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Association between knowledge on solid waste management and solid waste management practices in state sector institutions in Jaffna municipal council area

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Background Solid waste management (SWM) in state sector institutions requires sustainable interventions. Assessing the knowledge of the heads of the institution may have a pivotal role.

Objectives To determine the association between knowledge of institutional heads on solid waste management and solid waste management practices in state sector institutions in Jaffna Municipal Council area.

Method A cross-sectional analytical study was conducted among 240 state sector institutions in Jaffna Municipal Council area from September 2020 to March 2021. Institutions related to national security were excluded. Both self and interviewer administered questionnaires were used to collect the data about the knowledge on their responsibility of SWM, waste segregation, waste reduction practices, law and regulations related to SWM and observation check list. Point and interval estimates were calculated. Chi square test and independent t-test were used to determine statistical significance and a p-value at 0.05 significance level. The study was approved by Ethical Review Committee, Post Graduate Institute of Medicine, Colombo

Results Practices of handing over as segregated waste was associated with the knowledge on polythene waste segregation (OR= 2.2, 95% CI: 1.2 to 4, p-value=0.004). There was no evidence of association between practices of burning polythene and knowledge on law related to burning polythene in Sri Lanka (OR= 1.8, 95% CI: 0.9 to 3.4, p-value=0.06) or knowing that air pollution (OR= 0.6, 95% CI: 0.3 to 1.5, p-value=0.38) and climate change (OR= 1.1, 95% CI: 0.6 to 1.9, p-value= 0.61) are the adverse effects of burning polythene. Number of trainings attended by the staff was not associated with the recognition of training as his/her responsibility (t= 0.93, df=124, p=0.35).

Conclusion Knowledge of institutional heads on waste segregation is crucial for the practices of waste segregation which is an essential step in sustainable SWM and explicit training of them is needed.