

Knowledge of E-Waste among Young Adults

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ABSTRACT: *Electronic Waste is simply known as “e-waste”. Electronic waste is term used to describe old, end of life electronic appliances, such as- computer VCRs, DVD players, mobile phones, fax machines laptops, mp3 players etc. which have been disposed by their original users. E-waste contains hazardous constituent that may negatively impact the environment and affect human health if not properly managed. It has been observed that in most of the cases, electronic items are stored unattended because of lack of knowledge about their management. The main aim of this study was to assess knowledge of young adults towards e-waste. A total of 120 respondents (60 from semi urban) were selected from Lucknow city .The data were collected using a self made administered interview schedule along with knowledge scale. The data was coded, tabulated and analyzed to test the frequency, percentage, t-test, and anova and coefficient correlation by using SPSS (version 20). The findings of the study revealed that respondents of semi urban area were having more knowledge than respondents of urban area*

KEYWORDS: *E-Waste, Young adults, Knowledge*

I. INTRODUCTION

Electrical and electronic waste, also known as electronic waste or waste electrical and electronic equipment (WEEE), or in short called as e-waste, is used to describe obsolete or end of life electronic appliances. There is no generally accepted definition of e-waste around the world [6]. However, e-waste is often misunderstood as comprising only computers and related IT equipments, or worse still, mistaken as e-mail spam [5]. It is universally understood as electronic waste disposed of by end users and includes a wide range of products, from devices to complex goods. Therefore, e-waste comprises both white goods such as refrigerator, washing machine and microwaves and brown goods which consist of TV, radios and computers that have reached their ends for their current holder [5]. E-waste mainly comes from several sources: 1. Residue or leftover materials from electronic products manufacturing process. 2. Leftover parts or materials or discarded electrical and electronic equipment generated from a repair shop. 3. Obsolete electrical and electronic equipment coming from governments, companies and other facilities. 4. Obsolete electrical and electronic products mainly from households.

“E-waste” is a one of the rapidly growing problem today in the world. Disposal of e-waste is an being global environmental and public health issue, as this waste has become the most rapidly growing segment of the normal municipal waste stream in the world. E-waste contains hazardous constituent that may negatively impact the environment and affect human health if not properly managed. Due to lack of adequate infrastructure to manage wastes safely, these wastes are buried, burnt in the open air or dumped into surface water bodies. E-waste poses the most direct health risks when it degrades and the internal chemicals are released to the environment [4].

Electrical and Electronics Equipments are made of a multiple of components these toxic substances may have direct impact on human health and the environment if they are not handled properly. This hazard occurs due to the improper recycling and disposal processed used [4].

Public awareness of the e-waste is problem is only a start, the public has to be willing to support the companies that help to properly dispose of the e-waste even if the cost of their products is slightly higher. Consumers hold the power but need to be educated with the facts. The facts are recycling starts with the individual, with a little effort and an internet connection the average individual could learn where to recycle their electronic products [1]. It is livelihood for unorganized recyclers and due to lack of awareness; they are risking their health and the environment as well [3].

II. OBJECTIVE

- 1) To assess knowledge of young adults towards e-waste.
- 2) To study relationship between selected independent and dependent variables.

III. HYPOTHESIS

- 1) There exist no difference between knowledge of respondents about e-waste and age of respondents.
- 2) There exist no difference between knowledge of respondents about e-waste and sex of respondents.

IV. METHODOLOGY

The present study was conducted on 120 respondents of urban area and semi-urban area of Lucknow city. 60 respondents from urban area (Gomti Nagar, Indira Nagar, Aashiana, Alambagh) and 60 respondents from semi-urban (Mohanlalganj, Southcity, Rajnikhand, Telibagh) were choosen as respondents of the study. The sample was selected by using purposive random sampling technique. The independent variables of the study were gender and age. The dependent variables of the study were knowledge of respondents regarding e-waste.

V. TOOL

Self made interview schedule was used for data collection. In order to collect the data from respondents. The researcher has framed the questions and standardized it. This schedule measured respondents knowledge level related to e-waste. It includes 36 items in the schedule each item has 3 alternatives like correct, Partially Correct and Incorrect. Based on the scoring pattern, knowledge scale is divided into these categories that are low, medium, high knowledge of the respondents.

The range of these categories were as given below-

Categories	Scores
1- Low	1-36
2- Medium	37-73
3- High	74-108

The descriptive statistic applied was frequency and percentage distribution, mean and standard deviation to test the hypotheses, relational statistics like t-test, anova, and correlation were calculated SPSS (version 20) was used to analyze descriptive and relational statistics.

VI. RESULTS AND DISCUSSION

Table.1 Distribution of respondents on the basis of score obtained on knowledge scale

S.no.	Levels of knowledge	Urban (N=60)	Semi-urban (N=60)	Total (N=120)
1	Low (1-36)	-	2 (3.4)	2 (1.7)
2	Medium (37-73)	33 (55)	40 (66.6)	73 (60.8)
3	High (74-108)	27 (45)	18 (30)	45 (37.5)

(Figures in parentheses indicate percentages)

The above table (table no 4.3.2) showed that none of the respondents of urban area and very few of the respondents (3.4 percent) of semi-urban area were having low knowledge about e-waste. On the whole 1.7 percent of the total respondents were having low knowledge about e-waste. More than half of the respondents i.e. 55.0 percent of urban area and 66.6 percent of semi-urban area were having medium knowledge about e-waste. Also 60.8 percent of the total respondents were having medium knowledge about e-waste. 45.0 percent respondents of urban area and 30.0 percent respondents of semi urban area were having high knowledge about e-waste. More respondents were having medium knowledge about e-waste in semi-urban area compares to urban area. The findings of this study are same with study conducted by Kalana J., (2010) which concluded that more of the respondents are knowledgeable about e-waste.

Table.2 Analysis of variance between age of respondents and knowledge of respondents about e-waste

S.no.	Age of the respondents (In Year)	Mean	Std.	f- value	Sig.
1	20-25	76.02	14.82	7.346	.03*
2	26-30	72.05	10.65		
3	31-35	64.61	12.44		

(p<0.05*, level of Significant)

The above table reveals that high mean value 76.02 is between the age group of 20-25 years of respondents and low mean value is 64.61 is between the age group of 31-35 years of respondents, so that f test was found significant between age of respondents and knowledge of respondents about e-waste which means null hypothesis was rejected, which means that knowledge about e-waste was dependent or influenced by age.

Table.3 t- test for sex of respondents and knowledge of respondents about e-waste

S.no	Sex of the respondents	Mean	Std.	t- value	Sig.
1	Male	72.94	13.37	1.16	.775
2	Female	70.02	13.75		

P<0.01, NS= Not Significant

The data in table (table 4.4b) revealed that t-value (1.16) was found not significant. It means that no significance difference between sex of respondents and knowledge of respondents about e-waste. This means that null hypothesis was accepted which means that knowledge about e-waste was not dependent or influenced by sex. Very few differences were seen in the mean values.

VII. CONCLUSION

The study findings revealed that the majority of respondents (60.8 percent) were having medium knowledge about e-waste whereas only 1.7 percent respondents were having low knowledge about e-waste. It was also found that respondents of semi-urban area were having more medium knowledge than respondents of urban area. There was significant difference between age of respondents and knowledge of respondents about e-waste which concludes that knowledge level may vary according to age. Also there was no significance difference between of sex of respondents and knowledge of respondents about e-waste which concludes that knowledge may not vary according to sex.

REFERENCES

- [1]. Gupta S., 2007, "E-Waste Management: Teaching How to Reduce, Reuse and Recycle for Sustainable Development, Need of Some Educational Strategies", *Journal of Education and Practice*; 2(3): 74-86.
- [2]. Kalana A., 2010, "Electrical and Electronic Waste Management Practice by households in Shah Alam, Selongor, Malaysia", *International Journal of Environmental Sciences*; 1(2): 132-144.
- [3]. Kurian J., 2007, "Electronic Waste management in India-Issues and Strategies", *Eleventh International Waste Management and Landfill Symposium*;5(1):74-82.
- [4]. Mittal D., et.al. 2012, "E-Waste: A Hidden Threat to Global Environment and Health", *VSRD International Journal of Science and Technology*; 2(3): 271-275.
- [5]. Sinha D., et.al. 2005, "A comparison of electronic Waste recycling in Switzerland and in India", *Environment Impact Assessment Review*; 25(2): 492-504.
- [6]. Y.C. Jang and H. Yoon, 2006, "The Practice and Challenges of Electronic Waste Recycling in Korea with Emphasis on Extended Producer Responsibility (EPR)", *JK Journal of Management & Technology*; 1(1):11-24.