

Assessing the determinants of occupational health risks among domestic waste collectors

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Title PhD thesis: Assessing the determinants of occupational health risks among domestic waste collectors: A case study of the Volta region of Ghana

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Summary

The findings presented in this dissertation provide insight and knowledge into the occupational health risks and socio-cognitive determinants of PPE use among DWCs in Ghana and underscore experiences from already existing waste workers' health programs.

The qualitative study reported in Chapter 2 investigated psychosocial risk factors, work-related stress, and job satisfaction needs among municipal solid waste collectors in the Ho Municipality of Ghana. A phenomenological design was applied to collect data among 64 domestic waste collectors, 12 managers, and 23 supervisors of two waste companies in Ho Municipality, Ghana. Data were collected from June to August 2018 using in-depth interviews and focus group discussion guides. Interviews were supplemented by field observations. Data were analyzed using inductive and deductive content procedures to form themes based on the study's aim. Four themes emerged from the study. The study results revealed that DWCs' poor attitudes and safety behaviors such as not wearing PPE, poor

enforcement of safety standards by supervisors and managers, and work-related stress caused by poor working environments impact negatively on domestic waste collectors' health and safety. Other factors such as poor enforcement of standard company regulations, poor work relations, non-clear work roles, lack of social protection to meet medical needs, poor remuneration, negative community perceptions of DWCs' jobs, work environments, and workloads of DWCs were reported to negatively impact on work stress and job satisfaction needs. In conclusion, the findings are important in informing the necessary waste management policies aimed at improving decent work environments, as well as improving the health and well-being of DWCs in both the formal and informal sectors in Ghana.

Chapter 3 explored the perspectives and experiences of municipal waste company managers and supervisors in the Ho municipality of Ghana on solid waste management practices. A qualitative inquiry was conducted by adopting a phenomenological approach, using in-depth interviews and focus group discussions for data collection. A total of 35 participants, made up of 12 managers and 23 supervisors took part in the study. Transcribed data were imported into NVivo 11.0 software for coding. Content analysis was applied to analyze all transcribed data using processes of induction and deduction. The results showed that organizational capacity, resources, and expertise; community factors such as socio-cultural beliefs and a low sense of responsibility towards solid waste management among urban residents; contextual factors such as regulations, and weak enforcement all influence and shape the level of efficiency and effectiveness of solid waste management practices in the study setting. The findings suggest that policy frameworks and procedures implemented to curb poor urban waste management practices should be systematic and thorough to tackle the issue of solid waste in the study setting and in Ghana in general. The nature of the identified issues and challenges requires multidimensional and multilevel interventions to provide sustainable solutions for managing

urban waste in Ghana. This dissertation explored "Our Work, Our Health, No One's Concern": Domestic Waste Collectors' Perceptions of Occupational Safety and Self-Reported Health issues in the third study question.

Chapter 4 aimed to explore DWCs' perceptions of occupational safety and self-reported health issues in a city in Ghana using a phenomenological qualitative research design. In-depth interviews and focus group discussions were held with 64 domestic waste collectors from two waste companies. The transcribed data were imported into NVivo 11.0 software (QSR International, Burlington, MA, USA) for coding, and a content analysis was applied to analyze all the transcribed data using the processes of induction and deduction. The consensual views from the DWCs showed the waste-company employers' non-interest in the DWCs' occupational safety and health. Poor communication from employers to DWCs and huge workloads were identified as the causes of the poor implementation of occupational safety practices, which exposed the DWCs to occupational health hazards. The DWCs reported that they suffered from occupational injuries, psychosocial disorders, work-related stress, and frequent burnout. The domestic waste collectors adopted coping strategies, such as self-medication, to deal with these occupational hazards, since most of them were not covered by guaranteed health insurance. In addition, the study revealed the non-compliance and non-enforcement of occupational health and safety policies by employers to guide health and safety training and practices among DWCs. The findings suggest that DWCs are exposed to occupational safety and health hazards in their work. Waste-company employers should extend welfare benefits to DWCs, such as health insurance and social security benefits, to ensure their security, health, and well-being. The findings could inform the design of intervention programs and policies to guide training and practices for DWCs. This dissertation

explored Socio cognitive determinants of PPE use among domestic waste collectors in the fourth study question.

Finally, Chapter 5 reports the findings of a quantitative study that investigated the extent to which social cognitive determinants explained PPE use among DWCs in the Ho municipality of the Volta Region of Ghana. A cross-sectional survey, n=344 DWCs in the Ho Municipality of Ghana answered questions assessing the psychosocial determinants of PPE use. The questionnaire consisted of 107 items that were informed by a literature review, previous qualitative research, and two theoretical frameworks explaining behavior (i.e., the Health Belief Model and Reasoned Action Approach) and measured constructs such as perceived severity and susceptibility of work-related health risks, perceived benefits, and barriers, perceived norm, and self-efficacy towards PPE use. Partial least squares structural equation modeling (PLS-SEM) was used to evaluate the structural model describing the relationship between the psychosocial measures and intention to use PPE, which was the main outcome measure. We found that intention was significantly positively and directly influenced by attitude, indicated cues to action, perceived rule enforcement by the management, and self-efficacy. The direct effect of subjective norms on intention was not significant. Attitude in turn was significantly predicted by perceived severity, perceived benefits, and behavioral beliefs, whereas perceived barriers was significantly associated with self-efficacy. The full structural model explained 67% of the variance in intention. In conclusion: The current study successfully expanded the utility of the HBM and RAA in assessing the social cognitive determinants of PPE use among DWCs in a developing economy. Most constructs of the HBM and RAA were found to be associated with the intention to use PPE among DWCs. The findings can be used to inform tailored made interventions and policies to promote more PPE use among DWCs in the future.

