



Research Article

Determination the Level of Knowledge, Attitude, and Practices Regarding Household Waste Disposal among People in Rural Community of Lahore

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Abstract

Introduction: Waste disposal is one of the major environmental problems in all over the world. Improper waste disposal causes breeding and may cause infectious diseases like cholera, small pox, and plague, etc. The knowledge of waste disposal is necessary for health of people's. various study reveal that about 90% of people disposal of waste in open places and use the method of land filling, so increase the problems for health of public and the environment. The study has been carried out for the current status of waste disposal. **Methodology:** A cross-sectional study was carried out in rural area and 100 household peoples were the population. The Data collected by pre- tested questionnaire and direct interviewing the people about their routine waste disposal. **Results:** Majority of respondents (72.0%) was aware about adverse effects of improper waste removal and (28.0%) Respondent was not aware. 95.0% of people have good attitude about waste disposal. Regarding practices most of respondent (52.0%) had the poor practices towards waste disposal and 41.0% had satisfactory practices. **Conclusion:** The knowledge regarding waste disposal in the most of respondents was found good and in Minimum of respondents having satisfactory knowledge. In spite of good knowledge, the respondents having poor Practices regarding waste disposal due to lack of awareness, unavailability of public dustbins.

Keywords: Waste Disposal; Knowledge; Practice; Attitude; Rural area

Introduction

A Clean environment influences good health and improves quality of human's life. Awareness and education is very necessary about waste disposal for household people (Jatau, 2013). Proper waste disposal is important for protection of environment. Lack of knowledge, irregular and unplanned dumping of waste are the main reasons of improper waste

disposal. Poor knowledge about waste disposal is the major Problem for human health. Waste container and dustbins are very important need for dispose of waste. Due to lack of knowledge and insufficient availability of dustbins in homes people are faced many problems (Kiran *et al.*, 2015). Waste consists of all materials that are produced from humans and animals activities and are discarded and

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useless. Waste disposal mean removing and destroying or storing damaged used or other unwanted materials include packing waste (glass, paper, or plastic), domestic, commercial and agricultural. Disposal including dumping, burial landfill sites (Adogu *et al.*, 2015) People must have knowledge about household waste disposal. Awareness among people about dealing with waste is important. Inadequate and inappropriate knowledge of handling of household waste may have serious health consequences and a significant impact on the environment as well. If people have good knowledge towards household waste disposal they can prevent themselves from infectious diseases and keep their environment is clean (Jatau, 2013). People must have positive attitude towards household waste disposal. The attitude of people towards waste disposal is affected by their level of knowledge. Most of peoples due to lack of knowledge does not used the dustbins. Open defecation poses the serious threat to the health of peoples (Adeyemo, 2013). People with lack of Knowledge regarding household waste disposal have negative attitude towards waste disposal in their homes. They can achieve many health and environmental benefits if people play an important role in waste disposal. They reduce the harmful effects and prevent from many infectious diseases. Inadequate collection and improper disposal of waste facilitates multiplication of pathogens, causing diseases like cholera and diarrhea and provide breeding sites for disease vectors like mosquito (malaria, dengue fever), flies (Diarrhea) and rodent (Adogu *et al.*, 2015).

People must have good practices regarding household waste disposal in their homes. Moreover, Poor waste disposal practices lead to contamination of environment there by increasing the burden of infection and diseases among the peoples. Practices can be improved by providing knowledge regarding household waste disposal. Waste disposal Mass media, television, radio, all can play an important role in improvement of knowledge and practice regarding waste disposal (Thirumarpan *et al.*, 2015).

Globally, 2.6 billion people or 39 percent of the world population do not use proper method for waste disposal. Some 1.1 billion people still disposed of waste in the open places. Improper waste disposal most widely practices in rural areas. So, that people face many health related problems (Shewasinad *et al.*, 2017). Similarly, during survey large number of people that were not disposes household waste and garbage in proper way in rural area. Moreover, there were no proper dustbins for disposed of waste. This study has been conducted in rural area, to assess the knowledge, attitude and practices of people regarding household waste disposal.

Significance of the Study

This study was enhances the Knowledge, attitude and practices of people regarding household Waste disposal.

The present study is significant in such way that it was assessing the basic knowledge, attitude and practice of community people that deal with waste disposal. The information that was provided, the concern authorities will intervene to bend the existing and potential problem of community and furthermore it will serve as a source of data for future research

Research Purpose

The purpose of this study is to determine the Knowledge, attitude and practices of people regarding household waste disposal.

Research Question

Research Question 1: What is the knowledge regarding household waste disposal among people in rural community of Lahore?

Research Question 2: What is the attitude regarding household waste disposal among people in rural community of Lahore?

Research Question 3: What are the practices regarding household waste disposal among people in rural community of Lahore?

Research Objectives

To assess the Knowledge, Attitude and Practices regarding household waste disposal among people in rural community of Lahore.

Literature Review

Population is increasing all over the world, especially in developing countries. Similarly, increased amount of household waste is being produced by this growing population. Facilities to manage this waste are limited all over the globe, especially in developing countries, where these are minimal (Sharma *et al.*, 2013). The study was conducted in Pakistan to assess the knowledge and practices shows that 40-65% of waste in Pakistan is composed of waste material. The composition of waste in 2005 reveals that waste in Lahore contains 21.2% recyclables, such as plastic, paper, glass and metal. There is no regulation recycling in Pakistan, and the formal sector is not involved in recycling (Batool *et al.*, 2008). The study was conducted in India, to assess the knowledge, attitude and practices towards waste disposal in cities and towns generated an estimated 6 million tones of household waste, and it was about 484 million tones. More than 25% of the waste is not collected at all 70% of the Indian cities lack adequate capacity to transport it and there are no sanitary for landfills to dispose of the waste (Kiran *et al.*, 2015). Study was conducted in Somalia to assess the practices of people regarding household waste disposal, most of people 62% waste the garbage nearby their houses in open places.

However, many people shows poor attitude towards waste disposal. 32% people was known about methods of waste disposal but that have lack of dustbins they were not waste the garbage in a proper way (Azuike *et al.*, 2015). Study conducted in Thailand shows that attitude of household people regarding dispose of waste in separate dustbins. (12.2%) people had moderate intention while (10.0%) had low intention to dispose of waste into separate dustbins. Almost (92.2%) people have good practices to dispose of waste in separate dustbins. Study also shows the practices of people living in Thailand approximately (24.73) people dispose of waste in open places and 50% people dispose of waste in separate dustbins (Barloa, Lapie, & de la Cruz).

A study was conducted in Nigeria assess the respondent practice about household waste disposal majority Respondents regarded open dumping as a method (68.9%), only less than half regarded sanitary land fill (41.3%) and incineration (37.4%) as appropriate methods. Though, infection was reported as a result of inappropriate sanitation practices by a majority of the respondents (72.7%), providing a place for criminal hideouts was also reported by as high as 21% of the respondents (Azuike *et al.*, 2015). Appropriate waste disposal Generally, a majority of the respondents (60.0%) had an overall moderate level of knowledge about environmental sanitation with only less than one quarter (22.9%) having an overall good level of knowledge (Adogu *et al.*, 2015).

Conceptual Framework

Dr. Nola J. Pender developed the Health Promotion Model (HPM) that is used universally for research, education, and practice. According to this theory health promotion model focuses on helping people achieve higher levels of wellbeing through health promotion strategies like, educate the people, and change their behavior and practices to promote the health. Through this model enhance the Knowledge, attitude and practices of people. Through this model assess the Knowledge and give awareness about different types of waste. Modify the people attitude and thinking regarding waste disposal and can improved the practices about different method of waste disposal.

Methodology

Setting: The research has been conducted in homes, a rural area of Lahore, Pakistan.

Research design: A Descriptive cross sectional study has been carried out at rural area of Lahore.

Population: The study population has female and male of rural area age between 15 to 50 years.

Sampling: Data was collected from convenient selected sample of 100 males and females age 15 years to 50 years residents of rural area in Lahore by using a pre-designed questionnaire.

Sample size was determined by taking the following assumptions; since there was no previous study in the area, the estimated prevalence rate to be 50%, confidence interval of 95%, margin of error 5%.

Since the study population's number is less than 10,000 and sample size/study population is greater than 0.05 it's calculated by using the following formula with considering adjustment.

Correction formula is used to determine the final sample size. The sample size was 100 of people.

Research Instrument: Data was collected by pre-designed well adopted questionnaire, interview technique on different variables household waste, knowledge, attitude and practices.

Data Gathering Procedure: Convenience sample Technique has been used to collect data on demographic variables, Knowledge, attitude and practice among peoples of rural area.

Analysis of Data: Data analysis was done using SPSS version 21 software. Descriptive statistics has been conducted to obtain frequencies and percentage, proportion tables, Charts, graphs and tables.

Study Timeline: Study has been conducted in 4 month duration from Sep 2017 to Jan 2018.

Ethical Consideration: Ethical approval was takes from Institutional Review board (IRB) University of Lahore. Approval was takes from stake holders of rural area. Informed Written consent was takes from people of rural area.

Results

Profile of the Respondents

Table 1 indicates that majority (43%) of respondents were 25-34 years of age followed by (25.0%) of 15-25 years of age, (23.0%) of 35-44 years, and (9.0%) were 45-54 years. majority of respondents were females (75.0%) and (25.0%) were male. Regarding education maximum respondents (28.0%) were metric level and minimum (6.0%) were post graduate. (38.0%) were belonged to separate family followed by joint (61.0%). Maximum respondents (53.0%) were females Housewife.

Table 2 reveals the level of knowledge of respondents, Majority of respondents (72.0%) was aware about adverse effects of improper waste removal and (28.0%) respondent was not aware. Most community people (83.0%) were known about more production of waste can harm the environment. Most respondent (40.0%) were disposed of food category and used the burial method for disposed of waste.

Table 1: Socio- Demographic Characteristics of Respondents

Variables	Frequency	Percentage
1. Age of respondent		
15-25 year	25	25.0
25-34	43	43.0
35-44	23	23.0
45-54	9	9.0
Total	100	100.0
2. Gender		
Female	75	75.0
Male	25	25.0
Total	100	100.0
3. Family		
Joint	61	61.0
Separate	38	38.0
Total	100	100.0
4. Occupation		
Private job	25	25.0
Govt job	21	21.0
House wife	53	53.0
5	1	1.0
Total	100	100.0
5. Education		
Illiterate	12	12.0
Primary	12	12.0
Middle	23	23.0
Metric	28	28.0
Under graduate	19	19.0
Post graduate	6	6.0
Total	100	100.0

Table 3 reveals that the Attitude of respondent, Most of community people (50.0%) has no idea of waste disposal. (84.0%) people were thinking that proper waste disposal is important. Mostly respondent (95.0%) felt that streets should be clean. But they were not play an important role in household waste disposal.

Table 2: Respondents' Knowledge on Waste Disposal

Variables	Frequency	Percentage
1. Improper waste disposal has adverse effect on environment		
Wrong	28	28.0
Right	72	72.0
Total	100	100.0
2. Waste disposal on open Places can have harmful Effect on human health		
Wrong	17	17.0
Right	83	83.0
Total	100	100.0
3. Method of household Waste disposal		
Deep burial	42	42.0
Burning, incineration	35	35.0
Sanitary landfill	23	23.0
Total	100	100.0

Table 3: Respondent Attitude on Waste Disposal

Variables	Frequency	Percentage
1. Do you have an idea of waste disposal?		
Yes	49	49.0
No	50	50.0
3	1	1.0
Total	100	100.0
2. Do you think that proper waste disposal is Important?		
Yes	84	84.0
No	16	16.0
Total	100	100.0
3. Do you feel streets should be clean and free of waste?		
Yes	95	95.0
No	5	5.0
Total	100	100.0

Table 4 reveals the level of practice of respondents. Majority of respondents i.e. (39.0%) reported that they generate 3 bags of garbage per week. Most of them (58.0%) responded they were not using bins for waste collection or disposal. Only (41.0%) of respondent were using bins for

waste collection. Majority of respondents (44.0%) reported that there were not available bins for waste collection. Majority of respondent (42.0%) were using method of waste disposal thrown on open places. Only 24.0% people were using the burning method for disposed of waste

Table 4: Respondents Practices on Waste Disposal

Variables	Frequency	Percentage
1. Garbage generate per week		
1 bag	4	4.0
2 bags	22	22.0
3 bags	39	39.0
More than 4 bags	35	5.0
Total	100	100.0
2. Different bins used for waste disposal		
Yes	41	41.0
No	58	58.0
Total	100	100.0
3. Number of bins for waste disposal		
One	28	28.0
Two	28	28.0
No used	44	44.0
Total	100	100.0
4. Waste disposal method		
Decomposed	34	34.0
Burning	24	24.0
Thrown on open places	42	42.0
Total	100	100.0

Discussion

The study was done in rural area of Lahore, in our study indicates that majority (43%) of respondents was 25-34 years of age, and minority (9.0%) was 45-54 years. Majority of respondents were females (75.0%) and (25.0) were male. (38.0%) were belonged to separate family and maximum

(61.0%) belongs to joint family. Maximum respondents (53.0%) were female's homemaker. In our study regarding education maximum respondents (28.0%) were metric level and minimum (6.0%) were postgraduates and (12.0%) were illiterate.

In a similar study done in Kumar Bangalore it was found that 38.3% had studied up to secondary school 28.0% had studied up to primary school and 4.0% were illiterate. In the present study to assess the knowledge, Attitude and practices of community people regarding waste disposal. Majority of respondents (72.0%) was aware about adverse effects of improper waste removal and (28.0%) respondent was not aware. Study was conducted in South Africa reported that (80.0%) of community people have the knowledge about household waste disposal and aware about adverse effects of improper waste disposal. Most community people (83.0%) were known about more production of waste can harm the environment. Most respondent (40.0%) were disposed of food category and used the burial method for disposed of waste (Adogu *et al*, 2015). In our study Attitude of most community people (50.0%) have no idea of waste disposal. (84.0%) people were thinking that proper waste disposal is important. Most respondent (95.0%) felt that streets should be clean. Most respondent (71.0%) were know that improper waste disposal can affect the human's life. But they were not play an important role in household waste disposal.

The study was conducted in Malaysia showed that students 65.9% have negative attitude towards household waste disposal. In present study practices of community peoples Majority of respondents i.e. (39.0%) reported that they generate 3 bags of garbage per week .Most of them (58.0%) responded they were not using bins for waste collection or disposal. Majority of respondents (44.0%) reported that there were not available bins for waste collection. Majority of respondent (42.0%) were using method of waste disposal thrown on open places. Study conducted in Thailand shows that (71.8%) people dispose of waste in separate dustbins. (12.2%) people had moderate intention while (10.0%) had low intention to dispose of waste into separate dustbins. Almost (92.2%) people have good practices to dispose of waste in separate dustbins. Study also shows the practices of people living in Thailand approximately (24.73) people dispose of waste in open places and 50% people dispose of waste in separate dustbins (Moshoeite & Oladele, 2013).

In our study majority of respondents (44.0%) reported that there were not available bins for waste collection. Majority of respondent (42.0%) were using method of waste disposal thrown on open places. Only 24.0% people were using the burning method for disposed of waste. A study was done in india to observe the practices regarding waste disposal, shows that 32% burn the garbage nearby their homes and 27% waste the garbage in open places. This study shows

that people have knowledge but lack of resources they were not used the best practices regarding waste disposal (Azuike et al., 2015).

Conclusion

Level of knowledge regarding waste disposal among the people of rural area was found good. Majority of respondents were aware about the hazardous material and harmful effect of improper waste disposal. The Attitude of community people was found good. The practices of rural people regarding waste disposal was found substantially poor. Despite of having good knowledge the respondents were performing poor practices. Maximum respondents throw waste in open places

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Limitation

This study found many limitations:

- Time duration was too short.
- This study was focus only on rural community.
- Data collection was faced lot of issues.
- The respondent of the study have very careless attitude regarding filling questionnaire.

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