

A Study on Environmental Awareness and Responsibility of Disposal of Old Mobile Phones

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Abstract: *With the increasing usage of mobile phones and access to the new technologies in recent years the challenges concerning with disposal of old mobile phones are making trouble. To understand more about the topic two variables relating to the topic are considered awareness and ascribed responsibility. The study tries to identify the people's awareness towards the old mobile phone disposal and level of ascribed responsibility in people towards improving the concern of e-waste. The study is conducted with students as the respondents to understand about the topic. It helps to know the environmental awareness of people from with diverse background to contribute towards the socially acceptable ways of old mobile phone disposal.*

Key Words: *Environmental Awareness, E-Waste, Mobile Phone Disposal.*

I. INTRODUCTION

In the entire world mobile phones are having widespread acceptance and majority of the population in world uses mobile phones, the case is not different in India. With the technological interventions in life the mobile phone and smart phones is vital tool of telecommunication. The societal and economical inclination toward digitalization has also enhanced the need for using smartphones for a hassle free and smooth access to many facilities including banking, Payments etc.

From an era where a village had a common single telephone connection to smartphones in every home and single person using multiple phones at same time. With the latest mobile phones in market and people are ready to switch from their old phones to new. Resulting in people changing phones in less than six months.

Where do these used phones go after they become idle? The question remains the same over decades. Mostly such phones after their use remains as a waste, most dangerous and harmful of its kind e- waste. The e - wastes are to be treated in specified manner and are not similar to any other waster which is usually burned or buried. If not disposed well in the designated manner the adverse impact of the waste is multiplied. In current scenario most of the people are not aware about the mobile phone disposal and thus the old mobiles remains in homes for years and get dumped in land later. This loosely discarded, surplus, obsolete, broken mobile phone, its accessory and other e-waste is identified as a serious environment and public health hazard in India (Borthakur, 2016; Monika, 2010).

The discarded mobile phones can be reused and recycled to manufacture new ones. Researchers have shown that economically viable refurbishing or recycling of mobile waste

is possible in an environmentally friendly manner (Sarath et al., 2015). Many mobile phone companies have initiated the Take Back campaign, the companies come forward and collect the used mobile phones through reverse supply chain systems and does safe disposal of them. These are also aligned with the legislative requirements and rules by the Ministry of Environment and Forest.

Even after e-waste management and disposal of mobile phones have legal guidelines and companies have started the initiatives to take back the e waste challenge exist that the consumers are not aware about the harmful ill effects of nonscientific disposal system and they have limited access to it. This is the reason behind the many initiatives of the government and companies remain unrecognized. The return and recycling of obsolete mobile phone is feasible only with the co-operation of end consumer. Penners et al. (2018) found that awareness of prospective environmental damage is one of the crucial factor influencing propensities to return old mobile phone. Also, the awareness about relevant disposal initiatives as an important thing to manage the challenge of e- waste (Sarath et al., 2015; Monika, 2010).

Along with awareness of disposal system the individual should have a sense of responsibility for the disposal of e-waste. Unless the responsibility is deeply rooted in an individual it is difficult to find the disposal behavior. An individual may be aware of the mobile disposal system but may not use it. Norm-activation model proposed by Schwartz (1977) acknowledged the importance of felt responsibility in altruistic behavior. Schwartz (1977) named it as ascribed responsibility. The Value-Belief-Norm theory (Stern et al., 1999; Stern, 2000) further acknowledged the importance of ascribed responsibility in activating pro-environmental behaviors.

In this study researcher has studied awareness of mobile disposal initiatives and individuals ascribed responsibility towards disposing old mobile phone through disposal system.

II. METHODOLOGY

Descriptive research design is utilized to carry out the study, without influencing any factors of the research.

A. Instruments:

The Survey method was used to conduct the research with the help of a questionnaire 92 responses was collected from respondents. Sample of respondents were selected based on convenience. The respondents were students with age between 20 - 29. These data are analyzed to find the awareness and ascribed responsibility with respect to different parameters.

Revised Version Manuscript Received on 14 May, 2019.

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B. Sample profile:

Gender

The data was collected from 92 respondents out of which 52 are female and 40 are male.

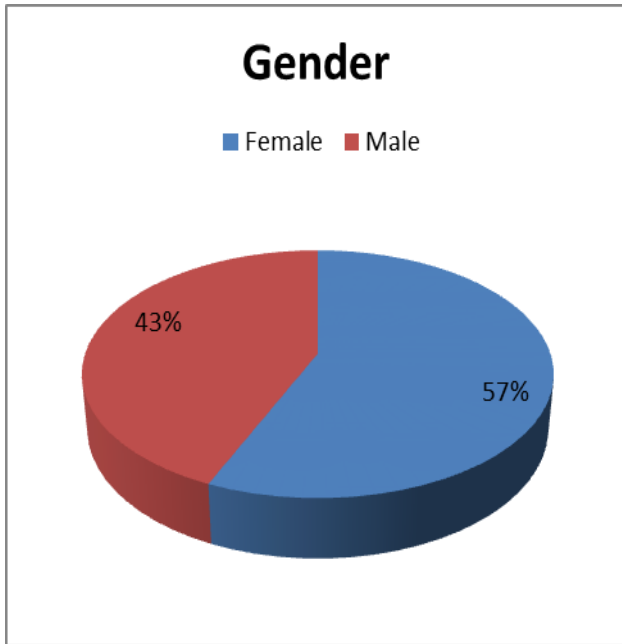


Fig.1: Gender

Educational qualification

The main focus was on students having educational background higher than graduation, thus the respondents constituted 74 people with post-graduation and 18 graduates

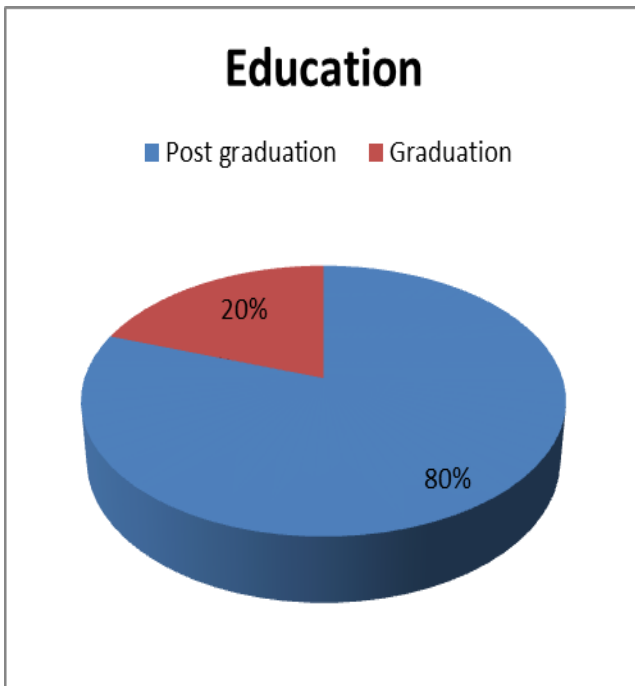


Fig.2: Educational Qualification

Household income

From the response collected from 92 people 44% had an annual household income between 100000- 500000 and 35% belongs to 500000-1000000, 11% have an income less than 100000 and 10% having more than 1000000.

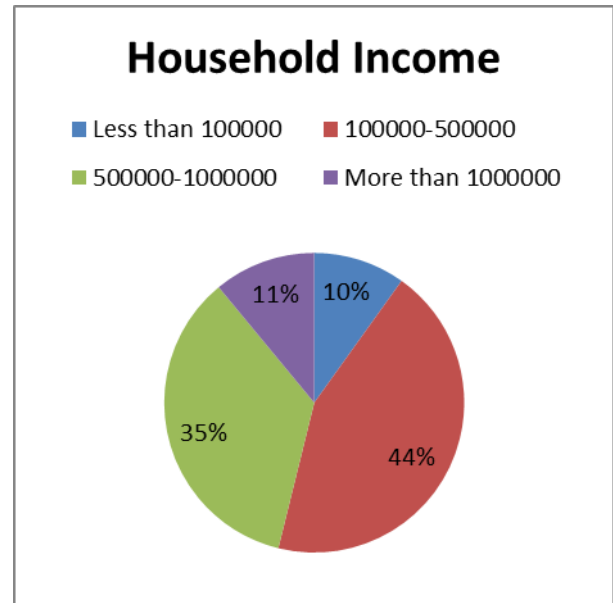


Fig.3: Household Income

III. DATA ANALYSIS AND RESULTS

A. Figures and Tables

The information collected through research are Environmental awareness and ascribed responsibility and the relation of these two variable with Household Income.

The people awareness is one prime variable which indicate the effectiveness of any initiatives taken to improve the concern of old mobile phone disposal, below two questions aims to find the awareness the sample population is having towards green initiatives by different authorities.

Table.1

	Female	Male
Environmental Awareness	3.183	3.186

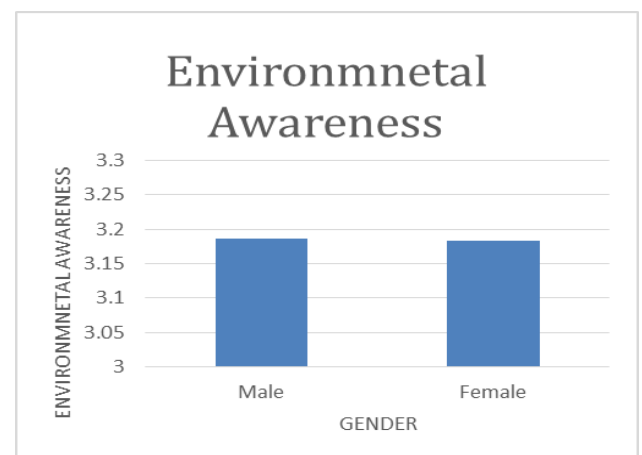


Fig.4: Environmental awareness and gender

The above chart indicate that male respondents are more aware about the implications and impact of mobile phone disposal and different initiatives taken by mobile phone companies and government for disposal of old mobile phones.



Table.2

	Female	Male
Ascribed Responsibility	3.86	3.713

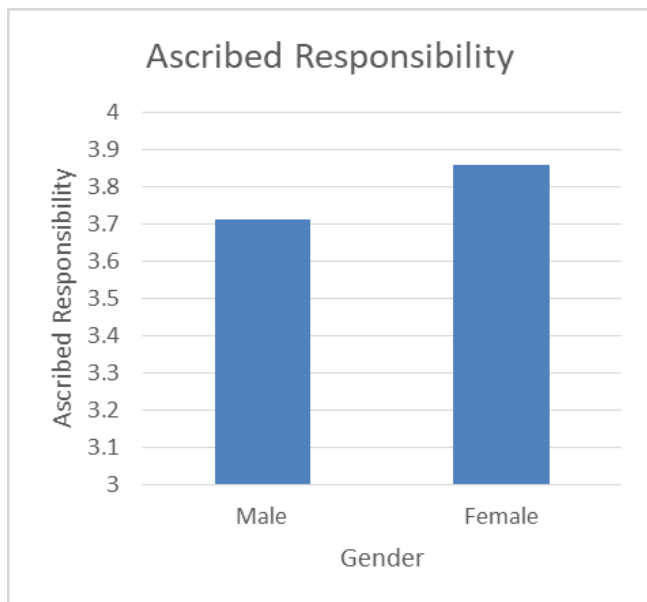


Fig.5: Ascribed responsibility and gender

Above chart indicate that more females are having higher ascribed responsibility towards disposal of old mobile phones than male.

Table 3

Household Income	Environmental Awareness
Less than 100k/year	3.06
10k-500k/year	3.2625
500k-100k/year	3.28125
More than 100k/year	2.65

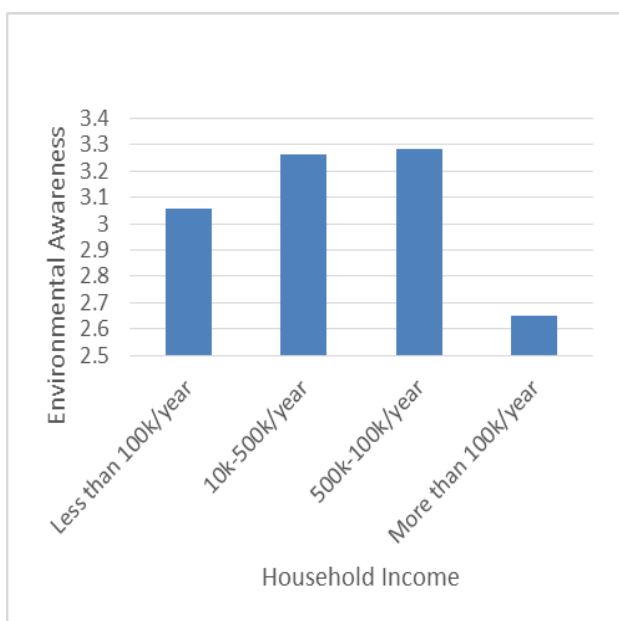


Fig.6: Environmental awareness and household income

The above table shows that students from household income more than 100,000 INR/year reported least environmental awareness.

Table 4

Household Income	Ascribed Responsibility
Less than 100k/year	3.925925926
10k-500k/year	3.820833333
500k-100k/year	3.776041667
More than 100k/year	3.583333333

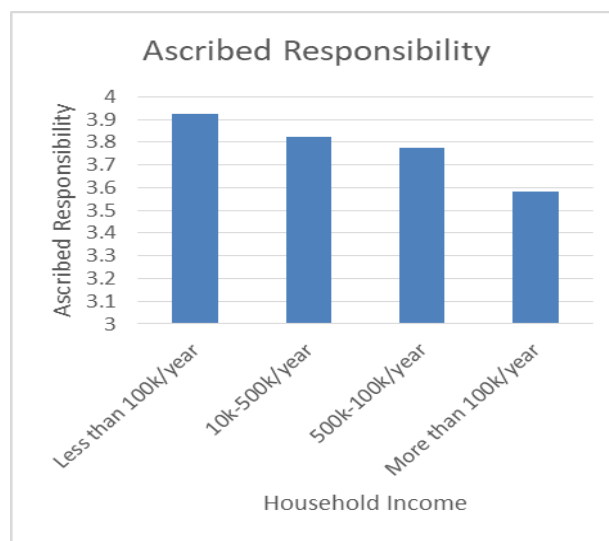


Fig.7: Ascribed responsibility and household income

The mean values of ascribed responsibility for students from four household income groups are shown in table 4. It is evident that student from household income more than 100,000 INR/year feel less responsibility of to use mobile disposal system or to find out proper mobile disposal mechanism.

IV. RESULT

This study indicates that awareness about the issues concerning the old mobile phone disposal is low. In the gender wise classification even though male respondents are much more aware about the initiatives and the implications of mobile phone disposal female feel it as their responsibility and much more concerned about the issue thus male respondents have a higher score on awareness and lower in ascribed responsibility. The initiative of government and mobile phone companies are only known to few and there is a necessity to enhance the reach of such initiatives to all people. The respondents rarely look into the disposal system and initiatives of the manufacturers before buying a product. The respondents are conscious about their responsibility towards the system but with the limited access to the avenues they are not initiating anything towards the process. This responsibilities as well as awareness were found low in students with affluent family background.

V. CONCLUSION

People having partial awareness about the mobile disposal system, even though initiatives and legal guidelines are adopted by government and mobile phone manufacturers the information regarding these and thus the awareness is limited.



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People having the feeling that they are responsible for the effective and systematic disposal are having limited access to those systems and have limited knowhow about the process. Resulting in even those with the awareness and ascribed responsibility towards the topic are not initiating the process of systematic and harmless disposal. Since the mobile phones are used by majority of the population the initiative taken for minimizing the harmful effects of e-waste and disposal of the old mobile phones in systematic manner will be only successful with the support of the end users, only when the users are completely aware about the damages and ill effects the unscientific disposal and throwing of old mobile phones can cause to the environment and the living beings people will come forward to act upon the issues and emphasis on selecting the mobile phones with effective disposal which can even turn the initiatives taken by organization matter of existence and not only for legal binding.

REFERENCES

1. Borthakur, A. (2016). Health and environmental hazards of electronic waste in India. *Journal of environmental health*, 78(8), 18-24.
2. Monika, J. K. (2010). E-waste management: as a challenge to public health in India. *Indian journal of community medicine: official publication of Indian Association of Preventive and Social Medicine*, 35(3), 382.
3. Onwezen, M. C., Antonides, G., and Bartels, J. (2013). The Norm Activation Model: An exploration of the functions of anticipated pride and guilt in pro-environmental behaviour. *Journal of Economic Psychology*, 39, 141-153.
4. Penners, O., Semeijn, J., Van Riel, A. C., and Lambrechts, W. (2018). Life cycle extension of mobile phones: an exploration with focus on the end-consumer. *The Central European Review of Economics and Management*, 2(4), 7-37.
5. Sarath, P., Bonda, S., Mohanty, S., and Nayak, S. K. (2015). Mobile phone waste management and recycling: Views and trends. *Waste management*, 46, 536-545.
6. Schwartz, S. H. (1977). Normative influences on altruism. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 10, pp. 221-279). New York: Academic Press.
7. Stern, P. C. (2000). New environmental theories: toward a coherent theory of environmentally significant behavior. *Journal of social issues*, 56(3), 407-424.
8. Stern, P. C., Dietz, T., Abel, T., Guagnano, G. A., and Kalof, L. (1999). A value-belief-norm theory of support for social movements: The case of environmentalism. *Human ecology review*, 81-97.

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