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Selection, usage, and disposal of personal care and cosmetic products in Sri Lanka; an environmental and health concern

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Personal care and cosmetic products have become an essential aspect of the lifestyle as individual awareness of health, hygiene, and appearance have enhanced considerably. As a result, personal care products and cosmetics are among the most utilized products in the present world. Due to high demand and cost-effectiveness, developers have adapted new manufacturing processes, chemicals, and novel ingredients, including heavy metals and microplastics. Further, the disposal of empty plastic packages has also created an alarming environmental concern. However, consumer knowledge and attitudes towards these products and their disposal play an important role in preventing and managing negative impacts arising from it. Therefore, the present study was conducted to understand the attitudes and knowledge of consumers on personal care and cosmetic product in Sri Lanka. To collect the necessary information, product observation and an online survey for three hundred respondents (300) were carried out from January to June 2021. The majority of the respondents were female (58%), and 71% represented the 18-65 age group. Results revealed that toothpaste (99.6%), face wash (63%), and skin creams (62%) were the most used products among the participants, while 63% used cosmetic products for their day-to-day life. However, 29% of the participants experienced adverse effects (skin rashes, pimples, allergies) when using personal care products and cosmetics. It was noted that most of the respondents (94%) remove applied products from their bodies by washing and 69% disposed of their wastewater into a wastewater gully, where 31% released wastewater into the municipal wastewater system or natural water bodies. Results revealed that discarding into municipal garbage trucks (42%), burning (31%), and open dumping (23%) are the most popular options for the disposal of empty packages. Interestingly, many participants were educated on heavy metals (91%) and their effects (88%), where only 42% knew about microbeads/microplastics. The present study revealed gaps in consumer knowledge, waste disposal, wastewater removal processes, and the suitability and health effects of cosmetics and personal care products. Therefore, relevant authorities, product developers, and consumers should work together to control and minimize the environmental pollution and possible health effects arising from using and disposing of these products. Further, it is suggested to educate consumers, enforce extended producer responsibility policies, improve waste management /recycling facilities, encourage sustainable packaging, and revise/enforce existing legal regulations.

Keywords: Cosmetics, Heavy metals, Microbeads, Personal care products, Waste disposal