



Improving Job Hazard Analysis to Enhance Safety Outcomes

Obstacles and Solutions to Implementing Job Hazard Analysis in Construction: A Case Study

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Overview

Construction workers experience a disproportionately high rate of occupational incidents and injuries. Research shows that such incidents can be prevented with proper planning that recognizes and addresses hazards before work begins. Job hazard analysis (JHA) is a common process used to identify and mitigate workplace hazards that emphasizes proactive risk control. However, the construction industry currently lacks comprehensive guidelines on developing and implementing JHA effectively and consistently. This study pursued two objectives: 1) explore challenges and shortcomings of current practices in developing and implementing JHA and 2) identify effective practices and interventions contractors can employ to enhance the quality of the JHA process. To this end, the researchers analyzed 30 sample JHA documents and conducted 23 interviews with construction safety professionals.

Key Findings

- Activity, hazard, and control sections were the only key components present in all the job hazard analysis (JHA) documents examined. Most documents did not include instructions for conducting a JHA, and they also lacked a risk assessment matrix, visual representations, or reference information for control recommendations.
- Interviewees identified ineffective communications from management, lack of buy-in by workers, complacency, isolation of upper management from job sites, and a lack of worker input as major obstacles toward implementing effective JHA.
- Respondents identified several disadvantages of paper forms, including the need to carry multiple forms on the job site and archive them, as well as difficulties accessing documents for revisions when job conditions change. However, out of 23 construction safety professionals interviewed, about half of them still preferred traditional paper forms over the application of technology to conduct JHA. This group mainly represented smaller contractors.
- To keep the JHA content current, active coordination between all parties and frequently updating information based on site conditions are necessary. It is recommended to use mini-JHA cards or one-page summaries to make JHA content more accessible to workers. It is also recommended to include visual aids to make content easier to understand.
- Worker involvement in site safety planning and rotating JHA leaders are highly encouraged to empower workers and improve crew buy-in.

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Read the abstract:

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