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Review Paper

Effectiveness of occupational safety and health training for migrant farmworkers: a scoping review



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ABSTRACT

Objectives: Migrant farmworkers report higher rates of work-related illnesses, injuries and fatalities compared with local workers. Language and cultural barriers represent a relevant source of risk, which can be reduced by means of targeted training interventions. However, very little evidence is available about the effectiveness of Occupational Safety and Health (OSH) training programmes addressing migrant farmworkers.

Study design: We carried out a scoping review.

Methods: Currently available literature about the effectiveness of OSH training for migrant farmworkers—in terms of improvements in at least one of the following: safety knowledge, behaviours, attitudes and beliefs and health outcomes—was searched from four databases: PubMed, PsycINFO, Scopus and Web of Science. The screening was performed independently by two authors, and any disagreement was resolved through discussion until consensus was achieved. Once the articles eligible for inclusion were selected, the objectives, design, sample and setting, interventions and findings of each study were recorded. No quality assessment tool for publications considered by this study has been used because a scoping review does not aim for critical appraisal.

Results: Twenty-nine publications met the inclusion criteria. Of these, nine cross-sectional studies discussed the effectiveness of training activities in terms of whether participating in any programme had or did not have a significant effect on the dependent variables, when training was considered along with other sociodemographic factors. In the majority of these studies, training appeared to have low or no effect on the dependent variables considered. Twenty mainly within-subject experimental studies addressed the effectiveness of specific training methods, reporting significant improvements especially for interventions based on a participatory approach.

Conclusions: Training could greatly contribute to an effective attainment of OSH information, but the present review shows that more evidence is needed to guide the future development of effective training activities.

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Introduction

International migrants account for an increasing share of the agricultural labour workforce: in 2013, 16.7 million migrants were engaged in agriculture worldwide, and 74.1% of these were concentrated in high-income countries.¹ Agriculture is one of the most hazardous industries,^{2–4} and migrant workers are exposed to higher safety risks than local workers⁵ because they often work longer hours in poor safety conditions.^{6,7} Indeed, they experience higher rates of work-related illnesses, injuries and fatalities compared with natives.⁵

One of the major risk factors enhancing migrant farmworkers' vulnerability lies in language and cultural barriers.^{8–11} In most cases, limited knowledge of local language and low levels of literacy make it more difficult for migrant workers to understand Occupational Safety and Health (OSH) rules and may interfere with their ability to report health concerns and access healthcare.¹²

Training is widely acknowledged as a key factor in promoting OSH among both local and migrant workers in many different sectors.^{13–18} In the field of agriculture, the results of several studies^{19,20} and an international convention²¹ have stressed the importance of developing targeted training strategies to provide migrant farmworkers with effective preventive and protective measures. However, few empirical studies have been conducted on this peculiar workforce,^{11,22} and very little evidence is available about the effectiveness of training programmes addressing migrant farmworkers.

Considering the rising share of migrants among the agricultural workforce in most developed countries²³ and given the high rates of injuries and illnesses affecting these populations,^{20,24–26} it would be important to acquire a global view over the current status of training intervention programmes and their relative effectiveness. Mapping available literature on this particular topic would provide the opportunity to identify key implications for targeted future research, practices and policies.

Based on these considerations, this scoping review aims at identifying and synthesising the results currently available in the literature about the effectiveness of OSH training programmes for migrant workers in the agricultural sector.

Methods

The literature search for the scoping review was carried out in September 2017. Relevant articles were searched for in four databases: PubMed, PsycINFO, Scopus and Web of Science. The search terms 'training' AND 'migrant' AND 'method' OR 'program' OR 'intervention' were used to identify relevant articles. Publications from peer-reviewed journals and empirical studies, as well as conceptual articles, were included. The review included articles reporting investigations conducted in any geographical area and published in English.

After removing the duplicates, the remaining articles were screened in order of titles, abstracts and the full text. To be included in the literature review, the publications had to meet the following criteria: (i) the reported study had to focus on a working population; (ii) the occupational sector addressed in the study had to be agriculture; (iii) the topics of the training

should address OSH issue; and (iv) the results had to concern the effectiveness of the training programmes and include at least one of the following dependent variables (based on the categorisation used by Burke et al.¹⁶ and Robson et al.¹⁵): safety knowledge (SK), safety attitudes and beliefs (SABs), safety behaviours (SBs), or safety and health outcomes (HOs). Fig. 1 illustrates the selection process for the review. The screening was performed independently by two authors, and any disagreement was resolved through discussion until consensus was achieved. Once the articles eligible for inclusion were selected, the objectives, design, sample and setting, interventions and findings of each study were recorded. No quality assessment tool for publications or research considered by this study has been used because a scoping review does not aim at critical appraisal.²⁷

Results

The database search identified 2251 articles containing the search terms. After the removal of duplicates ($n = 506$), articles were screened on the basis of inclusion and exclusion criteria applied to the titles, abstracts and full text. A total of 29 publications were retained to be included in the final review analysis (Fig. 1).

Contexts and populations of training

The studies and the interventions described in the selected articles were mainly conducted in the United States ($n = 28$), apart from one study performed in Australia–Indonesia.²⁸ Regarding the migrant population targeted by the studies, 24 articles include samples of Latino/Hispanic farmworkers, one of Indonesians and Australians, and four of mixed ethnic origin (e.g. African American, Hispanic white, non-Hispanic white).

Summary of findings according to the evaluation of training effectiveness

All selected studies reported a quantitative and/or qualitative assessment²⁷ of training effectiveness in terms of changes in at least one of the dependent variables, or in some combination of the four. In particular, SB and SK were addressed in 21 of the included articles. SAB and HO were considered in 11 and three articles, respectively. However, two different ways of investigating training effectiveness were detected: (a) nine cross-sectional studies^{8,12,29–35} investigated the effects of participation in any training programme together with other factors, mainly sociodemographic characteristics and work history (Supplementary Table 1); while (b) the 20 mainly within-subject experimental studies^{10,28,36–53} instead addressed the effectiveness of specific OSH training methods (Supplementary Table 2). The results are presented separately for the two different approaches to assess training effectiveness.

Effectiveness of having participated in any training programme

The majority of the nine studies concerning the participation in training programmes (Supplementary Table 1) reported that training and education programmes have little or no effect on the dependent variables considered.^{12,29–35}

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