



AWARENESS OF COMMON PEOPLE TOWARDS AN INTEGRATED WASTE MANAGEMENT STRATEGY

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Abstract

People across the world are always striving to improve their quality of life. As a result, there has been a rise in the consumption of products and services. Large volumes of waste and increased pollution are results of this kind of consumption. Maximizing energy consumption efficiency at every stage of the system, from the manufacturing of goods to the disposal of waste, should be the aim of any sustainable growth. It is essential to address the issues as a whole because each of these phases depends on the others in the entire chain. This study focuses on the awareness of common people towards an integrated waste management strategy that incorporates recycling and disposal of waste.

Keywords: waste recycling, E-waste, Eco friendly, Solid waste.

Introduction

The procedures and activities necessary to control garbage from its creation to its ultimate disposal are referred to as waste management or waste disposal. This covers waste collection, transportation, treatment, and disposal in addition to waste management process monitoring and control and waste-related legislation, technology, and economic processes. There are various ways to dispose of and manage different types of waste, which can be solid, liquid, or gaseous. All forms of waste, including organic, radioactive, biological, household, municipal, and industrial wastes, are dealt with via waste management. Waste could be harmful to people's health. Handling solid waste and consuming food, water, and soil can all lead to health problems. Human activity produces garbage, and waste management aims to lessen the negative consequences of waste on the environment, the well-being of people and natural resources. Active Participatory of common people in waste management is ideal for a sustainable, clean, and prosperous environment. With the goal of reaching zero waste, the Swatchh Bharat Ayojan (Clean India Mission) program has implemented waste management (WM) in India. This involves collecting waste at its origin and disposing of it in a minimal, safe, and examined manner in a disposal facility with segregation and recycling for value-added products.

To reduce the quantity of waste that ends up in disposal and minimize the impact on the environment, waste management aims to extend the lifecycle of products and, when feasible, reuse and recover resources. Waste management is essential in promoting sustainable development and the shift to a circular economy. In recent days consumption of products by people were large amounted as a consequence waste disposal is also increased. Every individual is responsible for safeguarding the healthy environment and enhance a greenery society in future. Therefore the ultimate object of this paper is to bring out the awareness level of common people towards integrated waste management strategy of recycle and disposal.

Review of Literature

Subramanian, P. M. (2000) observed that Growing environmental consciousness has led to worries about our wasteful lifestyles and careless trash disposal. Plastics make up a little but important portion of the waste stream. The fact that a considerable increase has been observed in the amount of plastics recycled is positive. When designing new parts, environmental compatibility and recyclability are taken into account. The use of life cycle assessments and management as decision-making instruments is also being researched.

Dhana, Raju (2021) With the amount of waste generated globally reaching 2 billion tons annually and predicted to reach 3.5 billion tons by 2050, as well as its significant impact on the global issues of pollution control (PC), global warming (GW), and climate change (CC), it is desirable for a sustainable society to have government-aided, government-monitored, and citizen-participated waste management (WM). A yearly assessment of the WM has led to the designation of certain states and localities as "clean." This article deposes an overview of the current waste management (WM) techniques, their outcomes in some of these clean places, and the creation of numerous value-added products through the recycling of various waste materials.

Singh D N (2021) examined the incorporation of contemporary strategies from many stakeholders in the rule making process is necessary in order to effectively handle the reduction and justifiable handling of the e-waste situation. The main requirements in an international forum that can address the financial reasons behind the export and management of illicit e-waste include stock, the source of inflow, limits in and out of the formal and informal sectors, etc. It will be necessary to assess how well the three entities—enforcing compliance, enforcing regulations, and removing health and environmental risks associated with managing e-waste—have been addressed by the regulations in order to determine whether further restrictions are required.

Importance of the study

The generation of waste is growing along with the world's population. In reality, the amount of trash we release nowadays is unparalleled. As a result, efficient waste management is now a crucial component in preventing the consequences that arise from unprocessed waste production, including resource inefficiency, climate change, health effects, and the attainment of sustainability and a greener future for the earth.

Statement of Research problem

Waste management were considered as significant strategy for environment protection. The process of collection to the end disposal stage is not an easy task because it requires high efficiency of manpower and technologies. Cost implemented for waste recycle and disposal is also significant aspect for the government and in major states many areas were dumped with the waste collected from different parts of the state which destroys the environment of such areas with disposal of large quantity of waste. The common people were in a position to segregate the reusable waste and non reusable waste separately at the origin of waste disposal. Hence emphasis is required for the awareness of common people towards integrated waste management strategy of recycle and disposal.

Objectives of the study

- To understand an overview of waste management system
- To study the awareness of common people towards waste recycle and disposal.

Hypothesis for the study

Based on the objectives for the study mentioned above, the following hypothesis is formulated

There is no significant association between demographic profile and awareness of common people towards waste recycle and disposal

Research Methodology

The present study focuses on the awareness of common people towards integrated waste management of recycle and dispersal in Chennai city. A sample size of 132 respondents was collected and the study falls under the descriptive type. The interview schedules were chosen as research instrument and Convenience sampling method is used for sample selection. The study comprises of two stages, first stage includes the general demographic profile of the respondents. Second stage involves the awareness of common people towards integrated waste management

strategy of recycle and isposal. The statistical tools used for the analysis of data were percentage analysis and chi-square test.

Analysis and Discussion

Table-1

Demographical profile of the respondents

Demographic profile	Classification	Frequency	Percentage
Gender	Male	90	68.2
	Female	42	31.8
	Total	132	100
Age group	Less than 20 years	66	50
	20-35 years	15	11.4
	35-50 years	27	20.4
	50-65 years	12	9.1
	Above 65 years	12	9.1
	Total	132	100
Educational qualification	School education	87	65.9
	Under Graduate	24	18.2
	Post Graduate	15	11.4
	Technical/Professional	6	4.5
	Total	132	100
Occupation	Home hold	24	18.2
	Private Employees	78	59.1
	Business	12	9.1
	Professional	18	13.6
	Total	132	100
Monthly y income	Up to Rs.25,000	66	50
	Rs.25,001 - Rs.50,000	15	11.4
	Rs.50,001 - Rs.1,00,000	39	29.5
	More than Rs.1,00,000	12	9.1
	Total	132	100
Marital status	Single	60	45.5
	Double	72	54.5
	Total	132	100

Source: Primary Data

Interpretation

From Table 1 it is inferred that majority of the respondents (68.2 percent) are male. Half of the respondents are aged less than 20 years. Regarding the educational qualification, majority of the respondents (65.9 percent) are having school education. Maximum of the respondents (359.1 percent) are private employees and half of the respondents' monthly income is upto Rs.25000 per month and majority (54.5 percent) of the respondents are living with their spouse.

Table-2
Awareness about different kinds of waste

Kinds of waste	Frequency	Percentage
Fabric waste	15	11.4
E-waste	27	20.5
Plastic waste	72	54.5
Bio solid waste	18	13.6
Total	132	100.0

Source: Primary Data

Interpretation

Table 2 shows that majority of the respondents (54.5 percent) have awareness on plastic wastes which is harmful for the environment, followed by 20.5 percent have awareness about e-waste. Around 14 percent were aware of solid bio waste. Only 11.4 per cent of the were aware bout fabrics waste which is growing on serious issues.

Table 3
Awareness about 3 r's of waste management –Reduce, Recycle, Reuse.

Reduce, Recycle and Reuse	Frequency	Percentage
Always	24	18.2
To an extent	75	56.8
Not sure	33	25.0
Total	132	100.0

Source: Primary data

Interpretation

From table 3 it is inferred that majority of the respondents (56.8 per cent) towards 3 R;s of waste management is to an extent. Around 18 per cent of the respondents state that they are aware about 3 R;s of waste management and 25 per cent of the respondents state that they are not sure about it.

Table 4
Awareness of respondents towards Integrated waste management

Awareness level	Frequency	Percentage
Not aware	6	4.5
Neither aware nor not aware	24	18.2
Aware	72	54.5
Fully aware	30	22.7
Total	132	100.0

Source: Primary data

Interpretation

As per table 4, majority of the respondents (77.2 per cent) are aware and fully aware about integrated waste management of waste recycle and disposal. Only 4.5 per cent of the respondents are not aware about the waste management. So, it is inferred that the awareness of respondents towards integrated waste management is successful but in practice it is tough task.

Testing of hypothesis:
Association between Gender and Awareness of respondents towards integrated waste management

To know the association between gender and Awareness of respondents towards integrated waste management, Chi-square test was used. The result shows Chi-square = 6.160, df = 3, N = 132,

$p > 0.05$. Since the p value (0.104) is not less than 0.05, there is no association between gender and Awareness of respondents towards integrated waste management,

Association between marital status and Awareness of respondents towards integrated waste management

To know the association between marital status and Awareness of respondents towards integrated waste management, Chi-square test was used. The result shows Chi-square = 6.664, $df = 3$, $N = 132$, $p > 0.05$. Since the p value (0.083) is not less than 0.05, there is no association between marital status and Awareness of respondents towards integrated waste management.

Association between age group and Awareness of respondents towards integrated waste management

To know the association between age group and Awareness of respondents towards integrated waste management, Chi-square test perceived experience of senior citizens towards digital payment methods, was used. The result shows Chi-square = 33.843, $df = 12$, $N = 132$, $p < 0.05$. Since the p value (0.001) is less than 0.05, there is an association between age group and Awareness of respondents towards integrated waste management.

Association between educational qualification and Awareness of respondents towards integrated waste management

To know the association between educational qualification and Awareness of respondents towards integrated waste management, Chi-square test was used. The result shows Chi-square = 42.446, $df = 9$, $N = 132$, $p < 0.05$. Since the p value (0.000) is less than 0.05, there is an association between educational qualification and Awareness of respondents towards integrated waste management.

Association between monthly income and Awareness of respondents towards integrated waste management

To know the association between monthly income and Awareness of respondents towards integrated waste management, Chi-square test was used. The result shows Chi-square = 32.177, $df = 9$, $N = 132$, $p < 0.05$. Since the p value (0.000) is less than 0.05, there is an association between monthly income and Awareness of respondents towards integrated waste management.

Suggestions

1. Effective measures for creating awareness among the public to be implemented for sustainable environmental growth.
2. Ensure strictly the segregation of reusable waste and non reusable waste separately at the origin of waste collection.
3. Enhance self responsibility of common people to follow the waste management strategies for recycle and disposal of waste.
4. Reduce the production of harmful plastics, electronic items and other waste materials to initiate the eco-friendly earth.
5. Implementation of penalties and punishments for the pollution makers and follow the measures laid down at global issues.
6. Induce the people to have simple and essential lifestyle with less consumption of products which may reduce the creation of waste in large quantum.

Conclusion

The global issues of climate change. Health hazards, extraction of resources and environmental pollution has adverse link with the waste management system. The proper way of disposal and recycle of waste could enhance the society in financial aspect as well as healthy environment aspect but in practice the waste disposal is quite a critical task. The government alone could not be the whole responsible for clearing the waste and maintaining the eco friendly community. The common people are accountable for the production of large quantum of waste due to high fascinate lifestyle. Hence the public are in a liable position to concentrate more on the recycle and disposal of waste in



an effective manner to step forth the eco-friendly and greenery society in future. The government has to strictly monitor and imitate public awareness towards the importance of waste management strategy.

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