

The Use of Mentoring to Promote Well-being for Female SMART Members

NCT04247880

June 23, 2025

Study Protocol

Significance

Construction workers are exposed to numerous chemical and physical hazards, leading to risks such as slips, trips and falls, musculoskeletal disorders, electrocution, and other chronic and acute health outcomes.^{1,2,3} Younger workers entering apprenticeships must learn to work around these chemical and physical hazards safely, but also contend with psychosocial hazards such as bullying and hazing.⁴ High job demands coupled with low control and lack of support at work also contribute to worker stress and risk of injury.⁵ For workers with children, balancing the long and unpredictable work hours with their family's needs can be stressful, a burden placed disproportionately on women workers.⁶ For underrepresented workers, there is additional vulnerability due to a culture that often condones harassment and discrimination based on gender and race.^{7,8} The percentage of women in the industry remains dismally low: 3% of workers nationally are women.⁹ Tradeswomen's minority status directly contributes to their risk for negative mental and physical health outcomes, as well as their burnout rates, thereby creating a negative feedback problem.

Employment of construction and extraction occupations throughout the country is projected to grow 11% from 2016 to 2026, faster than the average for all occupations.¹⁰ However, demand for skilled tradespeople is far outpacing supply due to national shortages of skilled construction labor and gaps in the apprenticeship pipelines.¹¹ Because of low apprentice retention rates and underrepresentation of women in the industry, there is a growing recognition among unions, contractors, and public owners of the importance of women to meeting current and future demands. Assuring that women, particularly the younger workers entering the trades as apprentices can learn to work safely and retain jobs in the industry is a high priority for the industry.^{12,13}

In addition to economic pressures, principles of equity indicate that the industry needs to reduce barriers to full participation. Pressure is also being placed on companies to address their workplace climate, as part of the shifting national debate, exemplified by the #MeToo and Time's UP movements. Recent media and political attention to workplace harassment is shining a spotlight on the underlying social dynamics that create an unsafe workplace for women in construction and other industries.¹⁴

Approach

Overview

In collaboration with the Sheet Metal workers arm of the Sheet Metal, Air, Rail and Transportation (SMART) union—representing approximately 200,000 members in 160 local unions in North America—we propose a randomized intervention study designed to address the health, safety, and retention of women apprentices in the trade. Randomization between intervention and control groups will occur among local unions and their affiliated apprenticeship programs throughout the US. Approximately 100 women apprentices will be recruited from locals in the intervention group, while another 100 women apprentices will be recruited from among the control locals. In addition, 30 mentors will be recruited from the locals in the intervention group to receive training after our evaluation is complete.

Building on mentorship and leadership curricula from the UW research group, Sheet Metal Workers Locals 16 and 66, and CPWR, we will design a mentorship training program to be delivered online in both synchronous (live webinars) and asynchronous (viewing previously developed or recorded materials on their own time) modalities. Journey-level workers from each intervention local will be recruited and trained to be mentors to women in their affiliated apprenticeship programs. Mentees in the intervention arm will be recruited and paired based on mutual preference with mentors within their local in two waves, allowing for at least two years of follow-up for each mentee. Women apprentices in the control locals will be recruited to participate in the evaluation only. Evaluation will assess changes in safety advocacy, self-efficacy, as well as work experience (including exposure to physical and psychosocial hazards), health (stress related indices), safety (injury experience and risk-avoidance actions) and retention in the trade. Evaluation will utilize pre- and post-program questionnaires and calculate retention rates for women apprentices in affiliated apprenticeship programs. In addition, interviews with mentors will add to a process evaluation. Using the developed curriculum and mentorship programs, and results of the evaluation, we will produce a guide to effective mentorship for women in the trades, and, in conjunction with CPWR, disseminate the materials widely. Locals participating in the program as controls will be provided with the training for any journey-level members interested in becoming mentors after the final evaluation is completed.

To help guide the development, implementation and results interpretation and dissemination, we will establish a program advisory board, who will meet annually with the research team throughout the project period. The board will include Marc Norberg, Assistant to the General President of SMART, Vanessa Carman, Chair of the Women's Committee for SMART Local 66, Linda Goldenhar, researcher for CPWR, a representative of the sheet metal contractors' association, TBN, an expert on mentorship for women in the trades (Lisa Davis, Instructor with SMART Local 16), and a professor of construction management (Dr. Ken-Yu Lin).

Recruitment and Assignment of Locals

UW researchers will work with SMART to identify locals to participate in the study, based on availability and membership size. Among the 81 Sheet metal worker JATCs, there are currently a total of 461 women apprentices, however they are not evenly distributed. Twenty-six locals have five or more women apprentices, so we will focus our efforts on the locals with a sufficient number of women to support our training and evaluations. Leaders at each local will receive information about the study and descriptions of the intervention. We will invite each local with 5 or more women apprentices to participate in the study. We will then rank order them by size, and randomize them to control or intervention groups, within size categories.

We will identify a key staff member at each local or apprenticeship program to serve as our primary on-site Mentorship Coordinator for the participant recruitment, training delivery, and mentorship programming. The identification of this person will be up to each local, but could be the apprenticeship coordinator, or instructor, a women's committee member, or a local safety coordinator, or staff person.

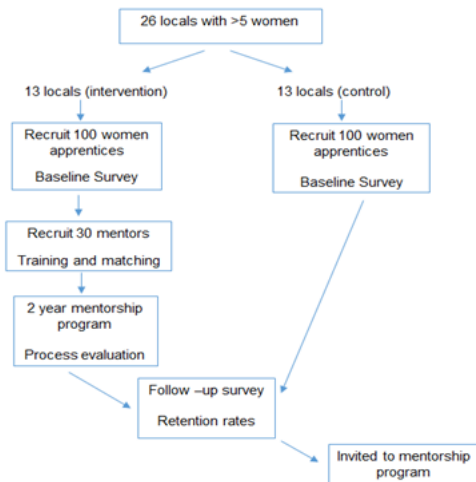


Figure 3. Study research design

Development and Delivery of Training

Mentor training provided to participants will draw content from the UW and Locals 16 and 66 programs, the CPWR Foundations for Safety Leadership curriculum, as well as other evidence-based mentor training materials. The goal of the training is to increase women’s knowledge of, and self-efficacy and skills in safety advocacy to reduce their injury risk, as well as psychological stressors at work. The training is grounded in principles of social support, most notably emotional, informational and appraisal support that mentors can provide. The training will focus on: active listening, asking effective questions, two-way communication, understanding how construction culture affects women apprentices’ health and safety, types of social support, mentorship benefits, setting goals, identifying barriers to success, and cultivating mentee problem-solving and self-advocacy skills. We will also provide mentors with resources for addressing mentee challenges that are outside the scope of the program (e.g., housing insecurity, domestic violence, etc.), adapted from resources available in the union’s location.

Delivery of the training: The training model will include multiple modalities in order for it to be delivered effectively to remote locations. It will include written materials and exercises which can be reviewed or completed individually, and webinar style presentations by our training expert. Most importantly, it will include synchronous workshops that will discuss key components of effective mentoring, and provide opportunities for mentoring practice, and discussions and problem-solving with input from the trainer.

The synchronous training sessions will be implemented with internet-based conferencing software such as Zoom or Skype, linking classrooms at each training location with the trainer. Based on other mentorship training programs, we project that we will need two synchronous training sessions, each lasting four to six hours. Prior to the first training, we will assign materials for review, and low-stakes “homework” assignments for exploration between the two sessions. In addition, we will follow-up with each Mentorship Coordinator to provide any additional guidance or practice needed.

All components of the mentorship training will be piloted with members of the advisory board and other local SMART volunteers, and revised prior to implementation. Each component of the training will be delivered to a group of volunteers, and subsequently discussed with the study team for revision.

Recruitment of Mentors and Mentees

Once the locals have been assigned to intervention or control, UW researchers will work with the identified Mentorship Coordinator at each intervention local to identify potential mentors and mentees. Mentors will be journey-level workers with the interest and capacity to support up to four mentees over the four years. While preferable to have women mentors for women apprentices, we will allow journeymen with an interest in the program if there are insufficient numbers of available journeywomen. Each potential mentor will receive a description of the purpose of the project, and a full outline of the commitment of time and effort involved in their participation, including compensation. Mentors will sign informed consent letters approved by the UW IRB.

Eligible mentees at intervention locals will be women currently enrolled in an affiliated apprenticeship program, with at least two years left prior to expected completion, and who are at least 18 years old. We will work with the Mentorship Coordinator and the Apprenticeship Coordinator at each local to provide recruitment materials, and informed consent letters to all eligible apprentices. Although we don't anticipate a problem with over-subscription to the program, if this occurs, we will allow the local to determine if they prefer to add mentors to accommodate the demand, or to restrict participants to a manageable number.

At control locals, we will work with the Apprenticeship Coordinator to recruit women apprentices, 18 years or older, with at least two years expected prior to journeying-out. Control apprentices will similarly sign informed consent letters to participate in the evaluation questionnaires.

Program Support

A key component of effective mentorship programs is allowing prospective mentees to find mentors with whom they have a level of trust. We will foster such pairing by sponsoring a "meet-up" at each intervention local, at which each mentor will introduce her/himself, and provide time for mentees to meet individually with each potential mentor. Mentees will subsequently inform the Mentorship Coordinator of their first and second choice for mentors, and we will assist the Mentorship Coordinator in making final pairs assignments. Mentees and Mentors will be free to decline the assignment, or request a change at any time in the program.

Each mentor will be contacted by our staff for a follow-up 'check-in' once quarterly. The purpose of these check-ins is several-fold. The check-in will provide an opportunity for the project staff to remind the mentors of the need to actively engage the mentee at regular intervals. Second, the check-in is a chance for 'refresher' training on key components of effective mentoring. It also provides an opportunity to help identify and solve any challenges that come up in the mentoring relationship - either transactional, or substantive - that is providing suggestions for additional resources. Finally, the check-in will form a component of the process evaluation (see below) to monitor the progress of the program and any barriers to its success.

Delivery of Mentorship Training to Control Locals

Because we have prior expectations that the mentorship program will have some degree of success, we don't want to withhold any benefits from the control locals. Thus, we will repeat the mentorship training with control locals in year five of the project. Participation will be voluntary, and no evaluation of the training will be included in this. Rather, it will be a service to the contributing local unions and their members.

Evaluation and Analysis

We have developed the following logic model of the mentorship program to describe our program and provide guidance on necessary evaluation components.

Inputs	Activities	Outputs	Short-term Outcomes	Intermediate Outcomes	End Outcomes
UW mentorship program	Recruit women apprentices and mentors	Mentor-mentee interact on regular basis	Increase in awareness of safety & health risks	Reduction in perceived stress	Reduced injuries
Sheet Metal Workers Locals 16 and 66 programs	Online mentor training	Mentors provide emotional, appraisal, & informational support to mentees	Increase in self-efficacy	Increase in self-advocacy behaviors	Improved jobsite safety climate
CPWR Leadership training programs	Matching mentors to mentees		Improved self-advocacy knowledge	Increase in problem-solving skills	Increased representation of women in trade
Local union engagement	Ongoing program support		Improved social support at work	Increase in job satisfaction	
				Increased retention in apprenticeship and trade	
PLANNED WORK			RESULTS		

This logic model shows the program inputs and outputs. We will conduct both process and impact evaluations, as described below. We will measure short-term, intermediate term and long-term outcomes, however, we hypothesize that short and intermediate outcomes will be affected by our mentorship program.

Analysis plan

We will conduct a hypothesis-driven analysis of the primary outcome (perceived stress) and a limited set of secondary outcomes that we highlighted as especially important in the grant.

Research question & hypotheses

Primary research question: What is the effect of the mentorship intervention on apprentice's **perceived stress**? Hypothesis: expect a reduction in perceived stress among the intervention group (mentees) compared to controls

Secondary research questions: What is the effect of the mentorship intervention on the following **short-term and intermediate outcomes**: social support at work, job satisfaction, and intention to leave construction trades? Hypothesis: expect an improvement (increase) in these outcomes among the intervention group compared to controls

Other (process and longer-term health) outcomes we will consider in a second paper where we'll conduct a more exploratory analysis by group:

- Self-reported health
- Self-reported mental health
- Sleep quality
- Sought professional help for mental health
- Sickness presenteeism
- Physical activity outside work
- Insomnia
- Depression severity
- Anxiety severity
- Work/life conflict
- Demand/control
- Overcompensation
- Bullying
- Age discrimination
- Race discrimination
- Gender discrimination
- Tokenism
- Sexual harassment
- Injury at work
- Work injury severity
- frequency of being understood
- perceived effectiveness at communicating
- self-advocacy behaviors
 - formal skills training
 - goal setting
 - perceived progress towards goals
 - perceived ability to advocate for own needs on jobsite

Data

Two control (total n = 40) and intervention (total n = 56) cohorts surveyed at three timepoints each: baseline, 6 months, and 1 year.

Subset of 18 control and 16 mentees who completed surveys at all three timepoints.

Variables to be used in descriptive analysis

Demographics by group:

- Age
- Race/ethnicity

- Marital status
- Family annual income
- Education
- Years in construction industry

Baseline variables by group:

- Mentor experience
- Mentor type
- Formal mentorship training
- Local level mentorship

Variables to be used in primary analysis

Exposure: group – 0 for control, 1 for intervention

Outcome: perceived stress score (continuous)

Fixed effects: time, group x time

Random effect: union local

Covariates: age, race/ethnicity, family annual income, year in apprenticeship, size of local, region of the country

Variables to be used in secondary analyses

Exposure: group – 0 for control, 1 for intervention

Secondary outcomes: Social support at work (continuous), Job satisfaction (continuous), Intention to leave construction trades (categorical)

Fixed effects: time, group x time

Random effect: union local

Covariates: age, race/ethnicity, family annual income, year in apprenticeship, size of local, region of the country

Statistical methods

Software: R

Analysis of loss to follow-up

Compare those who dropped out to those who stayed in study by:

- Union local [tally]
- Race/ethnicity
- Age
- Marital status
- Dependents
- Stress at baseline
- Years in construction industry
- Intervention status [yes/no]

- Round
- Intention to leave construction industry
- Difficulty taking time off during work to take care of personal or family matters
- Frequency of interference between job demands and family life or personal time
- Frequency of interference between family demands and work

And/or model for loss of follow up to include group, round, plus other vars listed above

Use chi-square test of independence (for discrete variables)/Fisher's Exact test (for count data, small sample sizes)/t-test (for continuous variables)/Wilcoxon rank sum test (for continuous variables not normally distributed)

Bivariate analysis

With same tests as above, compare demographic and other sample characteristics by arm at baseline

With same tests as above, compare primary and secondary outcomes by arm at baseline, mid-year, and end-year; also do by round

With same tests as above, do same comparison for subset of respondents in each arm who have surveys at all three timepoints; also do by round

Graph observations (averages, error bars). Spaghetti plots showing trajectories for each person, by group. Stratify by group, explore change btw timepoints. Either paired t-test or single rank Wilcoxon test. First compare BL to MY, then MY to EY.

Multivariate analysis

From research strategy: To evaluate changes over time, effectiveness of the intervention will be analyzed using a mixed effects regression model. For our primary outcome (perceived stress scale, PSS), a base model will be developed with PSS as a function of arm (intervention/control), and survey (pre, 6 months, post), with a random effect for local union (to assess difference between locals, and to control for non-independence within locals). We will then test the contributions of additional co-variables, including demographics, year in apprenticeship, size of local, and region of the country, etc. Co-variables will be retained if they are statistically significant ($p < 0.1$) or change the coefficient for study arm by $\geq 10\%$. Similar models will subsequently be run for each short-term and intermediate outcome.

Table shells -> see SMART Training Program_Survey responses + table shells_17Jun24.xlsx

Table 1: Baseline characteristics of participants ($n=X$), by study arm [+ outcomes at baseline for descriptives, may not use]

Table 2: Effect of mentorship training on level of perceived stress among tradeswomen using mixed effects regression models; base model + models with added covariates, in stages

Table 3: Effect of mentorship training on [X secondary outcomes] among tradeswomen using mixed effects regression models; base model + models with added covariates, in stages

Notes

Keep track of remaining tasks and questions here. Update with steps taken and info obtained as tasks are completed.

Survey data

Estimated missingness for each variable.

Filled in sources as best as I could in scale source doc.

Data dictionary – For scores that we modified, proposed strategy (mostly should just be average score, but noted any alternatives reported in the literature, e.g. if others that are unaltered but just subset of questions and whether others have done that, whether they standardized the scale to the original i.e. by multiplying total by old max divided by new max).

SMART Women_Variable info – summarizes variables we plan to analyze, their type (demographic/confounder, outcome, mediator) and how they'll be categorized.

Working list of analytic steps to do in R

Conduct descriptive analysis of demographic characteristics by study arm (intervention/control) using relevant statistical test. Also check balance in terms of year in apprenticeship, size of local, and region of the country.

Analysis of loss to follow-up:

- Union local size [tally – cioè of n ppl in local?]
- Race/ethnicity
- Age
- Marital status
- Dependents [y/n]
- Stress at baseline
- Years in construction industry
- Intervention status [group]
- Round
- Intention to leave construction industry
- Difficulty taking time off during work to take care of personal or family matters
- Frequency of interference between job demands and family life or personal time
- Frequency of interference between family demands and work

Visualize outcomes by group at each time point --> did this implicitly by running tests automatically in crosstables. If outcomes not normally distributed, compare groups at each timepoint (not differences) using Wilcoxon ranksum test (rather than two sample t-test). Complete responses. Will tell us if have group diffs at each timepoint.

once have dates, edit code and add to plots by round (all data, complete responses)

From research strategy: To evaluate changes over time, assess effectiveness of the intervention using a mixed effects regression model. For our primary outcome (perceived stress scale, PSS), we envision a base model with PSS as a function of arm (intervention/control), and survey

(baseline, 6 months, and 1 Year), with a random effect for local union (to assess difference between locals, and to control for non-independence within locals). We then envision testing the contributions of additional co-variables, including demographics, year in apprenticeship, size of local, and region of the country. Co-variables will be retained if they are statistically significant ($p < 0.1$) or change the coefficient for study arm by $\geq 10\%$. We envision running similar models run for each short-term and intermediate outcome.

Informed Consent Documents

Control Apprentice Consent Form

UNIVERSITY OF WASHINGTON CONSENT FORM

ADVANCING WOMEN IN THE SHEET METAL WORKERS' TRADE: A COORDINATED
MENTORING PROGRAM TO PROMOTE SAFETY, HEALTH, AND WELL-BEING
Principal Investigator: Marissa Baker, PhD, Department of Environmental & Occupational Health
Sciences, Phone: 206-616-4709
Contact Person: Lily Monsey, BA, Department of Environmental & Occupational Health
Sciences, email: lilymm04@uw.edu

*Please note we cannot guarantee the confidentiality of communication sent via email.
We are asking you to be in a research study. This form gives you information to help you decide whether or not to be in the study. Being in the study is voluntary. Please read this carefully. You may ask any questions about the study. Then you can decide whether or not you want to be in the study.

KEY INFORMATION ABOUT THIS STUDY

We are asking you to be in a research study. Participation in the study is completely voluntary and participation will not affect your standing in anyway with the SMART union. The purpose of this consent form is to give you the information you will need to help you decide whether or not to participate in the study.

The purpose of this study is to develop a mentorship training program through local unions of the International Association of Sheet Metal, Air, Rail, and Transportation workers (SMART) and evaluate if participation in the mentorship program reduces women's work stress and injury, improves job satisfaction, and helps to retain more women in the SMART trades. You are not being asked to participate in the mentorship program, though you are welcome to participate in the mentorship program at the completion of the study (2024).

We are asking you to participate for one year. Upon entry, you will be asked to complete a questionnaire, and complete it again after six months and at the end of the year. The questionnaire will include questions about health and safety risks you encounter at work, your feelings of stress, knowledge of and strategies you use to address work risks or work stress, job satisfaction, the degree of social support you are, and perceived safety climate at your job sites.

The benefit of participation is that you will be informing research that could help to make participation in the trades equally attainable, safe, and fulfilling for workers of all genders. You may feel uncomfortable sharing your perceptions and thoughts with a research team via the questionnaire. Participation is completely voluntary and you are welcome to leave the study at any time. All questions on the questionnaire are optional, and you do not have to answer any question that you are uncomfortable with. Your standing in the union, and all benefits you receive from the union, is in no way dependent on your participation in this study. As a thank you for participating, you will receive a \$20 electronic gift card for each questionnaire you complete.

PURPOSE OF THE STUDY

Women make up a very small percentage of workers in the construction trades. In addition to the injury risks faced by construction workers, women face additional circumstances at work that can make for a hostile work environment, including bullying, harassment, skills under-utilization, and challenges with work/life balance. The purpose of this study is to develop a mentorship training program through local unions of the International Association of Sheet Metal, Air, Rail, and Transportation workers (SMART) and evaluate if participation in the mentorship program reduces women's work stress and injury, improves job satisfaction, and helps to retain more women in the SMART trades.

STUDY PROCEDURES

To participate in this study, you must be a female-identifying, apprentice-level member of a SMART local. If you choose to participate, we will ask to follow you for about a year. You will be asked to complete a total of three surveys (30 minutes each). The study coordinator will contact you every 6 months to have you take the survey through an online, confidential website.

Descriptions of research activities:

1. Work & Health Experience Questionnaire: Upon entry into the study, and after 6 months and 12 months, you will be asked to complete a 30-minute work & health experience questionnaire. This questionnaire will include questions about health and safety risks you encounter at work, your feelings of stress, knowledge of and strategies you use to address work risks or work stress, job satisfaction, the degree of social support you are receiving through a mentor, other co-workers or friends and family, and perceived safety climate at your job sites. The most personal questions will relate to how frequently you experience feelings of anxiety, nervousness, or worry. We will also ask about coping mechanisms and health behaviors. . You may refuse to answer any question in the questionnaire.

RISKS, STRESS, OR DISCOMFORT

You may feel uncomfortable sharing your perceptions and thoughts with a research team via the questionnaire. The delicate nature of some of the questions may make you feel uncomfortable.

Participation is completely voluntary and you are welcome to leave the study at any time. All questions on the questionnaire are optional, and you do not have to answer any question that you are uncomfortable with. Your standing in the union, and all benefits you receive from the union, is in no way dependent on your participation in this study.

ALTERNATIVES TO TAKING PART IN THIS STUDY

If you choose not to participate in this study, but you are interested in mentorship, your SMART local may have resources they could point you to.

BENEFITS OF THE STUDY

You will not receive direct benefit from participating in this study. The indirect benefit of participation is that you be informing research that could help to make participation in the trades equally attainable, safe, and fulfilling for workers of all genders.

SOURCE OF FUNDING

The study team and/or the University of Washington is receiving financial support from the National Institute of Occupational Safety and Health (NIOSH) through their Center for Construction Research and Training.

CONFIDENTIALITY OF RESEARCH INFORMATION

We have a Certificate of Confidentiality from the federal Center for Disease Control. This helps us protect your privacy. The Certificate means that we do not have to give out information, documents, or samples that could identify you even if we are asked to by a court of law. We will use the Certificate to resist any demands for identifying information.

We can't use the Certificate to withhold your research information if you give your written consent to give it to an insurer, employer, or other person. Also, you or a member of your family can share information about yourself or your part in this research if you wish.

There are some limits to this protection. We will voluntarily provide the information to:

- a member of the federal government who needs it in order to audit or evaluate the research;
- individuals at the institution conducting the research, the funding agency, and other groups involved in the research, if they need the information to make sure the research is being done correctly;
- the federal Food and Drug Administration (FDA), if required by the FDA;
- individuals who want to conduct secondary research if allowed by federal regulations and according to your consent for future research use as described in this form;
- appropriate authorities if we learn of child abuse, elder abuse, or the intent to harm yourself or others.

The Certificate expires when the CDC funding for this study ends. Currently this is August 31, 2024. Any data collected after expiration is not protected as described above. Data collected prior to expiration will continue to be protected.

Upon entry into the study, you will be assigned a unique study ID. All the questionnaire data we collect from you will be coded with your study ID and stored on a password protected computer database. Your name and contact information will be stored separately from your questionnaire data, and only UW study staff will be able to access your identifiable information. The link between your identifiable information and Study ID will be destroyed at the conclusion of the study.

Government or university staff sometimes review studies such as this one to make sure they are being done safely and legally. If a review of this study takes place, your records may be examined. The reviewers will protect your privacy. The study records will not be used to put you at legal risk of harm.

A description of this clinical trial will be available on <http://www.clinicaltrials.gov>, as required by U.S. Law. This Web site will not include information that can identify you. At most, the Web site will include a summary of the results. You can search this Web site at any time.

USE OF INFORMATION

The individual or local-level results of this study will not be returned to you. Information from this study will be available to the research community and SMART International after we summarize the data from all subjects. You will not be identified in any of these reports.

The information that we obtain from you for this study might be used for future studies. We would remove anything that might identify you from the information. If de-identified information is used for future research studies or given to another investigator, we would do so without getting additional permission from you. It is also possible that in the future we may want to use or share study information that might identify you. If we do, a review board will decide whether or not we need to get additional permission from you.

Data we collect could be made available for other researchers. However, data would never be shared with identifying information and the purpose for sharing data would be to use it to enhance or compare to other research studies investigating mentorship or women's experiences at work.

OTHER INFORMATION

You may refuse to participate and you are free to withdraw from this study at any time without penalty or loss of benefits to which you are otherwise entitled.

You will not be charged for any study related procedures.

You will receive a \$20 electronic gift card for each survey you complete, as a thank you for your participation. You will receive this gift card within a week of completing the survey.

If you have any questions about this research study at any time, please contact the person listed on the first page of this form. You may ask questions at any time during your participation in the study.

RESEARCH-RELATED INJURY

If you think you have been harmed from being in this research, contact the study coordinator Lily Monsey at 206-221-2125.

Subject's statement

This study has been explained to me. I volunteer to take part in this research. I have had a chance to ask questions. If I have questions later about the research, or if I have been harmed by participating in this study, I can contact one of the researchers listed on the first page of this consent form. If I have questions about my rights as a research subject, I can call the Human Subjects Division at (206) 543-0098 or call collect at (206) 221-5940. I will receive a copy of this consent form.

Mentee Consent Form

UNIVERSITY OF WASHINGTON CONSENT FORM

**ADVANCING WOMEN IN THE SHEET METAL WORKERS' TRADE: A COORDINATED
MENTORING PROGRAM TO PROMOTE SAFETY, HEALTH, AND WELL-BEING**
Principal Investigator: Marissa Baker, PhD Department of Environmental & Occupational Health
Sciences, Phone: 206-616-4709
Contact Person: Lily Monsey, BA, Department of Environmental & Occupational Health
Sciences, email: lilymm04@uw.edu

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The purpose of this study is to develop a mentorship training program through local unions of the International Association of Sheet Metal, Air, Rail, and Transportation workers (SMART) and evaluate if participation in the mentorship program reduces women's work stress and injury, improves job satisfaction, and helps to retain more women in the SMART trades.

We are asking you to participate for one year. Upon entry, you will be matched with a trained journey-level mentor and be asked to complete a questionnaire. Over the next year, you will meet with or talk to your mentor as needed, and complete the questionnaire again after six months and once more the end of the year. The questionnaire will include questions about health and safety risks you encounter at work, your feelings of stress, knowledge of and strategies you use to address work risks or work stress, job satisfaction, the degree of social support you are receiving through your mentor and other co-workers, and perceived safety climate at your job sites.

The direct benefit of participation is that you will have access to a trained SMART mentor who can help you navigate the challenges of being a woman in construction. Going forward, our research can help to make participation in the trades equally attainable, safe, and fulfilling for workers of all genders.

You may feel uncomfortable being asked to interact with a mentor you don't know very well, and share your perceptions and thoughts with a research team via the questionnaire. Participation is completely voluntary and you are welcome to leave the study at any time. All questions on the questionnaire are optional, and you do not have to answer any question that you are uncomfortable with. Your standing in the union, and all benefits you receive from the union, is in

no way dependent on your participation in this study. As a thank you for participating, you will receive a \$20 electronic gift card for each questionnaire you complete.

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Women make up a very small percentage of workers in the construction trades. In addition to the injury risks faced by construction workers, women face additional circumstances at work that can make for a hostile work environment, including bullying, harassment, skills under-utilization, and challenges with work/life balance. The purpose of this study is to develop a mentorship training program through local unions of the International Association of Sheet Metal, Air, Rail, and Transportation workers (SMART) and evaluate if participation in the mentorship program reduces women's work stress and injury, improves job satisfaction, and helps to retain more women in the SMART trades. This is clinical trial, which means some participants in our study will have a mentor and some will not. You will be assigned a mentor.

STUDY PROCEDURES

To participate as a mentee in this study, you must be a female-identifying, apprentice-level member of a SMART local. If you choose to participate, we will ask to follow you for one year. You will be asked to complete a total of three questionnaires (30 minutes each). You will be matched with a trained mentor, and be encouraged to meet with or talk to your journey-level mentor as needed throughout the one-year period.

Descriptions of research activities for enrolled mentees:

1. Mentorship Program: Your local and the UW research team will facilitate matching you with a trained mentor. You will be encouraged to meet with your mentor as needed for one year. You are free to decline any mentor you have been matched with, or to request a different mentor at any point throughout the study. You are also free to opt out of the mentorship program at any point throughout the study.

2. Work & Health Experience Questionnaire: Upon entry into the study, you will be asked to complete a 30-minute work & health experience questionnaire, and you will be asked to take it again after six months, and at the end of the year. This questionnaire will include questions about health and safety risks you encounter at work, your feelings of stress, knowledge of and strategies you use to address work risks or work stress, job satisfaction, the degree of social support you are receiving through a mentor, other co-workers or friends and family, and perceived safety climate at your job sites. The most personal questions will relate to how frequently you experience feelings of anxiety, nervousness, or worry. We will also ask about coping mechanisms and health behaviors. You may refuse to answer any question in the questionnaire.

RISKS, STRESS, OR DISCOMFORT

You may feel uncomfortable being asked to interact with a mentor you don't know very well and share your perceptions and thoughts with a research team via the questionnaire. The delicate nature of some of the questionnaire questions may make you feel uncomfortable. Participation is completely voluntary and you are welcome to leave the study at any time, decline your mentor pairing, or ask for a new mentor. All questions on the questionnaire are optional, and you do not have to answer any question that you are uncomfortable with. Your standing in the union, and all benefits you receive from the union, is in no way dependent on your participation in this study.

ALTERNATIVES TO TAKING PART IN THIS STUDY

If you choose not to participate in this study, but are still interested in mentorship, your SMART local may have resources they could point you to.

BENEFITS OF THE STUDY

The direct benefit of participation is that you will have access to a trained SMART mentor who can help you navigate the challenges of being a woman in construction. Going forward, our research can help to make participation in the trades equally attainable, safe, and fulfilling for workers of all genders.

SOURCE OF FUNDING

The study team and/or the University of Washington is receiving financial support from the National Institute of Occupational Safety and Health (NIOSH) through their Center for Construction Research and Training.

CONFIDENTIALITY OF RESEARCH INFORMATION

We have a Certificate of Confidentiality from the federal Center for Disease Control. This helps us protect your privacy. The Certificate means that we do not have to give out information, documents, or samples that could identify you even if we are asked to by a court of law. We will use the Certificate to resist any demands for identifying information.

We can't use the Certificate to withhold your research information if you give your written consent to give it to an insurer, employer, or other person. Also, you or a member of your family can share information about yourself or your part in this research if you wish.

There are some limits to this protection. We will voluntarily provide the information to:

- a member of the federal government who needs it in order to audit or evaluate the research;

- individuals at the institution conducting the research, the funding agency, and other groups involved in the research, if they need the information to make sure the research is being done correctly;
- the federal Food and Drug Administration (FDA), if required by the FDA;
- individuals who want to conduct secondary research if allowed by federal regulations and according to your consent for future research use as described in this form;
- appropriate authorities if we learn of child abuse, elder abuse, or the intent to harm yourself or others.
- The Certificate expires when the CDC funding for this study ends. Currently this is August 31, 2024. Any data collected after expiration is not protected as described above. Data collected prior to expiration will continue to be protected.
- Upon entry into the study, you will be assigned a unique study ID. All the questionnaire data we collect from you will be coded with your study ID and stored on a password protected computer database. Your name and contact information will be stored separately from your questionnaire data, and only UW study staff will be able to access your identifiable information. The link between your identifiable information and Study ID will be destroyed at the conclusion of the study.
- Government or university staff sometimes review studies such as this one to make sure they are being done safely and legally. If a review of this study takes place, your records may be examined. The reviewers will protect your privacy. The study records will not be used to put you at legal risk of harm.
- A description of this clinical trial will be available on <http://www.clinicaltrials.gov>, as required by U.S. Law. This Web site will not include information that can identify you. At most, the Web site will include a summary of the results. You can search this Web site at any time.

USE OF INFORMATION

The individual or local-level results of this study will not be returned to you. Information from this study will be available to the research community and SMART International after we summarize the data from all subjects. You will not be identified in any of these reports.

The information that we obtain from you for this study might be used for future studies. We would remove anything that might identify you from the information. If de-identified information is used for future research studies or given to another investigator, we would do so without getting additional permission from you. It is also possible that in the future we may want to use or share study information that might identify you. If we do, a review board will decide whether or not we need to get additional permission from you.

Data we collect could be made available for other researchers. However, data would never be shared with identifying information and the purpose for sharing data would be to use it to

enhance or compare to other research studies investigating mentorship or the experiences women face at work.

OTHER INFORMATION

You may refuse to participate and you are free to withdraw from this study at any time without penalty or loss of benefits to which you are otherwise entitled.

You will not be charged for any study related procedures.

You will receive a \$20 electronic gift card for each questionnaire you complete, as a thank you for your participation. You will receive this gif card within a week of completing the questionnaire.

If you have any questions about this research study at any time, please contact the person listed on the first page of this form. You may ask questions at any time during your participation in the study.

RESEARCH-RELATED INJURY

If you think you have been harmed from being in this research, contact the study coordinator Lily Monsey at 206-221-2125.

Subject's statement

This study has been explained to me. I volunteer to take part in this research. I have had a chance to ask questions. If I have questions later about the research, or if I have been harmed by participating in this study, I can contact one of the researchers listed on the first page of this consent form. If I have questions about my rights as a research subject, I can call the Human Subjects Division at (206) 543-0098 or call collect at (206) 221-5940. I will receive a copy of this consent form.

