencing harassment during their training period.[6] Riddle et al.'s analysis of the literature on harassment of women workers in male dominated occupations, including construction where women compose less than 6% of the workforce, concluded that as many as 100% may have experienced sexual harassment at work.[7] A recent National Institute of Building Sciences survey found that 72% of Black or African American respondents and 66% of women respondents have experienced discrimination or hostile attitudes at work.[8] Rates for Asian American, Native American, Middle Eastern, and Hispanic respondents were all above 40%.

While the experience of abusive behavior at work is harmful in itself, investigators have found that such experiences are associated with additional adverse impacts on health and well-being. Analyses of National Health Interview Survey construction respondents' data found associations between reported hostile work environment and low back pain and work-related injuries.[3,9] Investigators have also explored links between hostile treatment of Hispanic and women workers and their greater risk of work-related injury on construction sites.[10–12]

The mental health and suicide crisis among construction workers is well-documented; nearly one-third of construction workers in the United States report psychological distress and 2.5% report suicidal ideation over the last year.[13] Construction workers have one of the highest rates of suicide of all occupations.[13–15] Younger workers and apprentices are particularly at risk.[5,16] Surveys have found that construction workers reporting experiences of discrimination and harassment have higher psychological distress scores and depressive symptoms, and are more likely to report suicidal ideation.[4,6,16–19] With increasing attention on the disproportionate risk of suicide, mental health conditions, and substance use disorders among construction workers, it is of critical importance to understand abusive behavior at work as a hazard and a potential "root cause" or contributing factor to poor well-being that can be prevented.[13]

Anti-bullying and harassment policies and training are prevalent in US workplaces and required for the construction sector by the Department of Labor's regulations governing apprenticeships.[20] However, despite these interventions, abusive behavior persists in construction worksites. Indeed, an Equal Employment Opportunity Commission study on best practices for reducing sexual harassment in US workplaces concluded that training, as it is usually undertaken, has generally failed to make a difference.[21] Specifically, the authors recommend that "Training is most effective when tailored to the specific workforce and workplace and to different cohorts of employees." However, to appropriately tailor interventions, detailed data must be collected to inform the content and protocol of the who, what, where, when, and how of anti-abusive behavior training.

CPWR: The Center for Construction Research and Training (CPWR) has identified bullying and harassment as important safety, health, and well-being hazards for the construction sector. We engaged the members of North America's Building Trade Unions (NABTU) apprenticeship and training committee to partner in an evaluation to assess perceptions of bullying and harassment in the unionized construction workforce. One international union that was in the process of revising their required bullying and harassment training volunteered to partner with CPWR to assess baseline measures of bullying and harassment among their membership. The union sought data that could help them design and target more effective training and evaluate training impact with a future survey. Below we describe our collaboration, the survey instrument, and recommendations for conducting such surveys among building trades members. Results of the survey were intended for use in program evaluation rather than as generalizable knowledge and, as a result, are confidential and not included here.

2 | METHODS

CPWR collaborated with trade representatives to create a comprehensive and accessible questionnaire of closed and open-ended questions related to bullying and harassment. In addition to assisting with the development of the survey by assuring appropriate language and content, the union agreed to promote the survey among their members in the United States and in Canada. Our overall method was to identify standardized and other questionnaires related to bullying and harassment and modify them to develop questions that were relevant and understandable in the construction context. We then reviewed and modified the drafts with the union partners' input, piloted the questionnaire with representative survey takers, and finalized the survey with the additional input of the union partners and the results of the pilot. The union partner distributed the survey widely among the membership. The survey was open for 6 weeks. CPWR research staff analyzed results, presented them to the union partner for feedback, and then the researchers provided recommendations based on the data collected. Below we describe these steps in greater detail.

2.1 | Survey development

We began with the Negative Acts Questionnaire-Revised (NAQ-R), a widely used and well-validated instrument used to measure workplace bullying.[22] Because we were conducting the survey with the purpose of developing programs to address bullying and other forms of abusive behavior, rather than for research purposes, we elected to

modify the basic constructs and language of the NAQ-R to adapt to the trades context and the purposes of this effort: Developing impactful interventions. For example, the NAQ-R focuses on bullying from a supervisor rather than identifying the specific source of the harassment or the kind of harassment. We wished to identify if bullying was perpetrated by apprentices, instructors, supervisors/foremen, journey-level workers, contractor management, or other trades. Additionally, we wanted to know where and when the bullying had taken place and if the bullying was directly experienced or witnessed. Furthermore, we were interested in the characteristics of those who experienced or witnessed bullying and what type of bullying was experienced within the prior 5 years.

The approach of the Workplace Bullying Institute also informed our modifications. Their standard questionnaire, which was designed with unions in mind, defines mistreatment and then asks further questions to ascertain the nature of the abusive conduct.[2] We adapted their question: At work, what has been your personal experience with the following types of repeated mistreatment: abusive conduct that is threatening, intimidating, humiliating, work sabotage, or verbal abuse? We then consulted with the union team to further refine and clarify the survey by adding questions on geography, types of potential abusive behaviors, and employment and training contexts specific to the trades.

In developing the survey, we used the general term "abusive behavior" interchangeably with the term "bullying." Definitions of abusive behavior became a central focus of the survey development. Collaboration team members noted that there was frequently confusion and misinformation about what constituted abusive conduct and that it would be critical to use extensive and detailed definitions of the behavior we sought to identify. While we utilized the Workplace Bullying Institute's definitions, we adapted them for the construction context. For example, as an example of physical abuse, we added: "had an object dropped on or near them intentionally."

Abusive behavior was defined as:

- Verbal abuse: Being yelled at about how someone does their job, repeatedly reminded of mistakes, subject of practical jokes, told to shut up, having been the subject of gossip or humiliating jokes.
- Intimidation: Being threatened with violence or other negative consequences, told they should quit, frightened on purpose.
- Targeting: Being singled out for unpleasant or difficult tasks, pressured to do a heavy/difficult/dangerous task without assistance, excessively monitored, not allowed a break they were entitled to, unfairly accused of problems.
- Physical abuse: Being hit, pushed, kicked, or tripped, had an object dropped on or near them intentionally, touched inappropriately.

In the survey, sexual harassment was defined as unwanted touching; verbal remarks of a sexual nature (including jokes and innuendos); inappropriate or offensive comments; gestures of a sexual nature, including exposure of any private parts; unwanted invitations of a sexual nature; lustful staring at you or a part of your body; messages of a sexual nature sent to you via e-mail, direct messaging, or through social media; obscene images in the workplace; stalking—online or physically; sexual coercion or quid pro quo which is where a person promises or hints at enhanced job prospects in return for a sexual favor, or threatens adverse job impact if you do not respond favorably.

We included follow-up questions for those who experienced or witnessed abuse to determine if it was related to any of the following characteristics: race/ethnicity, speaking a language other than English, female gender, transgender/nonbinary gender, sexual orientation, abstinence from drugs and/or alcohol, body types or characteristics, other (describe), or none of the above. We recognized that many union members are in recovery from alcohol or drug addictions, and we were interested to see if abstaining from drugs or alcohol could be related to abuse in an occupational group where drinking is often a cultural norm.[23]

We also asked if respondents had reported the bullying, to whom, and their satisfaction with the response. We included questions about their level of concern that abusive behavior impacted construction workers' mental health and if they had considered leaving the trades due to hostile worksite conditions. Finally, we asked if they had intervened to stop bullying and if they had participated in training related to bullying and the nature of the training context (e.g., apprentice program or employer).

The survey was created in Qualtrics with skip functions and piloted by the union team and others they recruited. Twenty-one pilot responses were received. To evaluate the usability of the survey, in addition to the proposed questions, we included questions about whether the pilot respondent completed it on a phone, tablet, or computer; their perception of the difficulty of the survey (and what would make it easier) and if questions were confusing (and what would make them clearer). Additionally, given the sensitivity of the survey subject, we asked how the survey could be modified to help people feel more comfortable answering honestly, and any other recommendations.

The vast majority of pilot testers used their phones or a computer to complete the survey and almost all found the survey easy to answer. Five identified some questions as confusing and gave directions for clarification. Responses to the question about making respondents more comfortable with participating elicited comments that confirmed that the survey would be uncomfortable, some people would dismiss the issue regardless, and we should stress the confidentiality and protection of the subjects. Additional comments recommended that we discuss hazing separately from bullying and that we better define bullying.

Following the pilot, the survey was modified in several ways, including the addition of the concept of hazing as a form of abusive behavior. The union team stressed that many members have a positive association with hazing as practical jokes that promote union identity, thus it was necessary to qualify the term by using "hazing that went too far," as self-defined by the participant. The final survey consisted of 33 questions and was designed to take less than 15 min to complete. For those who had little to report, the survey took much less time. At the end of the survey, we provided an open-ended question "What else would you like to tell us about this topic?"

2.2 | Survey distribution and protocol

Following the final review, the survey was distributed to the union's membership in the United States and Canada, primarily through announcements in union halls and in apprenticeship programs. The union partners sent a letter encouraging participation and providing a link to the survey. Notice and links to the survey were also circulated on social media. Some apprenticeship programs provided time in classes for participation. The survey was open for 6 weeks. It is not known how many potential participants there were, nor how many received notice of the survey.

The project was determined to be exempt by the CPWR Institutional Review Board. No identifiers were collected, nor IP addresses, and findings were aggregated so that individuals could not be identified. To reduce confidentiality concerns, the states that respondents reported for where they lived and worked were aggregated into regional designations, small numbers of any demographic were not reported, and we removed identifiers from the open-ended responses. CPWR researchers maintain the original data files and have only disclosed aggregated and non-identifiable data to the union partner.

3 | RESULTS

Our collaborative process and pilot produced a tailored survey that was sensitive to union concerns and was based on validated work in the assessment of abusive conduct in workplaces. We received over 3300 usable responses from diverse areas of the United States. We received only one response from Canada. In addition to the quantitative data, we collected over 500 narrative responses that provide unique and diverse perspectives on member experiences, attitudes, and ideas for action. Open-ended responses were classified into four categories, including (1) experience of abusive behavior, (2) perceived cause of abusive behavior, (3) responses to abusive behavior, and (4) attitudes toward the survey and the need to take action. Participants' quotes often reinforced and aligned with the responses to the closed ended questions previously presented.

We provided the union with a presentation of key findings, a summary report, an executive summary, and a slide deck for their use in educating the staff, officers, and membership about the survey. The data and findings from this survey project can be utilized not only to develop more effective tailored training but also to provide direction for revised policies and practices, additional interventions such as mentoring, and potential projects for the union's anti-harassment task force.

We were able to evaluate the survey instrument in the context of the abundant quantitative and qualitative responses and propose revisions for future use of the survey, as well as through direct feedback from the union. Future revisions include:

- Because we were not successful in collecting surveys in Canada, we will collaborate with Canadian union personnel to administer the survey in Canada.
- Include suggested "other locations" from the open-ended responses, including mandatory union or training events.
- Evaluate experiences of retaliation for reporting abusive conduct.
- Assess attitudes and beliefs about abusive behavior on an agree-disagree scale, for example, "Things have improved," "Harassment is not a problem," and so forth.
- Ask about incidents more than 5 years prior that had a lasting impact and if the respondent was an apprentice when the abuse occurred.
- Specify work-related factors as contributing to bullying (e.g., safety and hygiene conditions, lack of paid time off, lack of training, etc., on an agree/disagree scale).
- Ask about the specific impacts of bullying on the individual who experienced it (e.g., mental health, retaliation, wanting to quit, denial of promotions/development, etc.).
- Ask about the level of concern related to sexual harassment and mental health.
- Ask frequency of traveling for work and how travel and/or being far from home might impact abuse experience and response.

4 | DISCUSSION

Increased understanding of how work, workplaces, and employment influence mental health can help target interventions to address the most impacted occupations and industries, including the construction industry.[13–15] Abusive behavior (e.g., harassment, bullying) at work has been suggested as a potent potential negative factor that may be amenable to change through data-driven interventions. We begin to address this need by the development of a comprehensive and accessible survey to assess bullying and harassment in the construction industry. The survey obtained information on the prevalence of witnessing and experiencing abusive behavior, sexual harassment, and hazing gone too far by demographics, experience level (journey level, apprentice, etc.), and location. Open-ended responses provided detailed information on abusive behavior, how the behavior is being responded to, and overall attitudes toward the survey and the need to take action. This information will be used by the organization as they develop interventions and as a baseline to monitor trends following these interventions.

As described above, one of the key strengths to our methodology for assessing abusive behavior in the construction sector was a collaborative approach to tailor validated instruments to assure meaningful and actionable data. This led to over 3000 usable survey responses based on our convenience sample. These responses included over 500 comments from which engaging realistic scenarios can be developed for discussion in training and for other interventions to prevent bullying and harassment. Additionally, we were able to protect the confidentiality of participants and the collaborating union to better encourage safety in participation without negative unintended consequences, such as perceived retaliation.

Several limitations should be considered, including that a large percentage of those who opened the survey clicked through without

answering any questions or answered only a few; the sampling was by convenience and interpretation of results was limited by a lack of information about the baseline population; the survey instrument was novel, and, thus, the questions may not have produced valid and unbiased responses; and for apprentice level workers reporting past abuse, we did not ask if that abuse was experienced or witnessed as an apprentice, or more recently.

5 | CONCLUSION

Our collaboration produced actionable baseline data that will help the union effectively address abusive conduct in the trades, which will ultimately lead to an improved psychological safety culture and enhanced well-being outcomes in the sector. We plan to conduct a follow-up survey with this union to measure changes post-intervention. Additionally, we plan to work with other unions and non-union partners to promote adoption of the survey as an important component of action to reduce the prevalence of abusive behavior in the sector to improve well-being for construction workers. The survey instrument is included here as Supporting Information S1.

AUTHOR CONTRIBUTIONS

Cora Roelofs, Chris Rodman, and Amber Trueblood participated in the study and instrument design; collection, analysis and interpretation of the data; and drafting of the manuscript. Chris T. Cain conceived of the project and supported the collaboration from inception to completion. All authors edited and approved the final manuscript.

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CONFLICT OF INTEREST STATEMENT

The authors declare that there are no conflicts of interest.

DISCLOSURE BY AJIM EDITOR OF RECORD

John Meyer declares that he has no conflict of interest in the review and publication decision regarding this article.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

ETHICS APPROVAL AND INFORMED CONSENT

The CPWR Institutional Review Board reviewed the research protocol and determined it to be exempt from human subjects review.

DISCLAIMER

Article contents are solely the responsibility of the authors and do not necessarily represent the official views of NIOSH.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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