

Factors Affecting the Wheat Farmers' Safety Behavior in the Central District of the Zanjan Township

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(Received: Jul. 30, 2015- Accepted: Nov. 26, 2016)

ABSTRACT

The main purpose of this descriptive- correlative research was to investigate factors affecting the wheat farmers' safety behavior. The statistical population of the research consisted of wheat farmers in the central district of the Zanjan Township (N= 5705). According to the Bartlett et al.'s (2001) table, 254 out of them were selected through multistage sampling method. A research- made questionnaire was used to collect the data. The content and face validity of the questionnaire was confirmed by a panel of experts. A pilot study was conducted to establish the reliability of the questionnaire. The Cronbach's alpha coefficients for the main scales of the questionnaire were at an appropriate level (ranged from 0.701 to 0.838). The results of descriptive statistics showed that the majority of wheat farmers' safety behavior (95.3 percent) was at a low level. Also, the results of path analysis revealed that four variables, including age (with effect of -0.798), knowledge (with effect of 0.690), literacy level (with effect of 0.536) and attitude (with effect of 0.514) had the highest effects (sum of the direct and indirect effects) on the dependent variable of wheat farmers' safety behavior. Based on the findings, education and increasing farmers' knowledge and awareness of issues related to workplace safety and changing their attitudes toward occupational safety can have an important role in improving the wheat farmers' safety behavior.

Keywords: Safety behavior, Occupational hazards, Wheat farmers

EXTENDED ABSTRACT

Objectives

Agriculture is one of the most hazardous of economic sectors, which along with mining and construction has the highest occupational hazard rate. In fact, because of the difficulty and physical nature of agricultural activities and because agricultural work is typically performed in the open air, farmers can be exposed to various hazards and are susceptible to several occupational injuries. On the other hand, healthy and productive human resources are the core of sustainable development and as long as farmers do not have physical and psychological health, they cannot achieve an appropriate productivity. In other words, the production of a healthy product is the result of a healthy and active farmer's effort and attention to safety behavior or occupational safety and health can directly lead to increased performance and profitability of occupational activities.

Despite the importance of safety behavior and the necessity of planning for reducing the occupational injuries of farmers, evidence shows that safety behavior in the Iranian agricultural sector is a neglected and unknown issue, as few farmers receive training in occupational health. Furthermore, relatively few provinces in Iran have agricultural health committees and centers for providing occupational safety and health services. In addition, there are several limitations for providing professional health services to agricultural workers through Primary Health Care (PHC) networks. On the other hand, studies about safety behavior are limited in Iran, particularly in the

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agricultural sector. Therefore, there is a big gap of knowledge regarding farmers' safety behavior, so that studies on farmers' safety behavior and factors affecting it are necessary. Accordingly, the main purpose of this research was to investigate factors affecting the wheat farmers' safety behavior.

Methods

The research method of the current study in terms of the nature, rate and degree of control and method of data collection was quantitative, non-experimental and field research, respectively. The statistical population of the research consisted of wheat farmers in the central district of the Zanjan Township (N= 5705). Using Bartlett's (2001) table, the sample size was estimated to be 254 participants. A multi-step sampling method was adopted for selecting the villages as well as surveyed respondents. The questionnaire was administered through in-person interviews with the participants. Interviews were carried out in a friendly manner and a relaxing setting, in which all interviewees felt free to answer or leave the question.

A research-made questionnaire was used to collect the data, which consisted of four parts including respondents' profile, farmers' safety behaviors against harmful factors in the workplace, attitude toward occupational safety, and farmers' knowledge and awareness on workplace safety issues. To evaluate the overall validity indices, draft surveys and survey questions were reviewed by a panel of experts before starting full-field interviewing. These indices were the relevance and clarity of survey questions, length of the time of completion, and identification of grammatical errors. Moreover, to ensure that respondents could comprehend the measurement scales and items, the questionnaire was pre-tested with a small sample of farmers. In this case, the Cronbach's alpha coefficients for the main scales of the questionnaire were at appropriate levels (ranged from 0.701 to 0.838). Data was analyzed using the SPSS software. Moreover, descriptive statistics (i.e., frequency, percent, mean, etc.) and inferential statistics (including path analysis) were used for data analysis.

Results

The results of descriptive statistics showed that the majority of wheat farmers' safety behavior (95.3 percent) was at a low level. The results of path analysis also revealed that four variables, including age (with effect of -0.798), knowledge (with effect of 0.690), literacy level (with effect of 0.536) and attitude (with effect of 0.514) had the highest effects (sum of the direct and indirect effects) on the dependent variable of wheat farmers' safety behavior.

Discussion

Overall, given that the majority of wheat farmers' safety behavior was at a low level, accordingly, it can be concluded that farmers have a great exposure potential to different occupational hazards. Additionally, the results of this study showed that the variables of attitude and knowledge had the strongest direct effects on farmers' safety behavior. Therefore, education and increasing farmers' knowledge and awareness of issues related to workplace safety and changing their attitudes toward occupational safety can have an important role in improving the wheat farmers' safety behavior. In this respect, mass media such as television, and local radio, extension brochures, bulletins, posters, educational courses and even using the social networks are defined as the ways of making farmers aware of issues related to workplace safety and motivating them to comply the safety measures.