UNIVERSITI TEKNOLOGI MARA

INVESTIGATING THE KNOWLEDGE, ATTITUDE AND PERCEPTION ON MICROPLASTIC POLLUTION: A COMPARISON BETWEEN RESIDENTS IN TEMERLOH LIVING IN URBAN AND RURAL AREAS

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Project submitted in fulfilment of the requirements for
the degree of
Bachelor in Environmental Health and Safety (Hons.)

Faculty of Health Sciences

January 2023

ACKNOWLEDGEMENT

In the name of Allah, The Most Gracious, The Most Merciful.

Assalamualaikum and Alhamdulillah, praise to Allah S.W.T The Supreme Lord of the Universe. Peace and blessing to Nabi Muhammad S.A.W., all prophets and their families. I praise Allah S.W.T. for the strength and His blessings in completing my study.

Thousands of thanks and love to my parents Mr. Hasanudin Bin Jaafar and for their support and encouragement through thick and thin of my study. My deepest gratitude and appreciation to my supervisor, Dr Muhammad Afia Bin Zaki who spent his time and efforts in guiding and advising from the beginning till the end of my research journey. Not to forget, I would like to thank all the lecturers in Department of Environmental Safety and Health Sciences who always share their though, knowledge, and advice throughout my study in UiTM Puncak Alam. Only God can reward all of you with goodness.

My special thanks and appreciation to all my friends from HS243 who always give me support and motivation while completing my study. May our friendship last forever. Lastly, I would like to thank everyone who involved directly and indirectly in this study. Thank You.

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ABSTRACT

This study investigates the knowledge, attitude, and perception of residents in Temerloh living in urban and rural area toward microplastic pollution by interpreting the results of questionnaire. Due to high of prevalence of plastics wastes, a lack of knowledge of their ecological effects, and poor attitude toward where the waste generated ends, microplastic pollution is now considered as the greatest threat to livelihoods., biodiversity, and public health on a global scale. The method that has been used in this study is descriptive correlational study. The data was collected from November 2022 to December 2022. The number of respondents that was indicated in this study were 384 by random sampling method. Data were gathered, coded, and analysed using descriptive statistics and independent t-test using IBM SPSS 28 Version. Findings in this study showed that residents living in urban and rural areas has good knowledge with overall mean and median (mean=3.55850±.46675), (median=3.80) (mean=3.4953±.47276), (median=3.80) respectively. From this study, attitude mean (3.5164±.37367) and median (3.33) knowledge score for residents living in urban areas while the overall mean (3.5908±.42049) and median (3.50) is for residents living in rural areas. Both respondents from residents living in urban and rural areas typically have a positive attitude toward microplastic pollution and have a strong desire to reduce the threat it poses. Average mean and median perception score 2.5337±.57027 and 2.50 respectively for respondents in urban areas while the mean and median for respondents in rural areas were 2.8624±.68986 and 2.80 respectively. It showed that residents in urban and rural areas have poor perception on microplastic pollution. Hence, the significant of this study was that the results gave a significant positive impact of social change among the community by raising awareness of microplastic pollution. Also, can build knowledge and perception about microplastic and its effects toward environment and human health.

Keywords: *Microplastic pollution, Environmental effects, Urban and rural areas, Plastic waste.*

CHAPTER 1

INTRODUCTION

1.1 Background of study

Annually, global plastic production was more than 380 million tonnes of plastic every year (Ritchie, H, 2022). Everywhere on the planet, including the air, soil, sediment, oceans, plants, and animals, you can find plastics or fragments of plastic. these are normally made when polymers like polyethylene, polypropylene, polyvinyl chloride, and polystyrene break down (K. Omoyajowo, 2022). By using plastic, ends up as a pollutant and then enters our ocean and natural environment such as the water body. When plastics enter the ocean or water body, they break down into small particles or fibres known as microplastic.

According to (E. Safety, 2022) study, microplastics are particles with a maximum size of 5 mm that are made up of chains of basic molecular building blocks and can have a wide variety of chemical make-ups (polymer types) and morphologies (such as fibers, fragments, or films). Microplastic was usually known as a major factor that pollutes the marine environment but generally, microplastic also contaminated the terrestrial environment. However, it was important to remember that while microplastic can come from a variety of places when microplastic is consumed by aquatic organisms, their bioaccumulation or biomagnification might disrupt the food chain, affecting the organism's survival (K. Omoyajowo, 2022). Because of their small size, they were easily devoured by a wide range of biological species, from protozoan to other marine mammals. Because many marine species consume plastic fibres, they join a troubling list of