



Norwegian University  
of Life Sciences

Master's Thesis 2017

30 ECTS

Department of International Environment and Development Studies

Noragric

# **Role of Mass Media in Public Awareness About Household Waste Management: A Case Study in Lahore (Pakistan)**

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Master of Science in International Environmental Studies

# **Role of Mass Media in Public Awareness About Household Waste Management: A Case Study in Lahore (Pakistan)**



**A thesis submitted in partial fulfillment of the requirements for the degree  
of Master in International Environmental Studies**

**By**

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**September, 2017**



*In the name of Allah,  
the Most Beneficent,  
the Most Merciful*

## **DEDICATION**

*I humbly dedicate this research work to Almighty Allah, Who is my well-wisher!*

## **DECLARATION**

I, RUQIYA KOSER hereby declare that this thesis titled;

**" Role of Mass Media in Public Awareness About Household Waste  
Management: A Case Study in Lahore (Pakistan)"**

is a result of my own research findings and investigations. This work has not been previously printed, published and submitted in any university or research institute.

Signature.....

Date.....

## ACKNOWLEDGEMENTS

First of all, I am thankful to **ALMIGHTY ALLAH**, who has given me abilities and strengths to complete this thesis. I offer special praise to our **HOLY PROPHET MUHAMMAD** (Peace Be Upon Him) who is an ocean of knowledge and forever a torch of guidance for humanity as a whole.

Words are limited to express my heartiest gratitude to my supervisor **Elisabeth Molteberg (Faculty of Landscape and Society, Department of international environmental and Development Studies, Noragric)** for her constructive suggestions and valuable guidance. She accepted my mistakes and guided me persistently to complete this research work.

I am also obliged to Norwegian University of Life Sciences (NMBU) and especially "Noragric Department" for offering me admission and providing me a peaceful environment throughout this program. I would also extend my appreciations to my study co-coordinator **Anette Virtanen** for her calm and co-operative behavior during my whole master degree.

I do not have words to express my feelings of appreciations towards my parents whom prayers always encouraged me. I am earnestly obliged to my husband Muhammad Atif Bilal for her valuable guidance and moral support.

Finally, I acknowledged help of my friend; Dr. Unaiza for her sincere co-operation and inspirations during my research work.

Ruqiya Koser

Ås, September, 2017

## List of Abbreviations

LUDP	Lahore Urban development project
SWMD	Solid Waste Management Department
CDGL	City District Govt. Lahore
LWMC	Lahore Waste Management Company
DHA	Defence Housing Society
PEPA	Pakistan Environmental Protection Act
SWM	Solid Waste Management
TMA	Town Municipal Administration
SES	socio-Economic Status

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## **ABSTRACT**

Household waste management is both an urban or rural problem. Everyone is a potential generator of this waste and also a contributor of this problem. Due to urbanization and increasing population of Lahore Pakistan, the management of household waste has become major challenge for the Government of Lahore. Improper services for handling waste and the lack of awareness among people about the hazardous effect of this waste make the problem even worse. Mass media plays a vital role for the awareness of household waste management among individuals. Probably, the more informed the individual is about hazardous effect of unsorted waste, more active he/she is to manage the waste properly and to follow the policies made for the protection of environment. Therefore, it is crucial to investigate the role of mass media in public awareness about household waste management in Lahore, Pakistan. The main focus was to investigate the understanding and awareness of individuals of two different areas (Shahdara and DHA) about household waste management. A theoretical framework was developed focusing on agenda setting theory and knowledge gap theory to understand the media role on the awareness of household waste management and how the participants of both areas perceive mass media information and how that information effects the attitudes and practices of people belonging to two different socio-economic statuses.

The study used qualitative research methodology through which in depth interviews were conducted with the participants of two areas and also with the journalists by using mix criterion or convenience sampling approach.

The findings of the research demonstrated that overall reporting about household waste management is not proper in Pakistan. Only few environmental journalists in the country are assigned the task of reporting household waste management issue that too only on special occasions. In addition, if the information about household waste management is selected for publication and broadcasting, it got very little space and attention due to the organizational agenda. It was also observed that the awareness level of participants from two areas was mostly dependent on their economic conditions and educational level and the services which they have.

### **Key words**

Waste, household waste, management, environment, mass media, awareness, journalists, socio-economic status.

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# **1. INTRODUCTION**

## **1.1. House hold waste and its management**

For many decades, waste production and its management is both a rural as well as urban issue. Human activities are the main generator of waste, and at the same time is responsible for its management problem (Saxena et al., 2010). Waste generation is one issue and its types another issue, while the way in which waste product is managed is totally different issue. Household waste generation and its management generally include the degradable waste (food waste, paper waste, straws etc.), partially degradable waste (napkins, wood etc.) and also non-degradable waste (plastic, rubber, glass, metal and electronic waste) (Jha et al., 2011). The issue of solid waste management is concerning because there are many sources producing the solid waste across the globe, the amount of solid waste generated globally per year is estimated to have increased by 8 percent. Therefore, much effort is needed to manage and control the solid waste and its related issues (UNEP, 2009).

Household waste generation is increasing significantly all over the world which has greater impact on environment. Increasing population, rapid urbanization, growing economies and improved living standard lead to the gradual increase in the volume of household waste. The rapidly growing cities of the developing countries are major contributor to generate it (Minghua et al., 2009). The management of the waste collection is difficult in developing countries because they have not much facilities or tools to manage the waste. Likewise, Pakistan is also facing serious problems regarding household waste management. It has been estimated that waste production in Pakistan is about 71,000 tons per day at the end of 2014 from which 50 % of waste is collected by government and privately operated services (Masood et al., 2014). Further, due to continuous population growth in urban areas, household waste yield is also increasing per capita, which lead to greater demands of disposal services. Unfortunately, cities in Pakistan are not equipped with proper household waste management system, right from collection of waste to its disposal. Unmanaged waste system has serious environmental consequences and has become a reason for the spread of many diseases (Sara Ali, 2012).

In this thesis, the main focus will be on Lahore, which is also known as “the heart of Pakistan” and is also the capital city of province Punjab. Administratively Lahore is divided

into nine towns which are further divided into 150 union councils (Masood et al., 2014). According to 1998 census, population of Lahore was 6.3 million (Mazhar & Jamal, 2009) which has increased to over 9 million in 2016 (Pakistan statistics bureau, 2016). Population growth rate in Lahore alone is 3.1% which is higher than the total average growth rate of Pakistan, which is 1.55%. Due to this rapid population growth rate, Lahore is facing one of the biggest challenges of huge household waste management (Pakistan statistics bureau, 2016).

Local governments are the main stakeholders for waste collection and disposal in Lahore. Everyday about 6000-ton or more waste is generated in Lahore (ESMAP, 2010) from which 60% of the produced waste is collected while 40% waste lies along streets, roadsides, vacant plots, railway lines and open sewers (Batool & Chuadhry, 2009), due to this unhygienic conditions are getting worse day by day. About 50% of collected waste product in Lahore contain organic content, therefore most of it is disposed by large scale composting at three main dumpsites Mehmood Booti, Saggian and Baggarian in Lahore (Lahore Compost Limited 2010).

Lahore waste management came under Lahore Urban development project (LUUDP) in 1978, in which Solid Waste Management Department (SWMD) of City District Govt. Lahore (CDGL) was responsible for collection, transportation and disposal of the waste. Due to insufficient collection points, lack of equipment and resources, SWMD faced many obstacles to carry out the management properly (Lahore Compost Limited 2010). Therefore, in 2011 Lahore waste management company (LWMC) was established to deal with the waste management of Lahore, which became partner with two Turkish companies AlBayark and OzPak in 2012 to sort the waste for seven years in Lahore (Lahore Waste Management Company, 2013).

Still, there is an urgent need to reduce the current level of household waste generation in Pakistan by using for example the environment friendly waste management techniques (recycling, incineration and composting) (Joeng et al., 2007). Currently there are many innovative waste-to-energy technologies available to manage household waste, through which energy can be efficiently recovered, such as anaerobic digestion, landfilling and thermal conversion. Currently, household waste is used to produce electricity, fertilizer and recycling in many parts of the world (Tatamiuk, 2007). United States and Europe are recycling about

32% and 41% of their waste, while China is investing 6.3 billion dollars by 2030 to achieve success with 30% of its waste (State Bank of Pakistan, 2009). On the other hand, in Pakistan there are no regulations, which can provide the basis for compliance and monitoring of household waste. As a result of which generated waste is dispersed in all surroundings, which negatively affect the socio-economic-ecological components of society (Pakistan Environmental Protection Agency, 2005).

## **1.2. Role of Media in Public Awareness for Waste Management**

Public awareness and attitude towards waste can affect the public willingness to participate and cooperate in waste management practices. Generally, public awareness regarding environmental and health risk issue due to poor waste management are important factors need to be communicated in all sectors. The participation of the population is only possible if they are well informed of the benefits of carrying waste into shared container, separating waste to serve as recycling activities, or even paying for waste management services (Zurbrugg C, 2002). The benefit of awareness programs through media (Newspapers, radio and television) has been observed recently by support of people towards government action plan. (UNEP, 1992). A research of Japanese newspaper coverage of global warming showed that a dramatic increase in newspaper coverage from January 2007 correlated with an increase in public concern for the issue (Sampei & Aoyagi-Usui, 2009).

In developing countries people are highly dependent on natural resources and this dependency often leads to degradation of the environment. Lack of awareness about the environmental education in society, the media, environmental experts make the situation even more worse. Overtime the environmental issues and the risks in future have become more complex. For most of people media is an important source of information about the environment. Therefore, the coverage and presentation of environmental issues in the media should be in a form that can be easily understandable to audience (Tesema F, 2012). According to Millar (2012), mass media is useful tool for the promotion of sustainable development and campaign for social change. Media also play important role to spread the relevant environmental information which offer solutions to environmental issues which in turn helps in conservation and sustainable development (Makali, 2003). Media has the powers to control and change the attitudes, beliefs, and behaviors of audience through direct appeals toward a specific issue via information that circulate daily among the public (ibid).

The access and quality of mass media in Pakistan have increased significantly over the last decade. Further, the number of print and electronic media outlets have grown substantially from 2001. There are number of newspapers, ranging from the large English and Urdu dailies to the small local language papers. More than 100 television channels are available including both government and private owned channels (International Media Support, 2009).

In this study, the role of mass media in public awareness about household waste and its management in Lahore will be highlighted. Further, the role of media channels in influencing and shaping the attitudes and practices of the public towards waste management will be studied.

### **1.3. Problem statement**

The purpose of this study is to explore the people understanding about household waste management and which role the media plays for creating household waste management awareness in Lahore, Pakistan. The issue of household waste management is becoming worse in Lahore which has greater impact on every aspect of day-to-day life. Rapid population growth, informal planning and poor management have set up a challenge for the Government of Lahore to control the household waste. Any nation needs the support of its countrymen to solve the overall problem and the issue becomes adverse when citizens remain uninformed about environmental changes relevant to their daily life, which contributes to the environmental deterioration.

### **1.4. Objectives of the study**

Mass media is one of the most important tools in promoting knowledge and awareness at large scale among people. Since, mass media has direct influence on people perceptions, the aim of the study is to find how the mass media increase people consciousness about household waste management. The main objectives of this study are:

- To explore the understandings of participants (Shahdara and Defence housing society (DHA)) about household waste management issue.
- To assess why and which source of media (TV and newspapers) prefer by the participants to attain the information.
- To evaluate that the participants are getting information from media and to what

extent the information provided by media is understandable and interesting for the members of community and in which ways it influences their practices.

- To investigate the challenges faced by media practitioners as well as the opportunities provided to them for the coverage of waste management issues.

### **1.5. Research questions**

With the aim of addressing the above objectives of this study, the research activities are guided by the following questions.

- What is the level of understandings of participants about household waste management issue and what are their daily life experiences and practices about household waste management?
- Which source of media (TV, Newspaper) is preferred by participants to get information and why they choose that particular medium for getting information?
- Is media playing its proper role to provide information about household waste management issue and Does the information provided by media on waste management issue is understandable for the participants and how it influences their practices?
- What are the opportunities provided to media practitioners for the coverage of waste management issues and what are the challenges faced by them?



## **2. TOPICAL BACKGROUND**

Human being, compared to other species are dominating and changing the face of earth continuously. By-products produced by human activities are seen as discarded waste. The vast amount of this waste goes to ground, water and air. The characteristics and quantity of waste vary from place to place. Factors which influence the quantity and composition are the average, the sources, the population, income level, climate, social behavior, industrial production and the market for waste materials (Late & Mule, 2013). High consumption of earth resources and the production of large waste create serious environmental hazards, e.g. millions of ton of gasses and carbon dioxide released into the air has caused greenhouse effect (FAO, 1997).

Urbanization, industrialization, consumption and changing life style patterns are main challenges for developing countries. Due to which cities become overburdened with the provision of basic services (water, sanitation, health and electricity) and have difficulty in establishing an effective solid waste management strategy in developing countries. It is also compounded with the lack of waste management infrastructure and unplanned nature of urbanization. Therefore, most of the waste is then released into environment with improper management, which is main cause of diseases in humans and also in animals (Medina, 2010). In late 1900's annual waste production was about 300-800 kg per person in developed countries to about 200 kg per person in developing countries, which has increased tremendously today (Iliyas, 2008). Solid waste management is becoming worse due to lack of public awareness, unplanned growth of cities, high waste generation and non-functioning of governing institutions (Bonotto et al., 2008).

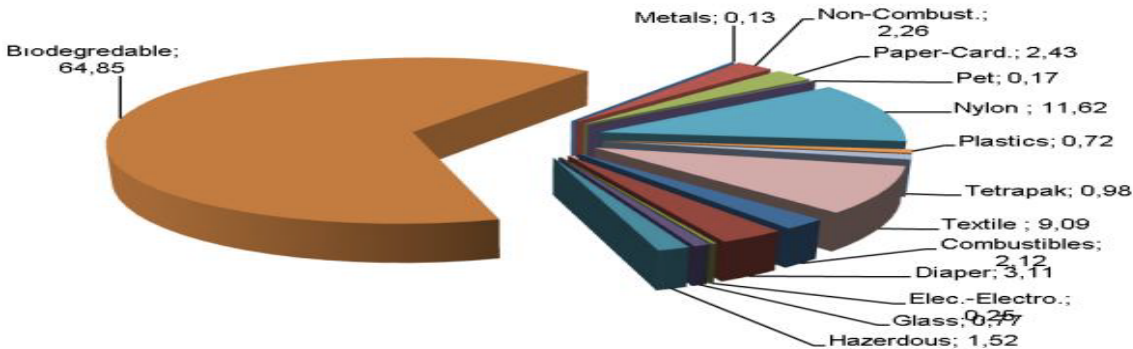
Waste management is basically considered an urban issue because waste production rates are much lower in rural areas as compared to urban areas. Mostly, the residents of rural areas are poorer and they bought fewer store items (which are less in packaging), and they have higher level of reuse and recycling. Today, more than 50% population of the world lives in urban areas, which is increasing faster than before. It is also estimated that the rate of urban solid waste production is faster than the rate of urbanization. Global estimates indicated that by 2002, 2.9 billion urban residents generated about 0.64 kg of waste per person per day and by 2012, this increased to 1.2 kg per person per day with a total urban population of 3 billion. It

is estimated that by 2025, there will be about 4.3 billion urban residents who will generate about 1.42 kg of waste per day. (Hoornweg et al., 2012).

According to PEPA (2005), 54888 tons per day solid waste is generated in Pakistan. The scope of problem regarding waste management is very wide and population growth is main factor affecting its management. The growth rate of population in eight different cities in Pakistan has increased from 3.67% to 7.42% in the years from 1996- 2006, which is higher than any other cities in world. Therefore, the amount of household waste is increasing yearly in proportional to the population growth (EPMC, 1996; Mahar et al. 2007).

**2.0.1 Waste generation and composition in Lahore**

Lahore is one of the biggest and populated city of Pakistan, covering an area of 1772 km<sup>2</sup> and has 8.16 million populations (Bureau of Statistics, Government of Punjab, 2012) of which 83% lives in urban areas while 17% lives in rural areas. Per capita waste generation is ranging from 0,5-0.65 kg per day in Lahore (JICA and Pak-EPA, 2005); LWMC has used this figure in per capita 0.65kg per day, which estimate the total amount of waste is 53000 tons per day in the city. However, this amount is only an estimate because there are no proper procedures to measures the actual amount of generated and collected waste in the city (LWMC, 2012). There are three disposal sites in Lahore where waste is sent for composting. Among these disposal sites, just one is weighed while two other sites have no record for entering the waste. according to LWMC, most of the municipal waste is consist of household waste which sometimes also includes commercial waste, sanitation residue and demolition debris. Household waste in Lahore contains approximately 65% organic, 15% paper, plastic and nylon, while 1.52% is hazardous waste (Olmez et al., 2012).



**Figure 1:** Composition of solid Waste generated in Lahore in 2012 (Olmez et al., 2012).

## 2.0.2 Collection of waste in Lahore

Collection of waste in Lahore is carried out in two ways, primary and secondary collection. In primary collection, private companies and informal waste collectors provide their door to door services for the collection of household waste while secondary collection is based on communal waste containers which are placed on various locations in the city. In the current system of Lahore, secondary collection is most dominant method for waste collection. LWMC with collaboration with Two Turkish companies AlBayark and OzPak, operating in 17 out of 150 union councils and they are collecting 292 tons of waste by door to door collection method. Waste workers are collecting waste at a fixed time from each household and they take this waste to the nearest communal container site. The other 133 union councils have no door to door collection facilities and are still covered by LWMC (Masood et al, 2014).

As 133 union councils have no door to door facility from LWMC so there are some informal waste collectors, who provide them door to door service by using their wheel barrows or donkey carts. They charge fee for collection of waste from the households every month, either in shape of cash, food or clothing. These informal collectors also used the LWMC containers for sorting the waste. on the other hand, LWMC is not responsible for the collection of waste from cantonment areas and private housing societies, as they have their own waste collection and transportation services. LWMC has provide 975 containers of 10 m<sup>3</sup> and 5 m<sup>3</sup> while the private companies have provided 1609 containers of 0.8 m<sup>3</sup>. (Masood et al., 2014).

Mehmood et al., (2010); Hasan et al., (2011), reported that Waste collection, transportation and disposal is not properly managed in Lahore and it is also observed that the waste is mostly dumped at the vacant plots and water bodies. These practices have reduced little since LWMC has taken charge for the collection of waste. Waste in Lahore is also burnt illegally both by residence and the SWM authorities due to the reduction of waste because of insufficient space. Only 40% of the generated waste is delivered to the disposal sites while 8% waste is converted to compost (Masood et al., 2014). Due to poor management and large amount of waste, it becomes very difficult for local governments to tackle the problem. This has led to the fall of ecological standards of living in the city like poor sanitation, pollution of water reservoirs, diseases and environmental degradation (CPF, 2010).

### **2.0.3. Rules and regulations related to household waste management in Pakistan**

In Lahore local government is mainly responsible for the collection and disposal of household waste. Due to devolution of local government system the town's municipal administration (TMA) is now accountable for the same. Although, the federal government in Pakistan has implemented the Pakistan Environment Protection Act (PEPA) in 1997, which is most recent and updated legislation on environment, but due to lack of system to follow rules, regulation and standard policies, TMA is unable to cope with this problem. One of the functions of (PEPA) is to assist the local governments and local authorities to implement the rules and regulation for proper disposal of waste (Malik, 2012).

Presently the rules and regulations dealing with waste management in Pakistan are as follows:

- Section 11 of the Pakistan environmental protection act prohibit the discharge/dumping the waste in an amount that violates the National environmental quality standard, municipalities are obliged to establish and operate domestic waste disposal facilities.
- Article 8 of Environmental Law prohibits delivering any kind of wastes and residues directly or indirectly to the receiving environment.
- Section 132 of the cantonment act 1924, deals with the deposit and disposal of household waste deals with solid waste management. According to this act, it is the responsibility of cantonment board to provide or appoint facilities or certain places where the residence can depot or dispose their household rubbish, offensive matter, car cases of dead animals and sewage.
- Municipality Law (Articles 14 and 15), municipalities/towns are obliged to carrying out all services with regard to collection, sorting, destruction and storage of solid wastes.

### **2.1. Mass media and household waste management**

According to Wellford (1998), world population uses more than 67% of planet natural resources for primary productivity, which has adverse impact on its environment. Environmental problem is global issue, which requires a collective local action to solve them (Gore, 2006). Global level conferences emphasized the importance of environmental

awareness through media and education to achieve sustainable development (Ekaete, 2001). After the 2<sup>nd</sup> world war, environmental problems entrenched in all over the world. Number of workshops and conferences held on environment, e.g. The Rio de Janeiro Earth summit in 1992 is one of these that marked the beginning of environmental campaigns across the world (UNCED, 1992: 327-366). A comparison of media coverage was made on environmental pollution between 1972 to 2002, which found that media is not paying their proper attention to the coverage of environmental issues (Wezel & Haigs, 2000).

It is very important to understand the relationship between media and environment (Otinga, 2012). Media has played very significant role in shaping people's perception on various issues including environmental crises. People dependencies on media are increasing considerably. First earth day in 1970 has increased the attention of press and public towards importance of environment (Burke, 1995). Shanahan and co-workers made a study on "The Literature of Environmental Communication," in 2002, they collected citations related to environmental communication from 1945 to 2001 and found that environmental awareness increased after 1985 simultaneously with the increase in number of articles on environmental communication. They concluded that by increasing environmental communication in different journal offering a discussion forum for the environmental issues (Pleasant et al., 2002).

The broadcast media (radio and television) have established themselves as one of the most powerful and persuasive form of communication in regard of environmental information in the world today (Otinga, 2012). Broadcast media become a major channel by which information about environmental issues can be delivered to the public (UNEP, 1997). Many environmental organizations are using media to raise public awareness and understanding about environmental issues. While, some organizations are also using media for fund raising campaigns or to specify policy reforms about environmental issues (UNEP, 1997).

It is observed that environmental campaigns that are pursued on different media like television, radio and newspaper are very effective, credible and easy for large and heterogeneous audience. Television creates highest impact on people compare to other sources, because of its audio-visual advantage. Further, it is relatively cheaper, accessible and available for large section of population (Nwabueze, 2007). Shanahan (2011), found that media coverage of environmental issues can aware the vulnerable communities about the potential impacts of these issues and how they can adapt to them, and can promote the

mitigation activities. Kapur (2011), also states that different information tools like television, newspapers and internet can spread awareness on climate change and environment protection among people faster than personal contact. Campaigns on broadcast media for household waste management affect the audience attitude, beliefs and perceptions. According to Banjo and coworkers (2009), mass media is playing effective role to create awareness in the public about health and environmental issues e.g. in Ijebu Ode, Southwest Nigeria. Radio and television were found most available (93% and 96% respectively), easily accessed (70% and 73%) and effective sources of environmental related information (61% and 64%) on the domestic waste disposal.

Communication is a beneficial way which helps individual to understand the interaction between environment and natural resources (Rim-Rukeh and Ogbemi, 2007). Barr (2003), observed that providing vast knowledge about environmental principles and theories of waste management by mass media enhance the individual's ability and attitude to participate in waste management. Nwabueze (2007), defines that the environmental communication is a conscious communicative effort that informs people about the environmental problems and encourage them to desist such activities, which are harmful for the environment. In addition, the role of communication in waste management becomes imperative (Nwabueze, 2007). Simultaneously, it encourages the government and agencies to focus on those areas, where waste management needs serious attention (Rim-Rukeh & Ogbemi, 2008).

## **2.2. Challenges to Environmental journalists**

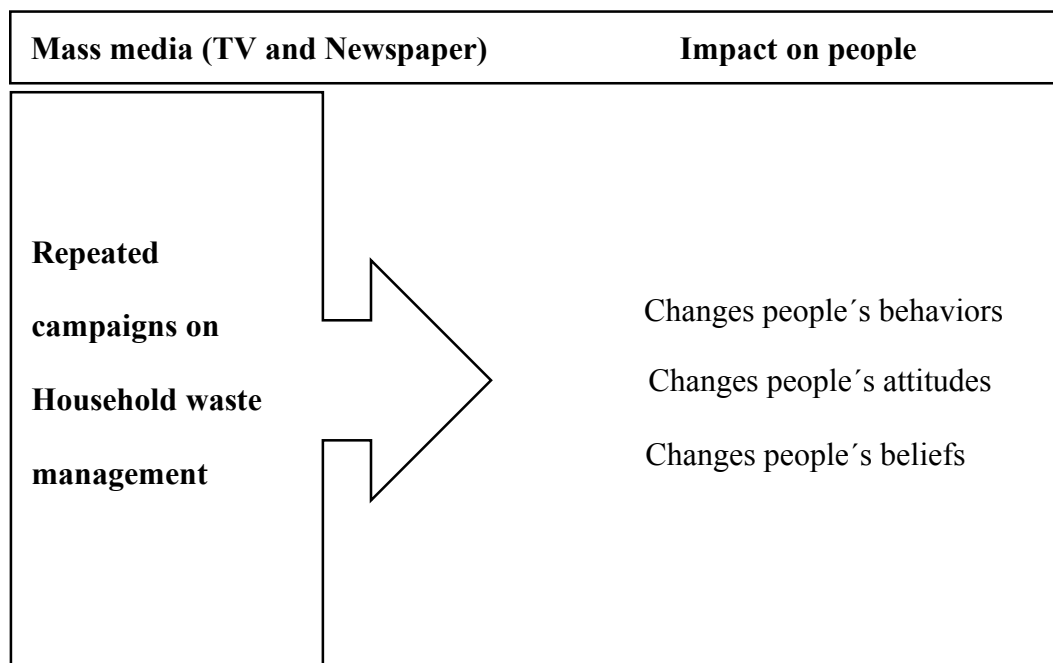
Environmental journalists are expected to advocate people for changes to improve the quality of life on the earth. They educate people about serious condition about the environment and issues related to it by using the power of mass media. To convince the audience about the importance of protecting the environment sometimes falls on deaf ears, because many people are not interested in environmental related issues (Yousef et al., 2013). Catching the attention of people is not only hard thing for environmental journalists but they also find many challenges about writing the environmental related issues. Due to lack of environmental and scientific training reporters ignore the complicated environmental stories (Yousaf et al., 2013). Journalists faced many difficulties for the coverage of environmental issues. News traditions including objective reporting, event reporting and writing about response other than initiative challenged journalists. Advertiser pressure, provincialism, unavailability of

information, management policy, lack of finances, space and time all created challenges for the environmental journalists (Hansen, 2007). Access to reliable source of information and finding technical information from experts are also major difficulties for the journalists to cover environment. The obstacles in accessing full information by media and the domination of authorities, suppress open coverage, debates and discussion on those issues that are of public interest. Furthermore, if environmental information is available in some cases, journalists interpreting of technical issues are not up to the mark (Mol, 2006).

In 1997 Dobson observed that environmental journalism meets more problems that are difficult to overcome. Such as existence of bottlenecks situation, where program managers and editors are criticizing the journalists for covering environmental issues, which doesn't fall into their described protocol. Authenticity is another factor for example, in some cases most important environmental stories are not reported in one country until the foreign media pick those stories and give them international coverage. In some countries, environmental practitioners and government agencies are not in good media relations for handling the subject of environment. Rather, they only use media for the publicity of events and individual actions (Otinga, 2012).

### 3. THEORITICAL FRAMEWORK

Communication scholars believes that media play a leading role in all sectors of human life. Therefore, they developed many theories by which we can understand that how media play an important role in environmental awareness. Hansen (2007), explain that media is not only play a vital role in modeling the public's knowledge of environmental issues, but also play significant role in the public's likelihood to participate in environmentally-friendly behaviors. According to Singhal & Rogers (1999), “Edutainment” is a way of framing and executing media information to both entertain and educate the audiences in order to increase the knowledge about an issue and to change the behaviors and attitudes of public. The figure below shows that media repeated campaigns on a specific issue transforms the attitudes, behaviors and beliefs of audience towards the intended development.



**Figure 2:** Effect of media campaigns on attitudes, behaviors and beliefs of audience.

The main focus of this study is on agenda setting theory and knowledge gap theory that how these two theories influence the perceptions and attitudes of audience.



### **3.1 Agenda setting theory**

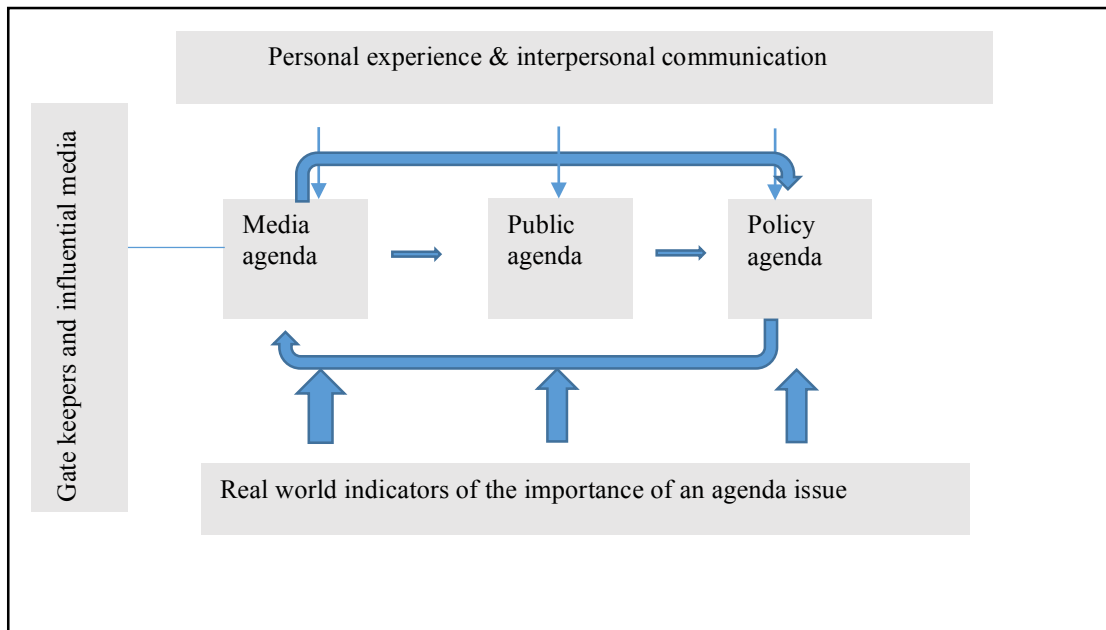
According to McCombs (2004), agenda-setting is the influence of mass media as the transfer of salience from the media agenda to the public agenda. McQuail (2000); Scheufele & Tewskbury (2007), also describe that agenda-setting is a process by which the relative attention given to certain issues in news coverage which influence the public awareness about issue and attribution of significance.

Mazur (2006); Branton & Dunaway (2009), found that the media set their agenda by focusing on the coverage of specific issue and by placing it first and foremost in the minds of people, simply by making it salient in news broadcasts. Media directly influence the public attention about the importance of issues through framing and priming (Lee, 2010).

According to McQuail (2000), agenda-setting is a process by which the relative attention to an issue in media coverage may influence the public awareness about issue and attribution of significance. Theory also explains that media play a significant role in defining public agendas because public pay more attention to those issues which are highlighted in the news stories.

#### **3.1.1. Conceptual model of agenda setting theory**

According to Tan & Weaver (2007), there are three main components of the agenda-setting process: the media agenda, the public agenda and the policy agenda. McCombs (2004), describe that the media agenda is media's way of transfer of salience of issues to the audience. While public agenda is influence of public on media that makes the issues most important, thereby deserving media attention (Soroka, 2002). According to Soroka (2002), there is an interrelationship between media agenda and public agenda, as media importance to an issue increase its importance also among public. According to Ader (1995), there is also relationship between the media's coverage and the public concern about certain issues. She found that media attention given to environmental issues did positively affect the community concern for such issues. The figure below shows all the interrelationship between all the components of agenda setting theory.



**Figure 3:** Model of agenda setting theory modified from (Al saqer, 2006)

This figure describe that gatekeepers and influential media determine media agenda that which issues to cover and which to leave out. Personal experience and interpersonal communication as well as real-world indicators of the importance of an agenda issue can influence the three types of agenda (media agenda, public agenda and policy agenda). (Al Saqer, 2006).

Every media organization has their own policies or agendas for the coverage of certain issues. It is agenda setting theory which gives power to the media to publish or broadcast salient issues on daily basis which become important for the society. The purpose of selection of this theory is to look at how the media in Pakistan sets their agendas on environmental issues or household waste management issue and how the organizational agendas effects the coverage of environmental issues.

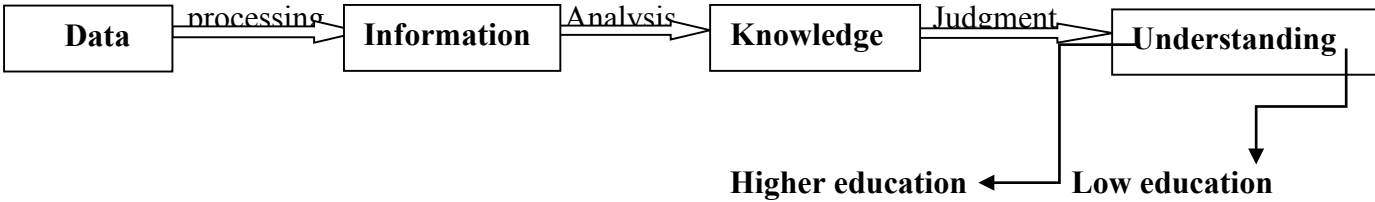
### **3.2. Knowledge gap theory**

The knowledge gap theory states that the mass media information influences the population according to their knowledge into a social system. Population with higher socioeconomic status receives the information at faster rate rather than then the population of lower status

(Weng, 2000). The knowledge gap hypothesis' also explains that knowledge is unequally distributed in society based on socio-economic status (SES). According to this theory when new information enters in a society by mass media, it leads to an increase in the existing knowledge gap between higher and lower socioeconomic status. People with more education have greater ability of perceiving and learning, while people with low level of education may also have less access to sources of information (Liu et al., 2005).

The knowledge gap between the people of lower and higher socioeconomic status can result in increased gap among information. The effort to improve the life of people and the information of specific issue such as political, poverty, education and environmental related issues which is given to audience through the mass media might not always work the way this is planned. The people perceive the mass media information according to their level of education. Mass media should realize that the people of higher socioeconomic status perceive the information in a different way than the people of lower socioeconomic status. The knowledge gap theory explains that every new medium increases the gap between information rich and poor societies because of the differences in access of the medium. So the gap in knowledge between those two societies tends to increase rather than decrease. (Jeffres et al., 2003).

Grabe et al., (2009), found in their study that the less educated people have ability to store and recall television news information but they have less memory capacity for newspapers, as compared with the more educated group. Because, television presents information in the form of animating sounds and visuals to its audience, which increase the cognitive effort of storing and retrieving information. This, in turn, made the information understandable, especially for people in the lower SES groups (Grabe et al., 2009).



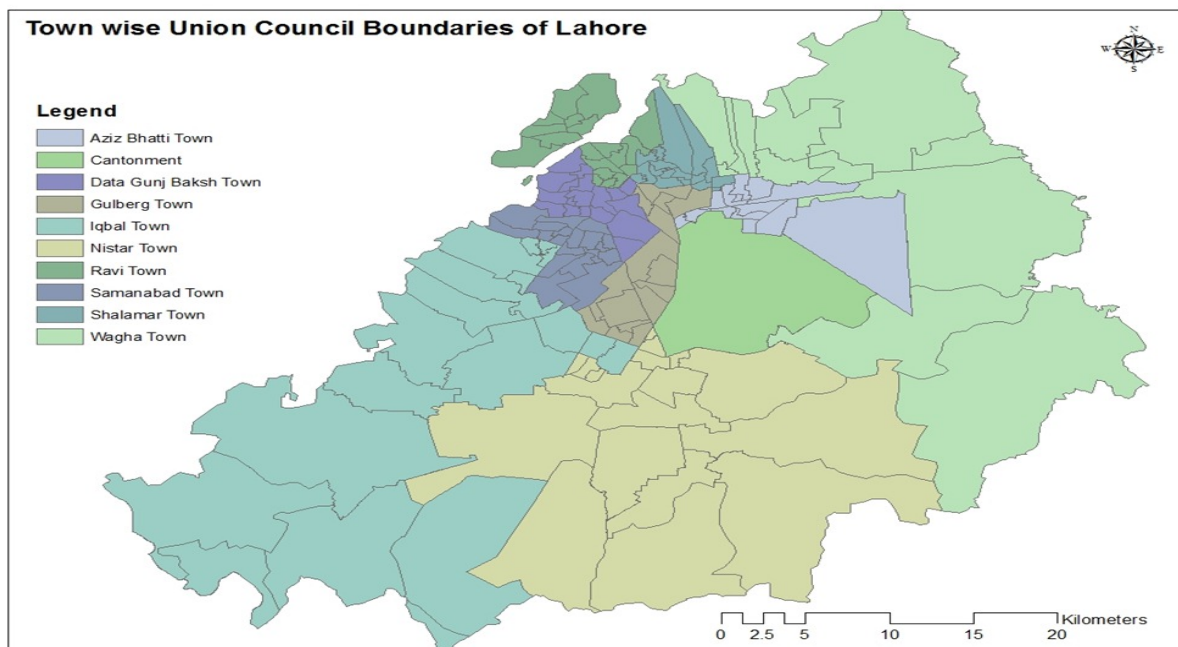
**Figure 4:** Influence of knowledge gap on understandings of people.

Knowledge gap theory is also very useful for this study because the study focus on the two main areas with different socioeconomic status. Due to this theory, it is easy to find that how media campaigns on environmental issues can influence the understandings, attitudes and behavior of the audience which is living in different socioeconomic background.

## 4. METHODOLOGY

### 4.1 Study Area

The study area, which is used for this research is Lahore Pakistan. It is the largest city of Punjab province and the 40<sup>th</sup> largest city of world (Worldatlas, 2013). Lahore is also considered as business hub of Pakistan after Karachi (ESMAP, 2010). Rural migration and indigenous population growth has been increased because of many business activities in Lahore. Nevertheless, increase in consumption pattern due to fast growing population has put huge pressure on physical and social structure of the city. Simultaneously, waste management is also a serious problem for the government of Lahore (ESMAP, 2010).



**Figure 5:** Town wise distribution of Lahore, Pakistan (LWMC, 2013).

Administratively Lahore is divided into nine towns, which are further divided into 150 union councils as shown in figure 05 (Masood et al., 2014). In 2011, Lahore waste management company (LWMC) was established to deal with the waste management of Lahore, which become partner with two Turkish companies AlBayark and OzPak in 2012 to sort the waste for seven years in Lahore (Lahore Waste Management Company, 2013). LWMC has 8544 staff members to ensure proper handling of household waste in Lahore (810 inhabitants per worker based on 2006 estimated city population 6.4 million).

**Table 1:** Total amount of waste generation in ton/day from 9 different towns of Lahore (Adopted from Masood et al, 2014).

Town Name	Population (millions)	Area(Km2)	Waste quantity (ton/day)
Allama Iqbal Town	0.80	513	520
Aziz Bhatti Town	0.59	68	383
DGB Town	1.01	30	656
Gulberg Town	0.81	43	526
Nishter Town	1.04	494	676
Ravi Town	1.65	31	1072
Samnabad Town	1.03	37	669
Shalimar Town	0.55	24	357
Wahga Town	0.68	442	442
DHA and Cantt area	-	97	500
<b>Grand Total</b>	<b>8.16</b>	<b>1780</b>	<b>5801</b>

## 4.2. Sampling sites

This study deals with two selected places in Lahore for public interviews, Shahdara and Defence housing society (DHA).

### 4.2.1. Shahdara

Shahdara is the northern suburb of Lahore, situated at the northern side of Ravi River. It is located in Ravi town. Shahdara is a very old, undeveloped city area with lot of unauthorized housing, mostly houses have 2 or 3 rooms where more than 8 people live. There is not proper sanitation, electrical and water supply. Shahdara is very congested residential place with a population of approximately 55954 in 1585270 square meters' area. In addition, there is continuous industrialization as well. Most of the population of Shahdara is poor and not well established, half of the population is uneducated and is labor class, even people with good

education are working on lower wages. According to the MICs (Multiple Indicator Cluster Survey), (2007–08) the population of Shahdara is a mix of rural migrants and local inhabitants. The mean income per month of the residents is Rs.1771 (\$17) with 20 percent of the people having incomes of less than Rs.750 (about \$9) per month. There is high unemployment (64 percent), about 5 percent of the inhabitants still own agricultural land and 3.7 percent possess livestock. Mostly informal workers are lived in Shahdara which includes (waste pickers, home-workers and street vendors).

Open garbage and pits falls in this area are common sights, mainly on the empty plots. Due to this mosquito and other water and poor sanitation borne diseases are the real threats for the people of the area. Since Ravi river flows in neighborhood of the town and the water level of the river is low throughout the year, because of which it has become a garbage dump site. In addition, there is ongoing industrialization in this area and the waste from the industries also goes directly or indirectly in the river which has become challenge for the waste management organizations. There is also no proper waste management system in this area.

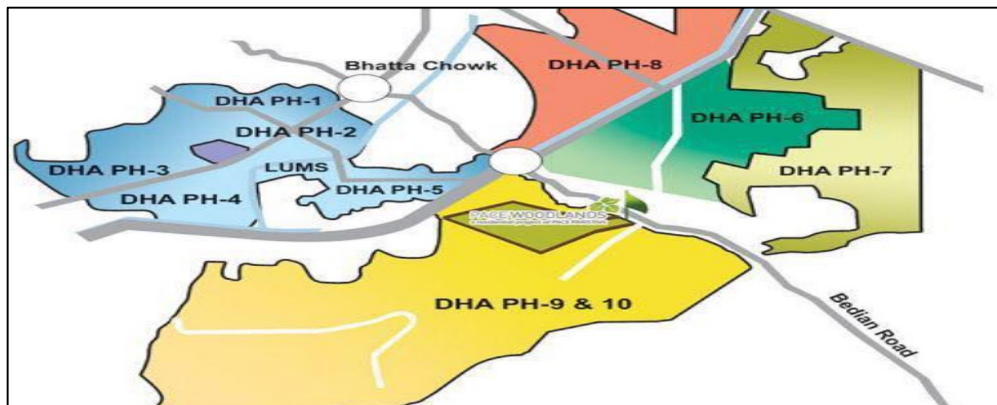
Ozpak with collaboration to Lahore waste management company (LWMC) is responsible for household waste management in this area. There is about 62 containers and 10 hand carts placed by LWMC at different places in area for the collection of household waste but due to lack of services the system is not working at all in the area (LWMC, 2013).



**Figure 6:** Red lined area in map shows Shahdara, Lahore (LWMC, 2013).

#### 4.2.2. Defence housing authority (DHA)

Defence housing authority (DHA) is located in southern Lahore. The Defence Housing Authority is one of the most developed and high-end living areas in Lahore. Previously called Cantt Cooperative Housing Authority was established in 1975 by Pakistan army, which is later converted into Defence housing society (DHA) in 1999. The area is well planned and mainly consist of apartments and big bungalows. There is proper sanitation system, electricity and water supply in this area and is very safe place to live in Lahore as it is well guarded because the entry is not possible without identity cards. Total population of DHA and cantonment area is approximately 150000, mostly educated and well established. It has total eleven phases, phase 1-7 are fully developed while phase 8-11 are in the process of development. DHA has its own household waste management staff of about 230 workers. DHA provides a packet of 30 biodegradable plastic bags (15 rupees each bag) to residents monthly and then collect the garbage from the garbage basket fixed outside the resident area before 12:00 on daily basis (Manzoor et al., 2012). The waste management system is working properly in this area because they also have proper service and are thus enabled to follow good practices.



**Figure 7:** Map of Defence housing society (All phases) (Accessed on 03.01.2017  
<https://www.dhalahore.org/>)

#### 4.3. Research methods

This study focuses on qualitative methods for research work, qualitative research strategy involves conducting intensive individual interviews with a small number of people to explore



their perspectives on a particular situation, idea or program (Boyce & Neale, 2006). The purpose of doing qualitative research is to get in depth knowledge about waste management awareness. Therefore, this study was aims to explore attitude, behavior, and experience of respondents about waste management information. Further, both primary and secondary source data was used to achieve the best result. Primary data is collected directly from media organizations, journalists and from local residents for which interviews were semi-structured and recorded. Personal experiences and observations were also recorded during fieldwork or collecting data. While for secondary data, I also read articles, journals or reports related to this topic.

#### **4.4. Sampling**

For the collection of data, I used convenience samplings approach. According to Etikan et al., (2016), Convenience sampling is a type of nonprobability sampling where members of the target population that meet certain criteria, such as geographical proximity, easy accessibility, availability at a given time and the willingness to participate are included for study or data collection. I also used criterion sampling approach to get valuable data. As, I went door to door and talked to the people but I tried to draw sample from the dispersed areas and avoid to get sample from one place. Most of the people were not willing to participate in the study, therefore the attempt was made to interview those members who were willing to participate.

The data was collected through direct personal interviews using open ended interview guide. In qualitative interviews, the researcher has list of questions related to topic which referred as an interview guide, but at the same time interviewee has freedom that how to reply these questions (Bryman, 2012). I also used three languages (Urdu, Punjabi and English) for taking interviews. As I also belongs to Lahore so, I have command on these languages which was positive point for me. People of Shahadra mostly used Punjabi language in their daily life, so I preferred to talk with them in their own language. In this way participants were more comfortable to talk with me. While I used Urdu and English language for taking interviews from the participants of (DHA) and also for media practitioners.

During my interviews, I made triangulation by using different methods to make my findings more accurate (Bryman, 2012). For example, I also observed the surroundings of participants (condition of their houses and streets) during my conversation with them. I preferred to do

triangulation because I knew that it will help me in formulation of my findings and conclusion.

#### **4.5. Scope of the study**

The study is focused on Geo TV, City 42 TV, Sama TV, and newspaper like daily Jung, daily Wakat and the news international for the coverage of information about household waste management. These TV channels and newspapers were chosen as they are the leading national/international dailies. Their audience size is reasonably big as these newspapers have high circulations rate and these TV channels have very high ratings. In addition, the information published or shown is also available on internet for the viewers. Their electronic versions meet the education, information, and communication needs of the nation, especially those of the rural majority, the urban poor and other sectors.

I have chosen two areas (Shadhara and DHA) for this study as these two areas are totally different from each other, when compare between education level, living standard, facilities and awareness about household waste management. Shahdara is very important area for Lahore because it connects Lahore to other cities of Pakistan, and is considered as a very ethnic, culturally rich area, people originally from Lahore are living here generation after generation in this area. On the other hand, DHA is a newly developed society where mainly army personals from various parts of Pakistan are living. The area is highly developed and secured. The purpose of selecting these two areas was to compare the understanding level of people related to household waste management and how differently media information effects the attitudes, behaviour and perceptions of people in these areas.

In this study, primary data collection was divided into two main parts, which was collected during December and January 2016. In the first part, 12 interviews were conducted from the media organization including reporters and editors, both Electronic media (television) and print media (newspaper) were used. The contacts with most popular TV channels like Geo TV, City 42 TV, Sama TV were made. Similarly, for print media, newspapers like The news international, Wakat and Jang newspaper were contacted. I selected these newspapers and TV channels because they are most famous and easily accessible to local population. Focus has been made for face-to-face interviews from journalists. Besides, 3 telephonic interviews were taken because of unavailability of journalists.

In the second part, I conducted total 40 interviews from both areas, 20 from each Shahdara and DHA. Majority of the interviewees were women in the age range from 20 to 50, at the same time, some men in the age range from 30 to 50 were also interviewed.

#### **4.6. Limitation and challenges of study**

There are many challenges which I faced during sampling. It was not easy to access public because People in Pakistan are usually politically oriented, therefore they are scared to speak out because they think it can go against one or the other political party. It was very difficult to talk one on one with the person, as the whole family, sometime neighbors or even friends will come forward and interfere with the views and approaches. People are hesitant to talk about things as they think government will collect this information and impose restrictions and taxes on them. people are also very scared to talk or open doors to the strangers as there are many incidents of robbery and theft in these areas. Finally, I found that people are hesitant because that they have little knowledge or information regarding this topic or in other world there is a visible lack of awareness.

Journalists were also not very co-operative as they claimed to be busy all the time and that they were fed up of giving information to researchers. When it became difficult for to approach journalists, I contacted my teacher who is working as a senior editor in a newspaper. I told him about my purpose of visiting and requested him to help me for approaching other journalist who are covering environmental reporting. He helped me a lot and his secretary arranged meetings for me with other journalists.

The shortage of time was another issue during my data collection. It was difficult to approach the participants of the two different areas and also the journalists in one month. During my research work, there was also terrorist attack in Bacha khan university Pakistan and because of it, I felt many security issues especially for the entrance in DHA housing authority because it is a cantonment area. I also want to take the views of mass communication teachers on this issue but after that terrorist attack, it became impossible for me because all the educational institutions were closed after that incident. Despite of all these challenges, I was able to collect data related to my study.

#### **4.7. Ethics**

All the participants in this study were participated voluntarily and I did not pressurize any of them. Some of the participants who were feeling hesitate to talk with me, I made them comfortable by my friendly and polite behavior. Most of the time other people also gathered when I talked to the participants which made them confused. In this situation I also talked to the gathered people on this issue that they also share their views. This helped me to get more views and it also made the participants more confident and comfortable to talk to me. I appreciated participants who were willing to participate and I also respected if participants did not want to express their thoughts on something and did not want to answer some questions.

Informed consent is the key principle for conducting social research which means that participants should be given all the information related to research study to make an informed decision about whether they want to participate in the study or not (Bryman, 2012, p. 712). Before talking to the participants, I always informed them clearly about the topic of discussion and told them about why I was there and why I want to talk to them. I ensured them that all their private information will keep confidential. As I recorded all the interviews taken from media practitioners, so I also ensured them that all their recorded information will be kept secret and I will not talk about it with others. In addition, I was also very careful to store that recorded information and never talked to anyone except my supervisor. As Bryman, (2012) also stated that it is very important for researcher to maintained the confidentiality of information and anonymity of participants.

## 5. RESULTS

This portion describes the overall understandings, awareness and practices of the participants of two areas about household waste management issue and also highlight the role of media about household waste management awareness. The main interview guide address in this chapter are given in appendix.

### 5.1. Understandings and practices of participants about household waste management issue

To explore the level of understandings of participants about household management issue, I started my discussion by asking the participants about their knowledge of environmental issues. 11 participants of Shahdara including all the housewives, 1 farmer and 3 shopkeepers have not answered this question because they have no knowledge about environmental problems or they have never heard about environmental issues. While the rest have little knowledge. One farmer said that *“I have no knowledge about household waste management but due to air and water pollution, the production of my crops (wheat and rice) are going down every year”*. Another female who was working as a teacher told that environmental problems are very common in the area and due to these problems people are facing danger of many diseases. She also said *“we have no proper water sanitation and waste management system. Mostly people throw their waste outside their houses and when it rains, the situation become worse, all the water from the rain and waste on streets mixed up and when stayed for long time, mosquitos reproduce and bring many diseases with them for the people of this area”*. On the other hand, almost all the participants of (DHA) have information about environmental issues which people are facing in the country except 3 female housewives who are in their 50s. One male participant who was working as sales manager in a private company said, *the main cause of environmental problem is increase in population and simultaneously increase in traffic pollution*. Another male participant said, *people are not ready to take responsibility of their surroundings, they keep on throwing garbage on the roadsides and spitting on the walls. If you observe outside, people have made open toilets and they even don't care to use common roads as a toilet*. A female participant who was doctor in an army hospital said, *I can feel how badly the environment is influencing the health of people. There is significant increase in the number of patients with breathing problem, eye and skin disease, all related to dirty surroundings and air pollution*.

When I asked about what knowledge, understandings and daily experiences they have about household waste management issue; 12 of the participants from Shahdara said, they did not have much information about the household waste management issue, while 8 said they knew about it. All the participants said that they clean their houses daily but they do not know, how they can sort the waste. One housewife who had 6 children and lives in a small house with 3 rooms, with no kitchen said that, *“I clean my house and put all the garbage in the bin. A garbage-picker come at my place every day and collect it from my house. I don't know what he does with the garbage and where he disposes it”*. Another male participant who is about 35-year-old and worked in a factory said that, *“there are many other issues like poverty, hunger, health, education and unemployment in our district, therefore waste management issue is not in the priority list”*. I observed that those participants who have knowledge about household waste management are not practicing it in their daily life. They are very few people who throw the garbage in the dumps provided by government while mostly throw it in the open plots. One female housewife who is living in a small house with joint family said, *“I always dumped my waste in open plot which is very close to my house and most of the other residents living in this street are doing the same”*. When I asked that lady, why she is dumping the garbage in open area rather than giving it to the garbage collector or throwing it to the garbage container. She replied, *garbage collector is asking for a lot of money which she cannot afford and there is no container nearby in her area.*

On the other hand, 8 participants of (DHA) said that they have information about household waste management, 7 have little knowledge of waste management while 5 have no information, but they said that they throw their waste in bins. One male participant who was a retired army officer said that, *“I am really concerned about the disposal of waste. In our housing colony we used the biodegradable plastic bags for waste disposal which is provided by the administration of DHA, they also impose the fine if someone violate the rules or regulations”*. When I asked other participants that, are they also using the biodegradable bags for sorting the waste? 8 of them were replied that they never used biodegradable bags. One female participant who was working as kindergarten teacher said, *“it is very expensive to use these bags because it cost 30 rupees just for one use, so I prefer to use simple plastic bags in my daily routine”*. 19 of the participants of DHA said that they sort their waste in proper way. One male participant told that, *“I don't know we all are sorting our waste properly or not because most of us are not separating our waste and put all kind of garbage in the same bag.*

Almost all the participants of (DHA) paid to the Defence housing authority for sorting the waste.

When I asked media practitioners about what role is media playing to educate and aware the public about environmental issues and does their newspaper or TV has environmental beat?

All the media persons agreed that coverage of environmental issues are critical and media is a vital tool to spread knowledge about environmental issues. 8 of the interviewees told me that there are fewer reporters who are covering environmental beat on daily basis. One male journalist said *“environmental reporters are not working full time to cover the environmental reports, they have to cover other news beats as well”*. One male reporter told me that, *“most of the journalists /reporters who are conducting environmental reporting don’t have environmental or scientific background and they have no such training to perform the task”*.

Luckily, I interviewed one female journalist covering the environmental issues and highlighting the serious increase of unsorted waste. She told me that she is working with Lahore waste management company for the coverage of these issues. she said that *“Lahore waste management company has made mega projects and campaigns with the cooperation of media organizations to sort the waste and aware the public”*. Also one of the male senior editor who is teaching mass communication students told that *“he arranges seminars in different universities and colleges about household waste management and in these seminars he invites different environmental and health practitioners who guide students about household waste management and motivate them to clean their environment.*

When I asked them about their thoughts on reporting household waste management seriously and vigorously to make the sustainable environment; they all agreed with me that this is a critical issue which must be addressed properly, but surprisingly when I asked them how can media contribute to improve the condition, they have no clear visions or plans. One male reporter told that *“it is not in the hand of reporters to publish news about household waste management issue. The editors and policy makers are the one who decide what kind of news they have to broadcast or publish”*. Another male journalist told that *“reporting related to environmental issues are always covered with other issues. In newspapers, there is no permanent section or column on which environmental news or stories can be publish regularly”*. A female senior journalist said, *media has power to influence public thoughts about an issue, but the reason behind the lack of media contribution in waste management awareness is the lack of environmental journalists and the lack of facilities.*

## **5.2. Participants preferences for the selection of media (TV, Newspapers) for gaining information**

When I asked the participants about which medium (TV, Newspapers) they prefer for entertainment, news and information and why they choose that particular medium?

Six (6) female interviewee from Shahdara said that the main source of information and entertainment among them is TV while 4 also read newspapers. On the other hand, 8 male participants told that they mostly read the newspaper and also watch TV, while 2 said that they cannot read newspaper so they only get information from TV. All the female participants used TV mainly for entertainment especially for watching TV serials and soaps, while male participants were interested in political talk shows and news. On the other hand, All the male participant of (DHA) said that they prefer to read newspapers but at the same time they also watch TV talk shows. Four (4) female participant said that they used TV for information and entertainment, while 9 female participants used both medium. One male participant who was working as sales manager said, *“I mostly used newspaper for information and to keep me update for daily happenings and it takes little time because I am a worker and I have not much time to watch TV news”*.

## **5.3. Media coverage on household waste management and its influence on participant’s practices**

When I asked about have they heard any information about household waste management from TV or newspapers and does the information provided by media on waste management issue is understandable for the participants and how it influences their practices?

16 participants of Shahdara said that they have not got such information on TV or newspapers while 4 said that they have got. All the participants said that they used media mostly for entertainment. 18 participants were very aggressive towards media role in Pakistan. A shopkeeper who was running a small grocery store said that, *“if you read the newspaper or watch the TV, you always find the news and programs related to politics. There is no any news related to household management”*. Another male participant said, *“I remembered that last time I watched the government campaigns on TV programs about waste management in summers when dengue disease was spreading quickly. In which experts suggested that it is very important to clean their houses and streets to fight against Dengue, but not after that”*. He also told that the dengue disease was spreading quickly so he followed all the guidelines which were given by experts to fight against dengue. A female teacher said that, *“I am*



*working in a government school and from the last three years LWMC with the help of local media organizations is arranging seminars and workshops about waste management in our school in which parents and students are invited. It is a good initiative but I think that It should be arrange at large scale because there is more need to aware the people".* Another male shopkeeper said, *"I didn't watch any programs related to household waste management awareness, maybe there are some programs which I have not seen. I prefer to watch entertainment programs because these programs make me fresh and boring programs make me restless within a minute and I tune another TV channel"*.

On the other hand, 11 of (DHA) participants said that they did not get information from TV or newspapers but they were environment friendly. Most of them said that they get information from their colleges and universities. While, 9 of the participants said that they saw advertisement on newspapers and TV but these are very rare. Among 9 participants, 6 of them said that they mostly read news related to waste management on newspapers. One female participant who was a banker told that, *"Media broadcast news related to household waste management on special occasions such as on EID festival or in case of outbreak of diseases such as malaria and dengue. These are basically the public service messages from the government"*. Another male participant said, he mostly read news related to waste management in summers or in rainy season. Most of the participant said that politics is the main topic of debate among media organizations so when you switch on the TV or read the Newspaper you only get news about political issues. A male participant said that, *"I think media is more active in political issues rather than other public issues. I hardly heard/read the news related to environmental issues"*.

I also asked media practitioners about what agenda their organization has on the coverage of household waste management issue and is environmental reporting on the priority list of your media organization; one male journalist answered that public opinion is always very important for media organization to set their agendas but in Pakistan we saw no such feedback from public towards issues related to environment. He said that *"the public concerns towards environmental issues have never been a driving force in Pakistan"*. Another female journalist said that *"one of the reason behind the lack of public interest or low feedback on these issues is off course low coverage by media, there is a must need to educate people about hazardous effect of waste on public health"*. Another male senior editor said that *"environmental reporting is not on the priority list of media agendas because there are so*

*many other issues about which people want to get knowledge, but off course it is a serious matter of discussion which should not be neglected”.*

#### **5.4. Challenges faced by media practitioners as well as their opportunities for the coverage of waste management issues**

When I asked the media practitioners about what challenges they are facing and which opportunities they have for the coverage of environmental or household waste management reporting? One of the female journalist responded “*environmental journalists are working within very limited budget as a result, they prefer to focus on other issues more than this issues and make this report in the form of a tiny news clip or a short story*”. Another male journalist said that news like waste management are always keep aside and if there is some space on newspapers so they get place. Besides, one male editor said “*that privatization of the media organizations is also a big reason for not covering the environmental issues, private media organizations think that the coverage of environmental issues is not good for their business, so they prefer to cover those issues which give them more profit*”. Another female reporter told that, it is very challenging to report those issues which comes under the local government. She said that, *if we report that the waste management system of one place is not working properly so this news is against the government system which media organizations will not publish or broadcast because every media organization wants to build good relations with the government*. All the media personals were agreed that the interest of media has become limited in the coverage of environment issues.

## **6.0. DISCUSSION**

This chapter aims to link the results to the theoretical framework while discussing three main areas: Understandings and practices of participants (Shahdara, DHA) about household waste management, media coverage on household waste management issue and finally Participants understandings about the information provided by media and its influence on their practices.

### **6.1. Understanding and practices of participants (Shahdara, DHA) about household waste management**

This section discusses the findings of the respondent's level of understanding about household waste management. From the findings presented in section 5.2.1, most of the respondents in the Shahdara were not aware of the environmental problems caused by improper household waste management. Due to low awareness and lack of facilities, the current level of participation for proper household waste management is low among the participants. Most of the people seem to be not ready to take the responsibility for managing the household waste that is generated by themselves. People are not concerned about waste, which is lying outside their houses. It seems they have general thinking that the Town Council authority (Lahore waste management company) have the responsibility over managing such household waste which lays around road sides and public open areas. During my field work, I observed that people have not proper facilities to sort their waste. As I mentioned in area description that the population of 55954 people has just 62 waste containers, which are placed on very long distances from each other. As one of the female participant told that she always dumped her waste in open plot which is very close to her house and most of the other residents living in this street are doing the same because they cannot afford to pay to the garbage collector for collecting the waste and there is no container nearby in their area.

Also, I observed that the waste containers were full of garbage that they have no space for more waste. Lot of waste were laid around the containers, which showed that these containers were not emptied for long time (picture 1 given in appendix 9.3). Altogether, the condition of area is continuously getting worse and people are facing many problems including diseases like malaria, cholera etc. Most of the participants bitterly complained about LWMC that they had not done anything about the management of household waste. Due to poverty, the ability of the participants to pay for waste collection and management was also low. There were fewer participants who pay for waste collection while most of the participants cannot afford to

pay the amount to the waste collector, therefore they throw their waste in open plots. Tadesse et al., (2008), investigated the factors like poverty and improper facilities can affect the household waste disposal decision-making. Further Tadesse et al., (2008), explained the relation between the supply of waste facilities, which significantly affects waste disposal choice. Inadequate supply of waste containers and longer distance to these containers increase the probability of waste dumping in open areas and roadsides relative to the use of communal containers.

As compare to Shahdara, most of the participants of DHA were aware about environmental issues connected to household waste. According to my observations, all the participants from DHA were well educated, well established and have all the facilities to live a better life. All the participants said that they are environmental friendly and their behavior also showed that they were very conscious about cleanliness. One important thing which I found in this area, was that most of the participants were using biodegradable bags for sorting the waste, which showed their great interest to keep the houses and surroundings clean. One male retired army officer told that, he is really concerned about the disposal of waste and using the biodegradable plastic bags for waste disposal which is provided by the administration of DHA. I also found that those participants who have not much information about environmental issues were doing the same practices like others who have information and this is because they have a well working waste management system. In this area, every participant said that they have the waste collector who pick the household waste every day from their houses. Participants were satisfied with the services provided to them by DHA administration authority. The adequate legal framework contributes positively to the development of the integrated waste management system as reported by Asase et al., (2009). Further, Moghadam et al., (2009) showed that proper waste management depends upon the active participation of both the municipal agency and the public, and socio- cultural aspects also include in decision making.

Although, most of the participants in DHA have knowledge about the proper household waste management, but I observed that they dump different types of wastes (organic, plastic, paper) in the same waste container. This is mainly because of limited resources e.g. they do not have separate containers for discarding different type of waste separately either at home or outside. Asase et al., (2009) reported limited resources as one of the main factor that affect the environmental aspect of solid waste management in developing countries together with lack

of proper use of economic instruments and insufficient technologies. Other studies also state that the waste management is an overall collection, transportation, processing and disposal of waste material (Mugambwa, 2009). Further, it is also the role of government authorities to encapsulate the waste generated sources and to show the public the specific areas set aside for dumping (Mugambwa, 2009).

## **6.2. Media coverage on household waste management issue**

Branton & Dunaway (2009), in their studies suggested that the media set their agenda by focusing on the coverage of specific issue and by placing it first and foremost in the minds of people, simply by making it salient in news broadcasts. Contrary, in Lahore, I did not find even a single media organization, who had interest in environmental reporting or which can provide environmental awareness on regular basis. It is true that media in Pakistan did a lot for the awareness of woman empowerment, education and to build democracy. According to my information, participants of both areas were highly influenced by media coverage of political talk shows and TV serials (mostly made on social issues). As talking to a woman from Shahdara who told that she has not enough monthly income but she is sending her children to the English medium school because she is really inspired by TV serials that are made on education. Further, participants were highly dependent on media for entertainment and information. Journalist were greed that It is in the hand of media to take benefit for these dependencies of people by educating them about environmental issues. On the other hand, journalists also said that this is not in the agenda of media organizations to give priority to the environmental issues like waste management and the poor services of waste management departments in daily converge. Journalists behavior showed that they are not free to report on everything which is happening in the country. During my interviews, I found that journalists prefer to report about things which can please the government and those political parties who support that media organization. In my opinion, the media organizations should work on applying agenda-setting for household waste management issues in their coverage which may influence the public awareness about environment as suggested by McQuail (2000), in his agenda setting theory. Most of the journalists think that environmental reporting is just event base and not on regular basis to have it influential effect on public awareness level. Similar opinions given by McQuil (2000), in his theory that public pay more attention to those issues which are highlighted on regular basis in the news stories

Media professionals agreed on that media is very important tool to spread awareness in the public about household waste management issues. They believed that people blindly trust media and get most of information from TV and newspapers. All the interviewees told that journalists are not covering environmental issues on routine basis. In addition, most of the journalists neither have training nor have specific educational background related to environment. Further, those environmental journalists who have professional background in this field have very limited facilities and opportunities to use their skills. One of the male reporter said that most of the journalists /reporters who are conducting environmental reporting don't have environmental or scientific background and they have no such training to perform this task. According to my information, main reason for this is that media organizations have not much interest for covering environmental issues and they have very little space for such kind of stories. Most of the environmental journalists are working with low budgets as environmental information are in the form of short stories and clips only. In addition, the coverage of environmental issues is event based and the journalists are assigned when there are either workshops or environmental celebration days.

I found out some campaigns (picture, 4,5,6 & 7 given in appendix 9.3) which are run by LWMC and the government of Punjab with cooperation of media organizations, but according to my findings these campaigns are event based and are not on routine basis. Mostly such kind of campaigns focusses on specific policies related to environment in which the guest of owner is invited who addresses the opening with a speech on environment and the coverage is mostly focused on that speech rather than on issues. All the media professionals agreed that such kind of coverage is not depth reporting and do not influence the public in order to create awareness. If media give the full coverage and attention to issues related to environment like household waste management, it can affect the attitude and behavior of audience about the issue. For example, same kind of environmental campaigns run in Bulgaria in which the Government worked closely with the country's media sector to build its environmental reporting capacity through regular press conferences and large public awareness campaigns, which positively affect the public awareness level (UNEP, 2009). Apolinary Tairo (2011), also found that print media played a leading role in educating and informing the people in creating awareness about climate change in Tanzania, Africa. On contrary in Pakistan, most of the information that is collected by journalists or received by editors for editing is based on fashion, politics and sports, while environmental information is left out. Mostly the environmental information is placed at the third place which means that it

is not on the priority list. Similar observation was reported by Yousuf et al., (2013), about environment reporting in other parts of Pakistan, he concluded that Pakistan is going through a state of war, social and political chaos which do not allow for much deliberation of environmental issues.

Ader (1995), reported that media attention given to environmental issues did positively affect to the community concern for such issues. All the media professionals in Lahore also believed that if media organizations set their agendas on providing awareness about household waste management issue and take action against poor services of waste management department, then it will have positive outcomes. By talking with media professionals, I observed that Pakistani media has become business hub and no more working for educating people. Most of the media organizations have the same agendas to create those programs which give them more rating and profit. There are agenda maker and gate keepers in every media organization who make policies and set agendas, if journalists bring information about household waste management issue, these gate keepers will decide whether it will publish or not. As I mentioned in the result section that one of the reporter told me that it is not in the hand of reporters to publish news about household waste management issue. The editors and policy makers are the one who decide what kind of news they have to broadcast or publish.

During my interviews with the participants of two areas, I found that participants were not satisfied with the role played by media in the awareness of household waste management. As I mentioned in the result chapter that the surroundings of DHA is very nice and clean compare to Shahdara. This study also highlights the fact that the condition of two areas not only differ due to media coverage and the different level of knowledge about waste management, but also because of their educational level and the facilities which they have. Participants of DHA were educated and they had all the facilities or services to sort the waste so they were more active in this direction while participants of Shahdara were less educated and also they do not have proper services which influence their practices in this regard. Tadesse et al., (2008), also investigated and reported that the factors like education, poverty and proper facilities can affect the household waste disposal decision-making.

Participants of both areas were very aggressive towards the role of media. participants from both areas said that if you read the newspaper or watch TV, there is hardly any information related to household management, rather it is full of news and programs related to politics.

### **6.3. Participants understandings of the information provided by media and its influence on their practices**

One of the main purpose of doing this research was to study how media information effects people attitudes and practices depending on their level of education and how people of lower and higher socioeconomic system perceived information about household waste management through media. When I selected these two areas (Shahdara and DHA) for my research, I was not sure if it was a good decision. But after completing my research I am very satisfied with my selection of areas because I found so much of contrast in many things. I observed a huge dissimilarity not only in participant's behavior, attitudes and practices but also in the condition of these two areas. I felt lot of inequality between the waste management services which the participants of these two regions have and also in their level of awareness about household waste management.

Knowledge gap theory states that knowledge gap between the people of lower and higher socioeconomic status can result in increased gap among information. The effort to improve the life of people and the information of specific issue such as political, poverty, education and environmental related issues, which is given to audience through the mass media might not always work the way it is planned. The people perceive the mass media information according to their level of education. I found the same knowledge gap differences among the participants of these two areas. As I mentioned in my results that the participants of Shahdara have little interest in information about household waste management compare to the participants of DHA. While taking to the participants of Shahdara, I found that their main focus is to earn some money to give better life to their families. During my conversation with the participants of Shahdara, I felt that most of them were very disturbed in their life because they have little monthly income which was not enough to support their families. Most of them were also working as informal worker. Because of these problems, they never focus on waste management issue. Mostly they use media just for entertainment to release their stress. I found that the participant from Shahdara prefers to watch entertaining programs on TV and don't like to watch discussions or documentaries about environmental issues including waste management.

Further, I found that 9 out of 20 participants in DHA gets their information about household waste management from TV and newspapers while only 4 out of 20 participants of Shahdara

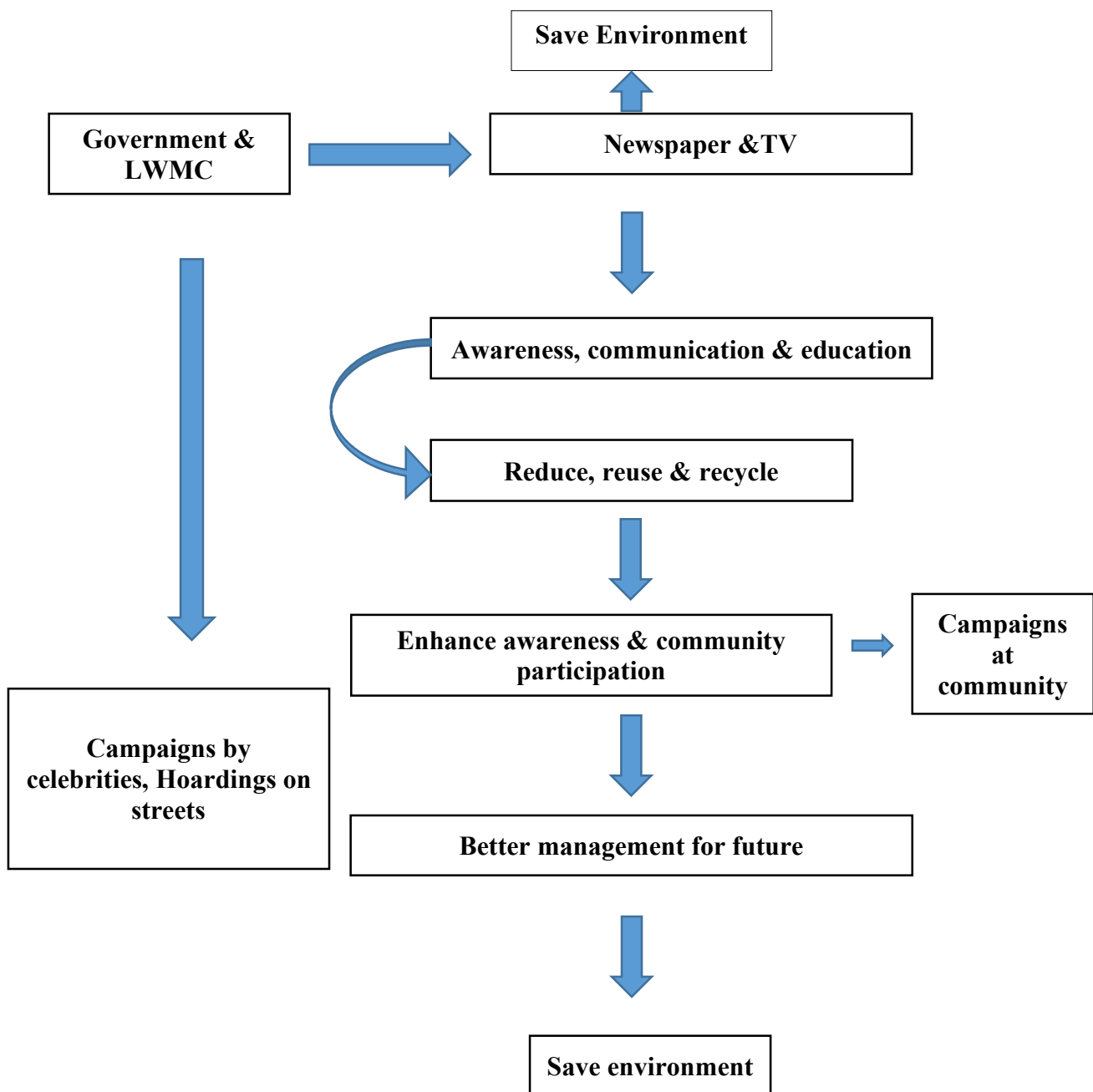


perceived information about household management from TV or newspapers. One of the participants from Shahdara said that may be there are some programs related to household waste management but he never focuses on such kind of programs. The study by Grabe et al., (2009), suggest that the less educated people have less ability and less memory capacity to store and recall the news information, as compared with the more educated group. Similar observations were reported by Liu et al., (2005), that people with more education have greater ability of perceiving and learning, while people with low level of education may also have less access to sources of information. This may be the reason that the number of participants from DHA, who got household information from TV and newspaper is higher than the participants of Shahdara. In addition, as I mentioned in section 5.1 that TV and newspapers are not regular in the coverage of household waste management issue, due to which, there are less chances for lower educated people to remember and recall the information. Further, it is also a possibility that Participants of Shahdara might have watch or read information about household waste management, but since it is not on regular basis, they forget it after some time.

## 7.0 CONCLUSION

This study highlights the role of media in creating awareness about household waste management in two totally different areas (Shadara and DHA) in Lahore, Pakistan. From the findings, it is clear that overall reporting about household waste management is not proper in Pakistan. Only few environmental journalists in the country are assigned the task of reporting household waste management issue that too only on special occasions. At the same time, journalists who are responsible for environmental reporting are untrained and covering other issues as well. It is also observed that the space given to household waste management issues is very minimal in selected newspapers and TV channels and it's not on regular basis. Further, organizational agendas are the big hurdle for journalists to publish the information they get about household waste management issues. In addition, if the information is selected for publication and broadcasting, it will get very little space and attention.

In addition, the study provides strong evidence that media is not playing important role in public awareness. The awareness level of participants from two areas is mostly dependent on their economic conditions and educational level and the services which they have. The awareness level of participants from Shahdara is very low compare to DHA. Participants of Shahdara are living in poor conditions with low-income level and low literacy rate as well as they have not proper facilities or services to sort the waste. Due to lack of awareness and services about household waste management, Participants showed no interest in this issue, as their main focus is to earn good to fulfill their daily needs. Even participants are facing so many diseases because of dirty atmosphere but at the same time they throw their waste in open plots rather than to dumped it in a proper way because they have not proper waste management services. On the other hand, participants of DHA are active to sort the waste properly as they have proper waste management system and they also have all the other facilities for living a better life. Finally, the results from the following study clearly put light on poor coverage of waste management issues by Media and dependence of awareness on socio- economic conditions of the participant.



**Figure 8:** Workable suggested model for awareness of household waste management modified model by (Lakshmikantha et al. 2014).

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## 9.0 APPENDIX

### 9.1 Interview (Media personals): Role of Mass Media in Public Awareness about Household Waste Management: a case study in Lahore, Pakistan

#### General Information:

Newspaper/ TV name: -----  
Department: -----  
Interviewee name (Optional): -----  
Occupation: -----  
Gender: -----

#### Household Waste Management:

- Does your newspaper /TV have an environmental beat. Describe it?

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- What are the main environmental problems of Lahore according to your opinion?

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- In what ways do you think the issue of household waste management is a serious threat to environment?

-----  
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- How and how much do you focus on the reporting of household waste management. And how much coverage does your newspaper/ television give such issues related to household waste management?

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- How can media contribute to improving the situation on household waste management? Does the newspaper/TV reporting have played its vital role to aware the people about household waste management?

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- What agenda your organization has on the coverage of household waste management and is environmental reporting on the priority list of your media organization?
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**9.2. Question Guide (Public): Role of Mass Media in Public Awareness about Household Waste Management: a case study in Lahore, Pakistan.**

**PART I**

**Personal Information:**

*Name:* -----

*Age:* -----

*Occupation:* -----

*Residential area:* -----

*Gender:*  Male  Female

**PART II**

**Role of Mass Media in Public Awareness about Household Waste Management**

1. Do you have awareness about environmental issues?  
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2. Do you have any idea that which are the main causes of environmental problems?  
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.....
3. Do you think that household waste is a serious threat for environment and human health?  
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.....
4. Do you get any information about household waste management from media (Newspaper/TV)?  
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5. What do you think media play a vital role to aware the public about household waste management?

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6. What do you think that media reporting is enough for the awareness of household waste management?

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7. How much information you get from media about household waste management?

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8. Which source of media provide more information about household waste management (newspaper/TV)?

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9. Is the media reporting about household waste management influence you to corporate in sorting household waste properly?

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10. What you suggest to media that how much coverage they should give to the public about the awareness of household waste management?

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### 9.3. Pictures



**Picture 1:** Household waste laying outside the waste bins provided by LWMC in Shadara (<http://tunza.ecogeneration.org/editorPhoto/288299GarbagePHOTOSMUHAMMADJAVAIID-1320557827-1000-640x480.jpg>) accessed December 2016.



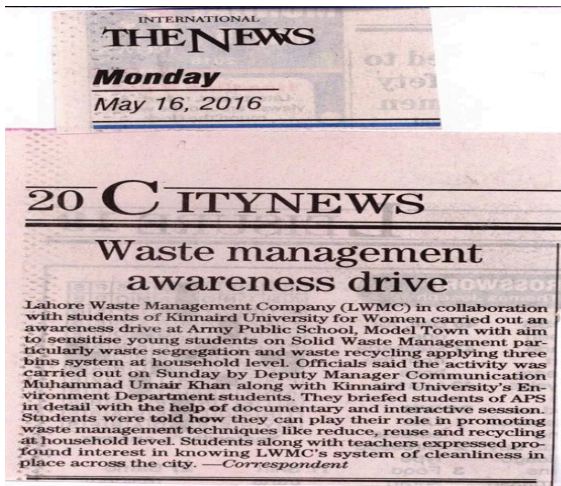
**Picture 2:** Household waste laying around the streets and open plots in Shahdara



**Picture 3:** Defence Housing Authority



Picture 4: Awareness campaigns about waste management by Duniya and City 42 newspapers



Picture 5: Awareness campaigns about waste management by LWMC in The News International newspaper. (<http://www.lwmc.com.pk/> Accessed December, 2016)



Picture 6: Waste management awareness campaigns by LWMC which is covered by Duniya TV in Lahore. (<http://www.lwmc.com.pk/> Accessed December, 2016).



**Picture 7:** LWMC awareness campaign about household waste management in Lahore. (<http://www.lwmc.com.pk/> Accessed December, 2016).



**Picture 8:** Senior journalist participating in waste management awareness campaign (<http://www.lwmc.com.pk/> Accessed December, 2016)



**Picture 9:** Waste management awareness campaigns in schools



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