

# Awareness and Practice of Youth about E- Waste Management among the Students of MSW and B.Ed. of Gujarat

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**Abstract:- Sustainable Development is a development that is of a prime concern to human beings in present era. The planet is a wonder creation of the almighty and has been the blessings to the creatures. The planet is a safe place to live and grow, but over the time span in the name of development there has been a disaster too. Often the waste means garbage but in 21<sup>st</sup> century the waste is also the useless electronic materials that are of no use. The way youth have grown in present time is with the electronic gadgets. The other factor of India is a huge development in population explosion. India has a growing economy that has boosted the manufacturing and use of electronic gadgets. The life span of the gadget has affected the consumerism too.**

**The present paper is an attempt to study the Knowledge, awareness and practice of youth about E- Waste Management.**

**Keywords:- E-Waste, E-Waste Management, Knowledge, Awareness and Practice.**

## I. INTRODUCTION

Sustainable Development is the development that meets the needs of the present without compromising the ability of future generation to meet their own needs. The entire world is looking forward for the better world keeping in mind the better adjustment for all without hindering the growth and development of the other species. This kind of a development assists in human development and in maintenance of ecosystem. The concept of sustainable development was derived from Brundtland Report in 1987.

Electronic waste, commonly acknowledged as 'e-waste' can be defined as electronic equipment's/products connects with power plug, batteries which have become obsolete due to: advancement in technology changes in fashion, style and status nearing the end of their useful life.

E-waste encompasses ever growing range of out of date electronic devices such as computers, servers, monitors, TVs & display devices, telecommunication devices such as cellular phones & pagers, calculators, audio and video devices, printers, scanners, copiers and fax machines besides refrigerators, air conditioners, washing machines, and microwave ovens, e-waste also covers recording devices

such as DVDs, CDs, floppies, tapes, printing cartridges, military electronic waste, automobile catalytic converters, electronic components such as chips, processors, mother boards, printed circuit boards, industrial electronics such as sensors, alarms, sirens, security devices, automobile electronic devices.

Electronic waste or e-waste is one of the fast growing rigid environmental problems to the world. In India, the electronic waste management assumes greater significance not only due to the generation of our own waste but also dumping of e-waste particularly computer waste from the developed countries. With extensively using computers and electronic equipment's and people dumping old electronic goods for new ones, the amount of E-Waste generated has been steadily increasing.

At present one of India's IT hubs Bangalore alone generates about 8000 tones of computer waste annually and in the absence of proper disposal, they find their way to scrap dealers. E-Parisaraa, an eco-friendly recycling unit on the outskirts of Bangalore which is located in Dobaspet industrial area, about 45 Km north of Bangalore, makes full use of E-Waste.

The plant which is India's first scientific e-waste recycling unit will reduce pollution, landfill waste and recover valuable metals, plastics & glass from waste in an eco-friendly manner. E-Parisaraa has developed a circuit to extend the life of tube lights. The circuit helps to extend the life of fluorescent tubes by more than 2000 hours. If the circuits are used, tube lights can work on lower voltages.

While tracing the data of the e-waste it is noted that Central Pollution Control Board (CPCB), India generated more than 10 lakh tones of e-waste in 2019-20, an increase from 7 lakh tones in 2017-18. Against this, the e-waste dismantling capacity has not been increased from 7.82 lakh tones since 2017-18.

In the year 2018, the Ministry of Environment had told the tribunal that 95% of e-waste in India is recycled by the informal sector and scrap dealers unscientifically dispose of it by burning or dissolving it in acids.

➤ *Objectives:*

- To study the awareness level of youth with regard to E-Waste Management
- To suggest strategies for sustainable e-waste.
- To study the awareness level of youth regarding E-Waste Management with respect to gender, area of residence and family monthly income.

➤ *Research Methodology:*

The present research study is a study based on knowledge, awareness and practice of youth about E-waste management. The study was conducted using simple random sampling and the sample size was 154 respondents from two fraternities i.e. Social Work and education.

**II. RESULTS AND DISCUSSION**

Table 1 Table Indicating the Gender of the Respondents.

Gender of the respondents	Frequency	Percentage
Male	50	32.5
Female	104	67.5
<b>Total</b>	<b>154</b>	<b>100.0</b>

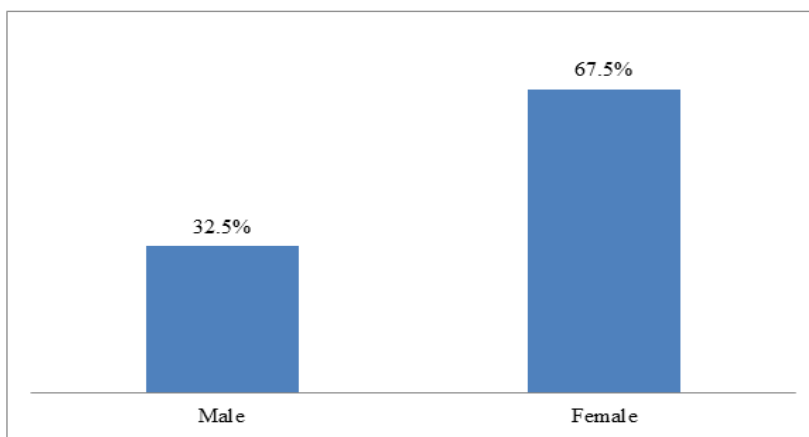


Fig 1 The Gender of the Respondents

From the above table it can be interpreted that the majority of the respondents (N=104) i.e. 67.5% respondents were female and (N=50) i.e. 32.5% respondents were male.

Hence, it can be concluded that the majority of the respondents (N=104) i.e. 67.5% respondents were female.

Table 2 Table Showing the Age Group of the Respondents

Age group	Frequency	Valid Percent
18 -21 years	45	29.2
22-25 years	94	61.0
More than 26 years	15	9.7
<b>Total</b>	<b>154</b>	<b>100.0</b>

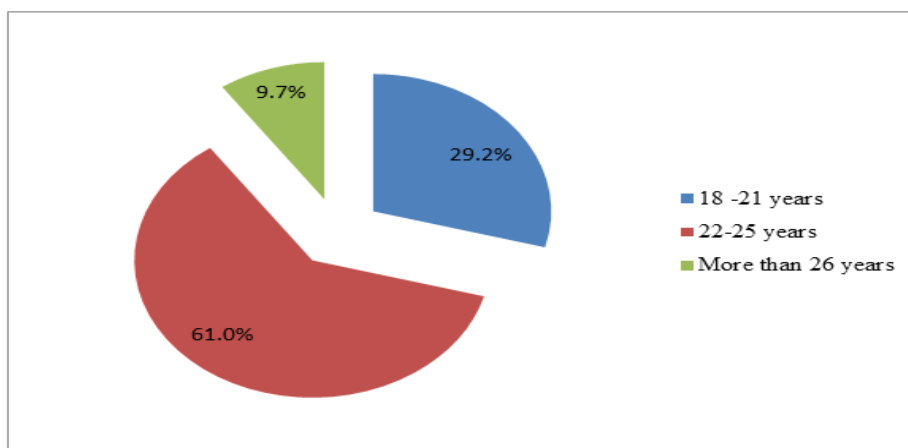


Fig 2 The Age Group of the Respondents

From the above table it can be interpreted that the majority of the respondents (N=94) i.e. 61% respondents are of the age group of 22-25 years, (N=45) i.e. 29.2% respondents belong to the age group of 18-21 years. Whereas the minimum (N=15) i.e. 9.7% respondents belong to the age group of more than 26 years.

Hence, it can be concluded that the majority of the respondents (N=94) i.e. 61% respondents are of the age group of 22-25 years.

Table 3 Table Highlighting the Region of the College/University.

Area of Residence	Frequency	Valid Percent
Rural	112	72.7
Urban	42	27.3
<b>Total</b>	<b>154</b>	<b>100.0</b>

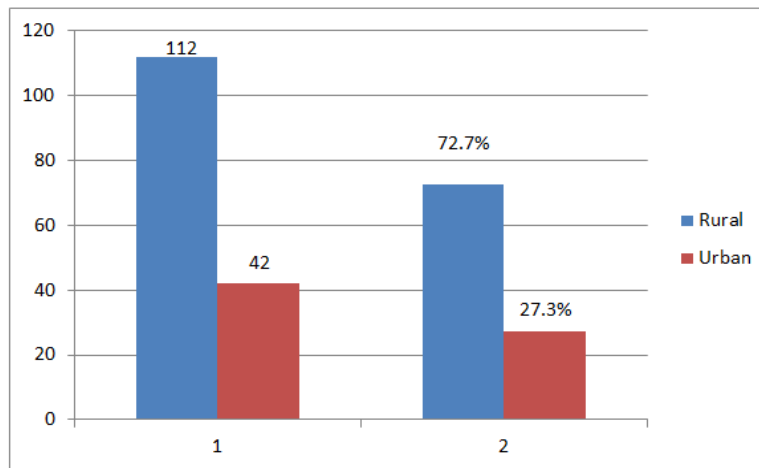


Fig 3 The Region of the College/University.

From the above table it can be interpreted that the majority of the respondents (N=112) i.e. 72.7% region of the college/university of the respondents situated at rural area and minimum (N=42) i.e. 27.3% college/university belong to Urban area.

Hence, it could be concluded that the majority of the respondents (N=112) i.e. 72.7% region of the college/university of the respondents situated at rural area.

Table 4 Table Depicting the Monthly Income of the Parents in INR

Monthly income in INR	Frequency	Valid Percent
Less than 20,000	57	37.0
20,001 to 40,000	30	19.5
40,001 to 60,000	32	20.8
More than 60,000	35	22.7
<b>Total</b>	<b>154</b>	<b>100.0</b>

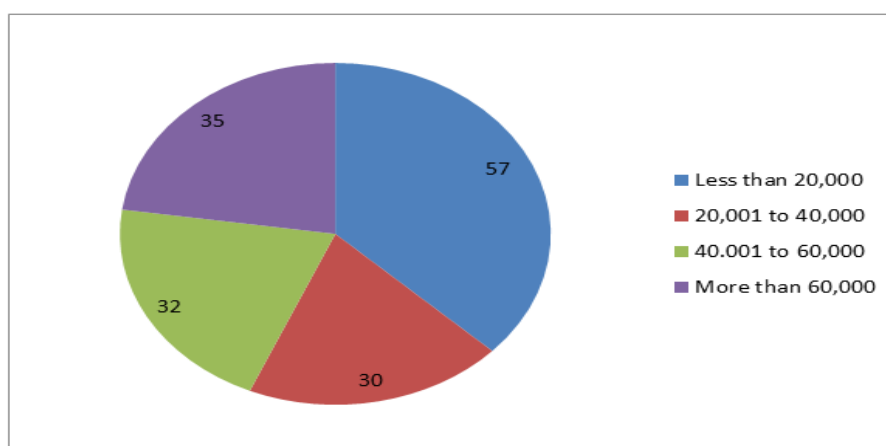


Fig 4 The Monthly Income of the Parents in INR

From the above table it can be depicting that the majority of the respondents (N=57) i.e. 37% respondents earn less than 20,000 INR per month as monthly income, (N=35) i.e. 22.7% respondents earn more than 60,000 INR per month, (N=32) i.e. 20.8% respondents earn 40,001 to 60,000 INR per month and least (N=30) i.e. 19.5 % respondents earn 20,001 – 40,000 INR per month as income.

Hence, it could be stated that the majority of the respondents (N=57) i.e. 37% respondents earn less than 20,000 INR per month as monthly income.

Table 5 Table Showing the Responses of the Respondents about the E-Waste Management Rule Passed in Gujarat

Year	Frequency	Valid Percent
2015	19	12.3
2016	99	64.3
2020	16	10.4
2021	20	13.0
<b>Total</b>	<b>154</b>	<b>100.0</b>

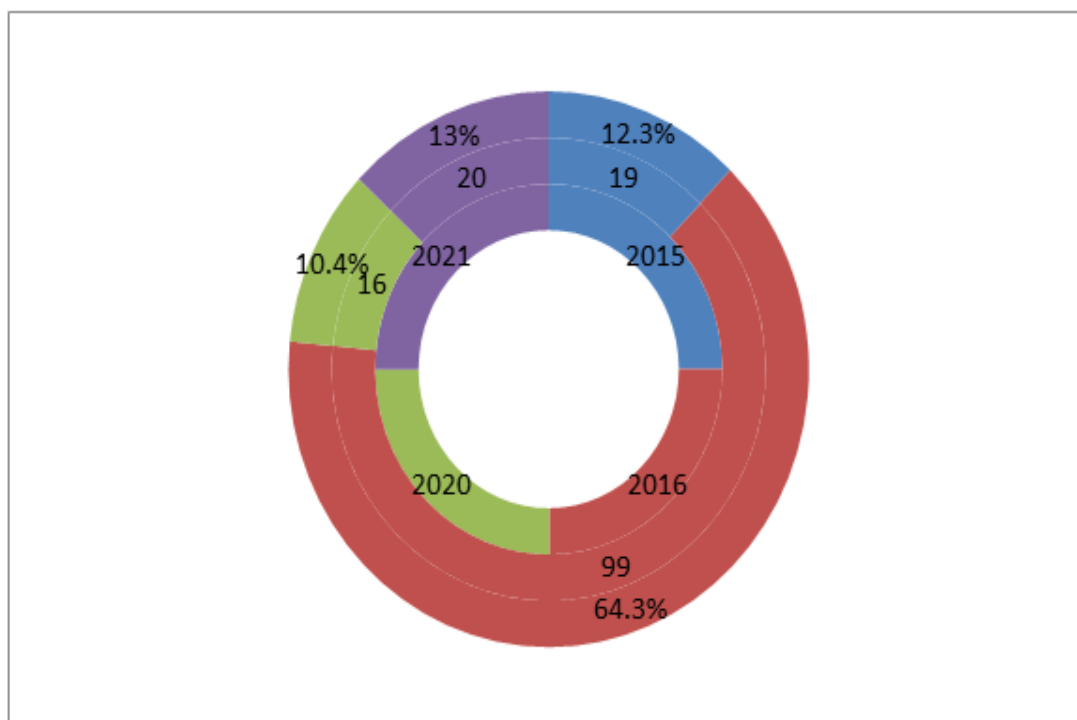


Fig 5 Responses of the respondents about the E-waste management rule passed in Gujarat

From the above table it can be interpreted that the majority (N=99) of the respondents stated that E-Waste management rule was passed in Gujarat in the year 2016, whereas (N=19) respondents i.e. 12.3% stated that it was passed in 2015, (N=20) respondents i.e. 13.00% respondents responded that it was passed in the year 2021. The minimum (N=16) respondents i.e. 10.4% said it was passed in the year 2020

Hence it can be stated that the majority (N=99) of the respondents stated that E-Waste management rule was passed in Gujarat in the year 2016. It can be interpreted that the majority of the respondents have correct knowledge about the E-Waste Management rule passed in Gujarat.

Table 6 Table Showing the Knowledge of the Respondents about Reduction of E-Waste

Knowledge	Frequency	Valid Percent
Yes	100	64.9
No	54	35.1
<b>Total</b>	<b>154</b>	<b>100.0</b>

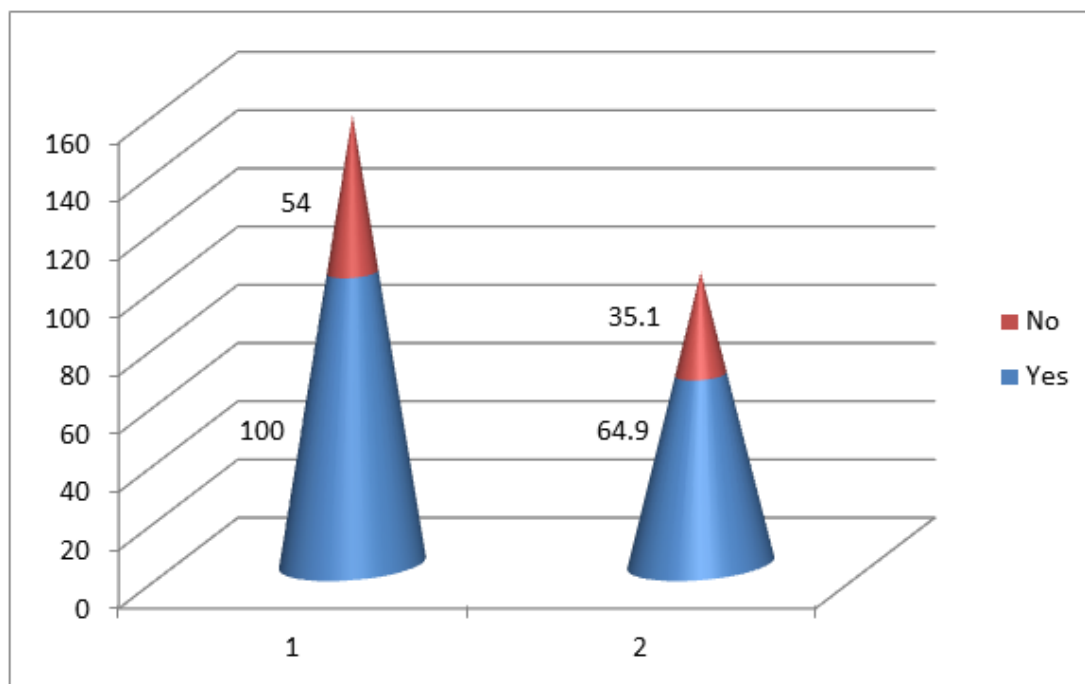


Fig 6 The Knowledge of the Respondents About Reduction of E-Waste

From the above table it can be identified that the majority (N=100) i.e. 64.9% respondents asserted that they have the knowledge about reduction of E-Waste, whereas minimum (N=54) i.e. 35.1% respondents negated.

Hence, it could be said that the majority (N=100) i.e. 64.9% respondents asserted that they have the knowledge about reduction of E-Waste.

Table 7 Table Showing the Knowledge of the Respondents About Zero Waste

Knowledge	Frequency	Valid Percent
Yes	76	49.4
No	78	50.6
<b>Total</b>	<b>154</b>	<b>100.0</b>

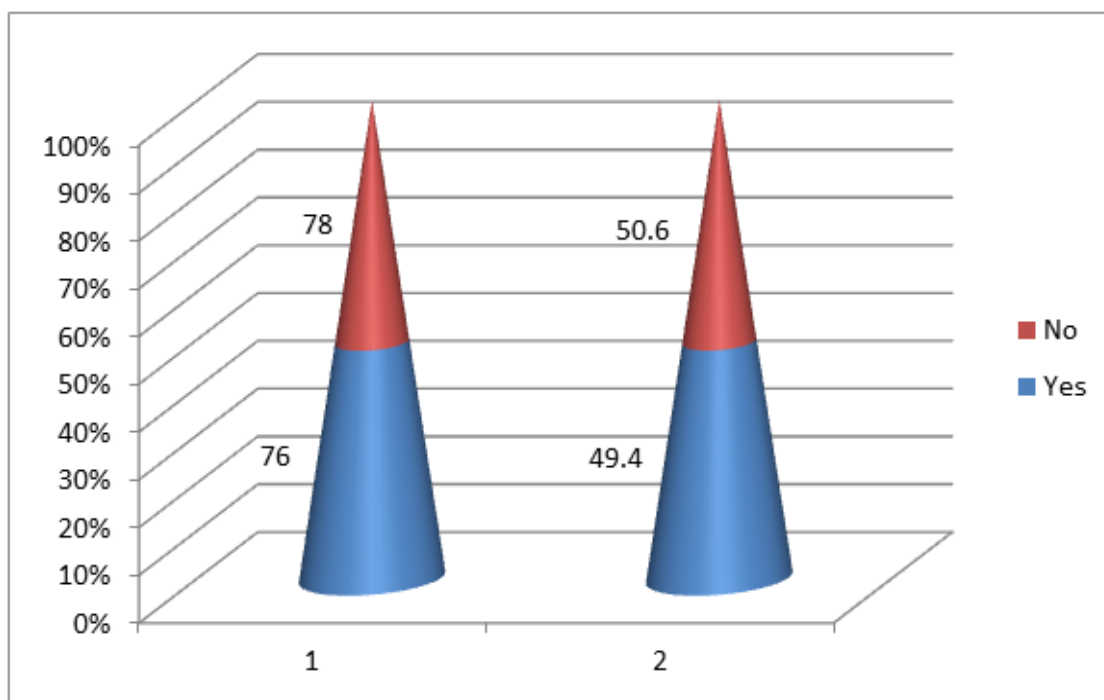


Fig 7 The Knowledge of the Respondents About Zero Waste

From the above table it can be identified that the majority of the respondents (N=78) i.e. 50.6% do not have the knowledge about Zero Waste, whereas (N=76) i.e. 49.4% respondents possess the knowledge about Zero Waste.

Hence, it could be state that the majority of the respondents (N=78) i.e. 50.6% do not have the knowledge about Zero Waste.

Table 8 Table Showing the Knowledge of the Sources of E-Waste

Year	Frequency	Valid Percent
Home	49	31.8
Hospital	7	4.5
Government	28	18.2
Private Sector	70	45.5
<b>Total</b>	<b>154</b>	<b>100.0</b>

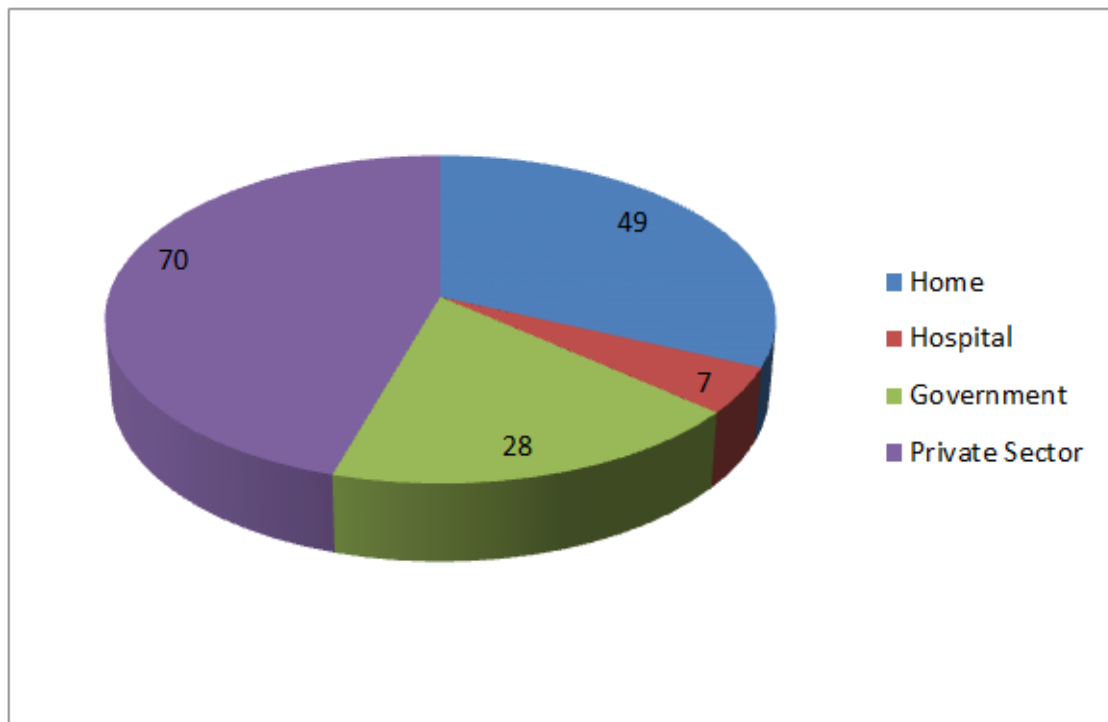


Fig 8 The Knowledge of the Sources of E-Waste

From the above table it can be seen that that the majority of the respondents (N=70) i.e. 45.5% respondents believe that source of E-waste is generated from Private Sector, (N=49) i.e. 31.8% respondents said that source of E-Waste is Home, (N=28) i.e. 18.2% respondents said the source of E-Waste is Government Sector and only (N=7) i.e. 4.5% respondents stated that source of E-Waste is Hospitals.

Hence, it could be stated that the majority of the respondents (N=70) i.e. 45.5% respondents believe that source of E-waste is generated from Private Sector.

Table 9 Showing the Knowledge About the E-Waste Collection Centre

Knowledge	Frequency	Valid Percent
Yes	71	46.1
No	83	53.9
<b>Total</b>	<b>154</b>	<b>100.0</b>

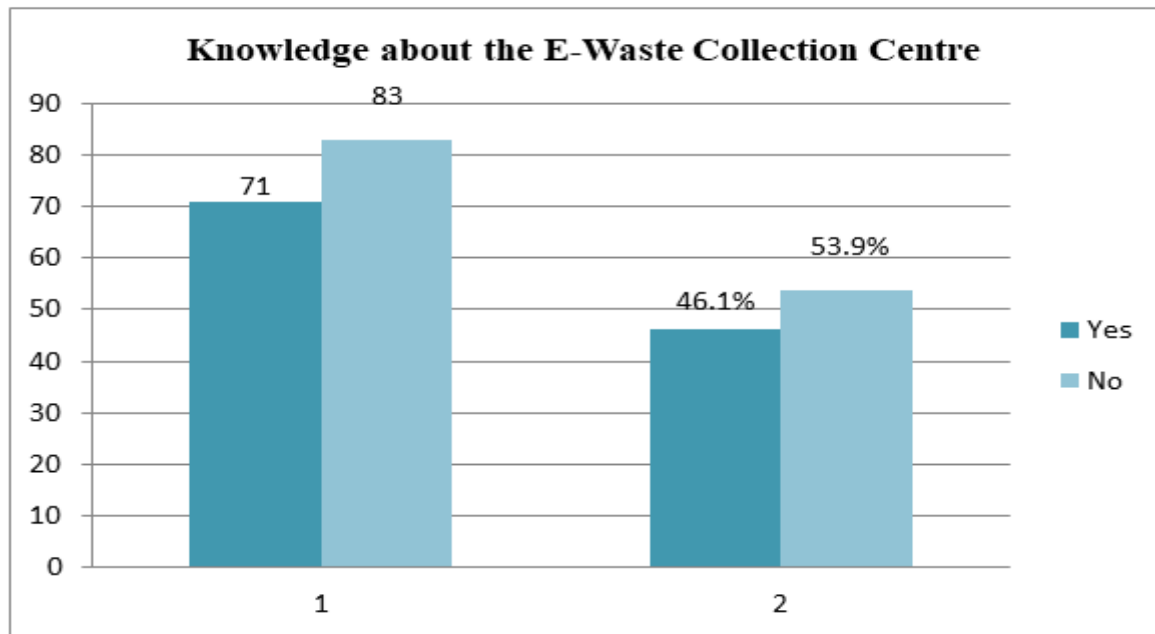


Fig 9 The Knowledge About the E-Waste Collection Centre

From the above table it can be interpreted that the majority (N=83) i.e. 53.9% respondents do not have the knowledge about the E- Waste Collection Centre and (N=71) i.e. 46.1% respondents do have knowledge about E-Waste Collection Centre.

Hence, it could be stated that the majority (N=83) i.e. 53.9% respondents do not have the knowledge about the E- Waste Collection Centre.

### III. SUGGESTIONS

#### ➤ *Scientific Approaches of E-Waste Management:*

##### • *Ways to Reduce E-Waste:*

- ✓ Refuse to purchase what one does not want or need. This will prevent the production and disposal of the waste.
- ✓ Reduce waste production when buying new things.
- ✓ Buying things in bulk rather than buying individual packaged goods.
- ✓ Reuse things rather than throw them away.
- ✓ Reuse plastic waste and eliminate the need for new plastic products to be made.
- ✓ Recycle what is not reused.

#### ➤ *Introduce the Concept of Zero Waste:*

Zero waste is a set of principles focused on waste prevention that encourages the redesign of resource life cycle so that all products are reused.

### IV. CONCLUSION

E-waste management is a significant topic that has been thoroughly debated in a number of places. Global North continues to dump its trash in South despite several treaties, agreements, and legislation on the matter at the national and international levels. India, a signatory to those agreements, now receives e-waste in exchange. India is the fifth-largest producer of electronic garbage, and wealthy nations send it roughly 50,000 tons annually. (2011) saw the launch of an e-waste management policy to address the

problem. As a result, several official treatment institutions were founded. But that didn't make the issue go away. More than 90% of e-waste is still handled in unregulated industries today. The pain persisted after that. Because they do not wear protective gear, the workers endanger their health by coming into direct contact with e-waste. The only good thing that results from this is the creation of employment opportunities, combined with some environmental and human health problems. Hyderabad is growing as a hub for a number of sectors despite the lack of a viable plan for effective e-waste disposal. This study investigated the degree of worker awareness regarding the effects of exposure on their activities and health. This could be caused by the high rate of unemployment in metropolitan areas and the slack application of regulations. This makes it evident that, both at the national and international levels, focusing solely on formal e-waste management techniques is insufficient.

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