Title: Measuring the Use of Personal Protection Equipments by the Workers of Isfahan Gitipasand Industries based on Health Belief Model structures in 2010

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Abstract: Background and aim: According to International Labor Organization (ILO), 250 millions accidents occur in the world annually, of which 22124 happen in Iran. This organization announced that 50 millions injuries are caused by occupation-related factors every year which is equal to 137,000 accidents per day. However, the use of personal protection equipments can lead to the prevention of these accidents to a large extent. This study was conducted to determine the use of personal protection equipments on the basis of health belief model (HBM) structures among the workers having high- risk positions in Isfahan Gitipasand industries in the year 2010.

Materials and Methods: This is a descriptive-analytic and cross-sectional study in which 164 workers of Isfahan Gitipasand industries were selected by randomized sampling. The data were collected by means of a researcher-made questionnaire including seven parts with 57 questions. These questions were constructed on the basis of HBM structures (knowledge, perceived susceptibility, perceived severity, perceived benefits, perceived barriers, demographic information) and also personal protection equipments checklist. In this study, the scores were considered out of 100. Reliability and validity of this questionnaire were established prior to data collection. Data were then analyzed through SPSS software and through statistical tests such as central statistical index, T-independent, One-way ANOVA, Chi-square and Correlation Coefficient.

Results: The results showed that the average age of workers was 27.9 years, their average knowledge, perceived susceptibility, perceived benefits, perceived barriers and also checklist were 78.16, 77.53, 77.95, 77.84 and 69.25, respectively. Chi-square test showed a significant relationship between education level and previous accident record (P=0.003); moreover, there was no significant relationship between marital status and previous accident record (P=0.199). At the same time, T-independent test showed significant relationship between average checklist score and marital status (P=0.015), so that married workers achieved higher averages out of checklist score. However, this test did not show any other significant relationship between marital status and other measured factors. One-way ANOVA showed significant relationships between education level and the average of perceived susceptibility, perceived severity, perceived barriers, perceived benefits and the checklist of personal protection equipments use.

Conclusion: Based on the findings of the study, workers were in acceptable situation with regard to measured variables. Although the use of personal protection equipments was rather satisfactory, it was not as suitable as seen in measured HBM structures. It might be due to educational programs carried out in the past, pervious worker's knowledge of personal protection equipments, accessibility of these equipments in those industries, regular monitoring done by officials, intimate communication between workers and professional health officials.

Personal protection equipments, Health Belief Model, Occupational accidents

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