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A STUDY ON THE ATTITUDE OF PEOPLE TOWARDS USE OF PLASTICS

¹Ayanna Kaur and ²Dr Jonas Richard A

¹Student and ²Professor & Coordinator, UNAI Hub for SDG 1

¹Mayor World School and ²Kristu Jayanti College

Bangalore, Karnataka, India

Abstract

The usage of plastic has become a part of human beings. People are not in position to avoid plastics and it has come as a major part of usage in the people lives. There is a constant demand in using plastics among the public and often it affects the environment directly and indirectly. The use of plastics has become the major determinant for human's health. Now this is the time people should reflect on the need of plastics and how to use it with responsible. Recycling is the one of the effective ways in taking up a control over the usage of plastics. Many literatures review are also revealed that there is a strong connection between the people's attitude and the environment safety. The plastic usage is also affecting the humans invariably and it is the responsibility of the people in responding to the adverse effects of using plastics. Hence this paper is focused on understanding the people's attitude towards the usage of plastics and the study is also intended to know the awareness level among the people with the regard to effective usage of plastics. This study has adopted the descriptive research design to obtain the information very systematically. The convenient sampling method was adopted by the researcher. The major findings were, 92.5% of the respondents are having awareness on plastic pollution, 16% of the respondents have decided not to use plastics and one third of the respondents are using the method recycling at home in segregating the plastic and other plastics. Based on the research findings, suitable recommendations were provided by the researcher.

Keywords: Plastics Usage, Attitude of People, SDG, Plastic Awareness, Recycling, Sustainability.

Introduction

Plastics are always considered as cost-effective production and it is a kind of versatility made us use in the modern life such as food & drink containers, medical devices and other consumable items. The usage of plastics in our day to day life is increased in the world. Though it is beneficial to the people, but it has adverse effects to the environment as a whole. The major reason is life of plastics increased over the decade. Plastics are synthetic or semi-synthetic organic polymers that are typically lightweight, strong, inexpensive, durable and corrosion resistant. Using plastics is adversely affecting the health of the humans directly and indirectly. The plastic associated additives disrupts the endocrine compound chemicals. The endocrine chemicals are disrupting the compound that are taken up into the body through food, drink, from the air or across the skin, generally unintentionally, and that interfere with the normal functioning of hormones in the body. Due to the imbalance of hormones in the body, there is a possibility of getting worst affected such as male and female reproductive abnormalities, incidence of hormone-sensitive cancers including of the breast and prostate, Endocrine abnormalities and behavioral conditions including autism, obesity-related conditions including diabetes, and cardiovascular dysfunction.

Literature Review

The article published in 2021, in the journal of case studies in chemical and environmental engineering, titled on "**Plastic waste management strategies for environmental sustainability**" found that plastics positively impact our daily lives due to their basic applications in the household activities and industrial packaging of various end-products. They cause different problems to human life and the ecosystem. thus, this research had illustrated different methods that can be applied to treat plastic wastes so that the plastic life can be cyclic, like the recycling of plastic wastes will help to improve the economy by decreasing the production cost. Rakesh Kumar et al (2021) in their study titled on "**Impacts of Plastic Pollution on Ecosystem Services, Sustainable Development Goals**" highlighted that Plastic pollution is ubiquitous in terrestrial and aquatic ecosystems. Plastic waste exposed to the environment creates problems and is of significant concern for all life forms. Plastic production and accumulation in the natural environment are occurring at an unprecedented rate due to indiscriminate use, inadequate recycling, and deposits in landfills. In 2019, the global production of plastic was at 370 million tons, with only 9% of it being recycled, 12% being incinerated, and the remaining left in the environment or landfills. The leakage of plastic wastes into terrestrial and aquatic ecosystems is occurring at an unprecedented rate. The management of plastic waste is a challenging problem for researchers, policymakers, citizens, and other stakeholders. Therefore, here, we summarize the current understanding and concerns of plastics pollution (microplastics or nano plastics) on natural ecosystems.



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In the journal of “**Nature communications**” published an article with the title of Shortcomings of Plastics summarized that Durability, one of plastic’s greatest assets is now its curse—its robustness means that plastics stay in our environment for hundreds of years.” Although the ease of plastic production generates cheap goods, the linear plastic economy adopted sees 90% of products used once and then discarded, thus creating a global environmental crisis. Since the plastic revolution, 6.3 billion tonnes of plastic waste has been produced worldwide. We store roughly 79% of plastic waste in landfills, which results in up to 2.41 million tonnes of plastic waste entering oceans via rivers every year. Durability, one of plastic’s greatest assets is now its curse—its robustness means that plastics stay in our environment for hundreds of years. Even when degraded, plastic never truly leaves the environment but is present as smaller pieces invisible to the naked eye (microplastics) that are choking marine life and propagating up the food chain.

In 2018, the article titled on “**Plastic Pollution and Potential Solutions**” published by Sage interpreted that review is presented of the use of different types of plastic, and the effects of pollution by these materials on animal, human and environmental health, insofar as this is known. Since 2004, the world has made as much plastic as it did in the previous half century, and it has been reckoned that the total mass of virgin plastics ever made amounts to 8.3 billion tonnes, mainly derived from natural gas and crude oil, used as chemical feedstocks and fuel sources. Between 1950 and 2015, a total of 6.3 billion tonnes of primary and secondary (recycled) plastic waste was generated, of which around 9% has been recycled, and 12% incinerated, with the remaining 79% either being stored in landfills or having been released directly into the natural environment.

The article titled on “**Public attitude towards plastics**” published in Science Direct examined that public beliefs and attitudes towards plastics in Australia and provides insight on a global level. The research was conducted using an online survey of a nationally representative sample (2518 respondents). Overall, the survey results indicate that the public view plastics as a serious environmental issue. Plastic in the ocean had the highest mean rating for seriousness out of nine environmental issues, followed by two other issues relating to plastic waste production and disposal. Whilst there was an association of plastics with food packaging and convenience, there was more of a negative association with the use of plastic overall. Eighty percent of respondents indicated a desire to reduce plastic use and the majority of respondents believe that paper and glass are more environmentally friendly packaging materials than plastics. However, the results showed that many respondents do not translate their aspiration to reduce plastic use into action.

The journal of Science of the total environment in 2021 published a paper on “**An assessment of attitudes towards plastics and bioplastics in Europe**” evaluated the attitudes and perceptions of Europeans on the use of plastics and bioplastics, associating them with their profile and characteristics. Evidences gathered from the study suggest that the majority of those surveyed showed a) an awareness about the problem and b) an interest to be engaged in reducing the use of plastics and adopting sustainable alternatives. The survey also shows that the participants have a good knowledge of bioplastics, whereby more than half had knowledge about the material properties of bio-based plastic materials. This feature stands out in participants with a higher educational level, who demonstrated the awareness of the difference between the terms ‘bio-based’ and ‘biodegradable’ when compared to other groups.

Social Science Journal in 2021 published an article on “**Investigating the Knowledge and Attitudes towards Plastic Pollution among the Youth**” pointed out Plastic pollution is a serious global environmental and health issue. Poor plastic waste management, from manufacturing processes to products’ end life, poses serious risks to the environment and human health. Most plastic materials discarded, disposed or abandoned in terrestrial environments after a single use “leak” into aquatic ecosystems, killing thousands of marine creatures Images of fish, sea birds, turtles and marine mammals entangled in, suffocated or dead from ingesting plastic debris are alarming. On land, plastic pollution manifests in many ways such as the deterioration of the natural beauty of the environment, blockage of drainage systems, reduced percolation of water and aeration in soils and death of domestic and wild animals due to the ingestion of plastic litter.

Methodology

Objectives of the study

- To understand the socio-demographic profile of the respondents
- To find out the attitude among the public towards the usage of plastics.
- To recommend suggestions for developing positive attitude towards use of plastics
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Research Design

The research design used in this research is Descriptive. A descriptive research design is used to describe the characteristics of a population or phenomenon. This type of research design is used to collect data that can be used to describe a population.



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Sample Design & Sample Size

Convenient sampling method was used in the present study. There were 25 respondents who participated in the study. The researcher shared the Google form to collect the data. Whoever was interested, responded to the questions through the google form.

Major Findings Related to study

Socio-demographic Profile

With regard to the Age more than half of the respondents (60%) belong in the age group of 41-50 and 1/4 of the respondents belongs under 20 & 31-40 years.

In relation to Gender, 92% of the respondents are females because the questionnaire was mostly send particularly to that gender. ~8% of the respondents prefer not to say their gender because they might want to stay discrete.

With regard to Educational Qualification, 64% of the respondents are post graduates mainly because most the respondents belong to the age group of 41-50. 1/4 of the respondents have completed their class 10 & 16% of the respondents are u graduates because the respondents here are housewives who got married young before completing their further studies.

Awareness on plastic usage

This study indicated that 83% of respondents are aware of how much plastic they use. As most of the respondents are in their middle age they are more aware of the percentage of plastic they use. The rest of the 16.7% of respondents are not aware of how much plastic they use. These respondents are students who are under 20 and are not that aware of how much plastic they use. Thus, what we can infer from this is Higher the age higher percentage of your awareness

Efforts to use recycle plastic

The result proved that most of respondents (60%) make an active effort to recycle used plastic. Most of the respondents are adults in their middle age. Thus, they are more aware and make an active effort of recycle. 2/5 of the respondents do not make an active effort to recycle because most of them are students.

Purchase of Plastic such as coke, water etc

The study found that, Most of the respondents (64%) only purchase plastic bottles a few times a month. 16% of the respondents never purchase plastic bottles as they might prefer to not to use plastic bottles. 3/25 of the respondents purchase plastic bottles once a week.

Awareness on Plastic Pollution

The study interpreted that most of the respondents (92.5%) are aware of plastic pollution and its impact. As all the respondents are literates and most of them are adults, they are more aware of plastic pollution and the toll it takes on the environment.

Knowledge on schemes for environment protection

The study resulted that most of the respondents (79.2%) are aware of schemes that are in place to reduce plastic pollution as most of the respondents are adults with much more awareness.

Government effort on controlling plastic usage

The study revealed that 70.8% do not think that the government is doing enough to tackle plastic pollution as found in the previous question 84% of the respondents often see a lot of plastic waste laying around. 29.2% of the respondents believe that the government is doing enough to tackle plastic pollution.

Consumer effort on plastic usage

The study found that two third of the respondents agree with this statement as they are aware of the disadvantages of plastic, they would rather pay more for a product that does not come in plastic packaging. Less than half of the respondents strongly agree with the statement. One third of the respondents disagree with the statement as they might not want to pay more for a product just because it comes in any other form of packaging.



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Usage of Biodegradable Plastics

In this study the result has shown that most of the respondents (54.2%) agree to the statement mainly because they can be decomposed. 29.2% of the respondents strongly agree with the statement. 12.5% of the respondents disagree with the statement.

Method of recycling at Home

More than 35 % of the respondents sometimes deliberately separate plastic waste for recycling. Around 32% of the respondents always separate plastic waste for recycling. Less than twenty-five percentage of the respondents rarely recycle plastic waste. Very least percentage (4%) of the respondents never recycles plastic waste.

Plastic Waste in the environment

The study found that most of the respondents (45.8%) agree with the statement “It is non- biodegradable”. 41.7% of the respondents agree with the statement “It never goes away”. 8.3% of the respondents agree with the statement “It is biodegradable so it reintegrates”

Suggestions & Recommendations

1. More awareness programme on the effective usage of plastics is to be conducted in the residential layouts
2. Children and youth are to be engaged effectively on Swachh Bharat Mission to act as an ambassador in protecting the environment.
3. Recycle products are to be high in the market with an affordable price which will make the public to use widely
4. Strict laws to be followed in the manufacturing sector towards producing the harmful plastics
5. Non-Governmental Organisations should take active participation in the campaigns and schemes in protecting the environment.

Conclusion

In the modern world, it is unavoidable situation for the people to use the plastics but recycle products and harmless plastics can be promoted and utilized by the consumers at large. In this study, the people are having high level of awareness on the effects of usage of plastics and also the schemes of government in nurturing the environment. Every individual should take strenuous effort in protecting the environment and to be more cautious in using the plastics to safeguard the next generation.

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