

ASSESSMENT OF OCCUPATIONAL HEALTH LITERACY AND WORK-RELATED INJURIES AMONG INTENSIVE CARE UNIT NURSES
AT A UNIVERSITY HOSPITAL IN ALEXANDRIA

Dorria Elsayed Melis, Nermine Mohammed Tawfik Foda, Nourhan Mohamed Hafez Abbas
Department of Community Medicine, Faculty of Medicine, Alexandria University

Introduction

Occupational Health Literacy (OHL) is the degree to which workers have the capacity to obtain, process, and understand basic occupational safety and health (OSH) information and services needed to make appropriate decisions with regard to health and safety at work. Workforce studies found that the magnitude of limited OHL shows a considerable variation across countries with a range of 25% to 72%. In addition, OHL was found to be positively associated with work-related injury prevalence, absenteeism, and productivity. Given that the healthcare sector has one of the highest rates of work-related injuries and illnesses, particularly among nurses employed in intensive care units (ICUs), OHL may be a protective factor against these types of injuries.

Aim of the Work

The current study was conducted among ICU nurses to measure the level of occupational health literacy, calculate the prevalence and frequency of work-related injuries, and to explore the association between occupational health literacy and work-related injuries.

Subjects and Methods

A descriptive cross-sectional approach was adopted. The study population comprised 163 ICU registered nurses from the Alexandria Main University Hospital (AMUH) who were available during the fieldwork period of the study (from March to May 2023) and gave verbal consent. A self-structured interviewing questionnaire was used to collect sociodemographic, occupational, and work-related injury data. The occupational health literacy scale used to measure OHL among the study nurses was adapted from both the Thai Occupational Health Literacy Scale for Informal Workers (TOHLS-IF) and the Health Literacy Scale for Workers (HELSW). It included 38 items covering four main domains: access, understanding, evaluation, and use of OSH information and services.

Results

Table 1: Mean score and level of overall OHL among the studied ICU nurses.

Overall OHL mean score and level	ICU nurses (n=163)	
Overall OHL mean score (from 1 to 3)		
Min. – Max.	2.0 – 3.0	
Mean ± SD	2.5 ± 0.2	
Overall OHL level	No.	%
Poor (from 1 to 1.67)	0	0.0
Moderate (from 1.68 to 2.35)	38	23.3
Good (from 2.36 to 3)	125	76.7

Abbreviations: OHL, occupational health literacy; Min., minimum; Max., maximum; SD, standard deviation; IQR, Interquartile range.

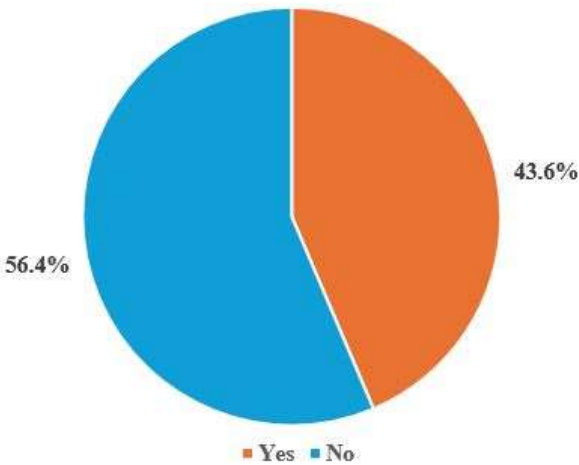


Figure 1: Work-related injuries among the studied ICU nurese in the last 12 months (n=163).

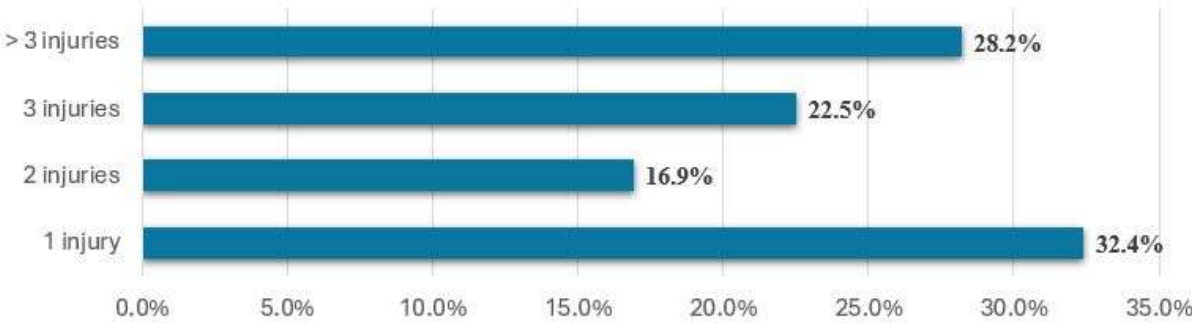


Figure 2: Number of injuries among the injured ICU nurses in the last 12 months (n=71)

Table 2: Multivariate logistic regression analysis of independent predictors of work-related injuries in the last 12 months among the studied ICU nurses (n = 163).

Variables	Coefficient	Adjusted OR#	95% CI	Pvalue
Bedside nurse	2.1	8.5	3.9, 18.6	< 0.001*
Moderate overall OHL level	1.0	2.8	1.2, 6.6	0.017*

Model X² = 43.5; P < 0.001; Cox & Snell R² = 0.23; Nagelkerke R² = 0.31; Hosmer & Lemeshow X² = 3.05; P = 0.217

Abbreviations: ICUs, intensive care units; AMUH, Alexandria Main University Hospital; OR, Odds ratio; CI, Confidence interval; OHL, occupational health literacy; # OR adjusted for all variables in the above table
* Statistically significant at p < 0.05

Conclusion

- Most of the studied nurses (76.7%) had a good level of OHL, while 23.3% of the nurses had a moderate level of OHL, and a poor level of OHL was not recorded.
- Work-related injuries in the last 12 months were reported by 43.6% of the study nurses, where 32.4% experienced only one injury and 28.2% reported experiencing more than three injuries.
- Predictors of a good OHL level were working in nursing jobs other than being a bedside nurse (such as charge nurse, indirect patient care nurse, assistant head nurse, and head nurse) and working at departments other than the critical care department (such as surgery, emergency, and internal medicine departments).
- Predictors of work-related injuries were working as a bedside nurse and having a moderate OHL level.