Knowledge, attitude, and practice among farmworkers applying pesticides in cultivated area of the Jericho district: a cross-sectional study

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Abstract

Background The excessive use of pesticides has chronic and acute toxic effects on human health. The aim of this study was to assess knowledge, attitudes, practices, and toxicity symptoms in farmworkers applying pesticides in a cultivated area of the Jericho district.

Methods In this cross-sectional study, we collected data through face-to-face interviews with farmworkers who applied pesticides in a cultivated area of the Jericho district. χ² and t tests were used to identify and assess associations, which were considered significant when p values were less than 0·05. Ethical approval was obtained from the Al-Quds University ethics board.

Findings 220 farmworkers participated in the interviews. Knowledge of pesticides was relatively high, except for knowledge of biological control (26%) and other agricultural ways for pest control (12%). A substantial proportion of farmers reported that they knew of the importance of wearing a wide-brimmed hat (91%) and an oral–nasal mask (95%), yet many did not use these forms of protection (p=0·007 for use of a wide-brimmed hat; p=0·049 for use of the oral–nasal mask). The most common toxicity symptoms associated with use of pesticides were a burning sensation in eyes and face (75%), headache (62%), cold, breathlessness, or chest pain (51%), and itching skin irritation and dizziness (46%).

Interpretation Most of the symptoms reported during interviews could be related to the use of organophosphorus pesticides. Training programmes for farmers are needed to explain safety aspects and optimal use of pesticides via integrated best management. Further studies are needed to assess the biological effects of pesticides on farmworkers. Farmworkers with acute symptoms should be followed-up to avoid the development of chronic symptoms.

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