DEVELOPMENT OF BIOLOGICAL HEALTH RISK ASSESSMENT TOOL FOR WORKERS EXPOSED TO KNOWN PATHOGEN

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ABSTRACT

Health risk assessment is an approach used to assess and manage health risks at the workplace and the environment. Biological hazard is one of the hazards that need to be assessed at the workplace for preventive and control measures and workers protection. Until currently, there is no established standardized biological health risk assessment (BHRA) tool for the use at the workplace. This causes inconsistent risk assessment methodology; findings may vary and possible inappropriate risk management. Therefore, a standardized and validated BHRA tool has been developed for the use of occupational health practitioners to prevent work-related infectious disease in the workplace. The newly developed BHRA tool is using a qualitative risk assessment matrix in which risk rating is equal to the consequences time likelihood, also considering the modifying factors. Version 1 BHRA was developed after extensive literature reviews and in-depth interviews with the experts. Version 2 BHRA was developed after face and content validity assessment using qualitative method and validity index among the occupational health and microbiological practitioners and experts. The results of the content validity analysis showed that the Relevance = 1.00, Clarity = 0.98, Simplicity = 1.00, Ambiguity = 0.98. The BHRA required much improvement in the mode of transmission modifying factors. Version 3 BHRA has been completed after tested its used among the occupational health practitioners using simulation case studies. In conclusion, the newly developed BHRA tool has good standing but requires continuous improvement.

Keywords: Biological hazard, Health Risk Assessment, Occupational Health Practitioner, validity

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