

Impact of an Educational Intervention on Hygiene Knowledge and Practices Among Municipal Waste and Sanitation Workers in Nelson Mandela Bay, South Africa

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Abstract : Municipal waste and sanitation workers play a crucial role in maintaining public health by providing a safe and clean environment. However, their hygiene-related knowledge and practices remain low due to a lack of educational intervention programmes on hygiene. Therefore, the study investigated the impact of an educational intervention on hygiene knowledge and practices among municipal waste and sanitation workers in Nelson Mandela Bay Municipality (NMBM). The study used a quasi-experimental study (pre- and post-test) design. A total of 201 municipal waste and sanitation workers (MWSW) were conveniently sampled in the study from all five municipal waste depots and six wastewater treatment plants in the NMBM. A self-administered, structured, questionnaire was used to collect the participants' demographic data and a pre-intervention assessment on hygiene-related knowledge and practices. An educational intervention based on existing literature and national environmental cleaning guidelines and policies was implemented, and after a minimum gap of two months following the intervention, participants were asked to complete the post-intervention questionnaire. The collected data was captured in a QuestionPro survey platform and analysed in Microsoft Office 365 (2019 version) and R software (version 4.4.1). Inferential statistics were used to analyse and describe the data, including tests such as Pearson's correlations, student t-tests, analysis of variance (ANOVA) and multivariable linear regression analysis. A total of 201 participants, comprising 148 (73.6%) males and 53 (26.4%) females, participated in the study. Of the 201 participants, 95 (47.3%) indicated that they had never heard of hygiene-related diseases. The study participants had poor knowledge and practices regarding hygiene prior to the educational intervention. Participants' hygiene knowledge and practices improved by 42.8% and 44.8%, respectively, post the educational intervention. Based on the paired samples t-test, there was a significant difference post-intervention phase in the mean scores for hygiene knowledge of 4.0 (± 4.8), $p < 0.001$ as well as hygiene practice scores of 4.3 (± 3.4), $p < 0.001$. Participants older than 51 years of age had slightly poor knowledge regarding hygiene when compared to the participants who were 18-30 years old. The study's findings highlight the significant positive impact of an implemented educational intervention programme among MWSW on improving their knowledge of hygiene-related diseases and hygiene practices when discharging their duties. However, predictor factors such as working environment, educational training background, age, and race significantly influenced the impact of the implemented educational programme. The ongoing implementation of similar initiatives is highly recommended among MWSW, thus preventing hygiene-related infections among the studied population and fostering a healthier environment.

Keywords : educational intervention, hygiene knowledge, hygiene practices, municipal waste and sanitation workers

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