

leadership on safety, union local (and apparently union density), and type of carpentry work. There was an upward secular trend in safety equipment use over the three-year duration of the study among both the study group and controls.

Important lessons for further intervention research were learned. Simply instituting a written health and safety program is an inadequate intervention to affect either safety practices or injury rates. Physical safety measures - engineering measures and protective equipment policy measures - must be taken in order to improve the injury picture in construction.

D5.4 Worker and Manager Perceptions of Construction Safety Practices—Gillen M, McCall C, Sum J, Kools S, Moulden K

Aim: Experience has demonstrated that large construction companies have been successful in reducing work-related injuries on well-managed sites. Using focus group methodology, the aim of this qualitative study was to identify construction workers' and construction managers' views regarding currently used safety practices. Questions were designed to elicit information on direct safety practices such as equipment and training, but also indirect practices for example, communication style, attitude, expectations, and unspoken messages.

Methods: A series of nine focus groups was held with union and non-union carpenters, union roofers, and a mixed group of trades. Seven questions were used to elicit opinions from the construction workers. A second series of three focus groups was held with construction safety personnel or construction managers. Questions for the manager groups were developed, in part, from the worker responses, as well as theoretically and practice derived questions.

Analysis: Thematic content analysis was used to determine major themes in both series of groups. Findings suggest that safety management is a complex phenomenon requiring technical, interpersonal, educational, management, and organizational skills. Management commitment to safety, modeling safe behaviors, explicit and implied messages, worksite planning, housekeeping efforts, and personal interactions affect employee morale, and subsequently may contribute to safe work practices. The role of regulatory agencies, the insurance industry, workplace culture, and individual and co-worker behavior was also explored.

Conclusions: These findings may assist construction workers and managers in evaluating their safety behavior and safety practices, as well as developing new skills that may enhance their effectiveness in contributing to or managing workplace safety. When applicable, these findings may also be used to

develop cost-effective, model safety and health programs for small construction firms.

Session: D6.0

Title: Special Populations

Category: Special Populations

Moderator(s): Letitia Davis

D6.1 The Prevalence and Patterns of Occupational Injury in South Texas Middle School Students—Weller NF, Cooper SP, Tortolero SR, Kelder SH, Hassan S

Introduction: Emerging evidence suggests that substantial numbers of middle school youth are working during the school year. Like their older adolescent counterparts, these youngsters may be at risk for various occupational hazards, including work-related injury, already documented as a substantial public health problem in secondary students. Except for isolated reports of injuries/fatalities among young workers, information about the extent and nature of the work circumstances of these pre- and early-adolescents is scarce. Also sparse are data on the work experiences of special populations of disadvantaged or minority youth from rural geographic areas in the Southwestern U.S. This paper describes the prevalence and patterns of occupational injury in 6th, 7th, and 8th graders from South Texas, where Hispanic and economically-distressed youth are heavily represented.

Methods. Anonymous surveys were conducted in student's regular classrooms in May of 1995 (n=2,965 workers). Self-reported data included typical weekly work hours, work injury, type of injury, and type of job.

Results. Twenty-five percent of employed students reported an occupational injury (n=773). Of the injured, 30% required medical help (n=232). A dose response effect was observed: increasing weekly work hours were significantly related to work injury (1-10 hours, Odds Ratio [OR] = 1.0; 11-20 hours, OR = 1.5; 21 + hours, OR = 2.4), $p < 0.0001$ for chi-square linear-by-linear association. The likelihood of injury for males (32%) was greater than for females (18%), $p < 0.0001$. Significant multivariate logistic regression variables included agriculture (OR = 3.3), restaurant work (OR=3.2), construction (OR=2.4), retail work (OR=1.7), working 21+ hours weekly (OR=1.8), and male gender (OR=1.5).

Conclusions: This study demonstrated that intense work during the school-year increased the likelihood of occupational injury in middle schoolers. Parents and professionals should supervise school-year work hours. Increased prevention efforts should be targeted to young workers to reduce and prevent work injuries.



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ABSTRACTS

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