



## HOUSEHOLD RECYCLING AWARENESS, PERCEPTION, PRACTICES TOWARDS SOLID WASTE RECYCLING AMONG WOMEN IN COIMBATORE CITY

<sup>1</sup>Ms. R. Suganya, <sup>2</sup>Dr. P. Sumitha

<sup>1</sup>Assistant Professor, <sup>2</sup>Assistant Professor

Department of Commerce with Business Analytics,

<sup>1</sup>Dr. N. G. P. Arts and science College, Coimbatore, India

**ABSTRACT:** This study has mainly been taken up to know the waste disposal practices and management were not a problem at an early day because of low population but now there was a high population in a world. So, it creates an issue in a waste management. Solid waste management occurs, because the waste is no longer useful so the collecting and disposing of solid material is discarded. Most domestic wastages are separated into different containers by householders and then it will be collected and taken to Recycling facilities. After sorted out the reusable materials, the remaining waste goes to landfill. So, this results in increases the recycling and changing composition of household waste. Household waste comprises of food waste, paper, plastic, metal and glass etc.

**KEY WORDS :** Perception , Awareness, Practices adopted for recycling

### I. INTRODUCTION

II. Solid Waste Management refers to the process of collecting, recycling and discarding of waste. The wastages are collected from different sources like household, public area, industries, work place etc. It can be taken place by anybody publicly or privately. Solid Waste Management includes various types of process for recycling. It has some advantages and dis-advantages and also changing the environmental composition

III. Waste materials are recycled, recovered, and reprocessed to be used in new goods. The fundamental steps in recycling are waste material collection, its processing or production into new products, and the purchase of those products, which may subsequently be recycled themselves. Iron and steel waste, aluminium cans, glass bottles, paper, wood, and plastics are examples of materials that are frequently recycled. The recycled materials act as replacements for raw materials derived from increasingly depleted natural resources like oil, gas, coal, mineral ores, and forests. Recycling can aid in lowering the amount of solid waste dumped in landfills, which are becoming more and more expensive. Recycling also lessens the pollution of the air, water, and land caused by the dumping of garbage.

IV. The awareness of household waste recycling among women is an important thing in current days. The women in household should gain knowledge about the recycling of solid waste. They must take steps to recycle the waste produced in their home. An effective way to increase the awareness among women and also every people through education especially teaching the children about the waste disposal, reuse and recycle etc. can increase more knowledge among public. The awareness can also create through social media, television, radio, magazines etc.

V. Women's perception on effectiveness of solid waste management and recycling is mandatory. Educated people should create awareness to others regarding household solid waste management. Everyone should practice to dispose the waste in the proper manner by segregating them into biodegradable and non-biodegradable. Some of the women practices to use different bins for waste dispose at their home.

### II. STATEMENT OF THE PROBLEM

This study concentrates on identifying the women's awareness, perception, recycling knowledge and practices towards solid waste recycling. Waste is the result of human activities so everyone needs to have an awareness of recycling. So, it is important to analyse the awareness and perception among women. In household, poorly managed wastes like dumping waste on the road/street side are

polluting the drains, human health and transmitting diseases. Burning of wastages can increase respiratory problem to the household people. Irregular collection of waste by sanitary workers are the problems facing by the household women. This study also aims to find out the practices taken by women for recycling the household waste.

### III.OBJECTIVES OF THE STUDY

- To assess the awareness and perception among women towards recycling of solid waste.
- To analyze the practices, adopted by the women in waste recycling.

### IV.LIMITATIONS OF THE STUDY

- The study includes only household women in Coimbatore City.
- The study does not include any other members in the household.

### V.SCOPE OF THE STUDY

Solid Waste Management and Recycling becomes a subject of concern globally. Segregation of waste and recycling helps to reduce the amount of waste that are dumped in the landfill and in public area. The women who are dumping the waste in public bin are not segregating that into biodegradable and non- biodegradable waste. So, it is difficult to segregate and recycle for the municipal corporation. The waste should be Reduce, Reuse, and Recycle. The result of the study would help to find out the number of women who have adequate knowledge, Practices and Perception regarding household waste recycling.

### VI. RESEARCH METHODOLOGY

Descriptive research design has been adopted for the study. Convenient sampling technique has been adopted to collect the response from the respondent's. The study mainly depends on primary data. The primary data have been collected from the household women using structured questionnaire. The secondary data have been collected from journals, reviews, research papers and magazines. Statistical tools like Percentage Analysis, Descriptive Statistics, ANOVA was used for the study.

### VII. REVIEW OF LITERATURE

**Oluwatobi Mary Owajori, et al.(2022)**<sup>1</sup> conducted a research titled "Student's Knowledge, Attitude, and Perception to Solid Waste Management: A Survey Towards a More Circular Economy From a Rural Based Tertiary Institution in South Africa". This study was to measure about the institution's current practices regarding SWM and identify steps that can be taken to move the institution closer to a circular economy goal. The Questionnaire method was used to collect data among 376 Students for this study. The study result showed that the knowledge of the Students on Solid waste management was low and inadequate. It was suggested that to increase awareness in education about SWM.

**Justice Kofi Debrah, et al.(2021)**<sup>2</sup> assessed a research on "Raising Awareness on Solid Waste Management through Formal Education for Sustainability". A systematic review was conducted aiming to identify and analyze environmental knowledge, awareness, attitudes and Practice studies on SWM from 2010 to 2019 in developing countries. It is revealed that there is lack of environmental education in most developing Countries and it concluded that environmental Sustainability education should be integrated into schools at all levels within developing countries.

**Nithyasri and Anbukarasi (2020)**<sup>3</sup> assessed a research titled "A Synthesis Research on the determinants of recycling perception of Household on E-Waste". A stratified random sampling was used to collect the data from 384 respondents to identify the determining factors of E-waste. The findings of the study shows that Government Initiatives, Social welfare, Green activism, Cost of recycling, Waste reduction, Participation Intention and recycling are the factor affects the recycling Perception of Individual.

### VIII. DESCRIPTIVE STATISTICS

#### AWARENESS ON HOUSEHOLD SOLID WASTE RECYCLING

Awareness on household solid waste recycling have been assigned ratings by the respondents on a five point scale ranging from 1 to 5 where 1 represents strongly disagree, 2 represents disagree, 3 represents neutral, 4 represents agree and 5 represents strongly agree.

FACTORS	N	Minimum	Maximum	Mean	Std. Deviation
<b>Household solid waste can be reused or recyclable</b>	<b>250</b>	<b>1</b>	<b>3</b>	<b>2.82</b>	<b>.500</b>
Every people have to know about the household solid waste management	250	1	3	2.59	.647
Aware of impact of solid waste in environment	250	1	6	2.23	.905
Aware of using vegetable waste as manure to plants	250	1	6	2.61	.737
Delay in household solid waste disposal cause many difficulties	250	1	5	2.37	.827
Waste disposal on open places will be harmful for human health and environment	250	1	6	2.62	.748
Aware of where does our waste go	250	1	6	2.02	.848
Recycling plastic is easy	250	1	5	1.97	.840
Aluminum can be recycled many	250	1	3	1.94	.819

times					
Improper waste management can affect extreme climate change	250	1	3	2.24	.820
Aware of using waste wires for other purpose	250	1	6	2.19	.818
Aware of waste is separated into different categories and which of those can be recycled	250	1	3	2.40	.766
Solid waste management has impact on sustainable development	250	1	3	2.40	.770
Garbage is a problem in our society	250	1	4	2.47	.750
Family supports in performing the household waste separation process	250	1	3	2.40	.765
Valid N (listwise)	250				

(Source: Computed)

The mean rating have shown that ‘ Household solid waste can be reused or recyclable’(mean 2.82), ‘Waste disposal on open places will be harmful for human health and environment’(mean 2.62), ‘ aware of using vegetable waste as manure to plants’(mean 2.61), ‘ every people have to know about the household solid waste management’ (mean 2.59), ‘ garbage is a problem in our society’(mean 2.47), ‘ family supports in performing the household waste separation process’ (mean 2.40), ‘ solid waste management has impact on sustainable development’(mean 2.40), ‘ delay in household solid waste disposal cause many difficulties’(mean 2.37), ‘ improper waste management can affect extreme climate change’(mean 2.24), ‘ Aware of impact of solid waste in environment’(mean 2.23), ‘ aware of using waste wires for other purpose’(mean 2.19), ‘ aware of where does our waste go’(mean 2.02), ‘ recycling plastic is easy’(mean 1.97), ‘ aluminium can be recycled many times’(mean 1.94) have been agreed by the respondents. With the highest mean rating it is found that, **most of the respondents (mean 2.82) have agreed the statement, ‘Household solid waste can be reused or recyclable’.**

#### PRACTICES ADOPTED BY WOMEN IN HOUSEHOLD WASTE RECYCLING

Practices adopted on household solid waste recycling have been assigned ratings by the respondents on a five-point scale ranging from 1 to 5 where 1 represents strongly disagree, 2 represents disagree, 3 represents neutral, 4 represents agree and 5 represents strongly agree.

FACTORS	N	Minimum	Maximum	Mean	Std. Deviation
Created awareness regarding household solid waste management for people.	250	1	5	4.04	1.031
Separate different type of waste at my home.	250	1	5	3.86	.885
Convert vegetable wastes to manure.	250	1	5	3.89	.929
Reuse grocery bags in my home.	250	1	5	3.88	.928
Collect waste in basket without cover.	250	1	5	3.62	.925
Use different bins for waste disposal at my home.	250	1	5	3.70	.970
Reuse old products than buying a new one every time.	250	1	5	3.84	.952
Use to burn when I have large amount of solid waste at my home	250	1	9	3.46	1.245
Reuse waste paper for other purpose.	250	1	5	3.70	1.006
Reuse waste carton boxes for storing purpose.	250	1	5	3.81	.978
Recycle things by myself.	250	1	8	3.67	1.092
Refill a water bottle with water from home instead of buying a new one.	250	1	5	4.04	.849
Have enough time to carry out waste separation.	250	1	5	3.72	1.018
<b>Maintain proper hygiene while disposing of waste materials like used tissues, disposal masks and empty hand sanitizer bottles.</b>	<b>250</b>	<b>1</b>	<b>5</b>	<b>4.15</b>	<b>.939</b>

Help people in need by donating old unused items.	250	1	9	4.05	.941
Valid N (listwise)	250				

(Source: Computed)

The mean rating have shown that ‘maintain proper hygiene while disposing of waste materials like used tissues, disposal masks and empty hand sanitizer bottles’(mean 4.15), ‘helppeople in need by donating old unused items’(mean 4.05), ‘refill a water bottle with water from home instead of buying a new one’(mean 4.04), ‘created awareness regarding household solid waste management for people’(mean 4.04), ‘convert vegetable wastes to manure’(mean 3.89), ‘reuse grocery bags in my home’(mean 3.88), ‘separate different type of waste at my home’(mean 3.86), ‘reuse old products than buying a new one every time’(mean 3.84), ‘reusewaste carton boxes for storing purpose’(mean 3.81), ‘have enough time to carry out waste separation’(mean 3.72), ‘reuse waste paper for other purpose’(mean 3.70), ‘use different bins for waste dispose at my home’(mean 3.70), ‘recycle things by myself’(mean 3.67), ‘collect waste in basket without cover’(mean 3.62), ‘use to burn when I have large amount of solid waste at my home’(mean 3.46) have been agreed by the respondents.

With the highest mean rating it is found that, **most of the respondents (mean 4.15) have agreed the statement, ‘maintain proper hygiene while disposing of waste materials like used tissues, disposal masks and empty hand sanitizer bottles.**

## IX.ANOVA

### SOCIO ECONOMIC PROFILE VS PRACTICES ADOPTED BY WOMEN

#### Age Vs. Practices Adopted by Women

**H0:** There has been no significant difference in the agreeability scores about practices adopted by women in household waste recycling by the respondents classified based on age.

#### Age Vs. Practices Adopted by Women in Household Waste Recycling

Age	N	Mean	Std. Deviation	Std. Error	F	Table Value	Sig.
20 to 30years	34	3.8059	.59907	.10274	4.560	3.98	S**
31 to 40years	99	3.7980	.57911	.05820			
41 to 50years	92	3.7514	.52046	.05426			
50 years and above	25	4.2259	.48783	.11498			
<b>Total</b>	<b>250</b>	<b>3.8285</b>	<b>.56409</b>	<b>.03568</b>			

(Source: Computed S\*\* - Significant at 1% level)

The respondents belonging to the age group of 50 years and above have high level of agreeability score about practices adopted by women in household waste recycling with a high mean score of 4.2. A low agreeability score is found for the respondents in the age group of 41. to 50 years (mean score 3.75). The score suggests that respondents’ level of agreeability has varied. With the F-ratio value it is clear that there is significant difference in the agreeability scores about practices adopted by women in household waste recycling by the respondents classified based on age.

Hence, **the null hypothesis is rejected at 1% level of significance.**

### EDUCATIONAL QUALIFICATION VS. PRACTICES ADOPTED BY WOMEN

**H0:** There has been no significant difference in the agreeability scores about practices adopted by women in household waste recycling by the respondents classified based on educational qualification.

Educational Qualification	N	Mean	Std. Deviation	Std. Error	F	Table Value	Sig.
No formal education	46	3.8304	.60626	.08939	.270	2.31	NS
SSLC	61	3.8525	.59006	.07555			
<b>HSC</b>	<b>57</b>	<b>3.8772</b>	<b>.61306</b>	<b>.08120</b>			
Under graduate	51	3.7856	.49644	.06952			
Post graduate	29	3.7517	.49822	.09252			
Professional	6	3.8444	.45737	.18672			
<b>Total</b>	<b>250</b>	<b>3.8285</b>	<b>.56409</b>	<b>.03568</b>			

(Source: Computed NS-Not Significant)

The respondent’s educational qualification is HSC have high level of agreeability score about practices adopted by women in household waste recycling with a high mean score of 3.87. A low agreeability score is found for the respondents are post graduates (mean score 3.75). The scores suggests that respondents’ level of agreeability has not varied to a great extent. With the F-ratio value it is clear that there is no significant difference in the agreeability scores about practices adopted by women in household waste recycling by the respondents classified based on educational qualification.



Hence, the null hypothesis is accepted.

#### OCCUPATION VS. PRACTICES ADOPTED BY WOMEN

Occupation	N	Mean	Std. Deviation	Std. Error	F	Table Value	Sig.
Home Maker	119	3.8304	.60626	.08939	5.786	3.51	S**
Employee	57	3.8525	.59006	.07555			
<b>Self Employed</b>	<b>33</b>	<b>3.8772</b>	<b>.61306</b>	<b>.08120</b>			
Professional	13	3.7856	.49644	.06952			
Student	28	3.7517	.49822	.09252			
<b>Total</b>	<b>250</b>	<b>3.8285</b>	<b>.56409</b>	<b>.03568</b>			

(Source: Computed S\*\*-Significant at 1% level of significance)

The respondents self-employed have high level of agreeability score about practices adopted by women in household waste recycling with a high mean score of 3.87 A low agreeability score is found for the respondents among students. The score suggests that respondent's level of agreeability has not varied to a great extent. With the F- ratio value it is clear that there is no significant difference in the agreeability score about practices adopted bywomen in household waste recycling by the respondents classified based on occupation.

Hence, the null hypothesis is accepted.

#### MONTHLY INCOME VS. PRACTICES ADOPTED BY WOMEN

Monthly Income	N	Mean	Std. Deviation	Std. Error	F	Table Value	Sig.
less than Rs.25,000	63	3.7090	.58369	.07354	4.683	3.51	S**
Rs.25,000-Rs.35,000	59	3.6881	.62458	.08131			
Rs.35,000-Rs.45,000	49	3.8939	.47080	.06726			
Rs.45,000-Rs.60,000	33	3.8343	.59910	.10429			
Above Rs.60,000	46	4.0986	.41449	.06111			
<b>Total</b>	<b>250</b>	<b>3.8285</b>	<b>.56409</b>	<b>.03568</b>			

(Source: Computed S\*\*-Significant at 1% level)

The respondent's monthly income is above 60,000 have high level of agreeability score on practices adopted by women in household waste recycling with a high area score of 4.09. A low agreeability score is found for the respondents whose monthly income is between 25000-35000(mean score 3.68). The score suggests that respondent's level of agreeability has not varied to a great extent. With the f-ratio value,it is clear that there is no significant difference in the agreeability scores about practices adopted by women in household waste recycling by respondents classified based on monthly income.

Hence, the null hypothesis is rejected

#### X. CONCLUSION

Solid waste recycling becomes an integral part of the society and helps to protect the environment. The study attempts to know the awareness level of household women regarding solid waste management and recycling. Overall, all women are aware about the solid waste management mostly through television. Most of the households dispose Bio degradable waste,so it is fast to decompose comparing to non-biodegradable waste. Similarly, recycling or reusing garbage improves the environment by reducing the need to extract resources and lowering the possibility for contamination. Burning of waste in land and public areas produce pollution to the environment but most of the household women are not burning the waste. The household women are having high willingness to participate in recycling activities. They are maintaining proper hygiene while disposing of waste materials. The practices adopted by the household women regarding waste recycling, reduces environmental pollution and avoids health issues that may cause due to improper waste disposal.

#### XI. REFERENCE

- 1.Oluwatobi Mary Owojori, et al. (2022) "Student's Knowledge, Attitude, and Perception to Solid Waste Management: A Survey Towards a More Circular Economy From a Rural Based Tertiary Institution in South Africa", Sustainability 2022,14,1310.
- 2.Justice Kofi Debrah, et al.(2021),"Raising awareness on solid waste management through formal education for sustainability", Volume 6,Issue 1,January 2021.
3. Nithyasri and Anbukarasi (2020),"A Synthesis Research on the Determinants of Recycling