

## AWARENESS AND PERCEPTIONS ON MICROPLASTICS: A CASE STUDY FROM SRI LANKA

**W.M.K.N. Premarathna<sup>1\*</sup>, H.M.S.P. Madawala<sup>1</sup>, A.M.T.A. Gunaratne<sup>1</sup> and S.P. Abeyesundara<sup>2</sup>**

<sup>1</sup>Department of Botany, University of Peradeniya, Peradeniya, Sri Lanka

<sup>2</sup>Department of Statistics and Computer Science, University of Peradeniya, Peradeniya, Sri Lanka

\*kumudinp@gmail.com

Microplastic (MP), derived from the long-term degradation of plastics, pollution has become a major global issue, and its impacts on natural ecosystems and organisms are largely unknown. As the impacts of MPs are relatively less visible in the short term, people pay less attention to the usage and disposal of plastics. The lack of awareness of MPs and their negative consequences can be a major drawback in introducing effective control measures to minimize their impacts. Thus, the current study investigates the level of awareness of MPs among a representative population of the general public and their perceptions of using plastics. The convenience sampling method was employed to select the study population representing rural and urban residents. A questionnaire was distributed among 166 respondents belonging to the age group of 20 - 40 years through different means and collected responses for a period of six months in 2021. A majority of the respondents were females (70%) and students (58%). Approximately 67 and 68% of respondents were aware of MPs and their harmful impacts, respectively. Nevertheless, a majority of respondents (66%) were not aware of the regulatory measures introduced by the authorities to control the usage of plastic items and to dispose of them without harming the environment. About 66% of respondents discard plastic items daily or weekly, suggesting extensive use. A majority (85%) of respondents were not aware that burning plastics is a prohibited action. The results also revealed that the awareness of MPs and their impacts were significantly related to the gender, level of education, and occupation of the respondents. However, their awareness of regulatory measures of plastics did not show any relationship with the aforementioned demographic characteristics. Their positive perceptions in relation to plastics were significantly associated with the education level and occupation of the respondents. As an example, unemployed respondents were more mindful (98.4%) of the non-biodegradable nature of plastics than that of students and employed respondents. In contrast, students were more aware of the impacts of MPs on plant growth than that of unemployed and employed respondents. Overall, the respondents were generally mindful of MPs and their environmental impacts; thus, they showed a willingness to use eco-friendly substitutes to reduce plastic usage in the future. The study highlights the need for effective measures to enhance the awareness of regulatory measures regarding the usage and disposal of plastics among the public to curb adverse consequences of MP pollution.

**Keywords:** Awareness, Microplastic pollution, Perceptions, Regulations, Sri Lankan community