Finding a Nursing Role in Preventing Eye Injuries in Construction Workers

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by

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Purpose: This exploratory pilot study 1.) identified the perceptions of workers about their health and their ability to take care of their health, 2.) investigated the frequency of use of safety glasses, and 3.) quantified the incidence of any work-related injuries.

Methods: A convenience (n=75) sample (72 male) (3 female) of apprentices in a training program for operating engineers were tested at their classroom site. The participants were given information about the study before they voluntarily signed the consent forms. Thirty minutes of class time was set aside for the testing.

Instruments: The Demographic Information Sheet elicited answers about age, sex, years in the trade, use of safety glasses, frequency of use of safety glasses, and number of at-work injuries. The Health Self-determinism Index (HSDI) a 17 item paper and pencil test uses a five point ordinal scale from strongly agree to strongly disagree. The test measures the subjects’ overall perception of health, actions taken in regard to their health, their perceptions of their competence in caring for their health and extrinsic motivation. The reliability estimates for HSDI ranges from 0.80 to 0.87.

Results: Most of the apprentices had been in the construction trade for many years (M=19.9), age (M=44.3 years). More than half (52%) had been injured on the-job an average of 2 times. Safety glasses were worn routinely by the majority (57.2%) of the sample. The results of the HSDI did not reveal workers who were intrinsically or extrinsically motivated. There were no significant differences in the result of HSDI for those who did or did not wear safety glasses, or who had or had not been injured. The alpha reliability coefficients were .79 and standardized item alpha was .80. The Pearson correlations were significant for the number of years in the trade and 1) age (r=.86) (p<.01), 2) number of times injured (r=.26) (p<.05), and age and number of times injured (r=.25) (p<.05). The HSDI did not correlate significantly with age, the number of times injured, the number of years in the trade, or the use of or frequency of use of safety glasses.

Conclusions: Age and longevity in construction were associated with eye injuries. Risk is a direct function of exposure. Underreporting of injuries is common in this population. Literacy issues may account for inconsistent responses to wearing safety glasses and the non significant results obtained on the remainder of the study. The HSDI did not reveal external motivation, as would be expected of subjects of this socioeconomic level. The HSDI is a global measure of health behavior motivation and did not tap issues of eye health.

Clinical Application: The occupational health nurse if present at construction sites could help decrease morbidity, and disability from eye injuries and improve the economic health of the nation. A subsequent experimental design should address literacy, underreporting of eye injuries, HSDI for Eye Health and nursing interventions to prevent eye injuries.