

KNOWLEDGE, ATTITUDE AND PRACTICE IN SOLID WASTE MANAGEMENT AMONG URBAN HOUSEHOLDS IN KUTHUPARAMBA –KANNUR DISTRICT KERALA

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ABSTRACT

Solid Waste Management is the crucial challenge faced by the world in present scenario. Improper management of solid waste is creating many environmental and health hazards in the society. The knowledge and attitude about solid waste management have influence on their waste management practices. Though the people have knowledge with regard to solid waste management practices many of them burn plastics and throw them in public places. There is emergent need to focus a greater attention on this issue. The governments both central and state should enforce developmental friendly policies with the help of the local bodies to save our environment.

INTRODUCTION.

It is found that the knowledge and attitude about solid waste management have no influence on their waste management practices. Though the respondents have knowledge with regard to solid waste management practices many of them burn plastics and throw them in public places. There is emergent need to focus a greater attention on this issue. The governments both central and state should enforce developmental friendly policies with the help of the local bodies to save our environment.

Waste management is the collection, transport, processing, recycling or disposal and monitoring of waste materials. The term usually relates to materials produced by human activity, and it is generally undertaken to reduce their effect on health, the environment or aesthetics (Lingarag, 2012). In a global perspective, it is a great challenge to deal with the waste management for several countries, especially the developing ones.

Solid waste rates show that they are greatly influenced by the economic development, industrialization, public habits and local time. As there is no fixed framework to deal with these issues.

The main causes of improper solid waste disposal in urban centers are due to lack of good and enough infrastructures, non-implementation of existing environmental sanitation laws, irregular and unplanned dumping of solid wastes, population and urban growth due to rural-urban migration, insufficient capital to run solid waste management process and lack of new technology in waste disposing (Momodu, 2011).

By perceiving these problems, this study tries to focus on the waste management problems in Kannur district in Kerala, focusing on the kuthuparamba municipality. In this region the problem of waste management is very crucial. The crucial problem for the waste management in this region is that there is no place to dump the waste and there is no proper waste management systems. This study proposes that the knowledge, attitude and practice of people towards these things are crucial, without these any policy can't make any changes in the society. Even if the people has knowledge about these issues, the practice of handling waste makes the problem much worse.

REVIEW OF LITERATURE

The aim of the chapter is to impart a basic idea about already existing literature of the present study that is linking with the study and make it clear for the understanding. Here the researcher makes an attempt to inculcate the existing literature to the present study. Through this chapter the researcher tries to find out different studies related to people's knowledge, attitude and practice regarding solid waste management. Several studies conducted by social scientists, social institutions and other agencies which related with Knowledge, Attitude and Practice of Solid Waste Management has been reviewed.

Biradar (2014) conducted a study entitled "Awareness of Solid Waste Management among under Graduate Students in Hyderabad, Karnataka Region". The study pointed out the better way of managing the waste 8% of the respondents expressed that reducing the quantity of the waste is the better way of managing the waste. While 22% reusing as the proper way to managing the waste, 58% of the respondents expressed that recycling can be used to manage waste and 12% of them suggested to introduce any new method to manage the waste. The majority of them expressed that lack of awareness among public is the reason for the problem of solid waste. The study also pointed out the need of proper interventions from municipalities. The study suggested that education and awareness programs need to be conducted among public.

Arora and Agarwal (2011) conducted a study entitled "knowledge, Attitude, and Practice regarding Waste Management in selected hostel students of University of Rajasthan, Jaipur". Total 300 students were selected by using stratified sampling, 150 PG students and 150 UG students were selected as respondents. The study shows that majority (54%) of the respondents are having low knowledge regarding waste management and 64.33% of them had less favorable attitude towards waste management. The study also found that more than half of the people are following moderate waste management practice and nearly half (46.6%) are practicing poor waste management practices. It is found that only less people (1.33) are practicing good waste management systems. It is pointed out that education has crucial role to determine people's knowledge towards waste management. Study shows that PG students are having higher knowledge regarding waste management compared to UG students but in the case of attitude there is no significant difference between UG students and PG students. The study also shows that those who possess good knowledge also have good level of practices, thus are able to manage the waste in proper manner.

In the context of Kerala, 6000 ton of waste is produced everyday as per unofficial estimates. Several local issues and sentiments have prevented from the collection of waste from several parts of Kerala. Many popular protests have happened in Kerala, in Vilappilshaala and Brahmapuram are examples, where the landfilling has created several health and environment problems. Lack of space, increasing waste generation, population, problems in policy making are the problems which much of the municipalities in Kerala faces towards the waste management. Land filling is the major practice of waste management in Kerala, but the problems it creates for the residents are very high. Kerala government and local self-governments don't have effective plans to handle these issues.

Knowledge Regarding Waste Management

The knowledge of the people regarding solid waste management is influencing the practice of dealing with it. The people who don't have a thorough knowledge about this may use the improper methods of waste management because they don't know about the ill effects it creates. In the context of Kerala, which is considered to be a well-educated society, the knowledge about the waste management is much less. Moreover, apart from discarding the valuable organic waste, it can be utilized as fertilizers or for the production of energy thus converting raw organic waste into black gold. Therefore, to promote sustainable development, the Government should take initiatives and should work in collaboration with other public and private sector as well as municipalities authorities for the implementation of segregation techniques that would be helpful for effective recycling.

Attitude Regarding Solid Waste Management

The right attitude of the people regarding the waste management is very crucial after the knowledge. The method of dealing with the waste, where to dispose and how to deal with it becomes part of the attitude, we have towards the waste management. Increasing the accessibility to the recycling centers may change people's attitude towards waste management. Awareness generation among the people using multiple strategies would have a strong impact on promoting positive attitude among the people. The attitude was determined by level of knowledge. Attitude, knowledge, thought, belief and emotion plays an important role. Attitude was determined as evaluative response. Evaluative response means that the rise of reaction as attitude expression was caused by individual evaluation process. This evaluation process

concluded the stimulus into bad, positive-negative, pleasant and unpleasant, and then became potential reaction on the attitude object. Some study showed strong relationship between the attitudes and behavior (Rahmaddin, 2015).

Practices Regarding Waste Management

As the whole, people in a community are not well aware of the consequences of the solid waste, the practice of dealing with it is diverse and harmful. The practice of people dealing with waste is different in the rural and urban areas too. This practice of handling the waste is very much influenced by the knowledge, attitude and the lack of space within the household. In the urban areas, the busy life and the lack of space within the household leads them to the improper ways of waste management. Burning waste and dumping in the public spaces are the major practice of handling waste in the urban areas. On the other hand, the quantity of waste produced in the rural areas are much less when compared to the urban areas but the practices are almost the same.

This study intends to address these issues by understanding the waste management practices and their knowledge and attitude towards waste management in the select households within the kuthuparamba municipality. This study, intends to know the methods adapted to waste disposals and the attitude, knowledge and practice of dealing with it.

RESEARCH METHODOLOGY

Title of the Study

Knowledge, Attitude, and Practices in Solid Waste Management among Urban Households in Kuthuparamba Municipality.

Statement of the Problem

The rapid urbanization, constant change in consumption pattern and social behavior have increased the generation of municipal solid waste (MSW) in Kerala beyond the assimilative capacity of our environment and management capacity of the existing waste management systems. Therefore, there is an urgent necessity of improved planning and implementation of comprehensive MSW management systems for upgrading the environmental scenario of the

State. The awareness and knowledge about solid waste management is very important in the modern scenario especially those who managing the home are managing the household waste also. In this context the proposed study is an investigation to asses' knowledge and awareness about solid waste management among urban households in the study area which is the need of the hour

Significance of the Study

The rate of waste generation is higher in urban areas than that of rural areas. The effective waste management is a critical challenge to authorities in urban areas of Kerala. Higher growth of population and lack of proper waste management mechanism increases the incidence of this problem. All waste management system will work effectively only if the people and the society have minimum level of knowledge and awareness regarding the issues of waste. The households play a crucial role in managing domestic wastes. Thus there is vital need to assess the knowledge, attitude and practice regarding waste management among urban households. Micro and macro level studies are very significant in order to tackle the issue.

Objectives

- To study the socio-demographic profile of the respondents
- To assess knowledge and attitude of urban households with regard to solid waste management
- To understand waste management practices among the respondents

Research design

This research is descriptive and analytical in nature. It describes and analyses knowledge attitude, and practices of people with regard to waste management. The universe of the study is ward no: 20 of Kuthuparamba municipality there are 132 households consisting of a total population of 729. Out of 132 households 40% of the households were selected as sample of the study. The simple random technique was used to select the sampling and The data was collected by personally interviewing the respondents in their houses. Only one adult member from each household was contacted and interviewed for the sake of collecting data

Both primary and secondary data was used to collect information. Primary data was collected by using structured interview schedule and attitude scale. Secondary data was collected from newspapers, Journals, books, & Reports

Analysis and Interpretation of data

A code book was designed in order to prepare a code sheet. Data was entered to code sheet and SPSS package was used to tabulate the data. Percentage analysis was done to present the data. The data was presented in tabular and graphical forms.

Socio- Demographic Profile

It is believed that socio- demographic parameters of an individual's influence their knowledge, attitude and practices. The socio – demographic profile of the respondents selected for the study are given below

Table .1, Distribution of Respondents based on Age

Age	Number	Percentage
20-30	6	12
31-40	10	19
41-50	22	42
51-60	6	12
Above 60	8	15
Total	52	100

A good number of respondents (42%) belong to the age between 41 and 50. The respondents belong to age below 40 years only 30% and respondents with age more than 60 years of old is 15% only. Age is very important determinant of individual's knowledge and attitude because increasing age also indicate increasing experience. Experience gives lot of input to a person. Since a great majority respondents of the study are housewives and majority (42%) of them are middle age and above middle aged. As per the study conducted by Ali Haider (2015) revealed that almost 81.1% of the respondents lie in the age span of 20-40 years in their study. As per the study conducted by Agovu (2012) it is found that respondents below 25 years have

significantly higher knowledge about solid waste management than those above 25 years of age but in case of awareness and practice reverse result can be seen in the study.

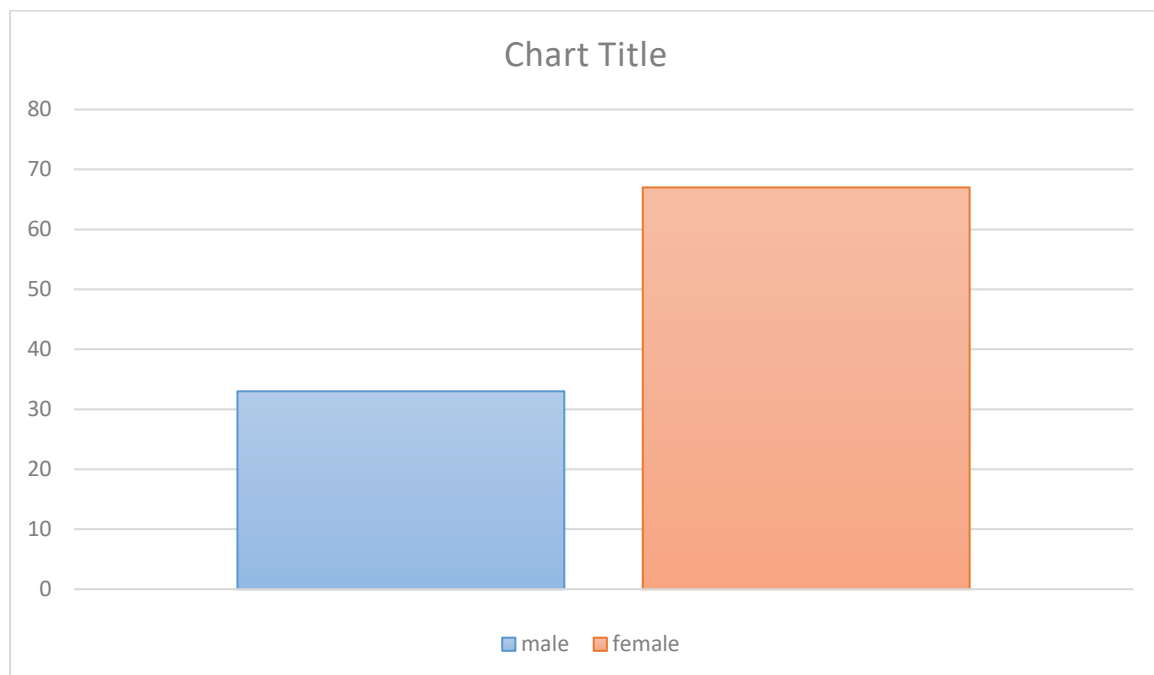


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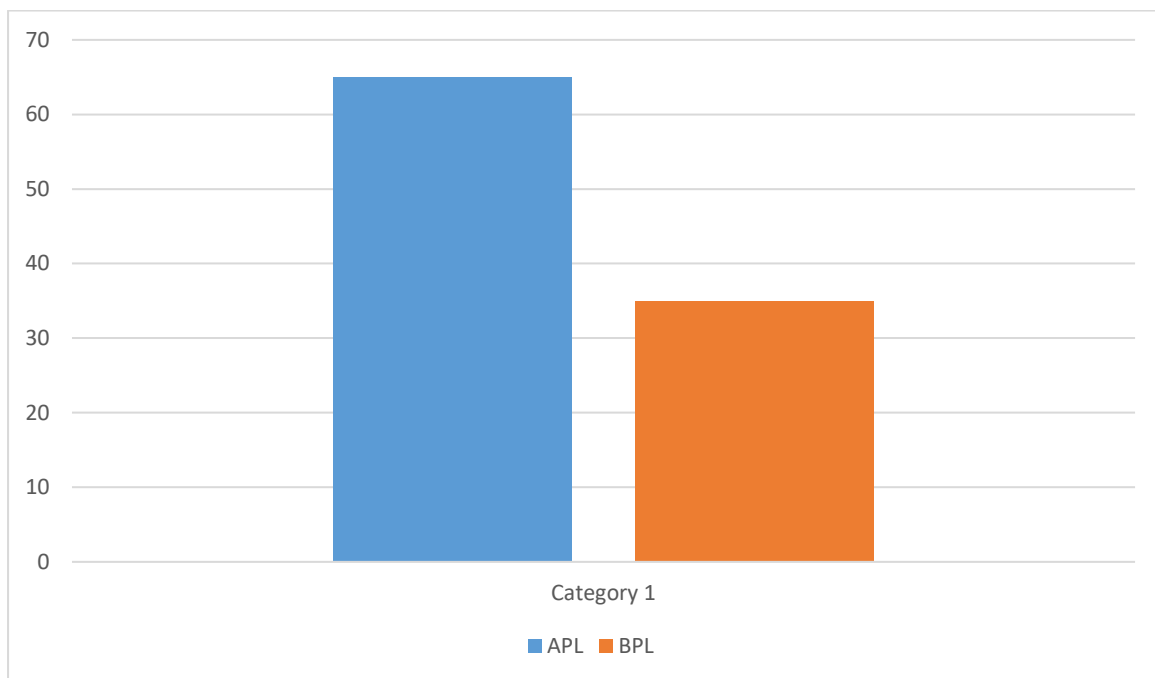
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Figure 1: Distribution of Respondents based on Gender

There exists gender difference in knowledge and attitude of individuals regarding various aspects of life. Among the 52 respondents selected for the study 67% are females and the rest (33%) are males. It is assumed that housewives can play very significant role in waste management in the house and the society. As women are more prone to positive changes if they are oriented properly, they are the best channels for pro-environment waste management practice. It is said if a women is educated whole family is educated and in turn the whole society is educated. Women are more likely to separate solid waste than men.

Figure 2: Distribution of Respondents based on Economic status



Majority of the respondents (65%) belong to Above Poverty Line (APL) category and the rest (35%) belong to Below Poverty Line (BPL) category. Economic status of the respondents is satisfactory.

Table 2: Distribution of Respondents based on educational status

Educational status	Number	Percentage
Primary	5	10
Secondary	16	31
Higher secondary	4	8
Graduates	18	34
PG	9	17
Total	52	100

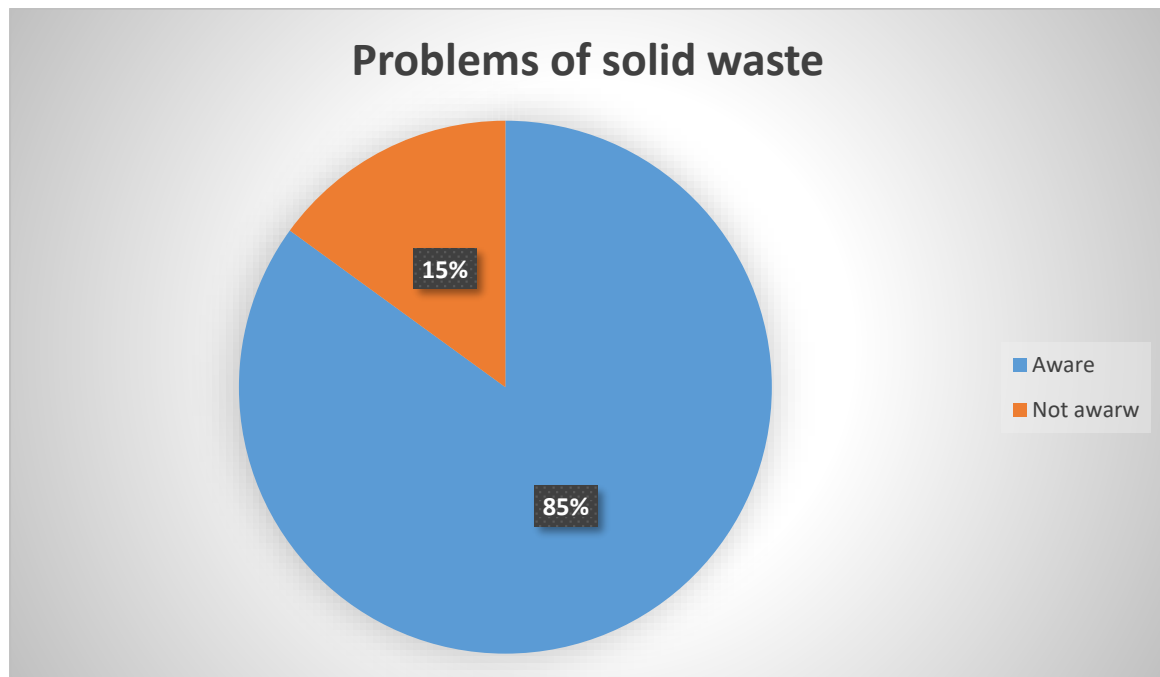
Education is an important factor in creating right knowledge and attitude. Table presents the information related to education level of the respondents. The results shows that 18(34%) of the respondents are graduates, 16(31%) of them are having secondary education, 9(17%) of the respondents are having post-graduation, 5(9.6) of them are having primary education. Only 4(8%) of them are having higher secondary education. Education is associated with actionable awareness. Education is an important tool to make the people aware but the question is about to what extent people are made to conscientize with our present education system. Thus present education system should make the people to think critically not just teaching literacy and memory skills. Critical consciousness is crucial as for as waste management practice are concerned. People should critically think and acts towards their waste management practices.

Table 3: Distribution of Respondents based on Attendance in the Waste Management Awareness programme

WMA Programme	Number	Percentage
Attended	11	21
Not attended	41	79
Total	52	100

The table 3 shows the results related to the attendance in the waste management awareness programs. It shows that majority of the respondents 41(78.8) have not attended any waste management awareness programme. Only 11(21.2%) of them have attended awareness programs related to waste management. It is evident from the above results that the municipality and other social organizations in the study area failed to give awareness among the people. Solid waste management is one of important responsibility of local self- government, so they have to conduct such awareness programs in the study area.

Figure 3: Distribution of Respondents based on Knowledge about the problems of solid waste.



Knowledge level of respondents related to problems of solid waste is presented in the above pie- chart. The results shows that majority of the respondents are (85%) having good knowledge about the problems of solid waste. Only 8(15%) of them do not have knowledge about the problems of solid waste. Majority of the respondents knows that improper management lead to many environmental and health problems but they were not connecting their knowledge with their practice. In general majority of the people are doing improper solid waste management like burning plastic, throwing waste in to public place etc but they are not aware of the problem.

Table 4: Distribution of Respondents based on their knowledge regarding different roles of municipality in waste management

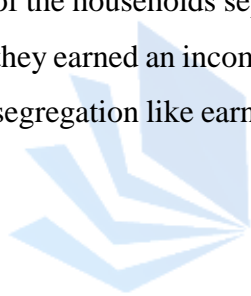
Responds	Number	Percentage
They have to collect household waste	9	17.3
They have to place public dustbins	11	21.2
They have to conduct awareness programme among people	5	9.6
NA	27	51.9
Total	52	100

Table 4. shows the information related to respondents opinion about what municipality have to do for proper solid waste management. The result shows that majority of the respondents (21.2%) have expressed that the municipality have to place public dustbins to dispose household waste. 9 respondents reported that municipality have to collect household waste and 5 of them reported that they have to conduct awareness programme among the people.

Table 5: Distribution of respondents based on Knowledge about Recycling of Solid waste.

Responds	Number	Percentage
Aware	29	65
Not aware	23	35
Total	52	100

Above table shows the information related to awareness level of the respondents about recycling of waste. The results shows that majority of the respondents (55.8%) are knows that recycling of solid waste. 23(44.2) of them having no idea about recycling of waste. Banga(2011) looked at the behavior of households in waste separation at the source. It is found that 59.4% of the households separate their waste. The majority of the households separated waste because they earned an income from the separated waste. The respondents gave various reason for waste segregation like earning income, feeding their animals, dispose waste effectively to get manure.



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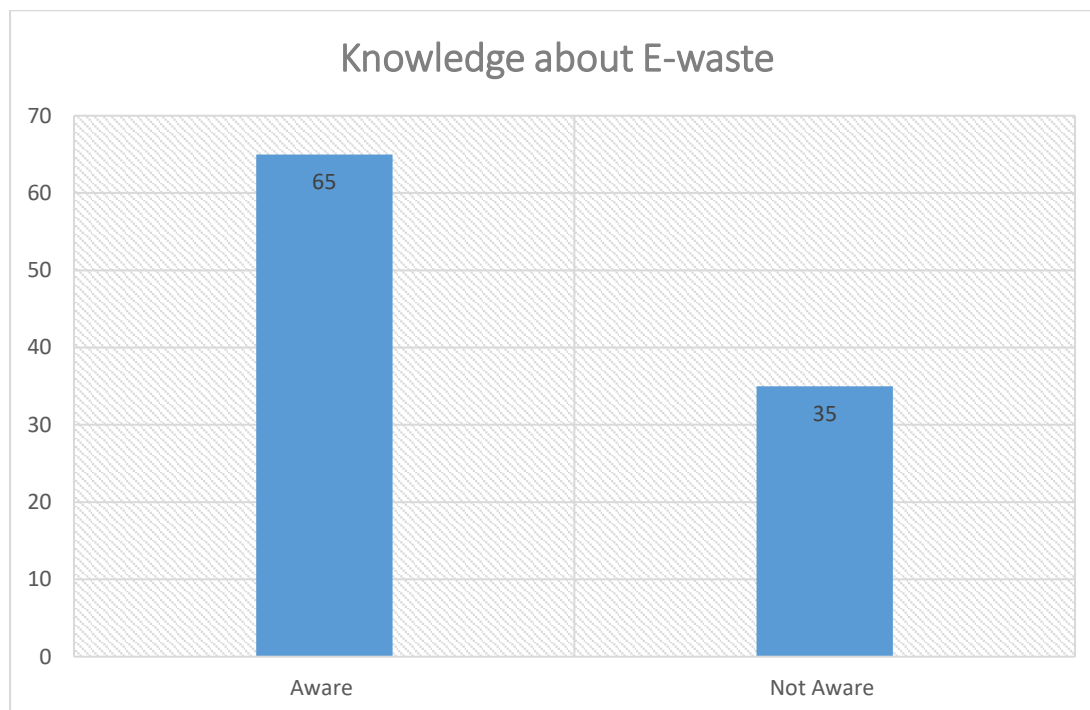
Figure 4: Distribution of Respondents based on knowledge about E-waste

Figure 4 shows the awareness of respondents about E-waste. It shows that out of 52 respondents 34(65.4%) of them are not aware about E-waste. Only 18((34.6%) of the respondents are aware about E-waste. The table clearly shows that the majority of the respondents are not aware about E-waste.

Table 6: Distribution of sample based on Respondent's usage of public dustbins

Public dustbins	Number	Percentage
Using	8	15
Not using	44	85

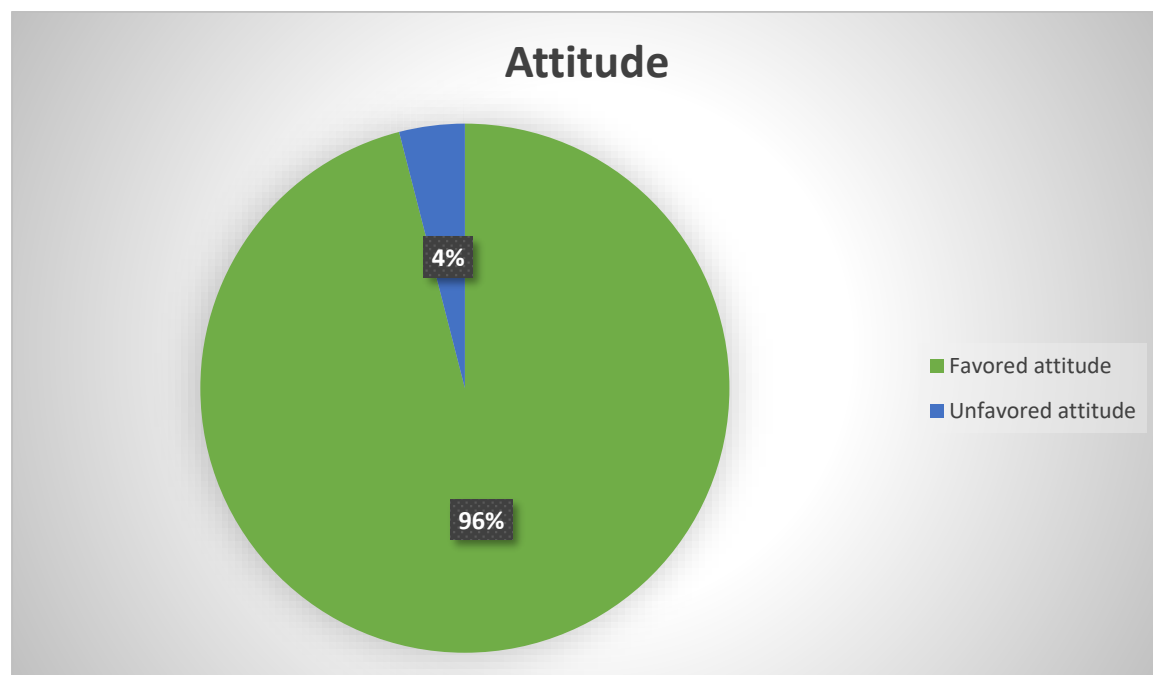
Table shows the information related to the usage of public dustbins among the respondents. It shows that majority of respondents are not using the public dustbins for depositing the solid

waste. Only 8 of them were using public dustbin. From the investigation it is observed that lack of public dustbin in the area is the main reason behind this. Placing public dustbin is the responsibility of the local self – government. As there is no place available for dumping yard in the district the municipality is not taking the risk to place dust bins as the practical question arises about where these waste should be dumped.

Attitude of Respondents

An attitude measuring scale which includes nine statements regarding SWM used to assess the attitude of respondents regarding SWM. The results are given below.

Figure 5: Distribution of Respondents based on Attitude of households towards SWM



The figure 5. shows the attitude of the respondents towards SWM. It revealed from the results that majority of the respondents (96%) are having favored attitude towards SWM. Only 4% of them have unflavored attitude.

Table 7: Distribution of Respondents based on Influence of Knowledge on Attitude of Households regarding Solid Waste Management

Knowledge	Attitude	
	Favored attitude	Unfavored attitude
Low knowledge	13(87.7%)	2(13.3%)
Average knowledge	25(100%)	-
Good knowledge	13(100%)	-

Table shows the information related to influence of knowledge on attitude of households regarding SWM. It is clear from the results that respondents with average and good knowledge regarding SWM shows favorable attitude towards solid waste management. Only 2 respondents with low knowledge (13.3%) shows unfavorable attitude towards SWM. It is clear indication that the attitude of people can be changed through proper education and awareness campaigns. So the authorities must give priorities for imparting proper education and awareness regarding SWM before implementing any strategies for SWM otherwise the programme will not yield much result. It is also significant to note that overall majority of the respondents have favorable attitude regarding waste management practices.

FINDINGS

- Majority of respondents (42%) belongs to the age group of 41-50 years.
- Majority of the respondents (90%) are married.
- Majority of the respondents (42%) are unemployed only 12% of them have government jobs.

- Majority of the respondents (65%) belong to APL category.
- 34% of the respondents are under graduates

Knowledge about solid waste management

- ❖ Majority of the respondents (79%) have not participated in any solid waste management awareness programs
- ❖ Among (11) the respondents who have participated in solid waste management awareness programs good number (9) have attended programme conducted by municipality.
- ❖ Majority of the respondents (56%) have knowledge about how to minimize solid waste.
- ❖ Majority of the respondents reported reducing solid waste is the best to way to minimize household wastes
- ❖ Majority of the respondents (85%) have knowledge about the problems of improper solid waste management
Majority of the respondents opined improper solid waste management lead to severe health and environment problems
- ❖ Majority of the respondents do not have knowledge regarding responsibility of the local self-government towards solid waste management
- ❖ Majority of the respondents have expressed that municipality have to place public dustbins in different locations for depositing household wastes
- ❖ Majority of the respondents (65%) knows about segregation of solid waste.
- ❖ Majority of the respondents (56%) knows about recycling of solid waste.
- ❖ Majority of the respondents (64%) are not satisfied with solid waste management practices of municipality in the study area.
- ❖ Majority of the respondents (65%) do not have any knowledge about E-waste.
- ❖ Majority of the respondents (48%) have average knowledge regarding solid waste management.

Solid Waste Management Practices of Households in the study area

- Majority of households (62%) are using their kitchen waste as compost
- Majority of households (56%) are burning their household wastes other than kitchen waste at home.

- Majority of households (85%) are not using public dustbins to dispose their household waste
- Majority of households (56%) are not taking carry bags while go to purchase groceries
- Majority of households (81%) are burning their plastic waste at home
- In majority of households (33%) housewives are managing their household wastes in their home.

Attitude of Respondents

- Majority of respondents (96%) have favored attitude towards solid waste management.
- It found that knowledge regarding solid waste management have a positive relation on attitude of the respondents regarding solid waste management
- It found that attitude of the respondents do not have significant influence on their solid waste management practices.

SUGGESTIONS

Information on solid waste management practices should be added in the curriculum from school level to university level and Awareness programs among public regarding proper solid waste management should be generated at various levels. Multiple channels should be used to create awareness

Municipality should establish waste segregation units and recycling units. Municipality should encourage for household level segregation of waste and compost preparation. and Should promote public private participation in waste management. Strong legislation should be implemented to ban plastic.

CONCLUSION

Solid Waste Management is the crucial challenge faced by the world in present scenario. Improper management of solid waste is creating many environmental and health hazards in the society. After China and USA, India is the country generating more waste. Economic development and the change in demographic profile made this very fast. Now most of urban centers in India is facing the challenge of solid waste management. Knowledge and attitude regarding solid waste management is very important. The study on knowledge, attitude and practices of solid waste management focused on understanding the level of knowledge, attitude and solid waste management practices of households of municipality. It was found that majority of the respondents have an average knowledge about solid waste management and majority have favored attitude towards solid waste management.

BIBLIOGRAPHY

1. Adogu, P. O.U. (2015): 'Assessment of Waste Management Practices among Residents of Owerri Municipal Imo State Nigeria', *Journal of Environmental Protection*, 2015, Vol 6, pp 446-456
2. Agwu, M.O.(2012) : 'Issues and Challenges of Solid Waste Management Practices in Port-Harcourt City, Nigeria- a Behavioral Perspective', *American Journal Of Social And Management Sciences*, Vol.3
3. Arora, Lalita, and Agarwa, Sunita (2011): 'Knowledge, Attitude and Practices regarding Waste Management in Selected Hostel Students of University of Rajasthan, Jaipur', *International Journal of Chemical, Environmental and Pharmaceutical Research*, Vol. 2, No.1
4. Banga, Margaret (2011): 'Household Knowledge, Attitudes and Practices in Solid Waste Segregation and Recycling: The Case of Urban Kampala', *Zambia Social Science Journal*, vol 2, No.1
5. Beall, J. 1997. 'Thoughts on Poverty from a South Asian Rubbish Dump: Gender, Inequality and Household Waste.' *IDS Bulletin* 28, no 3: 73-90.

6. Biradar, Basavaraj (2014): 'Awareness of Solid Waste Management Among Under Graduate Students in Hyderabad, Karnataka Region', EPRA International Journal of Economic and Business Review, Vol-2 ,No.10
7. Borthakur Anwasha, And Singh Pardeep (2012) 'Electronic Waste In India: Problems And Policies', International Journal Of Environmental Sciences,Volume 3, pp 353-361
8. Haider, Ali, Amber, Aleem, Ammara,Shahid, Mahruk,Saleem,Khan,(2015): 'Knowledge, Perception and Attitude of common People towards Solid Waste Management-A case study of Lahore, Pakistan', International Research Journal of Environment Sciences, Vol . 4,No.3
9. Indhira, K, Senthil, J. and Vadivel, S. (2015). : 'Awareness and Attitudes of People Perception towards to Household Solid Waste Disposal: Kumbakonam Town, Tamilnadu, India', Archives of Applied Science Research, 2015, Vol .7,No.3
10. Karout.N, and Altuwaijri, S.(2012),: 'Impact of Health Education on Community Knowledge, Attitudes and Behavior towards Solid Waste Management in Al Ghobeiry', Beirut, Eastern Mediterranean Health Journal, Vol 8, No.7
11. Kerala State Industial Development Corporation (2015), 'Solid Waste Management: Issues & Challenges', www.blog.ksidc.org Retrieved from, March, 18, 2016.
12. P. Santhosh, Kiran,udaya, N(2015): 'KAP Study of Waste Disposal of Households in Kuttar and Manjanadi Panchayath covered under gramaskhema programme of K.S. Hegde Medical Acadamy', Nitte University Journal and Health, vol.5, No.3
13. Kumar. M, and Nandini.,N. (2013) : 'Community attitude, perception and willingness towards solid waste management in Bangalore city, Karnataka, India', International Journal Of Environmental Sciences Volume 4, No. 1
14. Licy, C.D.,Vivek, Raghavan, Saritha, Kamath, Anies, T.K.,Josphina, C.T.(2013): 'Awareness, Attitude and Practice of School Students toward Household Waste Management', Journal of Environment, Vol.02.,NO.06
15. M.Y.Rahmaddin,Hidayat,Taufik,Yanuwaiadi,Bagyo,Suyadi(2015), 'Knowledge, Attitude, and Action of Community towards Waste Management in River Bank of Martapura', International Journal of Applied Psychology,Vol.2.No.1

16. Murad, Wahid, and Siwar, Chamhuri, (2007) : ‘Knowledge, Attitude and Behavior of the Urban Poor Concerning Solid Waste Management- A Case Study’, Journal of Applied Science Vol 7, No.22
17. Patro,Lingaraj,(2012), “Waste Managemet for Sustainable Environment”,Mangalam Publishers and Distributors, Delhi, Edition.1
18. Upadhyay, Vipin, A.S. Jetho, M.P. Poonia (2012): ‘Solid Waste Collection and Segregation: A Case Study of MNIT Campus, Jaipur’, International Journal of Engineering and Innovative Technology (IJEIT), Vol. 1, No.3
19. World Bank(2015) , “What A Waste: A Global Review Of Solid Waste Management”, www.sitesources.worldbank.org , Retrieved March,18, 2016



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