

Manual material handling training: The effect of self-observation, hetero-observational and intrinsic feedback on workers' knowledge and behaviour

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Abstract

This study aimed to assess the effect of systematic self-observation, hetero-observational feedback, and feedforward and intrinsic feedback (SsObserWork components) on workers' knowledge and behaviour of a manual material handling (MMH) technique in the industrial sector. Blue-collar workers recruited from a food processing company in Catalonia (Spain) were randomized into SsObserWork (N = 31) and control (N = 30) groups. SsObserWork group members participated individually in two sessions and a three-week follow-up between sessions where they received the SsObserWork components. The control group participated individually in two sessions where they received a standard MMH training. An ad hoc instrument called the MMH-SsObserWork instrument was used to assess the MMH behaviour, and an adaption of the instrument was done to assess the workers' knowledge. Significant differences were found between groups for the identification of recommended back positions in the first session and also on comparing both sessions. However, no differences were found for the rest of the criteria. There also were significant differences between groups in the score changes of the back, knee joints, elbow joints, and interaction criterion, indicating that the SsObserWork group improved the MMH performance in these criteria (behaviour). SsObserWork intervention showed a positive effect on improving the knowledge and behaviour of the MMH technique, specifically on back posture.

Author keywords

Behaviour

Feedback

Feedforward

Hetero-observation

Knowledge

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Observation

Self-observation

SsObserWork

Workplace intervention