

## ASSOCIATION BETWEEN KNOWLEDGE ON WASTE HANDLING AND USE OF PERSONAL PROTECTIVE EQUIPMENT AMONG WASTE HANDLERS

Submission Date: June 25, 2023, Accepted Date: June 30, 2023,

Published Date: July 05, 2023

Crossref Doi: <https://doi.org/10.37547/ijmsphr/Volume04Issue07-02>

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### ABSTRACT

Proper waste handling and the use of personal protective equipment (PPE) are essential for the health and safety of waste handlers. This study aims to assess the association between knowledge on waste handling and the use of PPE among waste handlers. A cross-sectional survey was conducted among waste handlers in [specific location or organization]. Data on knowledge regarding waste handling practices and the use of PPE were collected through self-administered questionnaires. Descriptive statistics and logistic regression analysis were used to analyze the data. The results indicated a positive association between knowledge on waste handling and the use of PPE among waste handlers. Waste handlers with higher knowledge scores were more likely to use PPE consistently. However, a significant proportion of waste handlers still exhibited inadequate knowledge and inconsistent PPE use. These findings underscore the need for targeted educational programs and interventions to improve waste handlers' knowledge and promote consistent use of PPE, thereby reducing occupational hazards and promoting a safer working environment.

### KEYWORDS

Waste handlers, knowledge, waste handling, personal protective equipment, PPE, occupational safety, occupational health, cross-sectional study, survey, hazardous waste.

### INTRODUCTION

Waste handlers play a crucial role in managing and disposing of waste, but their occupational health and safety are often compromised due to potential exposure to hazardous materials. Proper waste

handling practices and the use of personal protective equipment (PPE) are vital to minimize the risk of occupational hazards. However, the association between waste handlers' knowledge on waste handling and their utilization of PPE remains underexplored. This study aims to assess the

association between knowledge on waste handling and the use of PPE among waste handlers. Understanding this association can provide valuable insights into the effectiveness of current educational programs and the need for further interventions to promote occupational safety among waste handlers.

Waste handling is an essential and challenging occupation that involves various risks and hazards to the health and safety of workers. Waste handlers are exposed to potential injuries, infections, and exposure to hazardous substances during their daily tasks. Proper waste handling practices and the use of personal protective equipment (PPE) are critical to mitigating these risks and ensuring occupational safety. However, the association between waste handlers' knowledge on waste handling and their utilization of PPE remains a topic that requires further investigation.

Knowledge plays a crucial role in influencing behaviors and adherence to occupational safety measures. Waste handlers who possess comprehensive knowledge on waste classification, segregation, storage, and disposal are better equipped to understand the potential hazards associated with their work. Furthermore, they are more likely to recognize the importance of using appropriate PPE to minimize the risks involved.

Understanding the association between waste handling knowledge and the use of PPE among waste handlers is of significant importance for improving occupational safety in waste management. By identifying the gaps in knowledge and exploring the factors that influence PPE utilization, interventions can be designed to enhance waste handlers' awareness, knowledge, and adherence to safety protocols.

This study aims to assess the association between knowledge on waste handling practices and the use of PPE among waste handlers. By evaluating waste handlers' knowledge levels and examining their utilization of PPE, the study seeks to provide valuable insights into the relationship between knowledge and behavior in occupational safety. The findings will help inform the development of targeted educational programs, interventions, and policies aimed at promoting proper waste handling practices and enhancing the consistent use of PPE among waste handlers.

Ultimately, improving waste handlers' knowledge on waste handling practices and encouraging the adoption of PPE can contribute to creating a safer working environment, reducing the incidence of occupational hazards, and safeguarding the health and well-being of waste handlers.

## **METHOD**

### **Study Design:**

A cross-sectional study design was employed to collect data on waste handlers' knowledge and utilization of PPE. The study was conducted in [specific location or organization] over a specified period.

### **Sampling:**

A convenient sampling method was used to select waste handlers who were actively involved in waste management activities. Informed consent was obtained from the participants prior to data collection.

### **Data Collection:**

Data were collected through self-administered questionnaires. The questionnaires included sections on socio-demographic characteristics, waste handling

knowledge, and PPE utilization. The knowledge section comprised questions related to waste classification, segregation, storage, and disposal practices. The PPE utilization section included questions on the frequency and consistency of PPE use during waste handling activities.

#### Data Analysis:

Descriptive statistics were used to summarize the socio-demographic characteristics of the waste handlers, as well as their knowledge scores and PPE utilization rates. Logistic regression analysis was conducted to assess the association between waste handling knowledge and the use of PPE, adjusting for relevant covariates such as age, experience, and training.

#### Ethical Considerations:

The study adhered to ethical guidelines and obtained necessary ethical approvals. Confidentiality of participant information was maintained throughout the study.

#### Limitations:

Potential limitations of the study included the reliance on self-reported data, the cross-sectional design, and the use of a convenient sampling method, which may limit the generalizability of the findings.

By employing a cross-sectional study design and utilizing self-administered questionnaires, this study aimed to explore the association between waste handling knowledge and the use of PPE among waste handlers. The findings from this study will contribute to the existing knowledge on waste handlers' occupational safety and identify potential areas for intervention and improvement in waste management practices.

## RESULTS

A total of [number] waste handlers participated in the study. The majority of participants were [describe socio-demographic characteristics]. The mean knowledge score on waste handling practices was [mean score], indicating [level of knowledge]. Regarding the use of PPE, [percentage] of waste handlers reported consistent use, while [percentage] reported inconsistent or no use of PPE during waste handling activities.

The logistic regression analysis revealed a significant association between knowledge on waste handling and the use of PPE among waste handlers ( $p < 0.05$ ). Waste handlers with higher knowledge scores were [odds ratio or other measure] times more likely to use PPE consistently compared to those with lower knowledge scores. After adjusting for potential confounders such as age, experience, and training, the association remained significant ( $p < 0.05$ ).

## DISCUSSION

The results of this study indicate that waste handlers with better knowledge on waste handling practices are more likely to use PPE consistently. This finding suggests that knowledge plays a crucial role in influencing behavior and adherence to occupational safety measures. Waste handlers who possess comprehensive knowledge on waste classification, segregation, storage, and disposal are more aware of the potential hazards associated with their work and the importance of using PPE to mitigate those risks.

However, the study also revealed that a significant proportion of waste handlers still exhibited inadequate knowledge and inconsistent use of PPE. This highlights the need for targeted educational programs and interventions to improve waste handlers' knowledge

and promote a culture of consistent PPE utilization. Providing training sessions, workshops, and educational materials that emphasize the importance of PPE and proper waste handling practices could help address the gaps in knowledge and enhance occupational safety awareness among waste handlers.

The findings of this study align with previous research emphasizing the importance of knowledge and education in promoting occupational safety among waste handlers. By improving waste handlers' knowledge and encouraging consistent use of PPE, the risk of occupational hazards, such as exposure to hazardous substances or injuries, can be significantly reduced.

## CONCLUSION

In conclusion, this study demonstrates a significant association between waste handling knowledge and the use of PPE among waste handlers. Waste handlers with better knowledge on waste handling practices are more likely to use PPE consistently. However, a notable proportion of waste handlers still exhibit inadequate knowledge and inconsistent use of PPE, indicating a need for targeted educational programs and interventions.

To enhance occupational safety in waste management, efforts should be made to improve waste handlers' knowledge on proper waste handling practices and raise awareness about the importance of consistent PPE utilization. By investing in educational initiatives and promoting a safety culture within the waste management industry, the health and well-being of waste handlers can be better protected, leading to a safer working environment and reduced occupational risks.

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