

Promotion of Clean Environment through Solid Waste Management: A Social Responsibility of All

Irum Jabeen^{1*}, Nazia Rafiq² and Zia Ullah Akhuzada³

¹Department of Sociology, PMAS Arid Agriculture University, Rawalpindi, Pakistan

²Lecturer, Department of Sociology, PMAS Arid Agriculture University, Rawalpindi, Pakistan

³Lecturer, Department of Social Work and Sociology, Kohat University of Science and Technology, Kust, Kohat, Pakistan

Abstract

Kohat city is severely experiencing the problem of solid waste management (SWM). Open dumps in residential areas are creating day by day excessive number of environmental and social problems. This study concentrates on level of awareness and responsibility factors towards solid waste management (SWM) among inhabitants of Ashiq Colony, Kohat. There were 220 households and the sample size was 67 selected through analogy of Uma S, Sekaran. It is found by the study that male members of the community were aware about bad situation of solid waste management but female members were unaware about that. On the other hand both the sex were didn't understand their responsibility towards solid waste management and blame government and municipalities for the situation. Findings of the study suggest that there is need of environmental discourse to show community members that how much these environmental problems cause incredible fiascos. There must be awareness programs on SWM for promotion of clean environment through solid waste management. It is necessary for every individual of community to understand his/her responsibility towards solid waste management and to understand that it is not just the duty of municipality because environment is shared by all.

Keywords: Awareness; Community member responsibility; Environment; Solid waste management

Introduction

Solid waste is an environmental and also an economic issue confronting by entire the world. It is an economic issue since now a day's management of solid waste devours an excessive amount of financial resources by local governments. In fact on reusing of solid waste an excessive number of resources utilized for it and less waste is sending for landfill. It is clear by many researches that developed and developing countries both are chipping away at SWM's projects yet the potential varies. In developed nations the approaches and projects for solid waste management is simply actualized and there is an extraordinary civic sense in them that they manage solid waste with their own. People expressed in discussions and through criteria mapping that simple and user friendly environment frameworks were essential if they somehow happened to utilize those frameworks legitimately (field notes). This was likewise called attention to by Barr et al. [1], who contended that the principle impacts on solid waste administration conduct, for example, reusing are the coordination of reusing, particularly the accommodation of curbside plans, and information about reusing. These are the same findings by Tonglet et al. [2] alluded to above. Ebreo and Vining [3] contend that expanded availability to reusing openings influences peoples' mentalities and reusing intentions. In this way, it demonstrates that in developed countries private sector is occupied with solid waste management and waste transfer.

The problem is more intense in developing countries. People of developing countries are confronting twofold situation. This is on account of the rate of urbanization is quicker in the developing countries. All the populace development of the world somewhere around 2000 and 2030 is required to be consumed by the urban ranges of the less developed areas. Due to rapid increase in urban population it causes a tremendous increment sought after for waste management furthermore the traditional public sector is neglecting to react to the expanded interest for management. The public sector is likewise obliged by asset and institutional impediments. It is regularly recommended

that the arrangement lies in private sector investment. It is normal that the private sector, with its dynamism and adaptability, may fill in the service conveyance holes by shaping organization with public sector. At the same time, the municipalities in developing countries typically lack the financial resources and aptitudes expected to adapt to this very issue. This raises the imperative issue of how to convey quality management despite the monetary and aptitude limitations of people in public sector. Carelessly disregarding the inadequacies of the public sector in conveying quality administration represent a hazard to public health. It is, in this manner, basic to look for other options to conventional management conveyance instrument to keep the urban communities in developing countries sound and decent [4].

In developing countries like Pakistan, people are confronting issues past the capacity of the city power to handle [5] for the most part because of sloppiness, financial resources, multifaceted nature and system multi dimensionality [6] as a result of expanding populace levels, booming economy, rapid urbanization and the ascent in community living standard for everyday comforts have incredibly quickened the city solid waste generation rate. Along these lines, it is turning into a noteworthy public health and ecological worry in urban areas of many developing countries. The public sector in many developing countries is unable to convey benefits viably, control of the private sector is constrained and illicit dumping of domestic and industrial waste is a typical practice. When all is said in done, solid waste management

***Corresponding author:** Irum Jabeen, Department of Sociology, PMAS Arid Agriculture University, Rawalpindi, Pakistan, Tel: +92-51-9292113; E-mail: irumkhattak216@yahoo.com

Received June 06, 2017; Accepted June 26, 2017; Published July 04, 2017

Citation: Jabeen I, Rafiq N, Akhuzada ZU (2017) Promotion of Clean Environment through Solid Waste Management: A Social Responsibility of All. J Ecosyst Ecography 7: 236. doi:10.4172/2157-7625.1000236

Copyright: © 2017 Jabeen I, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

is given a very low priority in the developing countries. Accordingly, exceptionally restricted assets are given to the solid waste management sector by the governments, and the levels of administrations required for security of public wellbeing and the environment are not achieved. The issue is intense at the local government level where the nearby tax collection framework is insufficiently created and, in this manner, the money related reason for public services, including solid waste management, is frail [7].

Objectives

The study has following objectives:

- To identify the practices those are being followed by community members for proper management of solid waste.
- To find out the level of motivation of community members in management of solid waste.
- To find out the level of awareness of people that management of solid waste is our social responsibility.

Materials and Methods

This study was conducted in Ashiq Colony, Kohat. The colony is located in urban 5, PK 38, NA 14 and NC 12. There are three streets in the colony containing 220 households. The place is one of the older residential areas of the city. The target population for the research was from 21 years and selected randomly. There were 220 household in the colony and acknowledge through revenue office. The sample size of this study was 67 and selected through analogy of Uma S Sekaran described in her book "Research Methods for Business: A Skill Building Approach". Simple random sampling strategy (SRS) was used to collect the data in which right hand rule was used. Right hand rule means all houses on right hand side were chosen and every odd number house was chosen for the study. Here's the formula used for collection of the data.

$$SRS = \frac{\text{Total population}}{\text{Sample size}}$$

Where, total population is 220 and sample size is 67

$$SRS = \frac{220}{67}$$

$$SRS = 3$$

Therefore, in order to collection of data from residents of Ashiq Colony each 3rd number of the house was taken for data collection. The data for the following study were collected mostly from head of the households. In which 56 were male and 11 female; 62 households have male head of the family and 5 household have female head of the family.

Results and Discussions

Current bio-information of the respondents

As shown in Table 1 there were total 67 respondents and all were inhabitants of Ashiq Colony, Kohat. Out of total 67 (100%) respondents, 83.59% were male and 16.41% were female. In which 16.4% are of age 21-30 years, 17.9% were between 31-40 years, 29.9% were of the age between 41-50 years, 20.9% were of the age between 51-60 and 14.9% were above the age 60. Of the total 100% respondents, 85.1% were married and 14.95 were unmarried. 92.5% respondent's head of the family were male and 7.5% of the respondent's head of the family were female. 77.6% of the respondents were proficient and 22.4% were illiterate. 17.9% respondent's level of education was SSC, 13.4%

S. No	Title	Frequency	Percentage
1	Gender		
	Male	56	83.59
	Female	11	16.41
	Total	67	100
2	Age		
	21-30 years	11	16.4
	31-40 years	12	17.9
	41-50 years	20	29.9
	51-60 years	14	20.9
	61 or above	10	14.9
	Total	67	100
3	Marital status		
	Married	57	85.1
	Unmarried	10	14.9
	Total	67	100
4	Head of the family		
	Male	62	92.5
	Female	5	7.5
	Total	67	100
5	Educational status		
	Literate	52	77.6
	Illiterate	15	22.4
	Total	67	100
6	Level of education		
	SSC	12	17.9
	HSSC	9	13.4
	Graduate	24	35.8
	Other	22	32.8
	Total	67	100
7	Income		
	10000-30000	10	14.9
	31000-50000	6	9
	51000-70000	10	14.9
	71000-90000	12	17.9
	91000 or above	29	43.3
	Total	67	100
8	Family type		
	Nuclear	16	23.9
	Joint	37	55.2
	Extended	14	20.9
	Total	67	100
9	Status of home		
	Own	52	77.6
	Rented	15	22.4
	Total	67	100
10	Structure of home		
	Cemented	63	94
	Non-cemented	4	6
	Total	67	100

Table 1: Personal information of the respondents.

were qualified through HSSC level, 35.8% respondent's capability was graduate and 32.8% had got other training. 14.95 respondent's income was between 10000 to 30000, 9% respondent's income was between 31000 to 50000, 14.9% respondent's income was between 51000 to 70000, 17.9% respondent's income was between 71000 to 90000 and 43.3% respondent's income was 910000 or above. 23.9% respondents were has a place with nuclear family, 55.2% respondents had joint family framework and 20.9% respondents had more distant family. 77.6% had their own particular houses and 22.4% respondents

lived in lease houses. 94% of the respondent's structure of home was established cemented and 6% of the respondents had non-cemented home structure.

Techniques utilized by community members for management of solid waste

As shown in Table 2 out of total 67(100%) respondents, 85.1% respondents were thought about solid waste, 10.4% respondents had no information about solid waste and 4.5% respondents had demonstrated that they do not think about solid waste. 86.6% respondents said that they segregate their waste, 7.5% say no and 6% do not think about waste isolation. 68.7% respondents think about the powerful component for family unit squander management, 16.4% say no in regards to compelling system and 14.9% do not have learning that what is successful instrument for family management. 82.1% were thinking about how to arrange the waste, 13.4% were say no and 4.5% say do not know in regards to squander arrange. Out of 100% respondents, 70.1% said that they utilized kitchen squander as fertilizer, 13.4% said no and 16.4% said do not know in regards to kitchen squander compost. On the subject of utilizing dustbin as a part of home for waste out of 100% respondents, 98.5% said yes, nobody say 'no', only 1.5% respondent say do not know in regards to use of dustbin in home for waste. 50.7% respondents said that they utilize jugs and plastic sacks after use, 26.6% say no and 22.4% say do not have a clue. 47.8% respondents say yes they discard the waste in suitable transfer locales in their general vicinity, 29.9% said no and 22.4% said do not know. 80.6% of the respondents said they routinely observe junk out and about side, 16.4% said no and 3% said do not have a clue. 73.1% respondents say yes in regards to that they tossed their waste in somebody's plot, 19.4% say no and 7.5% say do not have the foggiest idea. 74.6% of the respondents say that they tossed squander in somebody's plot on the grounds that other group individuals toss there as well, 19.4% say no and 6% say do not have the foggiest idea. 44.8% said that they toss squander before their home, 49.3% say no and 6% do not have a clue. 85.1% says that they ordinarily burn their waste, 10.4% say no and 4.5% of the respondents say do not know in regards to smouldering of waste.

Level of awareness of community members towards solid waste management

Table 3 shows that on the question of knowing about environmental problems due to improper solid waste management of the total 67 (100%) respondents, 19.4% said yes they have idea about the environment problems due to improper waste management, 55.2% said no and 25.4% said that they do not know about it. 25.4% of the respondents said yes, improper waste management is a threat

to environment, 44.8% were opposite to it and 29.9% said that they do not know whether improper waste management having threats to environment. 76.1% said that solid waste management is the sole responsibility of government, 20.9% said no it is not the sole responsibility of government and 3% said do not know. 6% said yes that solid waste management is the sole responsibility of residents, 82.1% said no it is not the sole responsibility of residents and 11.9% said do not know. 23.9% of the respondents were agree that improper waste management can lead to outbreak of various epidemics, 41.8% were opposite to it and 34.3% say do not know whether it could cause any epidemic breakout. 6% were agree with the statement that improper waste management is public nuisance, 76.1% were do not consider that it is public nuisance and 17.9% had no idea about it. 23.9% has been knowing the place where the waste taken for ultimate disposal when it leaves their neighbourhood, 62.7% say no where it taken to dispose and 13.4% have no idea about whether it is taken to somewhere for ultimate disposal. 51 76.1% of the respondents consider SWM services good for improving lives of the masses, 6 9% of the respondents say no and 10 14.9% say do not know whether it can improve the lives of masses. 17 25.4% respondents have the knowledge about some volunteer group working for SWM strategies, 61.2% say no and 13.4% do not know. 22.4% were said yes that ignorance and illiteracy of masses is responsible for improper waste management, 71.6% were opposite to this statement and say no and 6% said do not know about this. 11.9% have knowledge about agency working for solid waste management, 73.1% respondents do not have knowledge about any agency working for SWM and 14.9% have no idea about any agency. 16.4% respondents know about the best practices of SWM, 62.7% say no and 20.9% say do not know. 3% say yes about the principles of waste minimization, 79.1% say no and 17.9% say do not know. 19.4% were agree that government policies are not in position to manage solid waste properly 62.7% were opposite to the statement and 17.9% shows no response as they do not know about any government policy.

Level of motivation of the community members

As shown in Table 4 of the total 67 (100%) respondent's 79.2% say yes that they are interested to manage solid waste for clean environment 10.4% say no they are not interested and 10.4% say do not know. 79.2% say yes they will engage opportunities if government provide it, 10.4% say no and 10.4% say do not know. 83.6% were committed to waste minimization, 10.4% were not and 6.0% say do not know about it. 6.0% were ready to pay for disposal of waste they generate, 86.5% were not and 7.5% say do not know. 17.9% said yes earning more income will encourage more payment for SWM, 68.7% said no and 9 (13.4%) said do not know. 9.0% said yes they own the services provided by TMA,

S. No	Attributes	Yes (%)	No (%)	Do not know (%)	Total (%)
1	You know about solid waste.	85.1	10.4	4.5	100
2	You know about the segregation of waste.	86.6	7.5	6	100
3	You know the effective mechanism for household waste management.	68.7	16.4	14.9	100
4	You know how to dispose the solid waste.	82.1	13.4	4.5	100
5	Your kitchen waste is used as compost.	70.1	13.4	16.4	100
6	You use dustbin in your home for waste.	98.5	0	1.5	100
7	You use bottles, plastic bags after usage.	50.7	26.9	22.4	100
8	You dispose of the waste in appropriate disposal sites in your area.	47.8	29.9	22.4	100
9	You see routinely garbage on roadside or at other places in your area.	80.6	16.4	3	100
10	You throw your waste in someone's plot.	73.1	19.4	7.5	100
11	You throw your waste there because other throws too.	74.6	19.4	6	100
12	You throw the waste in front of your home.	44.8	49.2	6	100
13	You normally burn the waste material.	85.1	10.4	4.5	100

Table 2: Information about methods used by members of the community for solid waste management.

S. No	Attributes	Yes (%)	No (%)	Do not know (%)	Total (%)
1	You know about the environmental problems due to improper disposal of solid waste.	19.4	55.2	25.4	100
2	Improper waste disposal is as threat to environment.	25.4	44.8	29.9	100
3	Solid waste management is the sole responsibility of government.	76.1	20.9	3	100
4	Solid waste disposal is the sole responsibility of the residents.	6	82.1	11.9	100
5	Improper waste management can lead to the outbreak of various diseases/epidemic.	23.9	41.8	34.3	100
6	You think that improper waste management is public nuisance.	6	76.1	17.9	100
7	You know the place where collected waste is taken for ultimate disposal when it leaves your neighbourhood.	23.9	62.7	13.4	100
8	You consider SWM services good for improving the lives of the masses.	76.1	9	14.9	100
9	You know any volunteer group involved in solid waste management.	25.4	61.2	13.4	100
10	Ignorance and illiteracy of masses is responsible for improper disposal of solid waste.	22.4	71.6	6	100
11	You know about any agency responsible for solid waste management.	11.9	73.1	14.9	100
12	You know about the best practices of solid waste management.	16.4	62.7	20.9	100
13	You know about the principles of waste minimization.	3	79.1	17.9	100
14	Governmental policies are not in a position to manage and recycling of solid waste.	19.4	62.7	17.9	100

Table 3: Level of awareness of the members of the community.

S. No	Attributes	Yes (%)	No (%)	Do not know (%)	Total (%)
1	You are interested to manage solid waste for clean environment.	79.2	10.4	10.4	100
2	If government/local authority provides you facilities to manage solid waste, you would engage the opportunities.	79.2	10.4	10.4	100
3	You are committed to minimize the waste.	83.6	10.4	6	100
4	You are ready to pay for the disposal of waste you generate.	6	86.5	7.5	100
5	Earning more income will encourage payment for waste disposal services.	17.9	68.7	13.4	100
6	You own the services provided by the TMA or municipality in your area.	9	77.6	13.4	100
7	You enjoyed the services of the service provider in your area provided by TMA.	14.9	64.2	20.9	100
8	You are concerned about whether the ultimate disposal in environmentally safe and acceptable.	35.8	50.7	13.4	100
9	Ever your community members decide to manage the solid waste of your area.	14.9	54	31.1	100
10	Ever you discuss the situation of solid waste with someone.	10.4	65.7	23.9	100
11	Programs like Public-Private Partnership will be better for solid waste management in your area.	49.2	25.4	25.4	100
12	You will be ready to cooperate with public sector in SWM.	59.7	14.9	25.4	100

Table 4: Information regarding level of motivation of the members of the community.

77.6% said no and 13.4% said do not know. 14.9% said yes they enjoyed the services provided by TMA for SWM, 64.2% said no and 20.9% said do not know. 35.8% said yes they are concerned about ultimate disposal of solid waste would be safe and acceptable for environment, 50.7% said no and 13.4% said do not know. 14.9% said yes their community members have discussions on solid waste management, 54.0% said no and 31.1% said do not know. 10.4% said yes that they had discuss the situation of solid waste with someone, 65.7% said no and 23.9% said do not know. 49.2% said yes that programs like Public-Private partnership will be better for SWM, 25.4% said no and 25.4% said do not know. 59.7% said yes they will be help government or local authorities in SWM strategies, 14.9% said no and 25.4% said do not know.

Conclusion

The study approaches to the role of culture and behaviors of inhabitants of Ashiq Colony and demonstrates that inhabitants of Ashiq Colony have known about solid waste management. But they do not know about how to tackle with this issue. Because they do not have enough assets to oversee the solid waste. One of the issues is that community members do not discuss this issue with each other. It demonstrates that they have no ecological discussions (green speak) in their everyday life. They do not know about ecological issues particularly females do not know about it. It is concluded by this study that females especially housewives has less interaction outside their homes. So, they are not aware of situation of solid waste in their area. Also they have very less chance to take part in any activity for promotion of clean environment through solid waste management. It

is because of culture that is females' lives in their homes all the time and do not know about such environmental issues. Community members smolder their waste, from one perspective it is one of the techniques for arranging waste yet then again it makes contamination. Family units simply clean their homes and leave their waste in an open place without realizing that it will make aggravation in living environment for other living creatures and for themselves as well. It is found by the study that community members point the finger at government for improper solid waste management. In any case, on their part they do not understand that it is their social responsibility to clean environment for betterment of their own life. This demonstrates their absence of mindfulness furthermore absence of enthusiasm for ecological issues. Lion's share of the respondents demonstrates their yearning working for legitimate management of solid waste. They said that projects like public-private partnership will be better for improvement of SWM. The study found that it is conceivable to enhance SWM benefit conveyance through public-private partnership in spite of institutional and monetary requirements show in developing nations. This perception is critical in light of the fact that aggregate change of the urban administration organizations, especially the public offices, might test and tedious. The discoveries of this study demonstrated that administration conveyance may be enhanced extraordinarily inside a brief period by creating partnership between the public and the private sector.

References

1. Barr S, Gilg AW, Ford NJ (2001) A conceptual framework for understanding and analysing attitudes towards household-waste management. Environment and Planning A 33: 2025-2048.

2. Tonglet M, Phillips PS, Read AD (2004) Using the theory of planned behaviour to investigate the determinants of recycling behaviour: A case study from Brixworth, UK. *Resources, Conservation and Recycling* 41: 191-214.
3. Ebreo A, Vining J (2000) Motives as predictors of the public's attitudes toward solid waste issues. *Environmental Management* 25: 153-168.
4. Ahmed SA, Ali SM (2006) People as partners: Facilitating people's participation in public-private partnerships for solid waste management. *Habitat International* 30: 781-796.
5. Sujauddin M, Huda SM, Hoque AR (2008) Household solid waste characteristics and management in Chittagong, Bangladesh. *Waste Management* 28: 1688-1695.
6. Burnley SJ (2007) A review of municipal solid waste composition in the United Kingdom. *Waste Management* 27: 1274-1285.
7. Minghua Z, Xiumin F, Rovetta A, Qichang H, Vicentini F, et al. (2009) Municipal solid waste management in Pudong new area, China. *Waste Management* 29: 1227-1233.