

## **Knowledge and attitude regarding garbage disposal and associated factors among Grade 9 and 10 students in Jaffna Educational Division**

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**Background and objective:** Improper garbage disposal remains a challenge in Jaffna. This study aims to assess knowledge and attitudes towards garbage disposal and associated individual and school-related factors among Grade 9 and 10 students in Jaffna Educational Division.

**Methods:** A descriptive cross-sectional study was conducted among 854 students selected by stratified cluster sampling. Data were collected by a self-administered questionnaire during school hours. A knowledge score was computed based on 35 items with cutoffs ( $\geq 80\%$  good, 50-79% average,  $< 50\%$  poor). Attitudes were scored as favourable, unfavourable or neutral based on a Likert scale (mean score  $> 0$  favourable,  $< 0$  unfavourable, 0 neutral). Data were analyzed on SPSS. Frequencies, percentages, and the chi-square test were used in the statistical analysis.

**Results:** In total, 831 students participated (response rate 97%). About a quarter (24%,  $n=202$ ) had poor knowledge and 12% ( $n=101$ ) had unfavorable attitudes. Over a third (40%) were not aware of disposal methods, 30% did not feel responsible for garbage disposal and 23% felt waste segregation was a nuisance. Being female ( $p<0.001$ ), younger ( $p=0.001$ ), parental education level being O/L or above ( $p<0.01$ ), having a monthly household income of  $>Rs.50,000$  ( $p<0.001$ ), being given instructions on garbage disposal by teachers ( $p=0.021$ ), presence of school environmental clubs ( $p=0.011$ ), being a member of such a club ( $p=0.004$ ) and presence of colour-coded bins in school ( $p=0.001$ ), were associated with good knowledge. Being given instructions by teachers ( $p<0.001$ ), presence of school environmental clubs ( $p=0.014$ ), being a member of a club ( $p=0.005$ ) and presence of colour-coded bins in school ( $p=0.031$ ), were associated with favourable attitudes.

**Conclusion:** School-based health promotion interventions, specifically those led by students, may help to improve knowledge and attitudes on garbage disposal of the school-going population.

**Keywords:** Garbage Disposal, Knowledge, Attitude, Secondary Schools, Jaffna