

Paying it Forward: An Exploration of Mentor Experiences Among Women Sheet Metal Workers

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Abstract

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Tradeswomen are underrepresented in the construction industry and face gendered occupational risk factors that impact mental and physical health. Mentorship is a tradeswomen-identified strategy to support the retention and wellbeing of incoming workers to cope with negative gendered experiences. We conducted a five-year randomized control trial to evaluate the efficacy of a mentorship program for women sheet metal workers, which included an online mentorship training for mentors. Here, we explore the experience of mentors in the program, including their reflections about how the mentorship training and program impacted them, their mentees, and their communities. Ten interviews were conducted and thematically analyzed using deductive codes informed by Social Cognitive Theory (SCT) and inductive codes that emerged from the data. Mentors described their motivation to support mentees through the lens of their gendered experience in the field and reported understanding and using skills from the training with their mentees and in their own lives, including the development of communication skills and increased confidence. They expressed motivation to engage in tradeswomen-supportive programming at the local level because of participating in the program. Mentors also reported significant barriers to mentorship, including lack of time, lack of responsiveness from mentees, and cultural norms in the trades.

These findings provide insight and context into the dimensions of the mentor role in an occupational-health focused intervention. These results inform recommendations for future tradeswomen-supportive programming; they also shed light on the role of individuals as intermediaries in supporting health promoting behavior.

Background

Political and Environmental Context

Representing 3.9% of the construction workforce in 2023, tradeswomen face a range of gendered physical and psychosocial hazards on the job.¹⁻⁴ Unique workplace hazards among this population are not new. Although the number of women in the construction trades has grown from 2.1% to 3.9% between 2011 and 2023 and the construction industry has placed an increased emphasis on recruiting and retaining a more diverse workforce through 2024, research continues to highlight gendered occupational risk factors such as ill-fitting personal protective equipment (PPE), lack of sanitary bathroom facilities, challenges with work-life balance, overcompensation, discrimination, and sexual harassment as barriers to entering and remaining in the trade.^{5,6} Tradeswomen-focused research highlights the need for more women supportive interventions to combat a male-dominated culture that perpetuates these risk factors.^{7,8} With the Million Women in Construction initiative launched by the Department of Commerce in 2022, renewed emphasis was placed on contractors, unions and training institutes to recruit and retain more tradeswomen to meet workforce demands.^{9,10} Engaging tradeswomen is an important step to supporting the growth of the construction industry.

Previous Tradeswomen Research and Need for Mentorship

In the past fifteen years, occupational health researchers and social scientists have highlighted social barriers tradeswomen face to enter and participate in the building trades. These barriers include sexist attitudes from male workers and employers, harassment and aggression on jobsites, and normalization of long working hours that make it difficult for women workers to participate and be fully accepted in the trades as they are more likely to balance caregiving and work responsibilities.^{3,11} Multiple studies highlight tradeswomen's' individual and interpersonal coping mechanisms, including their resiliency and ability to find supportive allies, that enable them to succeed and find meaning in their careers despite structural barriers to success.^{11,12} While research calls for greater tradeswomen support at the organizational level, few studies discuss the impact of tradeswomen supportive interventions toward

improving retention, health, and wellbeing.^{7,11,13–16} In Washington State, focus groups with tradeswomen revealed mentorship as a meaningful strategy to mitigate these challenges.⁴ Mentorship programs present one avenue to support tradeswomen with key skills to navigate the masculine culture of the trades, connect with other tradeswomen and utilize local and union-level resources to support them at work and in their emotional wellbeing.⁴ Furthermore, previous health promotion literature suggests that social support in itself can enhance positive health outcomes through supporting health promoting behavior.¹⁷ Although numerous tradeswomen supportive organizations, including union affiliated women's committees, have explored mentorship as a strategy to support tradeswomen, to our knowledge, little research on the efficacy of mentorship programs exists. A 2022 article on the role of pre-apprenticeship programs (training programs designed to equip future workers with the skills to succeed in apprenticeship programs) reported on how organizations can enhance recruitment and retention of women workers through deeper organizational partnership with the construction industry, including contractors, employers, and unions.¹⁵ This highlights the need for programming in partnership with the construction industry to promote sustainability. To our knowledge, no research to date has reported on the experiences of tradeswomen participants in a mentoring program. The perspectives shared in this analysis highlight mentor training as a strategy to create relationships between tradeswomen that can support utilization of local resources, transmit helpful knowledge from more experienced tradeswomen, and create or strengthen tradeswomen networks.

Mentorship Outside the Trades

Given the lack of literature focused on tradeswomen-specific mentorship programs, understanding mentorship and gendered dynamics in other occupational and educational contexts is important to contextualize the findings of this analysis. In the past twenty years, formal mentorship programs have become increasingly popular due to their potential to increase productivity and wellbeing among workers, as well as their potential to facilitate a culture of enhanced communication and reduced employee attrition.¹⁸ Although most studies focus on the mentee outcomes to assess program success, some do

provide insight on the mentor experience.¹⁸ Mentors in educational, healthcare, and university-based research settings report psychosocial benefits including a renewed sense of excitement in their careers and increased job satisfaction through providing support to a mentee.¹⁸ Gender also influences mentoring perceptions and impact: previous analyses have found that among female mentees, the value of providing access to informal support networks and debunking workplace stereotypes are more important than for male mentees.¹⁹ Among women mentors in male dominated corporate workplaces, womens' "token status" in their organizations may "increase visibility and pressure to perform" suggesting that mentorship may place an additional burden on women workers who continue to face gendered workplace norms.²⁰ One report evaluating an online mentoring program for college freshmen found that mentees with female mentors received more psychosocial and instrumental support than those with male mentors.²¹

Previous literature also highlights the impact of mentorship for underrepresented groups to support career and educational advancement, as well as access to resources.²² One study highlights an evaluation of an ongoing university-based mentoring program for students with autism spectrum disorder. Although participation in the program grew steadily over the course of the evaluation and student mentees reported high levels of satisfaction with the program, all evaluation measures asking for mentor input asked their perceptions of mentee progress, rather than any aspect of their own experience.²³ One report from Ghandi and Johnson (2016) highlights the importance of formal training for mentors among university faculty working in the HIV research space to support underrepresented junior faculty members.²⁴ Among those who completed the training, most reported improved understanding of mentoring skills and intent to use them in informal mentoring interactions with junior faculty.²⁴ These skills included including ability to communicate effectively, identify micro-aggressions in context, and understand their own unconscious biases.²⁴ Another study, which characterized the experiences of university student mentors working with at-risk secondary school mentees, found that mentors experienced psychosocial benefits. These included the development of communication and time management skills they could use in other life contexts, a greater interest in giving back to the local community, a greater sense of social connection, and an

enhanced sense of accomplishment, self-esteem, and confidence.²⁵ Other evaluations of school-based mentorship programs report that student peer mentors experience increased self-confidence and self-esteem in their mentoring roles.^{26,27}

Social Cognitive Theory as a Framework for Understanding Mentorship

Social Cognitive Theory (SCT) was used to inform the conceptual framework, interview guide design, and thematic analysis for this research. SCT describes the reciprocal relationship between personal factors, behavioral factors, and environmental factors in shaping human behavior.²⁸ In a health promotion context, these three sets of factors influence each other to affect individual health behaviors.²⁹ Personal factors include how an individual's own knowledge, expectations, and attitudes contribute to a health behavior, while behavioral factors encompass the role of skills, practice, and self-efficacy (one's perceived confidence in their ability to carry out a behavior) in determining behavior.²⁹ Environmental factors include both structural and social elements: social norms, community access, and influence on others.²⁹ For the purposes of this analysis, mentoring was the health behavior through which constructs from SCT were applied. Given the broad range of psychosocial and physical risk factors tradeswomen face on the job, understanding how factors work together to shape ability to engage in mentorship is useful for understanding barriers and facilitators to mentoring as a health behavior. Self-efficacy is particularly important, given the dominant cultural factors that make it difficult for tradeswomen to succeed in the trades.²⁸

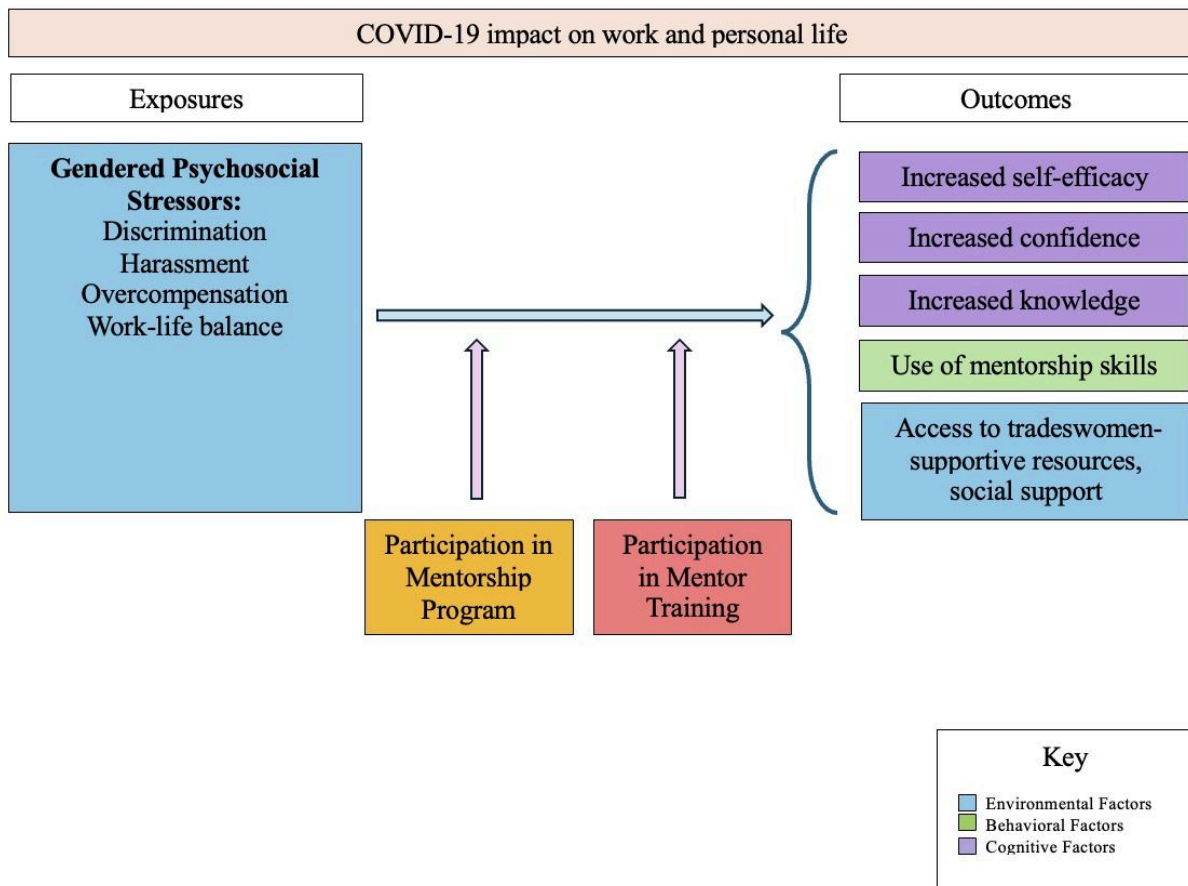
Mentoring SMART Women Study

From 2020-2024, researchers at University of Washington developed and administered a mentorship program for tradeswomen across 10 locals affiliated with the Sheet Metal, Air, Rail, and Transportation (SMART) International. This was part of a 5-year randomized control trial funded by the Center for Construction Research and Training (CPWR). Two cohorts of mentors were trained and matched with 1-3 mentees for a year-long period. The first cohort of 19 mentors was trained in 2021; the second cohort of 8

mentors was trained in 2023. The randomized control trial sought to improve health, safety, and retention of participating mentees through skill development and social support from their mentors over each year-long mentorship period. Although the goals of the study were focused on improving mentee outcomes through mentor support, the study team wanted to better understand how the program influenced mentor wellbeing. Study check-ins with mentors through the training process and during the yearlong mentoring periods suggested that the program was influential on mentors' own health, wellbeing, and leadership. Seeing the need for qualitative insight into the nature of mentor experiences, the study team conducted interviews with mentors between 2022 and 2024. This manuscript synthesizes the experiences of mentors in the program, including their experience with the training, working with mentees, and how they view mentorship within the context of their work environments. Given the lack of research on mentor experiences among tradeswomen, understanding mentor experiences in this program is an important step in measuring program impact and informing future tradeswomen-supportive interventions among other tradeswomen populations.

Figure 1 displays the relationship between mentors' negative workplace exposures and behavioral, cognitive, and environmental outcomes impacting health and wellbeing. Participation in the mentorship program and training are represented as moderators. Constructs from SCT including self efficacy, knowledge, use of skills, and access to resources informed the coding and analysis of mentor interviews. Due to the timeframe in which the program was launched, The impact of COVID-19 on work and personal life is represented as an overarching environmental factor impacting the ecosystem of mentor exposures, program participation, and outcomes.

Figure 1: Conceptual Model of Impact of Mentorship Program Participation on Mentor Health and Wellbeing



Mentors as Intermediaries for Health Promotion

Intermediaries (as individual people or organizations) can support the implementation of health programs or practices.³⁰ While intermediaries have had significant roles in supporting health programming, to our knowledge, little research focuses on the experiences of intermediaries themselves. Previous literature has noted the important role intermediaries play in promoting health outcomes in specific populations.^{31–33} When individuals function as intermediaries, they can support specific community members with information, skills, or resources to support engagement in health promoting behavior.³⁴ In the Mentoring SMART Women program, mentors became models to their mentees as they passed down personal

experience and specific skills—potentially impacting their own sense of confidence, identity, and wellbeing. In the context of the Mentoring SMART Women program, this qualitative research presents insight into how mentors as intermediaries understand their roles, and how their experience influenced their own health and wellbeing.

Purpose

The purpose of this study is to explore experiences of trained journey-level mentors in the Mentoring SMART Women program to inform recommendations for future tradeswomen supportive programming.

Method

Mentors were eligible to participate in an interview if they had 1) completed the online mentorship training, and 2) participated in the program with at least one mentee for one year. To recruit mentors for participation in an interview, a purposive sampling strategy was used: in 2022, the research team reached out via email to all mentors who participated in the first round of the program, which took place from 2021-2022, inviting them to participate in an interview. In 2024, the research team contacted via email all mentors who participated in the second round of the program, which took place from 2023-2024. To ensure mentors could speak to their full range of experience in the program, interviews only took place after mentors concluded participation in the study after year 1 (2021-2022) and/or year 2 (2023-2024). Of the 27 mentors contacted, 12 responded and 10 agreed to participate in a semi-structured interview. All interviews took place in English from June 2022-January 2025 over video conferencing software or via phone call, depending on participant preference. All mentors gave verbal consent to participate in the interview and were reminded that they could skip any questions if they desired. Interview questions were shared with participants ahead of time so they could familiarize themselves with the content and ask questions beforehand. The study team provided a time estimate (20-30 minutes) for the interview to all potential participants to allow them to plan their time accordingly. All mentors were compensated for their time with a \$40 gift card. Interviews were professionally transcribed. The study team sent transcripts

to mentors for member checking to ensure they felt their views were reflected accurately in the interviews. The University of Washington Human Subjects Division determined this project to be minimal risk.

Interview Guide Development

The research team developed a semi-structured interview guide to assess mentors' journey into the trades, the value and utility of the program, identify barriers and facilitators to program success, describe union-level resources available to tradeswomen, and generate ideas for future tradeswomen supportive programming. Constructs from SCT were used to inform questions about environmental, social, and personal factors that contributed to mentors' experience in the program, such as self-efficacy, skill development, observational learning, knowledge, and expectations. Table 1 includes a summary of the topics covered in the interview guide with corresponding SCT constructs and interview questions. (To view the full interview guide, see Appendix I.) The interview guide was shared with one tradeswomen researcher and one tradeswomen ally for feedback; edits were incorporated by the study coordinator and the study team finalized the guide before approving it to use in interviews. The final interview guide contained 14 total questions, including one to two probes for each question.

Table 1: Interview Topics and Corresponding Questions with SCT constructs

Topic	SCT Construct	Interview Questions
Tradeswomen identity and motivation	Knowledge, attitudes, self-efficacy	- Please tell me about your journey to becoming a tradeswoman. - When you think about what it means to be a woman working in the construction trades, what comes to mind?
Program Experience	Outcome expectations, Self-efficacy	- Please describe your overall experience as a mentor in the program. - How has your role as a mentor in the Mentoring SMART women program impacted your leadership or confidence, in terms of your own work, as well as supporting other women on the job? - To what degree do you feel that you were able to impart the skills you learned in the mentor training to your mentee(s)?

Facilitators and Barriers to Program Success	Outcome expectations, reinforcements, social norms, access in community, collective efficacy, constraints	- Based on your experience as a mentor in the Mentoring SMART women program, what do you think are the key characteristics for making the program successful? - What are some challenges that might get in the way of making this program successful?
Environmental Factors impacting Tradeswomen	Social norms, access in community, constraints	- Are there particular issues or challenges faced by women working in the sheet metal trade that are not addressed in the Mentoring SMART Women program?
Union and Policy Context	Collective efficacy, observational learning, reinforcements, social norms	- Can you tell me about any other programs designed to support trades women (or other underrepresented groups) at your local such as other mentorship programs, women's committees, work/life balance programs, pregnancy/childcare support? - Can you share your thoughts on the types of policies or programs you think would help get more women to enter and then stay in the sheet metal trade?

Data Analysis

The study team employed a combination of inductive and deductive approaches to the data analysis process according to Braun and Clarke's approach.³⁵ First, constructs from social cognitive theory were used to outline a preliminary codebook with three code categories: environmental factors, cognitive factors, and behavior factors. Constructs from social cognitive theory in each of these categories were translated into deductive codes that applied to mentoring as a health behavior. Definitions for all deductive codes were drafted. Throughout the coding process, one inductive code category and new inductive codes derived directly from the data were added. Deductive code names and definitions were edited to better reflect the data.

A data familiarization process was conducted by two study team members (LM and EV). To begin, two transcripts were read and re-read by both study team members, and inductive child codes were developed

to capture emergent information that did not fit into deductive codes. After meeting to discuss code application, deductive code definitions were adjusted to more accurately reflect the data. EV and LM used Dedoose qualitative analysis software (version 9.0.17 Los Angeles USA) to independently apply the codebook to the first two interview transcripts. A Kappa statistic was calculated to determine agreement on the first two transcripts: before adjudication, percent agreement for transcripts 1 and 2 were 72% and 68%, respectively. After comparing code application, adjudicating discrepancies, and amending the codebook accordingly, LM and EV reached 100% agreement on transcripts 1 and 2. LM independently coded six additional interviews and EV independently coded the two additional interviews. Both interviewers met two additional times to discuss code application, make further adjustments to the codebook, and discuss areas of confusion in the eight independently coded transcripts. After adjudicating remaining discrepancies, all codes with their definitions and examples of when to apply were memorialized into a final codebook. (See appendix III for the final codebook.) Coded text was then re-read to generate summaries of each code. (For a complete list of all code summaries, please see Appendix II.) To promote qualitative confirmability, code summaries were cross referenced across the original transcripts to ensure interpretation was supported by the interview data. After reviewing all excerpts by code in Dedoose, LM generated thematic notes from each code, noting topics and ideas that arose frequently to generate a list of initial themes. EV and LM met a final time to discuss each code summary and compare independently brainstormed themes. After discussing areas of similarity and divergence in interpreted themes, LM drafted paragraph descriptions of the five themes identified.

Results

Over the course of 2022-2025, 10 semi-structured interviews were conducted with mentors who participated in one or both rounds of the program. Of the 10 mentors interviewed, 6 participated in both rounds of the program, 1 participated in only the first round of the program, and three participated in only the second round of the program. Interviews ranged from 19 to 37 minutes long. To better understand mentors' life paths that led them to become tradeswomen and participate in the program, all participants

were asked about their journey to becoming tradeswomen, what it meant to them to be a woman working in the trades, strengths of the program, barriers to mentorship success, union and local-level resources, and potential policy ideas to support greater tradeswomen representation in the future. Below, table two summarizes how each interview prompt corresponded to SCT constructs, as well as each of the five emergent themes. Illustrative quotes for each theme are included.

Table 2: Thematic display with Corresponding SCT constructs

Interview Prompts	Constructs from Social Cognitive Theory	Emergent Theme	Illustrative Quotes
Tell me about your journey to become a tradeswoman. Why did you choose to become a mentor in the SMART mentorship program? When you think about what it means to be woman working in the construction trades, what comes to mind?	Expectations (Personal) Attitude (Personal) Social Norms (Environmental) Reciprocal Determinism (Environmental) Influence on others (environmental)	Personal identity and gendered experience shape mentoring motivations	<i>"I joined the program to better myself as a mentor. It's really the first time in my life that I've worked with so many women. I'm used to being the only one on the job site...so I was hoping to learn something more, maybe even to better grow my leadership skills as a mentor."</i> <i>"So my entire experience wasn't too bad. I didn't have a horrible time or I wasn't disappointed. I kind of just figured it's just like, "Okay. This is work. I'll be working with a bunch of either old grumpy dudes or old gross dudes or just weird dudes in general." And I found out that a lot of them weren't so old and-- not so old, so grumpy. Some of them weren't so gross. And I became friends with a lot of</i>

			<i>them, which is kind of cool...I did experience some harassment a couple of times, but that got taken care of."</i> <i>"Being treated so differently in the field when we're here just to do the same job as everyone else...I think that that's going to be the biggest thing, is the needed culture shift...I experienced that on one of the last jobs that I was helping run. I experienced it from an apprentice who thought that he was a foreman and he was better than me because he was a man."</i>
Please describe your overall experience as a mentor in the program. How has your role as a mentor in the Mentoring SMART women program impacted your leadership or confidence, in terms of your own work, as well as supporting other women on the job? Based on your experience as a mentor in the Mentoring SMART women program, what do you think are the key characteristics for making the program	Knowledge (personal) Self-Efficacy (Behavioral) Skills (Behavioral) Observational learning (Environmental) Collective Efficacy (Environnemental) Reinforcements (Environnemental)	Group-based learning facilitates individual mentor confidence and skill development	<i>"It's helped me a lot. Just talking and hearing the stories from other mentors gave me a lot of confidence, it helped me a lot."</i> <i>"And then I like the check-ins where we were able to check in and talk with the other mentors. So you can kind of hear what they're going through and everything. And you're able to hear their stories and say, "Oh, okay. Kind of know if, okay, that's how they handled that situation." So something like that came up, kind of had an idea of how to handle it or whatever. So it was, like I said, I think the check-ins and being</i>

successful?			<i>able to talk with the other mentors...”</i>
Please describe your overall experience as a mentor in the program. How has your role as a mentor in the Mentoring SMART women program impacted your leadership or confidence, in terms of your own work, as well as supporting other women on the job? Based on your experience as a mentor in the Mentoring SMART women program, what do you think are the key characteristics for making the program successful?	Knowledge (personal) Skills (behavioral) Self-Efficacy (Behavioral) Reciprocal Determinism (Environmental)	Impact of Mentorship on Mentors: Development of Communication and Life Skills	<i>“It's just more of having the confidence, setting goals for the goals-- like, okay, setting goals not only for your mentee, but taking that, okay, setting goals and stuff for yourself. And I'm a very shy person. It took a lot for me to pick up the phone and call.”</i> <i>“I would say it was really good for me in the leadership side of things. I've always kind of been a leader in the field, even as an apprentice. And so it helped me with my communicating. And sometimes I come across as super cold because I kind of have to be a little bit calloused and cold to survive in the field. I mean, everyone has to a little bit....But it helped me soften a bit, I think, and open up and make myself vulnerable to my mentees so that I could help them, which I think was really important for me, honestly, in my growth as a leader and a woman and a mom and a partner and a friend...”</i>
Please describe your overall experience as a mentor in the program.			

To what degree do you feel that you were able to impart the skills you learned in the mentor training to your mentee(s)?			
How has your role as a mentor in the Mentoring SMART women program impacted your leadership or confidence, in terms of your own work, as well as supporting other women on the job?	Reciprocal determinism (Environmental) Self Efficacy (Behavioral) Skills (Behavioral) Knowledge (Personal) Collective Efficacy (Environmental)	Mentorship fuels organizational tradeswomen support	<i>“Like I said, overall, it's been a really good experience and very helpful. Giving me the tools to not only talk to the mentees that I had in the study, but also within our local, reaching out to pre-apprentices and apprentices and checking in on them.”</i> <i>“Participating...has given me the confidence to really start focusing on our women's committee, seeing the impact of talking to some of my mentees and stuff like that, hearing the stories from the other mentors, from their mentees of what they were needing and stuff.</i>
What are some challenges that might get in the way of making this program successful? Are there particular issues or challenges faced by women working in the sheet metal trade that are not addressed in the Mentoring SMART Women program?	Access in Community (Environmental) Social Norms (Environmental) Behavioral Capability (Behavioral)	Barriers to mentorship reflect broader barriers to Tradeswomen participation in the construction industry	<i>“Time is always a challenge. Most of the mentors work full-time, if not overtime. Most mentors have after work obligations as well. For me, I have two kids. Both of them are in sports. We have sports every single day. Plus, you're trying to squeeze in doctor's appointments, dentist appointments, everything else. And so</i>

			<i>making time for another human being is difficult.”</i> <i>“Life. Life. And these last couple of years with the pandemic and just now, like with the economy, and now the way things are very slow, a lot of our people are traveling. So then that might make it a lot harder because there's not a lot of work.”</i>
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Themes

Personal identity and gendered experience shape mentoring motivations. Mentors’ gendered experiences on the job as tradeswomen were integral to their motivations to become mentors. Among all interviewees, on-the-job experiences were recounted through a gendered lens, including experiences that ranged from positive to negative depending on perceived support from allies and fellow workers. One tradeswoman described herself as lucky:

"I've been actually very blessed with the people that I've worked with, I can say kind of my mentors. A lot of them have been guys. So, when I got on as apprentice, the shop foreman was willing to teach, and the journeyman.”

This mentor regarded that supportive tradesmen on jobsites early in her career who were “willing to teach” were informal mentors, contributing to her success. This mentor was able to find supportive allies who looked out for her success. Another mentor described that although the conditions on her jobsite have been good with adequate access to resources, some of her co-workers commented that accommodating tradeswomen needs on jobsites is an extra cost:

“We've got the women's restrooms. Most job sites do now. They're getting us the women's PPE.

And they do make a comment about the cost, having, oh, well, it's going to be more. I don't care. I mean, that means nothing to me. I'm still a woman. So, let's go on and get that.”

Despite comments from her peers about how jobsite accommodations and procurement of inclusive personal protective equipment creates an extra cost, this mentor is unapologetic, affirming that her needs as a woman worker are important. Her reflections show that equitable jobsite resources are still viewed as an extra burden. Another mentor highlighted how in her experience, harmful stereotypes about tradeswomen persist now:

“Being treated so differently in the field when we're here just to do the same job as everyone else...I think that that's going to be the biggest thing, is the needed culture shift...I experienced that on one of the last jobs that I was helping run. I experienced it from an apprentice who thought that he was a foreman and he was better than me because he was a man.”

This mentor highlighted the need for a “culture shift” to shift sexist attitudes and discrimination toward female workers. When describing their motivations to become mentors, these personal gendered experiences were at the forefront of their reasoning to join the program and put in the time to support mentees. A majority of interviewees discussed the desire to give back to their tradeswomen communities. This held true whether they perceived themselves as lucky and wanted to create a similarly rewarding experience for others, or if they experienced discrimination and wanted to break that cycle. One mentor reflected,

“...I want to share my success with the next woman because I know that one time when I started out, I felt alone and there wasn't very many women. But not only that, I want to give back again to the community and showing another younger woman that there's nothing to be scared of if you work with your tools.”

When asked why she joined the program, another mentor highlighted her desire to give something she never received as an apprentice, in part due to the fact that there was little representation for tradeswomen when she was coming into the trade:

“I wished that I would have had a mentor. Anyone that could relate to any of my experiences in my earlier years of the trade. I doubt I would have ended up leaving the trade [if I had a mentor]... There wasn't very many women in our local. Maybe I think less than a dozen. I think it's even about half of that, maybe five or six of us.”

Another mentor highlighted how her own positive experiences with mentors and other tradeswomen at conferences early on connected her and motivated her to “give it back” to incoming tradeswomen:

“...I've had a couple very good mentors as far as my foreman that I've worked with. And then I've been able to meet some-- going to the Women Build Nations conferences, I was able to meet some local sheet metal workers, and they gave me the power to go through. And so the way I was taught is if somebody helps you, you turn around and give it back. And because of what they taught me and the help they gave me, it kept me going through in the trade.”

Here, mentoring was this mentor's way of passing down a support system she received, enabling a new generation of tradeswomen to succeed. Another mentor similarly framed her motivation because she saw potential for future tradeswomen success:

“The reason I chose to be a mentor is because of my passion. Not only that, it leads to success. I've had success and I want to share my success with the next woman because I know that one time when I started out, I felt alone and there wasn't very many women.”

Similarly, another mentor said, *“I want them to see themselves in what I'm doing.”* Taken together, these reflections demonstrate that regardless of their own gendered experiences, they want to create a better experience for their tradeswomen mentees. These reflections also demonstrate reflexivity in how mentors perceive their role: their own experiences inform their mentoring motivations, emphasizing a desire to build a culture of support. Mentoring motivation is linked to the hardship many tradeswomen face on the

job, and they see their mentoring identity as key in disrupting and rewriting negative gendered experiences for the next generation.

Group-based learning facilitates individual mentor confidence and skill development. Mentors frequently discussed the value of learning in the live, online training space alongside other mentors as valuable to their own development and confidence in the mentoring role. Mentors emphasized throughout interviews that learning from other tradeswomen and understanding how they cope with the difficulties of heavily male-dominated spaces is valuable. In the mentoring context, learning how other mentors work with mentees and deal with certain challenges that arise for their mentees is also a valuable part of their own development and growth. As one mentor shared when describing the training experience,

“It’s helped me a lot. Just talking and hearing the stories from other mentors gave me a lot of confidence, it helped me a lot.”

Another mentor shared that learning about the diversity of strategies other mentors employ to handle specific situations helped her develop a toolbox of strategies to engage in mentoring work:

“So I feel like the program helped me, like I said, just listening to the other mentors sometimes saying how they overcame a situation or a problem or how they talked to someone that they might not have had a rapport with from the very beginning and listening to all the different mentors and how they connected helped me understand, of course, that there’s more than one way to do things.”

For this mentor, the group-based training model highlighted that multiple approaches can be used to handle different situations with mentees or other workplace situations. Another mentor echoed this sentiment, highlighting how she developed new mentoring strategies from other mentors:

“...I like the check-ins where we were able to check in and talk with the other mentors. So you can kind of hear what they’re going through and everything. And you’re able to hear their stories and

say, "Oh, okay. Kind of know if, okay, that's how they handled that situation." So something like that came up, kind of had an idea of how to handle it..."

Here, mentoring skill development and confidence were facilitated by learning directly from other mentors' approaches. While the skills taught in the training were valuable, the act of bringing mentors-in-training together also served as a valuable tool to enhance their learning process, serving as a mechanism to practice and reinforce concepts from the training. This theme is important in the context of low tradeswomen representation on many jobsites and in many leadership spaces: the reality of bringing a small group of tradeswomen together from across the country is significant. Many tradeswomen work as the only women on jobsites, and many locals have fewer than five apprentice tradeswomen at any given time. While awareness and emphasis on tradeswomen-focused spaces has grown in the past 20 years, the power of bringing small groups of tradeswomen is rare. These spaces offer the opportunity for solidarity and collective efficacy that supports skill development.

Impact of Mentorship on Mentors: Communication and Life Skills. Although the original goal of the mentor training was to impart communication, self-advocacy, problem solving and goal setting skills on mentees, mentors reported that the communication skills supported their own development and growth, as well as their work with mentees. One mentor discussed practicing communication skills with her mentee while also highlighting that the practice helped her own communication:

"I think just practicing the listening and repeating what I heard her say just to build up the communication. I felt that that exercise was really good for me. And I use that a lot. I use that exercise a lot. So I'll be like, "Okay. So you said X, Y, Z. Okay, cool. So you said X, Y, Z." So I just repeat that. And she'd be like, "Yes, I said X, Y, Z." I'm like, "Okay, cool. I'm just trying to understand X, Y, Z, just making sure I heard you correctly."

Another mentor highlighted that a big part of what it means to be a mentor is being an active listener:

"You got to be empathetic to the person when they're scared or they don't trust the situation. You got to be put in their position and then you got to communicate that way. I'll tell you what, you

got to be an active listener. Sometimes you just got to learn to be quiet and listen. I've learned that too. Don't listen to answer, but listen to just listen, be an active listener."

For this mentor, active listening doesn't always include giving feedback or offering your own interpretation about a situation. It requires empathy and giving them your full attention, underscoring her own growth through practicing the skill. Another mentor echoed this same sentiment when reflecting on how to support her mentee in setting goals, emphasizing that you can't "force" mentees to make goals:

"And definitely at the start, just the teaching me how to be a better listener...not forcing them to make goals, but making them look towards goals. And I hadn't even thought about, "Okay. Where do you want to go? How do you want to get there?" You don't want to just be reactive. You want to be proactive in doing stuff."

This mentor highlighted that being a better listener allowed her to ask informed, open-ended questions to support her mentee in determining her own path, while also teaching her to be a better listener. Two mentors described themselves as shy people, highlighting that they needed confidence and support from the program to reach out to their mentees:

"It's just more of having the confidence, setting goals for the goals-- like, okay, setting goals not only for your mentee, but taking that, okay, setting goals and stuff for yourself. And I'm a very shy person. It took a lot for me to pick up the phone and call."

This was echoed by another mentee who felt empowered to reach out more because of her participation in the program:

"So what I got out of it was to focus better, reach out more. I'm nervous on phones and talking to people. So I think I got a little kick in the butt, a little fire under the tush."

Development of communication skills facilitated personal growth for these mentors, helping them engage more directly with mentees.

Communication also became a pathway for self-advocacy and increased leadership among mentors. At times, these sentiments were linked to other aspects of their identities, such as being mothers or partners, emphasizing that mentoring skills are also life skills. One mentor shared:

“I would say it was really good for me in the leadership side of things. I’ve always kind of been a leader in the field, even as an apprentice. And so it helped me with my communicating. And sometimes I come across as super cold because I kind of have to be a little bit calloused and cold to survive in the field. I mean, everyone has to a little bit. There’s so much you can take, so much you shouldn’t take, so much you have to take in every industry. But it helped me soften a bit, I think, and open up and make myself vulnerable to my mentees so that I could help them, which I think was really important for me, honestly, in my growth as a leader and a woman and a mom and a partner and a friend because being vulnerable is something I’ve really struggled with. So I think it’s helped me actually a lot in that aspect. And I didn’t really realize it until I was saying it, but. Yeah.”

Here, learning to communicate effectively as a mentor encouraged self-reflection and supported this mentor’s personal growth as a worker, mother, woman, partner, and friend. In this sense, development as a mentor became a way to affirm and broaden self-identity. Other mentors echoed how mentoring skills supported their development in other areas of life:

“I’ve ...been a mentor...especially when it comes to other women in the trade...And I’m a mom and I’m a wife, and I practice those things already. I might be too much of a problem solver and not as good of an active listener, so it was a good reminder for me to practice that one.”

Again, this mentor highlights active listening as a key skill in mentorship but also as a mother and a wife, something she got the chance to hone through the program. Similarly, another mentor emphasized that her mentorship work was supported by her identity as a mother:

“I don't know if maybe because I live my life as a mentor. I say as a mother, you're a mentor. And I believe it just comes from the heart.”

In these reflections, the relationships between multiple identities come together, suggesting that mentorship is something you can bring your full self to. In this light, mentoring can be interpreted as an affirmation of self and identity. Communication skills functioned to support mentors in their lives outside of work, and mentors also brought their life experiences into their mentoring roles. Learning to communicate more effectively allowed mentors to grow their own capacity as whole people:

“I had some troubles with my first mentees. But in hindsight, everything that I've learned with this program has helped me move forward and break the barriers of mentor, mentee and really help me reach beyond my own limits...And I really think that has something to do with learning how to mentor, speak to people a little better.”

Mentorship fuels organizational tradeswomen support. In addition to sharing qualities of the program and training they found particularly helpful or challenging, mentors highlighted that participating motivated them to become more active in supporting tradeswomen at their locals. Mentors discussed how developing skills through the training process helped them not only connect with their assigned mentees but also become more active in their women's committees or inspired them to create informal support spaces for new tradeswomen in their locals. One mentor shared,

“Like I said, overall, it's been a really good experience and very helpful. Giving me the tools to not only talk to the mentees that I had in the study, but also within our local, reaching out to pre-apprentices and apprentices and checking in on them.”

Here, participation in the training and ongoing work with mentees can fuel tradeswomen-supportive efforts at the local level beyond mentor-mentee relationships. In talking about the impact of the program on herself, another mentor shared,

“...after a day of work, I just want to go home and hide away and not do anything. So it made me get out and get to know the girls more. There was only one that I truly stuck with for this

program, and it opened the door for other ladies in our local to get involved and be able to talk to me. And we'd go to dinner every so often and-- just to check in and say hi, I'll text them every once in a while, and see how they're doing, make sure-- touch base every once in a while, see how they're doing. So it made me get out of my hide-at-home zone and get involved more."

For this mentor, working with her assigned mentee "opened the door" for her to connect more with other newer tradeswomen at her local, creating opportunities for her to check in on other new tradeswomen to create a broader network of support. With increased confidence from participating in the program, some mentors even connected their own growth in confidence to increased engagement in their local women's committees. As one mentor described,

"Participating...has given me the confidence to really start focusing on our women's committee, seeing the impact of talking to some of my mentees and stuff like that, hearing the stories from the other mentors, from their mentees of what they were needing and stuff. So it's given me the confidence to really start pushing our women's committee meeting within our local."

For this mentor, increased confidence can not only make mentors feel empowered in their interpersonal interactions but facilitate more engagement in tradeswomen supportive programming on the organizational level. These reflections suggest that mentoring relationships can facilitate broader tradeswomen support at the local level, creating both informal and formal avenues for tradeswomen-supportive activity.

Barriers to mentorship reflect broader barriers to Tradeswomen Participation. Mentors consistently discussed barriers to engagement in mentoring, which were reflective of barriers to general tradeswomen support in the construction industry. Mentors discussed lack of childcare, time, and unsupportive culture among tradeswomen as barriers to mentorship. Inaccessible childcare was discussed among six mentors-- two mentors described how this makes it difficult for women to attend union and women's committee meetings, while highlighting their desire to support union efforts to make meetings easier to attend for parents and anyone with caretaking obligations:

I was a single parent for years. I didn't come to union meetings years ago because I needed to go home and take care of the kids. So, we're trying to make meetings more accessible for people.

Here, single parenthood prevented this mentor from participating in union activities that could have created greater support for her. Some mentors discussed the possibility of on-site childcare as a solution to make union meetings more accessible. Despite childcare not being a person concern for the second mentor, she still emphasized the impact of lacking and inaccessible childcare on tradeswomen's' ability to participate in women's committee activities:

I don't know if we have anything in our member assistance program specifically for women or minorities. We do have our Women's Committee. We try to be pretty active and meet every other month, but getting women involved sometimes can be a struggle because of, I mean, finding a work-life/volunteer balance, it can be really difficult. And then I know that International is working on some daycare stuff, specifically in our local. I don't think we have anything like that. That's really unfortunate. I've been talking about that kind of stuff for years. So it's definitely a benefit we need to talk about. I've brought it up to our boss because I think it'd be really beneficial to have some sort of daycare assistance."

One mentor discussed how day-to-day childcare demands created less time for her to engage in mentoring behavior. Her obligations as a parent, in addition to her work as a tradeswoman, leave little time for her to feel able to contact her mentee in the regular flow of her life:

"Time is always a challenge. Most of the mentors work full-time, if not overtime. Most mentors have after-work obligations as well. For me, I have two kids. Both of them are in sports. We have sports every single day. Plus, you're trying to squeeze in doctor's appointments, dentist appointments, everything else. And so making time for another human being is difficult."

Four mentors also described how the dominant culture of the trades can make it difficult for tradeswomen to feel safe in supporting each other. Some tradeswomen discussed how the masculine culture of the trades creates pressure for women to take on similar characteristics while deemphasizing their identities

as women in order to feel accepted. One mentor described that this breeds a sense of guardedness among her fellow tradeswomen. This extended to this mentor's experience trying to connect to her mentees:

"My overall experience, I've had two mentees, and they were from two different ages and two different backgrounds. And at first, it was a little difficult because women sometimes are standoffish and hard-headed towards each other, which we find that out in relationships even with men or women or whatever. The women always have their guard up. 'Oh my gosh, I just don't want to tolerate other women.' 'I hear you.'"

Here, this mentor describes how the social dynamics between her two different mentees impacted her ability to build a trusting relationship; she describes a fundamental sense of mistrust from one of her mentees. Although this mentor highlights that this can be a dynamic across genders, she emphasizes the idea that not wanting to "tolerate women" has weight and can impact tradeswomen's ability to connect with one another. This connects to other tradeswomen literature that has identified pressure among tradeswomen to conform to masculine culture, demonstrate toughness, and associate less with fellow tradeswomen to be accepted.^{12,36} Another mentor described feeling more comfortable interacting with men, describing specific qualities about women that make her feel uncomfortable building relationships:

Especially starting the union with the background that I have, I am more apt to talk to the guys first. The girls make me nervous. It's hard because, men, they'll beat it out of each other, and then they'll go have a beer, and everything's fine the next day...So it's like I have problems speaking to women. And I don't know. On a job site, you say the wrong thing to a girl...I think that might be the toughest part or some of the toughest parts and the good parts, I think."

This mentor highlights her challenging experiences interacting with fellow tradeswomen on jobsites, noting broader negative gendered behaviors that lead to perceived lack of support and create fear of saying the wrong thing. She carries these feelings of discomfort into her interaction with her mentees, highlighting how the geographic distance between them makes it even more difficult to build a trusting

relationship. Still, this mentor highlights that this is both the “toughest” and best aspect of the mentoring job, suggesting that the work is still rewarding despite her perception of gendered behavior.

Lastly, mentors described lack of time and broader environmental factors as a barrier to participation. One mentor highlighted that the pandemic, the economy, and the fact that many apprentices were out of work could impact the functioning of mentor relationships:

Life. Life. And these last couple of years with the pandemic and just now, like with the economy, and now the way things are very slow, a lot of our people are traveling. So then that might make it a lot harder because there's not a lot of work... So to me, the biggest thing, the biggest hurdle for the program would be just life circumstances.”

This mentor describes how economic and pandemic circumstances create added stressors on workers, creating barriers to engaging in mentorship. These factors complicate tradeswomens’ already-busy lives, making it more difficult to create time to engage in mentoring relationships.. Other mentors described that just getting mentees to participate was a challenge. As one mentor put it:

“Honestly, I just think lack of participation because it can be successful. The tools are there. It's just getting everyone on board to participate, and do the exercises, or the goal setting and all that.”

This mentor highlights that the mentoring resources themselves are helpful and effective– and the challenge is creating the conditions for mentors and mentees to feel able and interested in participating, many of which are systemic resulting from normalization of long working hours and fewer accommodations for workers with families.^{4,11} Given the many competing demands on tradeswomens’ time, this highlights the difficulty of engaging a hard-to-reach, overburdened population for supportive programming.

Discussion

Positive Impacts of Mentorship

To our knowledge, this is the first qualitative analysis of tradeswomen's experiences in a formal mentorship program. Mentors reported that their identities as tradeswomen shaped their motivation to be mentors; positive and negative experiences on the job and a desire to create better support structures for incoming tradeswomen drove them to put in the work to be a mentor. Building mentoring skills in a group environment helped participants gain confidence that they could bring to their individual mentoring relationships, reinforcing concepts by listening to other mentors and using real-life scenarios to practice skills like communication, goal setting, and problem solving. Hearing others' stories also facilitated important insights into how to apply mentoring skills among mentors. Learning how other mentors handled specific situations with mentees gave other mentors a roadmap for approaching conversations in their own relationships with mentees. Mentors also reported that the skills they learned in the training were important in building positive relationships not only with their mentees, but also with other people in their work and personal lives, suggesting that mentoring skills can facilitate the building of personal identity beyond occupational contexts. Communication skills were cited as particularly important to supporting their roles as mentors and other identities beyond the workplace, including those as mothers, partners, and friends. These skills helped mentors develop a toolkit to bring to their work with mentees but also served as an opportunity to engage in self-reflection and personal growth. Interviews also revealed that engagement in the training and mentoring program inspired mentors to become more involved with local tradeswomen-supportive programming. Specifically, mentors felt galvanized to reach out to groups of apprentices, organize impromptu meet ups, and become more active in their women's committees. Although mentorship is considered an interpersonal intervention, this suggests that the impacts of mentoring can fuel organizational and community-level support.

These findings reflect similar conclusions reported in other literature reporting on the impact of mentorship in other occupational contexts. Mentorship programs in educational settings have revealed the positive psychosocial impact of mentorship on mentors²⁵⁻²⁷ Specifically, in a case study reporting on the benefits of the mentor role on a group of university students, Raven et al. found that mentors derived

psychosocial benefits from the role, including feeling a sense of reward in their work by observing the growth of their mentees over time.²⁵ Mentors in that program also reported gaining pedagogical knowledge about the educational challenges facing secondary school students, as well as the development of “transferable skills” such as leadership, problem solving, and organizational skills.²⁵ Furthermore, mentors reported “sociocultural” benefits for mentors, including greater awareness and desire to engage in community-based work outside the mentorship program. Similarly, Austin and Hatt (2005) and Ylonen (2012) reported that mentors experienced self-esteem and confidence, ability to engage in teamwork, enhanced communication skills, mirroring some results from this analysis.^{26,27}

These insights into mentor experiences also shed light on the role of intermediaries in health promotion contexts. Previous research highlights the benefit of intermediary involvement to support small businesses and older adults in integrating worker health initiatives and promoting healthy behavior.^{30,31,34} To our knowledge, no research has reported on the impacts of the intermediary role on intermediaries themselves, highlighting a gap in understanding the broader impact of health promotion programs. The results from this study show that mentors, who function as intermediaries for passing along information and support to their mentees, develop a strong sense of self-identity, learn interpersonal skills that support their own growth and development, and develop confidence to engage in their local-level programming; mentors as intermediaries can positively influence on their environments beyond mentee relationship they are tasked with nurturing.

Barriers to Mentorship

Mentors also discussed specific barriers to participation in the program. These barriers included demands of personal responsibilities like childcare, overall lack of time and capacity, and a dominant masculine culture that can drive mistrust among women workers, which reflect documented challenges women face to participating in the trades. Social tension between tradeswomen has been explored in previous tradeswomen literature: Denissen et al (2014) discusses the gendered social norms of the trades and the pressure of tradeswomen to participate in masculine culture to reduce their own vulnerability by choosing

to associate less with other women on jobsites.¹⁶ Mentors also discussed the impact of COVID-19 and the economy as barriers to engaging with mentees: given that tradeswomen may travel further distances when the construction industry is slow, this can create even less time for tradeswomen to engage in regular mentorship. The pandemic also placed additional strain on individuals and families, which may have made it more difficult to prioritize mentorship.³⁷

Overall, these barriers are similar to those reported in previous tradeswomen literature as barriers to broader participation in the trades. Generally, tradeswomen are less able to take advantage of overtime opportunities due to familial obligations, struggle to make traditional construction trades schedule workable with childcare needs and find themselves out of work more often compared to their male counterparts.³⁸ This suggests that mentoring models that integrate into existing tradeswomen-supportive programming, like women's committee meetings or jobsite toolbox talks, might help alleviate the burden of mentoring work as a separate responsibility to set aside time for. Future research should examine how local-level mentorship is being practiced. Although mentoring has been previously highlighted as a strategy to mitigate some of the gendered hazards of the job, these findings suggest that mentoring cannot be an effective strategy to support tradeswomen on its own. Policy and organizational-level change must accompany grassroots mentoring efforts to break down the gendered and structural barriers tradeswomen face to enter and remain in the trade.

Previous research has characterized individual tradeswomen characteristics necessary to survive and thrive in the trades: tradeswomen exhibit resilience, adaptability, and develop coping mechanisms with little or no structural support from the workplace.¹¹ This analysis contributes a new dimension of tradeswomen's identity in taking on a mentoring role. As mentors, tradeswomen are informed by their own work experiences; they bring their full selves to mentorship, describing their own life experiences when highlighting what motivates them to do the extra work of mentoring, and what they learn about themselves as a result of mentoring. Tradeswoman mentor identity is shaped by a capacity and desire to be reflective, grow through new relationships, and continually put in the work to make the trades a more

supportive space for new women workers. This brings forward a set of social motivations that shape and define what it means to be a tradeswoman in a mentoring context, adding depth to the existing body of tradeswomen literature that focuses on individual survival mechanisms. In developing future tradeswomen supportive interventions, solution-oriented programming should be prioritized; considering social motivations of participants will also be important. The reflections in this qualitative study offer unique insight into the elements of experience that build mentor self-identity for tradeswomen. Social and environmental conditions (such as experience with harassment, the need for resilience, and perseverance to prove yourself competent) shape tradeswomen's understanding and motivation to be mentors. In previous qualitative research, tradeswomen report being passed over for leadership positions because of their gender, told they don't belong on jobsites, and being physically threatened by male counterparts on jobsites.^{4,11,12,16} These inherent threats heighten the significance of mentoring work, which strives to create safety and support for incoming tradeswomen. In bringing defining personal experience to this work, the nature of mentorship becomes more meaningful for women in the construction trades. These insights may provide an important foundation to explore the experiences of mentors among other underrepresented occupational groups.

Strengths and Limitations

Strengths and weaknesses of this research must be noted. First, the inclusion criteria for the parent study required that all participating locals have at least five tradeswomen apprentices to be eligible: the tradeswomen who participated may therefore have come from locals with more supportive workplace culture. The experiences and perspectives of tradeswomen from locals with fewer tradeswomen are not represented here. Second, all tradeswomen participants in this program were represented by SMART International, making the results less generalizable to trades outside of sheet metal and non-union tradeswomen audiences. Third, it is possible that the subset of mentors who agreed to participate in an interview were among those who viewed the training and their experience in the program more favorably, making them more willing to take time to speak about their experience. Reflections in this analysis may

not accurately capture the views of all mentors who participated in the training. Last, we feel it is also important to note that the study coordinator, who conducted these interviews, was an integral part of the mentor training process. She coordinated the scheduling of all training sessions, attended training sessions, and followed up with all mentors before and after the training and throughout the mentorship year. Therefore, it is possible that mentors' perceptions of her role in the implementation of the training may have limited their willingness to be completely forthcoming about their experience, particularly regarding program weaknesses. And potential areas of improvement. On the other hand, it is also possible that familiarity with the study coordinator could have made them feel more comfortable and at ease in the interview. Although these aspects of the research may limit transferability to other tradeswomen populations, the goal of this research was to gain deeper insight into the experiences of participating in this particular program; this analysis provides a starting point for future analyses of tradeswomen experiences in other mentorship programs or tradeswomen supportive programming.

As a hard-to-reach and overburdened group, recruiting 10 tradeswomen mentors for this research is significant. As no research to our knowledge has reported on tradeswomen's experiences in mentorship programs, the insights provided in this analysis contribute novel and important information about the value of mentorship from the tradeswomen perspective. Previous literature has continually called for the development and assessment of tradeswomen supportive programming like mentorship programs (Bridges, Turner, Curtis, Goldenhar). As such, this qualitative exploration provides a starting point for understanding how and why these programs benefit participants, as well as contextual insight into what limits more widespread participation.

Implications for Practice

Based on the barriers mentioned by interviewees, it would be helpful to explore the benefits of integrated mentorship already being practiced at the local level. opportunities into existing tradeswomen supportive programming, including jobsite training opportunities, general union meetings, and women's committee meetings as mechanisms to make mentorship participation more sustainable. Mentorship as a strategy to

support tradeswomen retention and wellbeing must be accompanied with organizational and policy-level change to mitigate barriers to engaging in mentorship and support sustained tradeswomen engagement in the industry.

Implications for Research

Our findings indicate that mentorship has positive effects on mentors, who also function as intermediaries for health promotion among their mentees. Future research should explore peer mentorship models that deliver the benefits of mentor training to a wider cross section of tradeswomen. Future research should also evaluate mentorship models in other trades. Future work should also investigate opportunities to integrate mentorship efforts into existing tradeswomen supportive programming at the local level.

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Appendix I: Interview Guide

Interview Script for Mentors:

Interviewer Introduction:

“Before we begin, I want to let you know that we are conducting this research to better understand tradeswomen’s experiences and perceptions of mentorship, your experience in this program, and what we can do to make the program more effective. I’ll be asking questions about your experiences at work, as a mentor, and what you think is still needed to support tradeswomen at work. Please answer each question to the degree that it feels comfortable. You are welcome to skip any questions that make you feel uncomfortable. Do you have any questions?”

Do you consent to have this interview recorded?

Question 1: Please tell me about your journey to becoming a tradeswoman.

Probe: why did you decide to go into the trades? Has your experience been as you expected or hoped for?
Did you ever think you would end up in a different profession? Why or why not?

Question 2: When you think about what it means to be a woman working in the construction trades, what comes to mind?

Probe: Has this changed over time?

Probe: What is the value of mentorship to you?

Question 3: Why did you decide to become a mentor in the SMART mentorship program?

Probe: Had you ever been a mentor prior to participating in the SMART program?

Question 4: Please describe your overall experience as a mentor in the program.

Probe: What has your overall experience been in terms of time commitment, mentee relationships, and relationships among the mentor cohort?

Question 5: How has your role as a mentor in the Mentoring SMART women program impacted your leadership or confidence, in terms of your own work, as well as supporting other women on the job?

Probe: How has being a mentor in this program changed how you feel as a tradeswoman within your local? On the job site?

Question 7: Based on your experience as a mentor in the Mentoring SMART women program, what do you think are the key characteristics for making the program successful?

Probe: Do you feel the program (currently) has any of these characteristics?

Question 8: What are some challenges that might get in the way of making this program successful?

Probe: What aspects of this program did not work for you?

Question 9: To what degree do you feel that you were able to impart the skills you learned in the mentor training to your mentee(s)?

Question 10: Are there particular issues or challenges faced by women working in the sheet metal trade that are not addressed in the Mentoring SMART Women program?

Probe: If so, what can we do to fix the program to address them?

Question 11: Can you tell me about any other programs designed to support trades women (or other underrepresented groups) at your local such as other mentorship programs, women's committees, work/life balance programs, pregnancy/childcare support?

Question 12: Are there any programs in place at your local designed to support worker mental health or injury risk reduction?

Probe: These could be local specific or union specific programs like safety training or support groups.

Question 13: Can you share your thoughts on the types of policies or programs you think would help get more women to enter and then stay in the sheet metal trade?

Probe: Do you have ideas for that could improve working conditions for tradeswomen?

Question 14: Is there anything else I should be asking about this topic that I have not already asked?

Anything additional you would like to share?

Appendix II: Code Summaries

Code Summaries

Code Category: Behavioral Factors

Nine out of ten mentors discussed behavioral factors, or actions that directly impact mentoring behavior, in interviews. These included performance of mentoring skills and goals for adding new or modifying existing mentoring behaviors. A majority of mentors discussed learning mentoring skills or adjusting their mentoring goals in response to conversations and interactions with other mentors. Mentors discussed behavior skills in the context of passing on skills to a new generation of tradeswomen and a greater purpose towards building leadership among more tradeswomen.

1. Mentoring Intentions

Describes/discusses goals for adding new/modifying existing behaviors as a mentor

Eight mentors described intentions and goals for their roles as mentors. One mentors discussed her intentions through her sense of purpose in the role: “I joined the program to better myself as a mentor. It's really the first time in my life that I've worked with so many women. I'm used to being the only one on the job site...so I was hoping to learn something more, maybe even to better grow my leadership skills as a mentor.” So it was great. Mentors also discussed intentions to self-advocate more in their own jobs. Two mentors discussed their intention to change previous mentoring behavior after talking in a group with other mentors to hear others’ approaches to approaching certain topics with mentees. Two mentors also recounted intentions to reach out to their mentees after being in the training environment with other mentors or receiving reminders from the study team.

2. Skill Development

describes/discusses development and/or performance of mentoring skills

Nine mentors discussed their skill development in the program. About half of mentors' observations about skill development were described through the context of interactions with other mentors through the live training. Three mentors cited that the mentor training was helpful for developing skills if you are not already coming into the training with mentoring experience. Two mentors specifically cited that mentoring skills are life skills; things they practice in their identities as mothers or partners. Mentors talked specifically about the development of active listening skills, goal setting skills, and self-advocacy skills in relation to their own careers: "I had some troubles with my first mentees. But in hindsight, everything that I've learned with this program has helped me move forward and break the barriers of mentor, mentee and really help me reach beyond my own limits...And I really think that has something to do with learning how to mentor, speak to people a little better." One mentor discussed that her practicing communication skills from the training allowed her to carry the skill forward into women's committee meetings. Three mentors also discussed that successful performance of mentoring skills required listening and supporting mentees in breaking down their desired goals into manageable steps and not pushing a certain agenda or course of action.

Code Category: Cognitive Factors

All mentors discussed their individual ability to self-determine their mentoring behavior. This included reflections on confidence in the mentoring role, perceived outcomes of mentorship, their own knowledge of mentorship, and perceived characteristics that enhance tradeswomen's success. Confidence in the mentoring role came up frequently.

3. Confidence in Mentoring

Describes/discusses perceived confidence to perform mentoring role

[Overall notes: confidence enables mentors to perform the skills they learned in the training; confidence as a mentor translates to confidence in life.]

Nine out of ten mentors discussed confidence in mentoring. Four mentors discussed how confidence built from the mentor training process supported their engagement within their locals. 5 mentors discussed confidence in mentoring in relationship to goal setting, and 7 mentors discussed how skills built through the training were helpful not only for mentees but for themselves as mentors: as one mentor described, “It’s just more of having the confidence, setting goals for the goals-- like, okay, setting goals not only for your mentee, but taking that, okay, setting goals and stuff for yourself. And I’m a very shy person.” It took a lot for me to pick up the phone and call. Mentors discussed how it was empowering to build relationships with other women on the job, which bolstered their confidence as mentors. Confidence in the mentoring role allowed them to be more vulnerable, not only with their mentees but with others in work settings. Two mentors discussed that their own confidence allowed them to tune out negative criticism from tradesmen in their locals. A majority of mentors discussed that their perception of other women seeing them as leader built their own confidence in the mentoring role.

4. Mentoring Outcomes

Describes/discusses expected or observed impact of mentoring role

Five mentors discussed perceptions of mentoring outcomes. Three mentors discussed wanting their mentees to see themselves as tradeswomen as a result of the mentoring relationship. As one

mentor noted, “I want them to see themselves in what I’m doing.” Mentors also discussed the desire for their mentees to feel more comfortable opening about their experiences through the relationship. Five mentors discussed the challenge of finding role models as tradeswomen, and the value they perceived in being able to fill that role for newer tradeswomen as mentors. One mentor also discussed that an outcome of her participation in the program was that she was able to more readily engage in her women’s committee: “this has given me the confidence to really start focusing on our women's committee, seeing the impact of talking to some of my mentees and stuff like that, hearing the stories from the other mentors, from their mentees of what they were needing and stuff. So it's given me the confidence to really start pushing our women's committee meeting within our local.”

5. Mentoring Knowledge

Describes/discusses knowledge and/or perceived value of mentorship

Eight mentors discussed knowledge of the mentoring role, and perceived value of the mentoring role. Four of eight mentors discussed that mentoring knowledge overlaps with their knowledge and skillset as partners and mothers. Four mentors discussed being proactive as a mentor as important. All mentors discussed that part of their role is supporting mentees with certain tools; knowing how to communicate and what to tolerate on a jobsite. Half of mentors also emphasized that part of the value of their role is being there to listen to a mentee, rather than to try to change something: “You got to be empathetic to the person when they're scared or they don't trust the situation. You got to be put in their position and then you got to communicate that way. I'll tell you what, you got to be an active listener. Sometimes you just got to learn to be quiet and listen. I've learned that too.” One mentor also highlighted the value of finding mentoring relationships among the cohort, in addition to learning how to support her mentee efficiently: “Because I was

given some skills ahead of time, when I did meet with my mentee, we were able to make effective use of our time. We were able to cut to the chase and get to what we needed to talk about because they were busy too. And then I was able to grow closer with some of the mentors, find mentorship amongst the mentors, support from them as well because they're learning the same things and they're working with mentees as well.

6. Tradeswomen Characteristics

Describes/discusses personal qualities or personality traits important to mentorship and industry success

Overall thoughts: tradeswomen characteristics are adaptive in response to tradesmen norms

Seven mentors discussed tradeswomen's qualities they perceived as important to succeeding in the industry. One mentor described tradeswomen pride: “we are incredibly proud of being tradeswomen. We are incredibly proud of our craft, of the work that we do. Not to bash on our brothers...but a lot of them do that because it's just what they do. It's what their dads did... And they do it because they have to, not because they love it the same way we do. We get into it. And with everything that's thrown our way, we stay in it because of that love that we have.” Other tradeswomen discussed ability to deflect negative feedback, consistency, perseverance, passion and stubbornness as supportive qualities. In most cases, tradeswomen’s characteristics were described in relation to tradesmen, often highlighting the differences between tradeswomen and tradesmen.

Code Category: Environmental Factors

7. Tradeswomen Journey

All ten mentors described their journey to becoming a tradeswoman. Mentors reported become

involved in the trades because of family tradition (4 mentors) learning about it through friends (3), learning and applying through tradeswomen supportive organizations (2) or knowing they were interested in it from a young age (1). While three mentors reported becoming involved in the trades in their teens or early twenties, others made the transition into the trades from other professions or deciding they wanted a more hands on career with good work opportunities: “It was just something to do with my hands. I tried college and didn't love sitting in classroom setting and getting knowledge that way. I'm more of a hands-on. So I thought it would be a good career opportunity. Lots of potential for different options.” One mentor described that she had the opportunity to join an apprenticeship program after being incarcerated. Two women highlighted the need for perseverance and self- confidence to overcome the dominant trades culture that makes it difficult for women to find their place. Mentors described moving from informal trades work to apprenticeship to journey level status; four described leadership positions they now hold as part of their journey (organizer, women’s committee leader, SMART international women’s committee, business rep status). Two mentors reported studying in university settings before joining the trades. One mentor reported moving from a non-union to union position early in her career.

8. On the job experience

describes/discusses range of experience on the job, including social interactions and physical tasks

Seven mentors described their own experiences on the job as tradeswomen. All reflections of on-the-job experience were framed through a gendered lens, and mentors’ personal experience on the job was at the forefront of their perceptions of their roles as mentors. Two tradeswomen described working with unsupportive men on jobsites, contributing to negative workplace

experiences and the promotion of harmful stereotypes, such as women being weaker than men. One mentor described this as part of a “culture problem.” Another mentor described that she encountered a tradeswoman earlier in her career who she described as bitter from enduring so many years of harassment—the mentor described that she did not want this to happen to her. Two mentors highlighted that they got to work supportive male allies on their jobsites, which made their on-the-job experience more positive. Another described that the conditions on her jobsite, which included better bathrooms, well-fitting PPE, and women in positions of power, were integral to creating a better experience on the job. Two tradeswomen also discussed how important it is to not stand for poor treatment on jobsites, and that working for “companies that care” about tradeswomen is important. Another mentor described that her willingness to tell harassers that she will escalate an issue of need is an important skill.

9. Collective Efficacy

Describes/discusses how cohort supports mentoring confidence

Seven mentors discussed how the presence of other tradeswomen in the mentor training enhanced their experience in the program. As one mentor said, “It’s helped me a lot. Just talking and hearing the stories from other mentors gave me a lot of confidence, it helped me a lot.” Every mentor who discussed collective efficacy in some capacity did so through the lens of hearing stories from other mentors through the live training sessions; two highlighted getting to learn through observation of other mentors in the live training sessions. One mentor described that she was able to find a kind of mentorship from other mentors because they shared a common experience and faced similar circumstances. One mentor discussed that she was more able to take on leadership roles as a result of the support she received through the training.

10. Barriers to mentoring

Describes/discusses how the physical and/or social environment make mentoring challenging

All ten mentors described diverse barriers to engaging in mentorship. Barriers discussed were both structural and social. Two mentors discussed that having mentees out of state made it difficult to connect regularly; one mentor discussed that due to the wide geographic spread of her own local, matching mentors and mentees would be challenging. The pandemic was cited by one mentor as a factor that prevented her from fully engaging. One mentor also discussed lack of support for unions in her area as an issue.

Four mentors discussed lack of time as a central barrier; being a single parent, having familial and childcare responsibilities, and working overtime were highlighted: “Time is always a challenge. Most of the mentors work full-time, if not over time. Most mentors have after-work obligations as well. For me, I have two kids. Both of them are in sports. We have sports every single day. Plus, you're trying to squeeze in doctor's appointments, dentist appointments, everything else. And so making time for another human being is difficult.” Two mentors discussed personality mismatch between mentor and mentee as a challenge. Two mentors also cited lack of response from mentees. One mentor also discussed that when things were going well for her mentee, it was difficult to find things to talk about. One mentor highlighted life circumstances, including being out of work, as a barrier for mentees connecting with their mentors.

11. Barriers to Industry Success

Describes/discusses aspects of experience in the industry that prevent tradeswomen from being able to fully participate in the trade

Six mentors described barriers to succeeding in the industry for tradeswomen. Four discussed harassment as a barrier to staying in the trades long-term; two discussed men's stereotypical perceptions of tradeswomen as weak or that they receive special treatment on the job as challenging. Two mentors discussed how the expense and lack of inclusive hours for childcare gets in the way of tradeswomen being able to be parents and return to work if they have children, and especially if they are single parents. One mentor discussed the hypocrisy of her local discussing the importance of work life balance while tradeswomen work 60-hour weeks on “mega projects” and how this makes it challenging for tradeswomen with families to handle the competing demands of work and participate in women’s committees. One mentor cited the need for culture change and accountability to increase tradeswomen participation and empowerment: “I just think holding other trades accountable for their actions and people not being reprimanded or retaliated against for reporting actions, harassment, discrimination. That shift needs to happen. We need that culture change...one of our business reps and I put together a survey a few years ago because I was really interested in getting and retaining women because I went through that whole experience....and if I remember correctly, a lot of the results were culture was the reason that a lot of women didn't stay. Being treated so differently in the field when we're here just to do the same job as everyone else.” One mentor discussed that tradeswomen are not readily invited to project management meetings that can support the development of future foreman. The same tradeswoman reported that negative comments on social media from fellow tradesmen have negative mental health impacts. On a broader level, one mentor who sits on the international women’s committee cited that many locals don’t respond to inquiries about tradeswomen participation, even though this outreach is designed to better understand the needs of locals. She was concerned that locals perceived contact about tradeswomen participation as a sign that they

might be doing something wrong.

12. Opportunities for Mentoring

describes/discusses how the physical, social and individual factors facilitate mentoring

Overall thematic notes: this code has more connections to impact of the program on mentors and connects more to how the overall culture of the trades and personal experience of mentors influences facilitators to mentorship

Six mentors discussed how the social or physical environment facilitates mentoring. Two mentors cited their development of communication skills within the group training context as allowing them to have fluency and directness in their interaction with mentees. Two mentors also discussed developing awareness of their knowledge of the field, and how it could help others, as supportive to their mentoring capacity; one mentor went on to say that knowing how much mentorship could have helped her motivated her to do the same for others. Other facilitators were structural; three mentors discussed the importance of mentee interest and engagement to make mentorship work, and one mentor discussed that her previous role as an informal mentor supported her stepping into a formal mentorship role. One mentor described how the social dynamics of the program impacted her ability to mentor, but also her own development as a tradeswoman: “Working inside this mentoring program and getting feedback from my mentees, getting feedback from other sister members, taught me how to listen to the positive comments and the positive feedback. If I expected my mentees to ignore the naysayers and to listen to the positive stuff, I should probably have practiced what I preach. And so teaching them was also teaching me to try to silence the noise.”

13. Social support for mentoring

describes/discusses perceptions of support, encouragement in mentorship (could include instrumental, informational, or emotional support)

Seven mentors described social support for the mentoring role. Of these, three mentors described social support for mentoring within the context of committees or organizations designed to help tradeswomen. One mentor described allocation of small, manageable tasks, including those related to mentorship, among her women's committee to build confidence and leadership skills among tradeswomen in her local. One mentor discussed that she attended a union meeting with a friend to see what the trades were all about before she joined. One mentor described that mentorship programs create support for tradeswomen by showing tradeswomen that they are not "out to get each other." Conversely, another mentor described that other women on her jobsite gave her the confidence and support to know she could be an effective mentor: "Hearing the applause or the good commentary about me and my skills makes me want to be better. So it gave me self-confidence listening to the other women on the job site think of me as somebody that they could look up to."

14. Representation

Describes/discusses importance of tradeswomen representation and visibility for tradeswomen and/or mentorship success

Eight mentors discussed the importance of tradeswomen participation and representation to improving the environmental conditions for tradeswomen. Two discussed the power of growing participation in the Tradeswomen Build Nations Conference and the value of other tradeswomen seeing so many people they can relate to in one place. Another mentor discussed how representation fuels women's committee involvement: "I think I've seen a big change lately in

the participation since we started the women's committee with them going to union meetings and stuff like that. You're starting to see them taking what we're learning at the women's committees, like get involved in your union, go to union meetings and stuff is a big thing. That way, they're seeing you.” Five mentors discussed the importance of tradeswomen in leadership positions; 4 highlighted the power of younger women coming into leadership roles as valuable to improving conditions for tradeswomen. One discussed that poor representation in her local led her to leave the trade for 3 years. One mentor discussed the power of sponsorship to integrate informal mentoring into the work process by bringing more women into meetings on worksites. One mentor discussed being placed at a woman-owned company as important to her success early on.

15. Tradeswomen-supportive policies

Describes/discusses potential policies or programming that that could improve tradeswomen wellbeing

Four mentors described tradeswomen supportive policies that could help tradeswomen enter or remain in the trades. One mentor described the value of local-level women’s committees as a mechanism for helping tradeswomen feel supported and more able to stay in the trade: “There's so much value to be held in these women's committees. Even if they don't have the same structure as ours has, simply offering the support, the natural mentorship, the kinship helps keep women from leaving when they know they're not alone.” One mentor also discussed the value of lean in circles and small-scale mentorship programs. Four mentors discussed the power of Tradeswomen Build Nations, an annual conference that brings together tradeswomen from across trades. One mentor shared about the value of the conference in context of other programs that build trust among tradeswomen: “And then going to the conference, it was kind of a lot of camaraderie. The girls got together. We got to know each other. So I mean, programs where we

can get together and just show that we're not out to get each other.” One mentor also emphasized that a new, younger generation of trades leaders will also facilitate positive policy change. Two mentors discussed the need for paid parental leave, and three mentors discussed the need for inclusive childcare options that open early enough to accommodate tradeswomen schedules.

16. Union resources

Describes/discusses existing union resources that can benefit tradeswomen

All ten mentors described a variety of existing union resources that support tradeswomen's wellbeing. Eight mentors discussed the value of women's committees at their locals and of those eight, six discussed the value of mentorship programs (either the SMART mentorship program or their own local-specific programs) as tradeswomen supportive resources. One mentor described that her local sends a welcome letter to new apprentices and pre apprentice women telling them about their women's committee upon entry into the local. Six mentors described mental health resources offered by their locals through their member assistance programs. Two mentors described an international-level resource called B4All that is designed to make the trades more welcoming for underrepresented groups and create a protocol to deal with jobsite problems. One mentor noted the value of lean in circles, and one described the OSHA training as an injury prevention program. One mentor described a substance use rehab program offered through her local, and one described jobsite toolbox talks as an injury prevention program. One mentor described a program called TOPS, which gives prospective apprentices the opportunity to learn about the work you do in different trades, which helps prospective tradeswomen decide which trade might be the right fit before committing.

Code Category: Program Qualities

17. Areas for Improvement

describes/discusses elements of program or training that were unhelpful or did not support mentoring work or suggests elements that could enhance program/training experience

All 10 mentors described ways the program and/or training did not meet their needs or could be improved. Two mentors discussed that having mentees who were out of state made it difficult to engage. Two additional mentors added that general lack of mentor engagement generally created barriers to successful mentoring relationships. Two mentors spoke to this through the lens of mentor/mentee matching. Two stated that being matched with mentees who were from out of state made their job more difficult: “Probably personality matching with similar geographic area. It seems to have been the key for me. The people in other states that I got assigned never got back to me. I don't know if that had to do with time zones or culture. I don't know.” The other mentor emphasized that her matches in the second round were more successful because she was matched to mentees who lived closer to her.

Two mentors recommended that the program be better integrated with state and local level resources to better harness existing union resources and reach more participants; another pointed out that it was difficult to get the word out to potential mentors before it was too late. Regarding the training, two mentors noted that there was a need for in-person training, with one citing that zoom is a challenging platform on which to speak up; another mentor highlighted that the zoom option increased ability to attend training sessions. One mentor reported that it was difficult to navigate and return to the online training; another reported that better digital access to the mentor

handbook would have been helpful. Two mentors spoke to the content of the training. One recommended more emphasis on home life and mental health than mentoring strategies specific to the workplace, because jobsites change so regularly for tradeswomen; the other recommended more training on how to respond to workplace violence. Another mentor said that it would have been helpful for the mentors to meet more frequently into the mentorship year.

18. Successful characteristics

describes/discusses elements of the training or program that supported mentoring behavior

Nine mentors discussed aspects of the program and training that supported their experience in the program. Six mentors stated that the structure of the program was supportive to their learning and mentoring behavior, with three stating that it was helpful as someone with no prior mentoring experience. One highlighted that the skills she learned were important for her own career. Seven mentors highlighted the importance of practicing skills with other mentors in live training sessions, and two noted that goal setting was particularly helpful. One stated that it helped her work efficiently with her mentee, and two felt that the breakout sessions were a helpful tool for group practice. One mentor spoke about how the training gave her the confidence to be more vulnerable with mentees: “It's been really good. It was eye-opening, going through the trainings that we did before we did the actual hands-on, I guess you can say, talking with them. So that was very helpful and stuff with that and kind of helped me got the confidence to be able to do that and share my stories with them and stuff.”

Four mentors discussed that the tools from the training supported their work in their women's committees, with one mentor highlighting that mentorship helped her become more engaged with other tradeswomen and fight the urge to “go home and hide away and not do anything.”

Five mentors highlighted that the check ins from the study team were helpful for keeping them on track and reaching out to their mentees: “The training, definitely. Not that I've needed to take advantage of it, but the ability to email you guys and ask questions. And the check-ins are like, "Hey, you're not just out in the wilderness doing your own thing. We actually remember that you exist, and you are a part of this program, and you're not just on autopilot on your own. That's really nice.” Two mentors felt that having multiple options for the live zoom training sessions were helpful; and one highlighted that the training facilitator created an environment that welcomed people to engage and created space for respectful feedback. One mentor cited that the skills learned in the training are important not just for tradeswomen, but men and workers outside of the sheet metal trade.

Appendix III: Codebook

Code Category	Code	Definition	Quotes/examples of when to apply	Notes
Cognitive Factors <i>Individual ability to self-determine mentoring behavior</i>	1. Confidence in mentoring	Describes/discusses perceived confidence in ability to perform mentoring role	<i>Definitely all the way through life of all situations, not just work. I think the mentorship program helped me to think about how to approach everything in life a little bit.</i> <i>And if you were to come up against a little block between you and the mentee, the way y'all had it laid out and categorized made it a lot easier for us as the mentor. And then, like I said, in my personal life, it helped me to understand how to navigate more or even strengthen my skills.</i>	Connected most closely with self-efficacy Frequently talks about how confidence in mentoring skills translates to confidence in life skills
	2. Mentoring Outcomes	Describes/discusses expected or observed impact of mentoring behavior	<i>I wanted people to feel that they could try...to do this, or they can do this. I want them to see the demographic. I want them to see themselves in what I'm doing. And then, two, I wanted to make sure that my mentee or any mentee doesn't have to make the same mistakes that I did, or they just feel a little bit more comfortable about opening up communication so they can navigate their path. - Mentor 1</i>	Sometimes feels difficult to distinguish from mentoring outcomes (behavioral)

	3. Mentoring Knowledge	Describes/discusses knowledge of mentorship and/or perceived value of mentorship	<i>You got to be competent, competent on what you're teaching, competent on what you know, competent on everything, life in general. You got to be empathetic to the person when they're scared or they don't trust the situation. You got to be put in their position and then you got to communicate that way. I'll tell you what, you got to be an active listener. Sometimes you just got to learn to be quiet and listen. I've learned that too. Don't listen to answer, but listen to just listen, be an active listener. - Mentor 3</i>	
	4. Tradeswomen Characteristics	Describes/discusses qualities or personality traits specific to tradeswomen success	<i>Power, owning your power, not hiding behind society's idea of women. I don't like to be like everyone else. I like to be different. And I probably take a little bit of pride in bringing difference. But definitely, owning power, I think that that's huge. I really try to encourage other women to do the same. But to own your power but also be humble and still advocate for yourself. It's a weird dance, I think. --Mentor 5</i>	
	Behavioral Factors <i>Actions that directly affect mentoring behavior</i>	5. Mentoring skill development Describes/discusses skills performed in mentoring role	<i>Like I said, overall, it's been a really good experience and very helpful. Giving me the tools to not only talk to the mentees that I had in the study, but also within our local, reaching out to pre-apprentices and apprentices and checking in on them, so. - Mentor 6</i>	

	6. Mentoring intentions	Describes/discusses goals for adding new/modifying existing behaviors as a mentor	<i>And that's probably part of the growth stuff, too, is somebody asking the question and me recognizing it and being like, "Ah, shit. Yeah, okay. Yeah. I need to call this person and do this."</i>	
Environmental Factors <i>How the perceived physical and social environment promotes and discourages engagement in mentoring</i>	7. Social support for mentoring	Describes/discusses perceptions of support, encouragement in mentoring role (instrumental, informational, or emotional)	<i>A mentor for me would have been incredibly impactful. Even just somebody to call and bitch about stuff. Excuse my language, but to call and vent and be like, "Yo, this happened." And then them be able to like, "Actually, I had a similar thing, and this is how I handled it, but it might not have been the best way, but what I learned from it was this." And so I think that would have been extremely, extremely useful for me. And then also helping our membership progress and grow and grow out of the old-- just getting it out of the good old boys club days.</i>	This can be mentors helping other mentors, mentors' previous mentors when they were apprentices—some overlap with collective efficacy
	8. Collective Efficacy	Describes/discusses how mentor cohort supports mentoring confidence	<i>And then I like the check-ins where we were able to check in and talk with the other mentors. So you can kind of hear what they're going through and everything. And you're able to hear their stories and say, "Oh, okay. Kind of know if, okay, that's how they handled that situation." So something like that came up, kind of had an idea of how to handle it or whatever.</i>	

	9. Barriers to mentoring	Describes/discusses ways in which the physical, social environment make mentoring challenging	<i>So to me, the biggest thing with the program would be just life itself because I don't think it's too much of a combat with the mentor or the mentee because technically, it's all volunteer. So if you don't want to have a mentor, then you wouldn't join the program or you would say, "No, thank you. I'm not interested." So to me, the biggest thing, the biggest hurdle for the program would be just life circumstances.</i>	These can also be personal versus environmental
	10. Opportunities for mentoring	Describes/discusses ways in which the physical, social environment facilitate mentoring	<i>I think it's the way they're brought into the school is the culture is now, "You don't talk to women that way," or, "You don't say those things in front of women." And it's a zero tolerance. And if they get that drilled in-- the males get it drilled into their head as apprentices going through when they become journey people, they're more respectful to everyone. So I think that aspect we have going well for us.</i>	Can include culture shift and other more indirect mechanisms that make mentoring easier

	11. Union resources	Describes specific existing or needed union program or resources that support tradeswomen	<i>As far as mental health and stuff like that, they have been doing trainings through our international-- it's member assistance program trainings. So once a year, they go through and they hold different areas within 104 trainings for all the representatives and any of the foremen or superintendents that want to go through the training. So they're really concentrating on the mental health and all that stuff, talking about it at union meetings and letting them know that there is the support out there and stuff like that and starting to let them know about the different programs that - [SMOHIT], I believe is how you say it - that we have through our international has for that. -- Mentor 2</i>	- this code is wide reaching and often includes SMOHIT, EAPs, mental health resources, women's committees
	12. Tradeswomen journey	Describes/discusses pathway and motivations to becoming a tradeswoman	<i>Oh, fine. So when I was 19, I was working two jobs. I think I had been out of high school for right around a year. And my dad is actually-- he was a union member. I think he joined the union the year I was born, actually. But he worked for a really small company, and their apprentices had turned out and so they needed a new apprentice. And so the company owner asked my dad, "Hey, do any of your daughters want to join?"</i>	Discussed potential to make motivation a separate code Elements of this code could belong in cognitive factors

	13. On the job experience	Describes/discusses range of experience on the job, including social interactions and physical tasks	<i>My journey has been a little bit different. I've been actually very blessed with the people that I've worked with, I can say kind of my mentors. A lot of them have been guys. So when I got on as apprentice, the shop foreman was willing to teach, and the journeyman. So to me, it's pride, I guess you can say.- Mentor 6</i>	
	14. Representation	Describes/discusses the need or value for tradeswomen representation, and/or mechanisms to improve tradeswoman experience, representation	<i>Because in Indiana, women are not-- there's not a lot of women in Indiana. And that's because they're not pushing forewomen. There's nothing saying women, let's go to trades in Indiana. It's different for different states, so I'm not sure what type of programs would be good. We're not getting our name out there. - Mentor 3</i>	
	15. Barriers to industry success	Describes/discusses aspects of experience in the industry that prevent tradeswomen from being able to fully participate in the trade	<i>"Oh, you don't want to lift up that piece of pipe. Oh, you can't pick it up." And then it's like, "I'll show you." And then I hurt my finger doing it. And it's like, oh my pride just went down the door, but I don't want to let them know that, hey, all these things are frustrating me right now. And if I had picked it up properly, if I didn't have these things to think about. I'm like, but you can't really do that. You just kind of shut down and shut your mouth. - Mentor 3</i>	

	16. Tradeswomen-supportive Policies	describes/discusses potential policies that could improve tradeswomen health, retention, and/or safety	<i>So I truly believe in the women's committees. There's so much value to be held in these women's committees. Even if they don't have the same structure as ours has, simply offering the support, the natural mentorship, the kinship helps keep women from leaving when they know they're not alone. There's someone there who will care for them, which is what I thought I'd be as a mentor, just being someone to care for someone else. Getting the sister members from the women's committee to go to the career fairs with the JTCs, with their organizers, also helps encourage the young women to apply. So getting them in the door-- the women help other women get in the door, and then the women help the other women stay. So just women's committees. Support them and fund them.</i>	
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Program Qualities <i>How the design or implementation of the program facilitated mentor development, engagement</i>	17. Successful characteristics	Describes/discusses elements of program or training that supported mentoring behavior	<i>So the way she [M] definitely just it made it fun and interacting. And like I said, the write-ups that you had, it played well to have something to see. Because when I first was asked to be a mentor with before your program, it was to mentor a young lady that was already part of 28 through the local, but it wasn't as structured as the SMART Program to where we had something to visually look at and refer to and have a little group session where we could sit around as the mentors, with the mentees, with the program administrators for us to-- it didn't have that. So I think that that's a very good thing as well.</i>	
	18. Areas for improvement	Describes/discusses Elements of program or training that were unhelpful in engaging in mentoring behavior or suggests changes that could enhance program/training experience	<i>But if even we could have gotten together maybe a little bit more frequent or maybe a more closer touch base, which kind of would help us actually keep touching base with the mentee because I also remember with me, it took a few months before we actually connected for the very first time. And then, like I say, sometimes when life is life, and if you don't hear it or see it, it might slip your mind until then I'll see your name come up on the phone. I'm like, "Oh, my goodness. I haven't even spoken to this girl since last month. Let me reach out again."</i>	