Suicide Prevention Practices for Ironworkers

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CPWR THE CENTER FOR CONSTRUCTION RESEARCH AND TRAINING

Addressing Suicide and Opioid Risks in Construction: CPWR's Approach

Construction workers in the United States face a mental health crisis: their suicide rates are twice the national average and they account for over one in six opioid overdose deaths.

CPWR is leading a *Research and Action Agenda on Suicide, Mental Health and Opioids* focusing on three objectives:

1. **Tackling Root Causes:** Addressing upstream, work-related factors that contribute to mental health struggles and substance use.
2. **Breaking Down Barriers:** Ensuring workers have access to essential treatment and recovery resources
3. **Enhancing Support Systems:** Strengthening services, programs, and policies to support workers facing mental health and substance use challenges.

CPWR partners with North America's Building Trades Unions (NABTU), fourteen international union representatives, employers, building trades council representatives, insurers, and government partners to share successful strategies for preventing suicide and opioid deaths, address common challenges, and put knowledge into action through training, health programs, member services, and communications. Subscribe to our free quarterly newsletter REASON (Resources and Effective programs Addressing Suicide and Opioids Now) for updates and materials.

CPWR funded five small studies to advance knowledge and action on suicide prevention and opioid overdose. This report highlights one such study.

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A. Abstract and Key Findings

Suicide rates among ironworkers are among the highest in the construction industry, necessitating targeted prevention strategies. This study explores two key approaches: (1) employer-led suicide prevention practices and (2) the effectiveness of LivingWorks ASIST and safeTALK training. A modified Delphi survey identified three high-priority employer-led interventions: integrating mental health education into safety training, conducting active follow-ups with employees at risk, and equipping workers with suicide prevention skills. The evaluation of ASIST and safeTALK training demonstrated significant improvements in suicide awareness but no sustained changes in emotional well-being, suggesting that one-time training alone may not be sufficient. The study emphasizes the need for long-term mental health initiatives tailored to ironworkers' occupational stressors. Findings highlight the role of employers in creating supportive environments and integrating structured mental health interventions into workplace safety protocols. Future research should assess the long-term implementation and impact of these strategies within the industry.

Keyword: Ironworkers, Suicide Prevention, Mental Health, Workplace Safety, Training Programs.

B. Introduction

The construction industry is facing a mental health crisis, with suicide rates among construction workers significantly higher than those in the general population. Suicide claims approximately 700,000 lives globally each year—one every 40 seconds (Tyler et al., 2022). In the United States, male construction workers have a suicide rate 75% higher than men in the general population, according to the Centers for Disease Control and Prevention (CDC), 2023. In 2022, an estimated 6,000 construction workers died by suicide, marking an increase from the previous year and vastly outnumbering the approximately 1,000 construction-related fatalities from work-related injuries (CDC, 2023). Globally, similar trends are observed, with construction workers consistently demonstrating elevated risks of suicide compared to other occupational groups (Chan et al., 2020). In Australia, for instance, the suicide rate among construction workers is double the national average (Gullestrup et al., 2011). Similarly, in the United Kingdom (UK), the construction industry recorded 1,419 suicides between 2011 and 2015, which is 3.7 times the UK national average (Burki, 2018). While these statistics are not entirely surprising—given that suicide rates are generally higher among males (Hare et al., 2023; Ross et al., 2022), and the construction industry

is predominantly male (Turner et al., 2017)—they signal a need for increased consideration of which factors affect this behavior and which mitigations may effectively prevent suicides among construction workers.

Construction workers face unique psychosocial and physical stressors that contribute to their heightened suicide risk. Specific antecedents to stress that especially manifest among this population include excessive alcohol consumption and drug use (Flannery et al., 2021; Sawicki & Szóstak, 2020), relationship problems (Milner et al., 2019), low job control, high psychological demands (Martin et al., 2016; Milner et al., 2019), low social support, and work-family conflict (Ross et al., 2022). Additionally, the construction industry is characterized by a dynamic and often unstable work environment involving frequent project changes, high turnover rates, job insecurity, and the pressure to meet tight deadlines, all of which further exacerbate mental health challenges (Turner et al., 2017). As a result, studies show that work-related stress can lead to higher risks of depression, anxiety, suicidal thoughts, and—ultimately—suicide among construction workers (Chan et al., 2020). Furthermore, these intensified stressors conceivably drive the prevalence of mental health issues—including conditions that affect thinking, mood, and behavior—which compounds the suicide risk within this workforce (NIMH, 2024a).

Studies show mental illness rates differ among various trades, with the specific rates often linked to specific stressors associated with a work environment (Tijani et al., 2021; Xu et al., 2022). Within the construction industry, such trades as ironwork, carpentry, and plumbing exhibit varying prevalence rates of mental illness and suicidal thoughts (Tijani et al., 2021)—with suicidal thoughts defined as thinking about, considering, or planning suicide (NIMH, 2024b). Among these trades, ironworkers face significant mental health challenges due to the physically demanding and hazardous nature of their work. Hafeli (2022) established that ironworkers have the highest suicide rates in the United States' construction industry, at 5.7 times the national average, and Guo et al. (2015) noted severe stress among ironworkers in China, leading to violent incidents. High chronic work stress, exposure to toxic substances, noise, ionizing radiation, and vibration—each of which have been linked more or less to such various health problems as hypertension and cancers (Li Jun et al., 2014; Park et al., 2005)—make ironworkers particularly susceptible to mental health issues and suicidal thoughts (Guo et al., 2015).

Despite recognizing these risk factors, there remains a significant gap in effective suicide prevention strategies tailored specifically to job conditions within the construction industry. Several studies have investigated various suicide risk factors and prevention strategies for construction workers, but these are generally generic and not targeted for specific work conditions or trades (Bowles et al., 2019; Grauke, 2002; Nwaogu et al., 2023; Tsutsumi, 2021). Given each trade has unique job characteristics, stressors, and risk factors influencing mental health outcomes (Chan et al., 2020), the inability to generalize findings from these studies to specific trades within the construction industry therefore represents a significant limitation. For instance, the physical demands, exposure to hazardous conditions, and job instability experienced by ironworkers are different from those faced by carpenters or plumbers. Therefore, interventions effective for one trade may not be applicable or effective for another, necessitating targeted research addressing the specific needs and conditions of each trade. Given the high rates of suicide and mental health issues among ironworkers, targeted research into specific work conditions or trades is particularly important. This study fills this gap by focusing on ironworkers, who face significant psychological impacts due to hazardous work conditions.

C. Research Objectives

Given the heightened mental health risks and suicide rates among ironworkers, this study (1) identifies and ranks employer-led best practices in suicide prevention specific to ironworkers, and (2) evaluates the effectiveness of the LivingWorks ASIST and safeTALK program for ironworkers. By addressing these objectives, the study provides targeted insights to inform more effective and tailored suicide prevention strategies within the construction industry, thereby ultimately improving mental health and safety outcomes for ironworkers.

D. Methodology & Results

i. Identification of Employer-led Good Practices

To achieve Aim 1, this study employed a Delphi-based methodology with three primary tasks: *Literature Review and Expert Selection* to identify initial practices, *Data Collection* via a Delphi survey to refine expert consensus, and *Data Analysis* to assess reliability, to rank practices, to measure variability, and to confirm consensus. Statistical tools included Shapiro-Wilk and Cronbach's alpha for reliability, median ranking, standard deviation and median absolute

deviation for variability, and Kendall's W with Chi-square tests for consensus validation. Figure 1 presents this structured approach.

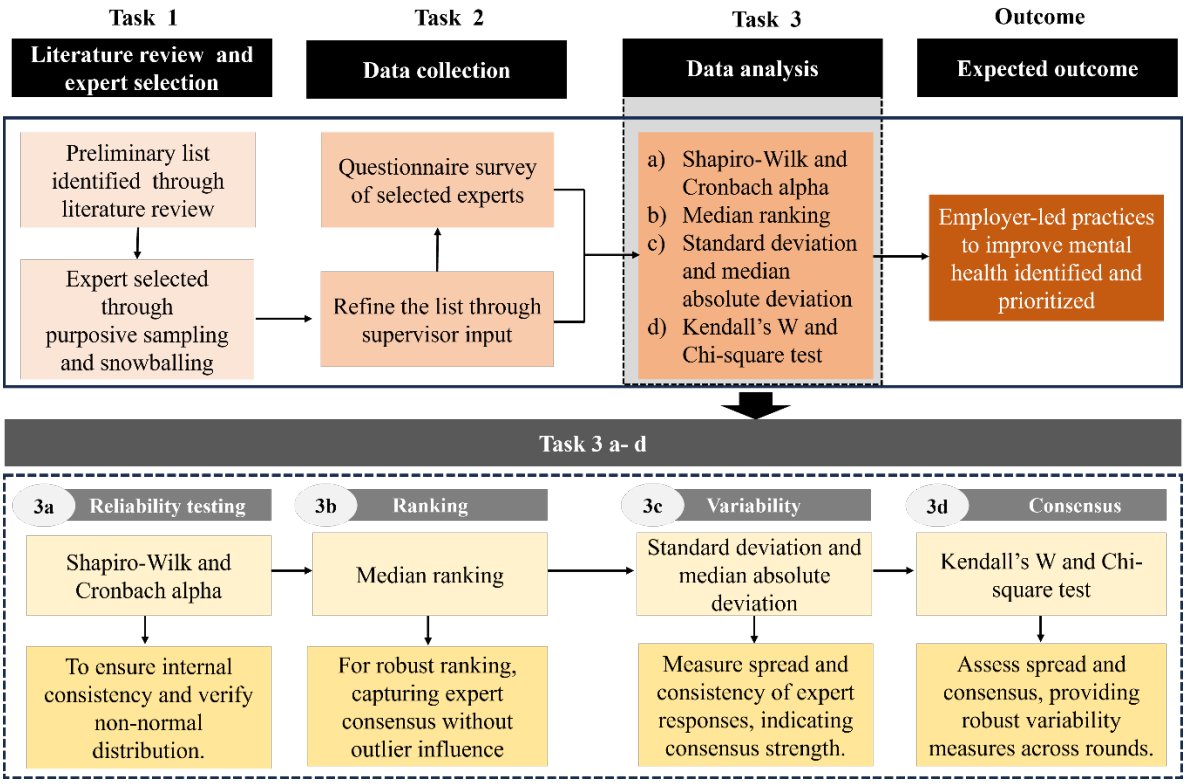

Figure 1: Methodological framework (Aim 1)

- **Preliminary identification of construction employer practices**

The study began with a comprehensive literature review to identify an initial list of employer-led practices meant to improve mental health. Such a method provides a broad foundation by aggregating previous findings—ensuring the study is grounded in existing research—and helps uncover patterns and gaps within the literature. Seventeen employer-led practices were identified through this review. Then, to explore additional practices not found in the literature and to reduce redundancy and overlap among the identified practices, five construction experts provided feedback on this list using semi-structured interviews. These experts were selected for their combined academic and practical ironwork experience (Table 1)—following the methodology of a previous construction study (Adetooto et al., 2022)—and they did not participate in the final Delphi questionnaires (described below) to avoid skewing the data.

Table 1: Demographic information for the expert participants

Code	Position	Professional licensure	Year of experience in Construction and Iron works
P1	EHS Director	CSHP Level 5	25 years
P2	Safety manager	-	20 years
P3	Director of safety and health	Certified Safety Professional (CSP)	30 years
P4	Safety engineer	Safety and Health Management	30 years
P5	Safety engineer	Safety and Health Management	30 years

Table 2: The refined list of employer-led practices

Code	Employer-led practices	References
A1	Educate employees on how to detect suicidal signs, initiate an appropriate conversation, then refer them to help centers.	(Dean, 2021; Milner et al., 2019; Ross et al., 2020; Tijani et al., 2023)
A2	Engage in role-playing exercises on identifying signs of suicide contemplation and how to intervene during a mental health crisis.	(de Groot et al., 2015; Ross et al., 2014)
A3	Active follow-up from employers with employees who have experienced a recent workplace injury or a suspected suicide attempt.	(Gullestrup et al., 2011; Milner et al., 2019; Tyler et al., 2022)
A4	Incorporate education on symptoms of common mental health conditions and substance use disorders as a part of employee safety training.	(Ross et al., 2014; Tijani et al., 2023)
A6	Initiate team-building exercises among employees to increase collaboration, employee relations, and/or sense of belonging.	(Nwaogu et al., 2023; Obayashi, 2016)
A7	Implement injury management and return-to-work programs to assist employees in safely returning to work after a period of illness or injury.	(Iles et al., 2020; Jain et al., 2021)
A9	Discuss the importance of mental health during work meetings and communications.	(Mann et al., 2021)

Code	Employer-led practices	References
A10	Require counseling after a failed drug test instead of being laid off to prevent employees from experiencing financial hardship and further substance use.	(Roelofs et al., 2021)
A11	Promote conversation surrounding mental health and help-seeking through a stand-down or a guest speaker.	(Chan et al., 2020; Nwaogu et al., 2023)
A14	Provide employees with a tangible item (e.g., token, bracelet, hard hat stickers) that provides words of encouragement and the suicide prevention hotline number.	(Dean, 2021; Gullestrup et al., 2011; Guo et al., 2015)
A15	Limit how often employers can make overtime or work-related travel mandatory in a calendar year.	(Doran et al., 2015; Maple et al., 2020)
A16	Educate staff on managing various facets of discrimination (gender, race, religion, sexual orientation, etc.) to improve attitudes and knowledge regarding personal differences.	(Gullestrup et al., 2023; Roelofs et al., 2024; Ross et al., 2020)
A17	Implement a zero-tolerance policy for certain bullying, sexual harassment, and discrimination behaviors.	(Hafeli, 2022; Roelofs et al., 2024; Ross et al., 2020)

The experts assessed the relevance and appropriateness of the employer-led practices for improving the mental health of ironworkers. Their validation enabled the research team to refine and reduce the list to thirteen employer-led practices (Table 2). This combination of a thorough literature review and expert interviews provided a robust, evidence-based approach for identifying the most relevant and effective practices to improve mental health among ironworkers.

- **Delphi Panel**

Following expert interviews, the refined list of thirteen employer-led suicide prevention practices underwent a three-round modified Delphi survey. To ensure the quality and relevance of the expert panel, a purposive sampling technique was employed, which is commonly used in Delphi studies to enhance the validity and reliability of the results by selecting participants with relevant expertise (Ameyaw et al., 2016; Hallowell & Gambatese, 2010). The panelists were recruited from LinkedIn, ironworker unions, and local construction sites, and they represented such roles as

ironworkers, foremen/superintendents, safety managers, and project managers. The recruitment criteria were carefully established to ensure a diverse and knowledgeable panel: (1) each participant needed to have a minimum of 10 years of construction experience to ensure he/she had a substantial enough background to make informed judgments (Olawumi & Chan, 2019; Olawumi et al., 2018); (2) the sample of participants included individuals with experience holding a mix of roles to provide diverse insights, as studies have shown that panels with heterogeneous backgrounds yield a more balanced and comprehensive view of the issues (Spickermann et al., 2014); and (3) the research team preferentially recruited experts with experience in mental health initiatives or suicide prevention, given the study's specific focus on mental health practices (Hoshuyama et al., 2006). Sixteen experts initially expressed interest, and thirteen were selected based on these criteria, aligning with recommendations that suggest Delphi panels should consist of 8-20 members to ensure manageability while enhancing the robustness and validity of findings (Ameyaw et al., 2016; Hallowell & Gambatese, 2010).

The Delphi survey involved three rounds, conducted via Qualtrics, with each round estimated to take 10 to 20 minutes. The decision to use three rounds was informed by research indicating that 2-3 rounds are typically sufficient to reach consensus without overburdening participants (Gunduz & Elsherbeny, 2020; Olawumi et al., 2018). Several measures were implemented to minimize biases and ensure the credibility of the findings: (1) anonymity was maintained throughout the process to prevent the influence of dominant personalities or social pressures, which could otherwise skew responses; anonymity is a critical feature in Delphi studies, as it allows participants to express their views freely without fear of judgment, thereby ensuring honest and unbiased feedback (Hallowell & Gambatese, 2010). (2) Feedback was provided after each round, including median ratings and summaries of responses from the previous rounds; this iterative feedback mechanism enabled participants to reconsider their responses based on the aggregated feedback, helping to reduce discrepancies and align opinions toward a consensus (Gunduz & Elsherbeny, 2020). (3) All panelists received the same set of standardized descriptions for the practices being evaluated, ensuring that they were making judgments based on consistent information; this measure helped maintain internal validity and minimize bias due to differing interpretations (Hallowell & Gambatese, 2010).

In the first round, the thirteen identified practices were presented to the panelists, who rated their effectiveness on a 5-point Likert scale, from "Not at all effective" to "Extremely effective." For the second round, participants were provided with individualized surveys showing their initial ratings alongside the group median. They were then asked to either maintain their original response, accept the group median, or change their rating. If their new response differed by more than one point from the median, they were required to provide a justification, encouraging thoughtful consideration of the ratings (Gunduz & Elsherbeny, 2020). In the third and final round, the updated median scores were calculated based on the feedback from the second round. Panelists received a summary of outlier responses and justifications from the previous round to guide their final ratings. This structured approach ensured that significant disagreements were addressed systematically, allowing for convergence toward a consensus (Olawumi & Chan, 2019).

The Delphi panel included a diverse group of experts, with safety managers (46%), foremen (23%), superintendents (15%), ironworkers (7%), and project managers (7%). Over half (54%) had prior experience with mental health initiatives in construction, ensuring a comprehensive perspective on suicide prevention strategies. Data analysis was conducted using SPSS 28.0, with the Shapiro–Wilk test confirming the non-normal distribution of responses, justifying the use of non-parametric methods (Adetooto & Windapo, 2022). Cronbach's alpha values exceeded 0.7, indicating strong internal consistency. The ranking of employer-led practices was based on median scores, a robust measure for Delphi studies that minimizes the impact of outliers (Karakhan et al., 2023). Variability was assessed using standard deviation and median absolute deviation, ensuring a reliable measure of expert agreement (Karakikes & Nathanail, 2020). Kendall's W increased across rounds, reaching moderate agreement levels, while chi-square tests confirmed statistically significant shifts in consensus (Olawumi et al., 2018; Weeks & Leite, 2022).

- **Findings**

The Delphi panel identified key employer-led suicide prevention strategies, with increasing consensus across three survey rounds (Table 3). The highest-ranked practices included incorporating mental health education into safety training, active follow-up with injured employees or those suspected of suicide attempts, and educating employees on recognizing suicidal signs. These practices consistently demonstrated effectiveness, with decreasing variability

in expert ratings over the rounds. Injury management and return-to-work programs also emerged as critical strategies, reinforcing the importance of structured employer support for at-risk workers.

The lowest-ranked practices, including role-playing for suicide intervention and team-building exercises, showed consistently lower median ratings and higher variability, indicating weaker expert agreement on their effectiveness. As the Delphi process progressed, consensus strengthened, reflected in an increase in Kendall's W from weak to moderate agreement. Standard deviation and median absolute deviation measures confirmed improved alignment among panelists, particularly for the highest-ranked practices. Chi-square tests further validated the statistical significance of these shifts, ensuring that changes in consensus were not random but a result of iterative expert deliberation.

The findings underscore the importance of employer-driven interventions in addressing mental health challenges among ironworkers. Mental health education, structured follow-ups, and return-to-work programs were identified as the most impactful strategies, with strong expert support and statistical validation. The results provide clear guidance for prioritizing workplace initiatives that enhance suicide prevention efforts in high-risk industries like construction.

Table 3: Result for Delphi surveys, ranked by Round 3's highest impacting employer-led practice for preventing suicide among ironworkers, along with statistical analysis results.

Code	Round 1				Round 2				Round 3			
	Median	**SD**	**Median ranking**	**MAD**	**Median**	**SD**	**Median ranking**	**MAD**	**Median**	**SD**	**Median ranking**	**MAD**
A4	4.00	1.656	4	1.00	4.00	1.044	2	1.00	4.00	.947	1	1.00
A3	4.00	1.391	1	1.00	4.00	.913	1	1.00	4.00	1.038	2	1.00
A1	4.00	1.450	2	1.00	4.00	1.092	3	1.00	4.00	1.068	3	0.00
A7	4.00	1.502	3	1.00	4.00	1.266	4	0.00	4.00	1.092	4	0.00
A17	3.00	1.441	10	1.00	3.00	0.899	5	0.00	3.00	0.899	5	1.00
A11	3.00	1.320	8	1.00	3.00	1.166	10	1.00	3.00	.927	6	1.00
A16	3.00	1.235	7	1.00	3.00	.927	6	0.00	3.00	0.927	7	1.00
A15	2.00	1.109	11	1.00	3.00	.967	7	1.00	3.00	0.927	8	1.00
A10	3.00	1.115	5	1.00	3.00	1.013	8	0.00	3.00	.987	9	0.00
A14	3.00	1.188	6	1.00	3.00	1.144	9	1.00	3.00	1.092	10	0.00
A9	3.00	1.405	9	1.00	3.00	1.182	11	1.00	3.00	1.166	11	0.00
A2	2.00	1.450	12	1.00	2.00	1.121	12	1.00	2.00	.961	12	1.00
A6	2.00	1.725	13	1.00	2.00	1.330	13	1.00	2.00	1.050	13	1.00
Cronbach's (α)	0.921				0.930				0.932			
Number of respondents	13				13				13			
Kendall's (W)	0.136				0.353				0.411			
Consensus level	Weak				Weak				Moderate			
Chi square	28.200				55.012				64.064			
Degree of freedom	12				12				12			
Significant level	0.008				< 0.001				< 0.001			

ii. Evaluation of LivingWorks ASIST and safeTALK

o Methods

To achieve Aim 2, this study utilized a longitudinal methodology to assess the impact of the LivingWorks ASIST and safeTALK suicide prevention training on suicide awareness and emotional well-being among ironworkers. Data were collected at three stages: before the intervention (pre-intervention), immediately after (post-intervention), and during follow-up. This survey was selected to capture both the immediate and long-term effects of the training on suicide awareness and emotional well-being, thereby providing a thorough assessment of the intervention's sustainability. Longitudinal designs are well-suited for examining trends over time in intervention studies, enabling researchers to observe changes in knowledge, behaviors, or attitudes that extend beyond short-term impacts (Willett & Singer, 2003). Figure 2 provides a visual summary of this structured methodology.

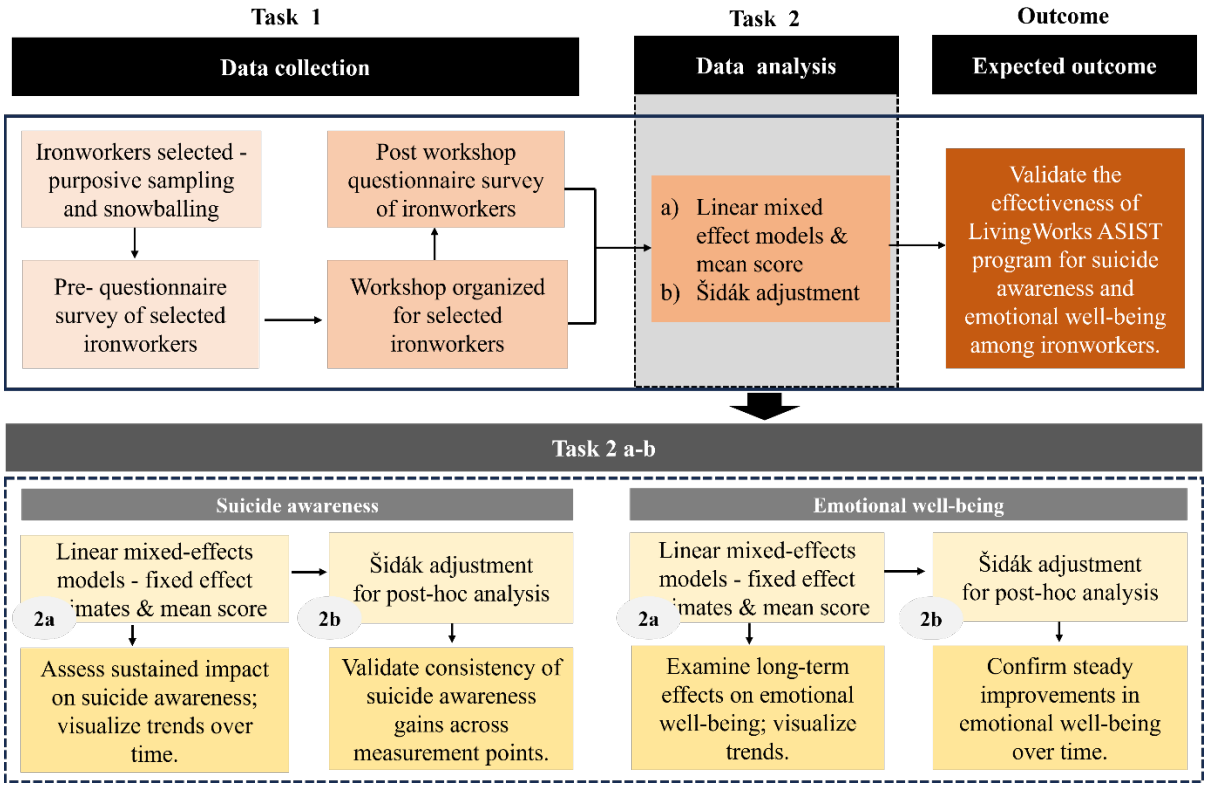

Figure 2: Methodological framework (Aim 2)

Training program

LivingWorks ASIST and safeTALK program were selected as the intervention due to its demonstrated efficacy in high-risk industries, including its application in construction environments to address suicide prevention and mental health challenges (LivingWorks, 2024). The program began with safeTALK, a three-hour session focused on building foundational suicide awareness by training participants to recognize warning signs such as verbal, behavioral, and situational cues and connect at-risk individuals to appropriate resources. This was followed by ASIST, a two-day intensive workshop designed to develop advanced intervention skills, including trust-building, dispelling myths about suicide, and collaboratively creating detailed safety plans. Delivered as a unified framework, safeTALK enhanced early detection capabilities, while ASIST provided participants with practical tools for effective intervention.

As shown in Figure 3, this combined framework was implemented with twelve ironworkers in Indianapolis, Indiana, aiming to improve suicide literacy, emotional resilience, and help-seeking behaviors. The approach aligns with recommendations for structured, skills-based mental health training tailored to the unique challenges of workers in high-risk environments like construction. The effectiveness of this unified framework was assessed collectively, reflecting its integrated nature in addressing both early detection and advanced intervention needs.

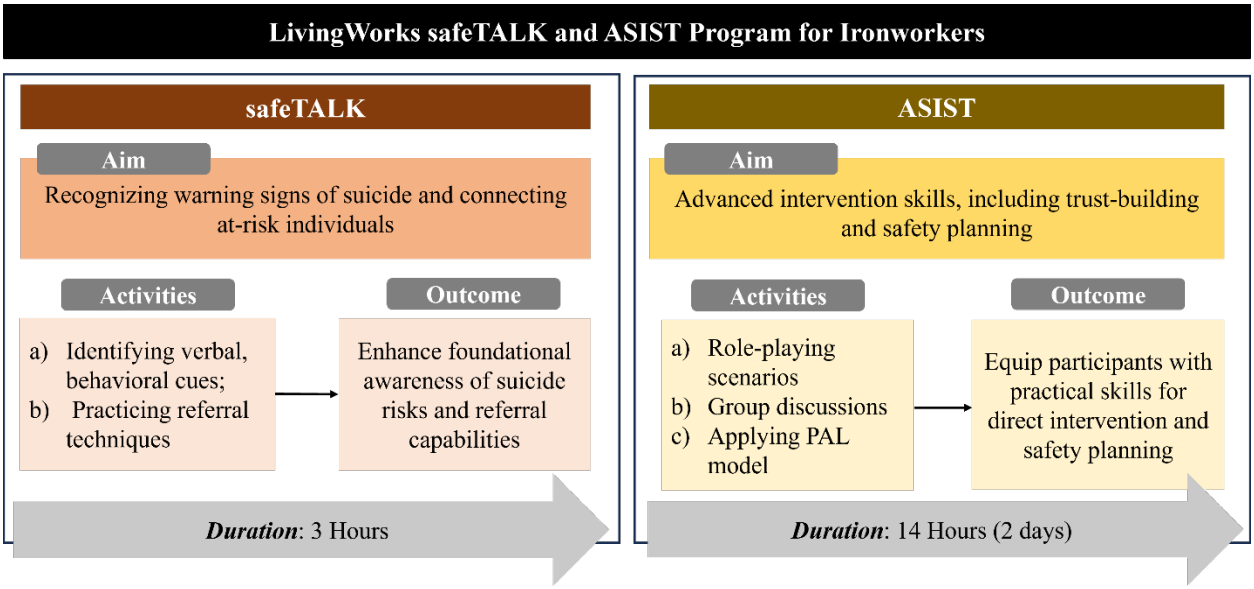

Figure 3: LivingWorks ASIST and safeTALK program

Sampling and data collection: pre-, post-, and follow-up surveys

Given the sensitivity of mental health in high-risk professions, the research team used surveys (Appendix 1, 2 and 3) to collect data, since surveys provide anonymity, which promotes honest responses regarding stigmatized topics (Milner et al., 2014). Initial recruitment involved fourteen participants, with fourteen completing the pre-intervention survey, eight providing responses during the intervention phase, and four providing responses during follow-up. Although response rates declined over time—a known limitation in longitudinal studies—the sample size across each phase provided critical insights into both short-term and ongoing impacts of the training (Willett & Singer, 2003). The purposive sampling approach, often used to enhance the depth of findings in specific populations, was instrumental in ensuring that participants had relevant experience in ironwork, which adds validity to the collected data despite reduced sample sizes in later phases (Ameyaw et al., 2016). Efforts to mitigate response attrition, such as follow-up reminders, were incorporated, though participant dropout is a common challenge in multi-stage studies. This approach underscores the importance of longitudinal research designs in capturing nuanced shifts over time in mental health interventions tailored to high-risk sectors

Statistical analysis approach

In keeping with the approach described above, the statistical analysis during Aim 2 employed LMM as the primary technique; LMM is suitable for longitudinal studies due to its ability to account for both within-subject correlations (repeated measures) and between-subject variability (differences across participants), allowing for the accurate assessment of individual changes over time (Ariyo et al., 2020; Jiang, 2018; Wang et al., 2010). Mean scores for each time point (Pre, Post, and Follow-up) were also reported to provide a descriptive overview of the trends observed in suicide awareness and emotional well-being across time. Including mean scores adds clarity to the analysis by visually representing participant trends, complementing the inferential findings obtained through LMM.

LMM's capacity to handle missing data by assuming data are missing at random was particularly beneficial given the dropout rates from post-intervention to follow-up, ensuring all available data were utilized without excluding participants with incomplete observations. To improve model accuracy, participant ID was included as a random intercept to account for individual differences

at baseline, and model fit was optimized by comparing covariance structures, with the unstructured (UN) structure selected as the best fit based on -2 Res Log Likelihood and Akaike's Information Criterion (AIC) (Wang et al., 2010). Sensitivity analyses using multiple imputation techniques addressed potential biases from missing data, confirming the consistency of the results and the appropriateness of using LMM (Zhao et al., 2006). Post-hoc analyses applied the Šidák adjustments to control for the risk of Type I errors due to multiple comparisons, ensuring reliable conclusions with an alpha level of 0.05 (Zhao et al., 2006). This combination of longitudinal design, LMM, sensitivity analysis, and Šidák adjustments provided a robust framework for evaluating the LivingWorks ASIST and safeTALK program's impact on suicide awareness and emotional well-being, making the findings statistically sound and suitable for informing mental health interventions in the construction industry.

- **Findings**

Suicide awareness

The LivingWorks ASIST and safeTALK training program demonstrated significant improvements in several dimensions of suicide awareness among ironworkers, as revealed by the Linear Mixed-Effects Model (LMM). The statement *"Asking a co-worker if they are having suicidal thoughts can increase his/her risk of suicide"* (B1) exhibited significant changes, $F(7.143) = 76.889$, $p < .001$, with mean scores decreasing from Pre (2.54) to Post (1.87) and Follow-up (1.75). This result indicates that the training effectively enhanced participants' understanding that discussing suicidal thoughts does not increase risk, addressing a critical misconception in suicide prevention.

Similarly, *"People considering suicide often send out warning signs or invitations"* (B2) showed significant improvement, $F(7.773) = 126.327$, $p < .001$, with mean scores increasing from Pre (3.46) to Post (4.25) and stabilizing at Follow-up (4.00). This highlights the program's success in increasing recognition of suicide warning signs, an essential skill for early intervention. Additionally, the statement *"I would notice if a co-worker was having a tough time and ask how he/she was doing"* (B6) showed significant improvement, $F(3.262) = 323.756$, $p < .001$, with mean

Table 4: Fixed effect estimates for suicide awareness

S/n	Suicide awareness	Time			Suicide Exposure			Time* Suicide Exposure		
		F	df[1]	P	F	df[1]	P	F	df[1]	P
B1	Asking a co-worker if they are having suicidal thoughts can increase his/her risk of suicide	76.889	7.143	<.001	.998	11.944 - 1	.338	1.066 - 1	12.211	.322
B2	People considering suicide often send out warning signs or invitations	126.327	7.773	<.001	.585	10.348	.461	.022	10.381	.885
B3	Suicide is a serious problem in the iron work trade *	.699	8.567	.523	.000	10.077	.985	.007	8.482	.938
B4	If I was struggling with mental health issues, I would be willing to ask for help	109.939	5.878	<.001	1.262	20	.275	.046	20	.833
B5	If I was struggling with mental health issues, I would know who I would talk to, in order to get help *	3.662	8.646	.070	.044	10.292	.837	1.003	8.912	.409
B6	I would notice if a co-worker was having a tough time and ask how he/she was doing	323.756	3.262	<.001	.280	7.799	.611	403	6.926	.546
B7	If I knew a co-worker was struggling then I would be willing to offer help *	0.706	5.200	.706	.474	3.971	0.529	0.044	3.772	.845

Table 5: post-hoc estimates for suicide awareness

S/n	Suicide awareness	Pre –Post			Pre to follow up			Post to follow up		
		Mdiff	p	95% CI	Mdiff	p	95% CI	Mdiff	p	95% CI
B1	Asking a co-worker if they are having suicidal thoughts can increase his/her risk of suicide	0.745	0.328	[-0.538, 2.027]	0.882	0.031	[0.084, 1.680]	0.137	0.987	[-1.153, 1.428]
B2	People considering suicide often send out warning signs or invitations	-0.954	0.412	[-2.782, 0.874]	-0.585	0.736	[-12.357, 11.187]	0.369	0.735	[-1.191, 1.929]
B3	Suicide is a serious problem in the iron work trade	-	-	-	-	-	-	-	-	-
B4	If I was struggling with mental health issues, I would be willing to ask for help	-0.205	0.946	[-1.476, 1.065]	-0.230	0.893	[-1.217, 1.758]	-0.025	1.000	[-1.487, 1.438]
B5	If I was struggling with mental health issues, I would know who I would talk to, in order to get help	-	-	-	-	-	-	-	-	-
B6	I would notice if a co-worker was having a tough time and ask how he/she was doing	-0.731	0.184	[-1.800, 0.338]	-0.864	0.064	[-1.794, 0.067]	-0.132	0.941	[-1.077, 0.812]
B7	If I knew a co-worker was struggling then I would be willing to offer help	-	-	-	-	-	-	-	-	-

Note: * = post-hoc not conducted as fixed effects showed no significance (P > 0.005)

Table 6: Mean value across time.

S/n	Suicide awareness	Time (Mean values)		
		Pre	Post	Follow-up
B1	Asking a co-worker if they are having suicidal thoughts can increase his/her risk of suicide	2.54	1.87	1.75
B2	People considering suicide often send out warning signs or invitations	3.46	4.25	4.00
B3	Suicide is a serious problem in the iron work trade	4.00	4.38	4.50
B4	If I was struggling with mental health issues, I would be willing to ask for help	3.54	3.75	3.50
B5	If I was struggling with mental health issues, I would know who I would talk to, in order to get help	3.46	4.13	4.50
B6	I would notice if a co-worker was having a tough time and ask how he/she was doing	3.77	4.50	4.75
B7	If I knew a co-worker was struggling then I would be willing to offer help	4.31	4.75	5.00

scores increasing from Pre (3.77) to Post (4.50) and Follow-up (4.75). This result demonstrates the program's effectiveness in improving participants' ability to identify and address signs of distress in co-workers, a critical aspect of workplace suicide prevention.

Conversely, some items showed limited or no significant change. For example, *"Suicide is a serious problem in the ironwork trade"* (B3) had F (8.567) = .699, p = .523, with mean scores increasing slightly from Pre (4.00) to Post (4.38) and Follow-up (4.50). This result may reflect a high baseline awareness among participants, leaving minimal room for measurable improvement. Similarly, *"If I was struggling with mental health issues, I would be willing to ask for help"* (B4) showed significant fixed effects, F(5.878) = 109.939, $p < .001$, but mean scores only slightly fluctuated from Pre (3.54) to Post (3.75) and Follow-up (3.50). This suggests that willingness to seek help may not have been substantially impacted by the intervention, possibly due to deeply ingrained stigma or other barriers to self-help. The incorporation of safeTALK training, which focuses on recognizing and connecting individuals at risk to resources, might have strengthened participants' awareness but may not have sufficiently addressed the cultural or systemic barriers that discourage help-seeking behaviors.

The post-hoc analysis, adjusted for multiple comparisons using the Šidák adjustments, provided further insights into pairwise differences across time points. For *"Asking a co-worker if they are having suicidal thoughts can increase his/her risk of suicide"* (B1), a significant improvement was observed between Pre and Follow-up (Mdiff = 0.882, p = 0.031), reflecting a sustained understanding of the safety of discussing suicidal thoughts over time. This underscores the program's effectiveness in correcting critical misconceptions. For *"I would notice if a co-worker was having a tough time and ask how he/she was doing"* (B6), pairwise comparisons showed trends toward significance between Pre and Follow-up (p = 0.064). Despite this, the steady increase in mean scores suggests meaningful progress in participants' ability to recognize distress among co-workers, reinforcing the value of peer-to-peer support in workplace suicide prevention.

In contrast, items such as *"People considering suicide often send out warning signs or invitations"* (B2) and *"If I was struggling with mental health issues, I would be willing to ask for help"* (B4) did not exhibit significant pairwise differences despite their significant fixed effects. This discrepancy may be attributed to high variability in responses or consistently high baseline scores, particularly for B2, where participants already demonstrated strong recognition of warning signs prior to the training. This strong baseline awareness could be linked to prior exposure to safeTALK, which emphasizes recognizing and responding to warning signs, equipping participants with foundational skills before attending the more advanced ASIST program.

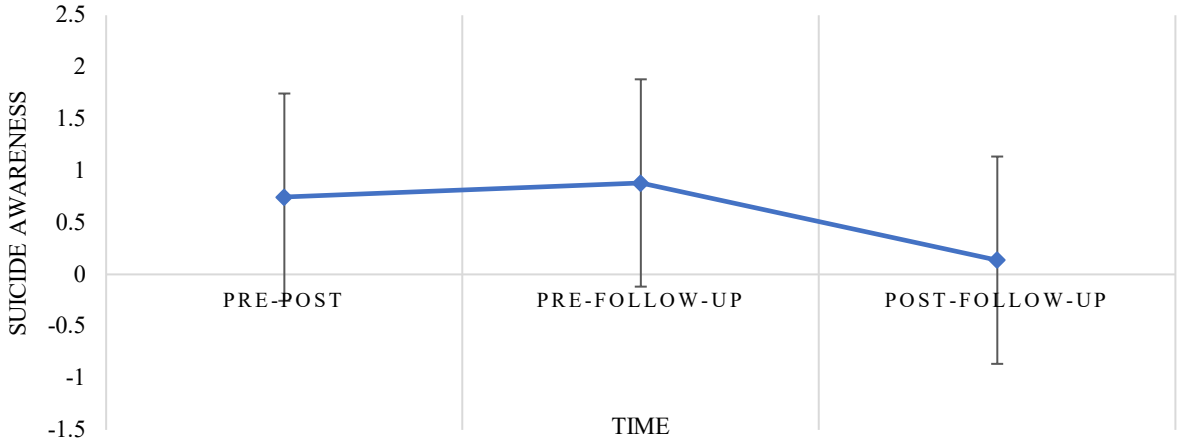

Figure 4: Marginal mean estimate

Emotional well-being

The analysis of emotional well-being following the LivingWorks ASIST safeTALK training program did not reveal statistically significant changes across time points. The fixed effects results for the question, *"How would you rate your emotional well-being?"*, showed no significant variation over time, $F(2.346) = 20$, $p = .122$, despite fluctuations in mean scores: Pre (4.31), Post (4.88), and Follow-up (4.50). These findings suggest that while participants reported a short-term improvement in emotional well-being immediately after the training, this gain was not sustained at the Follow-up stage. Additionally, suicide exposure—whether participants knew someone who had attempted or died by suicide—did not have a significant effect on emotional well-being, $F = .072$, $p = .791$, nor did the interaction between time and suicide exposure, $F = .450$, $p = .510$.

E. Discussion & Relevance of Findings

i. Identification of Employer-led Good Practices

The three rounds of this study's modified Delphi survey highlight experts' consensus and ranking of employer-led practices for suicide prevention among ironworkers. The highest-ranked practices—such as " *Incorporate education on symptoms of common mental health conditions and substance use disorders as a part of employee safety training."* (A4), " *Active follow-up from employers with employees who have experienced a recent workplace injury or a suspected suicide attempt* " (A3), and " *Educate employees on how to detect suicidal signs, initiate an appropriate conversation, then refer them to help centers."* (A1)—reflect strategies with direct relevance to the mental health challenges in the construction industry. The emphasis on integrating mental health education into existing safety protocols is consistent with prior research showing the benefits of a comprehensive approach to safety, which includes psychological well-being (Obayashi, 2016; Zalsman et al., 2016). These findings align with previous studies emphasizing the need for mental health training as part of workplace safety programs, as it addresses both mental and physical health risks (Mann et al., 2021).

The consensus around lower-ranked practices, e.g., "*Role-playing for suicide intervention*" (A2) and "*Team building exercises*" (A6)—suggests that experts found such practices less directly impactful for preventing suicide in the ironwork context. The lower ranking of these practices may be attributed to the preference for interventions that offer more immediate and measurable

outcomes, such as active follow-ups and structured mental health education (Dean, 2021). The findings underscore the complexity of addressing mental health in high-risk occupations, where interventions must be tailored to the unique stressors and safety requirements of the job (Gullestrup et al., 2011).

The gradual increase in consensus across rounds, reflected in the reduced variability and improvement in Kendall's W, indicates that expert agreement was strengthened by the iterative Delphi process. The final consensus supports the prioritization of practices that integrate mental health awareness into routine safety measures, an approach known to reduce stigma and encourage help-seeking behaviors (Flick, 2011). The statistical significance of changes in chi-square values across rounds further suggests that the observed shifts in consensus were meaningful and informed by the panelists' reassessment of priorities.

The practical implications of these findings are significant for the construction industry, particularly for enhancing mental health support among ironworkers. The ranking of practices such as integrating mental health and substance use education into safety training and conducting active follow-ups for employees who have experienced injuries or suicide attempts suggests a need for employers to adopt a more holistic approach to workplace safety. By embedding mental health education into existing safety protocols, organizations can normalize mental health discussions, reduce stigma, and foster a supportive environment that encourages early intervention. Additionally, the focus on proactive measures—e.g., active follow-ups—ensures that workers receive ongoing support, which can be crucial in preventing crises from escalating. Lower-ranked practices, while still valuable, may serve as complementary strategies rather than primary interventions. The findings indicate that to be effective in the U.S. context, employer-led initiatives should emphasize practical, direct actions that can be integrated seamlessly into daily safety routines, thereby maximizing both employee well-being and workplace productivity.

ii. Evaluation of LivingWorks ASIST and safeTALK

The LivingWorks ASIST and safeTALK training program significantly enhanced suicide awareness among ironworkers by improving participants' understanding of key prevention concepts. The statement, *"Asking a co-worker if they are having suicidal thoughts can increase his/her risk of suicide,"* showed substantial changes, reflecting improved understanding that such

discussions do not increase suicide risk. Addressing this misconception is crucial in fostering a supportive workplace culture, reducing stigma, and enabling open conversations about mental health (Isaacs, 2020; Rihmer & Rutz, 2021). Similarly, participants demonstrated greater awareness of behavioral cues through the statement, *"People considering suicide often send out warning signs or invitations,"* underscoring the program's success in equipping ironworkers to identify and respond to distress signals. These improvements align with findings by Hafeli (2022) highlighting the importance of recognizing warning signs in high-risk industries like ironwork, where early intervention can prevent crises in demanding work environments. The training also promoted peer-to-peer support, as reflected in the statement*, "I would notice if a co-worker was having a tough time and ask how he/she was doing."* This underscores the program's role in strengthening interpersonal connections, which are critical in addressing mental health challenges in high-stress industries characterized by physical hazards and long hours(Fernandes, 2024; Rainbow et al., 2024). Encouraging co-workers to recognize and act on signs of distress fosters a culture of care and accountability, echoing Roelofs et al. (2021) findings on the positive impact of peer support in reducing isolation.

The analysis of emotional well-being following the program revealed limited impact, consistent with previous studies indicating that short-term interventions often produce minimal sustained improvements without broader structural support (Kraiss et al., 2022). Emotional well-being, influenced by individual and situational factors, may require comprehensive approaches, including ongoing mental health initiatives and workplace policies addressing job insecurity, physical strain, and isolation (Gullestrup et al., 2011). Additionally, the use of a short-term assessment metric (e.g., "today") may not fully capture broader emotional trends, as responses are likely to fluctuate daily. Addressing these limitations necessitates holistic strategies that integrate long-term mental health support into workplace environments, fostering sustained psychological resilience among ironworkers.

The findings have several important implications for suicide prevention strategies in the construction industry, especially for ironworkers. The significant improvements in suicide awareness indicate that the LivingWorks ASIST and safeTALK training programs can effectively enhance participants' knowledge about suicide risks, warning signs, and available resources. Such findings suggest that incorporating similar trainings into workplace safety protocols may help

normalize discussions about mental health, reduce stigma, and potentially encourage help-seeking behaviors. These outcomes are crucial for creating a supportive work environment, where employees are more willing to engage in preventative actions and support colleagues who may be struggling. However, the lack of significant change in emotional well-being implies that raising awareness alone may not be enough to substantially improve mental health outcomes. This limitation highlights the need for additional support mechanisms, such as ongoing mental health resources, peer support groups, or more frequent follow-up training sessions. Employers may need to implement a more holistic approach, addressing not only suicide awareness but also providing resources that directly target emotional health and resilience.

F. Conclusion

This study examined targeted suicide prevention strategies for ironworkers, a high-risk trade with one of the highest suicide rates in the construction industry. Two key approaches were explored: employer-led best practices and the effectiveness of LivingWorks ASIST and safeTALK training. The modified Delphi survey identified three high-priority employer-led interventions: (1) integrating mental health education into routine safety training, (2) conducting active follow-ups with employees at risk due to workplace injuries or suicidal warning signs, and (3) equipping ironworkers with the skills to recognize and respond to co-workers in distress. These findings underscore the importance of employer-driven interventions in fostering a workplace culture that prioritizes mental health awareness and proactive suicide prevention measures. Lower-ranked interventions, such as role-playing exercises and team-building activities, while still beneficial, were considered supplementary rather than primary strategies for suicide prevention in this workforce.

The evaluation of the LivingWorks ASIST and safeTALK training demonstrated statistically significant improvements in suicide awareness among ironworkers. Participants showed enhanced understanding of key suicide prevention concepts, particularly in dispelling misconceptions and recognizing early warning signs. However, emotional well-being did not exhibit sustained improvement over time. This outcome does not indicate a failure of the intervention but rather aligns with existing research suggesting that single-session training may not be sufficient to produce lasting emotional resilience. Given the physically demanding and high-stress nature of

ironwork, additional long-term employer-supported mental health initiatives—such as structured peer support programs, ongoing education, and recurring training—may be necessary to reinforce and sustain the program's benefits.

Several limitations must be acknowledged when interpreting these findings. The study's small sample size and participant attrition over time limited the statistical power of longitudinal comparisons, reducing the generalizability of the results. Additionally, while this study identified employer-led suicide prevention practices, it did not assess how employers implement these interventions in real-world ironworking environments or their long-term effectiveness in reducing suicide risk. Future research should examine how ironworker employers integrate mental health practices into routine safety protocols and assess their impact on workforce well-being and suicide prevention over time.

While this study provides valuable insights into suicide prevention strategies tailored to ironworkers, the conclusions must remain within the scope of the study's methodology. The findings do not assert a direct mitigation of suicide risk but instead highlight the potential of employer-led initiatives and structured training programs to enhance suicide awareness and create a more supportive workplace culture. Future research should refine assessment instruments, expand sample diversity, and investigate the long-term effectiveness of comprehensive workplace mental health initiatives tailored to the unique occupational stressors faced by ironworkers.

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Appendix I

Ironworker Suicide Prevention - Pre-Training Survey

Demographics

Introduction Thank you for choosing to attend our LivingWorks safeTALK and ASIST training sessions. Our Purdue research team would like to assess your suicide literacy before the training. This information will help to improve the experience for all future attendees. Please read and answer all questions. This survey should take about 10-minutes to complete. All identifiable information will be deidentified after receiving the follow-up survey, 2 months after the training. To connect your answers to the three surveys, input a code using the first letter of your last name and your birth month.

1. What is your gender?
   a) Male
   b) Female
   c) Non-binary / third gender
   d) Prefer not to say

2. What is your ethnicity?
   a) Caucasian
   b) Black or African American
   c) American Indian or Alaska Native
   d) Asian
   e) Native Hawaiian or Pacific Islander
   f) Hispanic/Latinx
   g) Prefer not to answer
   h) Others _____

3. What is your age? _____

4. What is your current zip code? _____

5. Do you know someone who died by suicide?
   a) No (21)
   b) Yes
6. Do you know someone who attempted suicide?
   a) No
   b) Yes

End of Block: Demographics

Start of Block: Suicide Literacy

7. Now you will be asked to answer questions assessing your thoughts on asking for help when you or a co-worker are having a hard time. Please read each question carefully and answer to the best of your ability. "Asking a co-worker if they are having suicidal thoughts can increase his/her risk of suicide"
   a) Strongly disagree
   b) Somewhat disagree
   c) Neither agree nor disagree
   d) Somewhat agree
   e) Strongly agree

8. "People considering suicide often send out warning signs or invitations"
   a) Strongly disagree
   b) Somewhat disagree
   c) Neither agree nor disagree
   d) Somewhat agree
   e) Strongly agree

9. "Suicide is a serious problem in the iron work trade"
   a) Strongly disagree
   b) Somewhat disagree
   c) Neither agree nor disagree
   d) Somewhat agree
   e) Strongly agree

10. "If I was struggling with mental health issues, I would be willing to ask for help"
    a) Strongly disagree
    b) Somewhat disagree
    c) Neither agree nor disagree
    d) Somewhat agree
    e) Strongly agree

11. "If I was struggling with mental health issues, I would know who I would talk to, in order to get help"
    a) Strongly disagree
    b) Somewhat disagree
    c) Neither agree nor disagree

d) Somewhat agree
e) Strongly agree

12. "I would notice if a co-worker was having a tough time and ask how he/she was doing"
    a) Strongly disagree
    b) Somewhat disagree
    c) Neither agree nor disagree
    d) Somewhat agree
    e) Strongly agree

13. "If I knew a co-worker was struggling then I would be willing to offer help"
    a) Strongly disagree
    b) Somewhat disagree
    c) Neither agree nor disagree
    d) Somewhat agree
    e) Strongly agree

End of Block: Suicide Literacy

Start of Block: Well-being and Help-seeking

14. "So far today, the best way to describe how I'm feeling emotionally/mentally is..."
    a) Very poor
    b) Poor
    c) OK
    d) Good
    e) Very good

15. "If I was going through a difficult time, feeling upset, or was thinking about suicide, I would be willing to seek help from..."

	Yes (1)	No (2)
i. Close family		
ii. Friend		
iii. Co-worker		
iv. A supervisor		

v.	My doctor
vi.	My doctor
vii.	Psychologist
viii.	Counsellor
ix.	A helpline
x.	No one
xi.	Other

16. "If a co-worker was going through a difficult time, feeling upset, or was thinking about suicide, I think they would be willing to seek help from..."

	Yes (1)	No (2)
Close family		
Friend		
Co-worker		
A supervisor		
My doctor		
My doctor		
Psychologist		
Counsellor		
A helpline		
No one		
Other		

End of Block: Well-being and Help-seeking

Appendix II

Ironworker Suicide Prevention - ASIST Post-Training Survey

Demographics

Thank you for attending the recent LivingWorks ASIST training session. Our Purdue research team would like to assess your suicide literacy, as well as hear your impression of the training. This information will help to improve the experience for all future attendees. This survey should take about 10-minutes to complete. Please read and answer all questions.

1. Please type in the same code from the pre-survey, consisting of the first letter of your last name and your birth month. Example: R9 Male

2. Did you attend the safeTALK Training on Tuesday, May 21st?

a) No
b) Yes

End of Block: Demographics

Start of Block: Suicide Literacy

1. Now you will be asked to answer questions assessing your thoughts on asking for help when you or a co-worker are having a hard time. Please read each question carefully and answer to the best of your ability. "Asking a co-worker if they are having suicidal thoughts can increase his/her risk of suicide"
   a) Strongly disagree
   b) Somewhat disagree
   c) Neither agree nor disagree
   d) Somewhat agree
   e) Strongly agree

2. "People considering suicide often send out warning signs or invitations"
   a) Strongly disagree
   b) Somewhat disagree
   c) Neither agree nor disagree
   d) Somewhat agree
   e) Strongly agree

3. "Suicide is a serious problem in the iron work trade"
    a) Strongly disagree
    b) Somewhat disagree
    c) Neither agree nor disagree
    d) Somewhat agree
    e) Strongly agree

4. "If I was struggling with mental health issues, I would be willing to ask for help"
    a) Strongly disagree
    b) Somewhat disagree
    c) Neither agree nor disagree
    d) Somewhat agree
    e) Strongly agree

5. "If I was struggling with mental health issues, I would know who I would talk to, in order to get help"
    a) Strongly disagree
    b) Somewhat disagree
    c) Neither agree nor disagree
    d) Somewhat agree
    e) Strongly agree

6. "I would notice if a co-worker was having a tough time and ask how he/she was doing"
    a) Strongly disagree
    b) Somewhat disagree
    c) Neither agree nor disagree
    d) Somewhat agree
    e) Strongly agree

7. "If I knew a co-worker was struggling then I would be willing to offer help"
    a) Strongly disagree
    b) Somewhat disagree
    c) Neither agree nor disagree
    d) Somewhat agree
    e) Strongly agree

End of Block: Suicide Literacy

Start of Block: Well-being and Help-seeking

8. "So far today, the best way to describe how I'm feeling emotionally/mentally is..."
   f) Very poor
   a) Poor
   b) OK
   c) Good
   d) Very good

9. "If I was going through a difficult time, feeling upset, or was thinking about suicide, I would be willing to seek help from..."

	Yes (1)	No (2)
Close family		
Friend		
Co-worker		
A supervisor		
My doctor		
My doctor		
Psychologist		
Counsellor		
A helpline		
No one		
Other		

10. "If a co-worker was going through a difficult time, feeling upset, or was thinking about suicide, I think they would be willing to seek help from..."

	Yes (1)	No (2)
Close family		

Friend
Co-worker
A supervisor
My doctor
My doctor
Psychologist
Counsellor
A helpline
No one
Other

End of Block: Well-being and Help-seeking

Start of Block: ASIST Training

11. Please rate the quality of the ASIST training.
    a) Very Good
    b) Good
    c) Average
    d) Poor
    e) Very Poor

12. Do you think the ASIST training was relevant for you?
    a) No
    b) Yes

13. Would you recommend the ASIST training to others?
    a) No
    b) Yes

14. What the most useful about the ASIST training?

_____

_____

_____

_____

_____

15. What would you change about the ASIST training?

_____

_____

_____

_____

_____

End of Block: ASIST Training

Start of Block: safeTALK Training

Display This Question:

If Did you attend the safeTALK Training on Tuesday, May 21st? = Yes

16. Please rate the quality of the safeTALK training.
    a) Very Good
    b) Good
    c) Average
    d) Poor
    e) Very Poor

Display This Question:

If Did you attend the safeTALK Training on Tuesday, May 21st? = Yes

17. Do you think the safeTALK training was relevant for you?
a) No
b) Yes

Display This Question:

If Did you attend the safeTALK Training on Tuesday, May 21st? = Yes

18. Would you recommend the safeTALK training to others?

a) No
b) Yes

Display This Question:

If Did you attend the safeTALK Training on Tuesday, May 21st? = Yes

19. What what the most useful about the safeTALK training?

_____

_____

_____

_____

_____

Display This Question:

If Did you attend the safeTALK Training on Tuesday, May 21st? = Yes

20. What would you change about the safeTALK training?

_____

_____

_____

_____

_____

End of Block: safeTALK Training

Appendix III

Ironworker Suicide Prevention - Follow-up Survey

Demographics

Thank you for attending our recent LivingWorks safeTALK and ASIST training sessions on May 21st-23rd, 2024. Our Purdue research team would like to assess your suicide literacy, as well as hear your impression of the training. This information will help to improve the experience for all future attendees. This is the final survey in this study. It should take about 10-minutes to complete. We greatly appreciate your participation in this vital research. Please read and answer all questions.

1. Please type in the same code from the pre-survey, consisting of the first letter of your last name and your birth month. Example: R9 Male

End of Block: Demographics

Start of Block: Suicide Literacy

1. Now you will be asked to answer questions assessing your thoughts on asking for help when you or a co-worker are having a hard time. Please read each question carefully and answer to the best of your ability. "Asking a co-worker if they are having suicidal thoughts can increase his/her risk of suicide"
   a) Strongly disagree
   b) Somewhat disagree
   c) Neither agree nor disagree
   d) Somewhat agree
   e) Strongly agree

2. "People considering suicide often send out warning signs or invitations"
   a) Strongly disagree
   b) Somewhat disagree
   c) Neither agree nor disagree
   d) Somewhat agree
   e) Strongly agree

3. "Suicide is a serious problem in the iron work trade"
   a) Strongly disagree

b) Somewhat disagree
c) Neither agree nor disagree
d) Somewhat agree
e) Strongly agree

4. "If I was struggling with mental health issues, I would be willing to ask for help"
   f) Strongly disagree
   a) Somewhat disagree
   b) Neither agree nor disagree
   c) Somewhat agree
   d) Strongly agree

5. "If I was struggling with mental health issues, I would know who I would talk to, in order to get help"
   a) Strongly disagree
   b) Somewhat disagree
   c) Neither agree nor disagree
   d) Somewhat agree
   e) Strongly agree

6. "I would notice if a co-worker was having a tough time and ask how he/she was doing"
   a) Strongly disagree
   b) Somewhat disagree
   c) Neither agree nor disagree
   d) Somewhat agree
   e) Strongly agree

7. "If I knew a co-worker was struggling then I would be willing to offer help"
   a) Strongly disagree
   b) Somewhat disagree
   c) Neither agree nor disagree
   d) Somewhat agree
   e) Strongly agree

End of Block: Suicide Literacy

Start of Block: Well-being and Help-seeking

8. "So far today, the best way to describe how I'm feeling emotionally/mentally is..."

a) Very poor
b) Poor
c) OK
d) Good
e) Very good

9. "If I was going through a difficult time, feeling upset, or was thinking about suicide, I would be willing to seek help from..."

	Yes (1)	No (2)
i. Close family		
ii. Friend		
iii. Co-worker		
iv. A supervisor		
v. My doctor		
vi. My doctor		
vii. Psychologist		
viii. Counsellor		
ix. A helpline		
x. No one		
xi. Other		

10. "If a co-worker was going through a difficult time, feeling upset, or was thinking about suicide, I think they would be willing to seek help from..."

	Yes (1)	No (2)
Close family		
Friend		
Co-worker		

A supervisor
My doctor
My doctor
Psychologist
Counsellor
A helpline
No one
Other

End of Block: Well-being and Help-seeking

Start of Block: safeTALK Training

11. Please rate the quality of the safeTALK training.
    f) Very Good
    g) Good
    h) Average
    i) Poor
    j) Very Poor

12. Do you think the safeTALK training was relevant for you?
    a) No
    b) Yes
13. Would you recommend the safeTALK training to others?
    a) No
    b) Yes

End of Block: safeTALK Training

14. Please rate the quality of the ASIST training.
    f) Very Good

g) Good
h) Average
i) Poor
j) Very Poor

15. Do you think the ASIST training was relevant for you?
c) No
d) Yes

16. Would you recommend the ASIST training to others?
c) No
d) Yes

17. What the most useful about the ASIST training?

_____

_____

_____

_____

_____

18. What would you change about the ASIST training?

_____

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_____

_____

End of Block: ASIST Training