



Awareness about Hospital Wastes and its effects on the Health of Patients in District Dera Ghazi Khan

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ABSTRACT

The hospital wastes are different kinds of wastes especially infectious wastes. A study was conducted to measure the awareness among patients about hospital wastes and its effects on health. The importance of the study is that mostly patients were illiterate they don't know about the importance of infectious wastes. The main objectives were to measure the awareness about hospital wastes and chances of infectious diseases among patients. The study was conducted at DHQ Hospital Dera Ghazi Khan. Total 200 hundred patients were interviewed through convenient sampling procedure. Data was collected through interview schedule tool because mostly patients were illiterate. After data collection, the Chi-square test was applied to test the hypothesis the greater the awareness about hospital and lower the chances of infectious disease. The result was calculated through the value of "Chi square" at 0.05 level of significance and on the basis of P-value. There was a significance association between awareness about hospital wastes and chances of infectious diseases. The hypothesis was accepted. The conclusion of the study was a lack of awareness about effects of hospital wastes among patients and more chances of infectious diseases. Because there were improper handling and disposal of hospital infectious wastes at DHQ Hospital Dera Ghazi Khan, there was a pose risk for the patient's health.

Key words: Hospital wastes, Awareness about wastes, chances of disease among patients, infectious diseases

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INTRODUCTION

The basic role of health care system is providing health facilities to the patients. This is the duties of a hospital to provide the health services for every person in the society.

A hospital is an institution to treat the patients. But during the treatment of patients, hospital produces the various types of hospital wastes. The function of a hospital was to save the health of patients and public health from the diseases. But during diagnosis and treatment of the patients the infectious wastes were generated because these are the higher risk of infectious disease for the patients and doctors at hospital. No discrimination on the base of race, sex, religions in the hospital this is over and above the normal inhabitants of hospital i.e. patients and staff (Patil, 2005).

Hospital waste refers to biomedical waste, biologic or non- biologic that is discarded and not intended for further use. Hospital wastes are a potential risk for the patients, public and professional health. During the treatment of patients, if the waste is not properly handled than the bright chances of different diseases will be shown among patients at workplace. It is the duty of the concerned person to manage the wastes while treating anyone at workplace. The hospital waste management depends on patients and doctors attitude and awareness about its dangerous effects on health. But the patients are no aware of the effects of such wastes as well as doctors are aware of this but irresponsible attitude about the handling of infectious hospital waste (Radha, 2012).

Hospital is providing health facilities to the public and patients. The hospitals are falling in providing health facilities to the concerned person. Hospital is threat for the patients and professional health due to improper hospital waste handling. Infections are associated with hospital waste and threats for the concerned person. Due to improper handling of wastes are created an infection. Infections are caused infectious diseases among patients and patient's guardian in hospital (Hienet. al, 2012).

Hospitals are producing different kinds of wastes in which infectious wastes are more dangerous than other kinds of waste. Infectious wastes have pathogen agents spread due to contact with such kind of wastes in the hospital. The infectious waste is not properly managed that are caused different infectious diseases among patients. Infectious waste contains different types of pathogens that are potential for infection or disease if it is not properly manage. Tetanus, wound infection, cholera, diarrheal diseases, HIV infections, HBV, HCV and T.B caused by infectious hospital waste in the hospital. Infection originates from patients while they are admitted in the hospitals are termed as endogenous infections, and other derived from the ward environment are termed as exogenous infection. That exogenous and endogenous infection may lead to respiratory infection, wound infection in the hospital (Zarin and Ahmed, 2009).

Objectives

Following were objectives of the study;

- To explore the awareness of patients about hospital waste.
- To explore the chances of infectious disease among patients due to mishandling of hospital waste.
- To see the relationship between awareness of patients about hospital waste and infectious diseases

DATA AND METHODOLOGY

The main purpose of research methodology is to brief the procedure, method about conducting research at social problems. The research was done about awareness about effects of hospital wastes on health of patients in district Dera Ghazi Khan. The universe of the current study includes all the indoor patients in DHQ Hospital Dera Ghazi Khan, in the month of October and November in 2013. To approach the whole universe was difficult for the researcher. So, for the convenience, the respondents were selected by a convenient sampling method. Samples of 200 patients were interviewed about effects of hospital wastes on health. The tool for data collection was interview schedule because mostly patients were illiterate.

Variable: A study to measures the variable such as awareness about hospital waste, infectious diseases.

Indicator: A study consists of several variables such as awareness about hospital wastes consist indicators such as perceive, realize, conscious, understand and attentive about hospital waste, and another variable infectious diseases consist indicators such as HIV AIDs, Hepatitis B, Hepatitis C, Respiratory disease, Tuberculosis and skin diseases.

After collecting the data, the data enter into SPSS for the statistical purpose of research. To draw the results, the "Chi square" test was applied to see the association between independent variable and dependent variable. Chi square is given below;

$$\chi^2 = \sum \frac{(O - e)^2}{e}$$

Where:

O= Stands for observed value

E= Stands for expected value

Σ= Stands for observed expected total sum.

LITERATURE REVIEW

To make the study more authentic and valid, the support of relevant literature is required. The relevant literature not only clarifies the different aspects of the study but acts as confirmation of that as well. A literature review is a body of the text that aims to review the critical points of current knowledge on particular topics. The purpose of this chapter is to review the available literature related to the topic under study.

Bhatti *et.al* (2007) studied that hospital wastes had the threats of infections among the concerned person in the hospital. Wastes are different kinds that are produce in the hospital and cause of infections. Cross sectional study conducted in Pakistan railway hospital in Rawalpindi to measure the knowledge and attitude of waste handlers, doctors and nurses about hospital waste and related threats. Waste handlers have not knowledge about threat and related infection about wastes. But some of the doctors have the knowledge and consider a threat related with wastes but nurse's knowledge and attitude are lower than doctors. In sum great threats for the health of waste handlers, doctors and nurses due to knowledge and attitude about waste and related infection.

Ndidi (2009) studied that improper management of hospital wastes effects on workers and visitors in the hospital. Wastes are generated in the hospital during treatment of patients that are different kind of wastes. If not properly managed that are harmful to the health of the concerned person as well as effects on an environment. That survey was conducted in

six hospitals in JOS Metropolis. To check the waste handling in the hospital but results show that improperly dealing with wastes in the hospital are found. That condition is threats for the health of workers and also visitors in the hospital. Improperly handling of harmful wastes spread different types of infectious diseases among concerned person such as dermatitis, asthma and neurological disorders in children; typhoid, cholera, hepatitis, AIDS and other viral infections through sharps contaminated with blood. Hazardous waste has a high risk for the healthcare workers, patients, visitors and concerned department, etc. The study recommends that to create awareness among concerned person about effects of hospital wastes.

Sharma (2010) studied about hospital waste and its management and also explained about treatment of waste that is method used in the Agra hospital. Take a sample different kind of hospital in the Agra i.e. apex, government and nongovernment on the basis of random sampling procedure was used. The study shows that about awareness and knowledge about waste management practices among the staff. The study results show that lack of awareness and knowledge about waste handling procedure which is used worldwide among the staff/ workers in the hospital. The lack of awareness was higher risks for the health of staff and workers in the hospital as well as environment problem.

Khan and Raza (2011) studied that an improper disposal of hospital wastes spread the disease among the community and related healthcare workers in a hospital. The study explored the effects of waste on the health of waste handlers in hospital. Data were collected from the waste handlers. Improper handlings of wastes pose to infectious diseases among concerned person in a hospital. The study results show that different infectious diseases occur due to improper handling of wastes like a T.B, skin disease and respiratory diseases among the workers in a hospital. The major facts were lack of facilities like clothes, gloves and apron to the worker. Lack of provision of equipment to the worker could lead to higher chances of infectious disease among the waste handlers in the hospital.

Lekwot (2012) studied that improper management of hospital wastes and effects on the health of the public. If the hospital wastes are not properly handle in the hospital that are pose to different kinds of infectious among the public, as well as hospital personnel. The improper management of hospital wastes are also effects on the environment. Due to improper handling and disposal of wastes pose to risks for the health and spread infectious diseases. The study results show that improper dealing with wastes pose to risk for an environment and also public health at major level. Almost 5.2 million people and also four million children die every year with hospital related diseases.

Anagaw *et. al* (2012) studied that spread of infectious disease like Hepatitis B, Hepatitis C among the waste handlers in Gondar town health care North Ethiopia. The viral diseases like HBV transmit among the waste handlers during handling of waste. During works, the waste handlers are faced the needle stick injuries due to improperly handling the wastes in the hospital. A cross sectional study was conducted in the Gondar town health care North Ethiopia shows that waste handlers have lack of preventive measures about handling of wastes. Take a sample medical and nonmedical worker for the data collection about study. Associated with high risk of infection among the waste workers. During examine the waste handlers almost workers are suffered in infectious diseases like Hepatitis B and Hepatitis C. Compare with medical and non medical worker in the hospital about infectious disease but results shows that medical worker are suffered in infectious disease than nonmedical workers. The Major finding indicated that improper system of waste handling and low level of awareness about handling and disposal of waste in the hospital.

The improper handling of wastes is the cause of spread of infectious diseases among the waste handlers like a Hepatitis B, Hepatitis C.

Asimet.al (2013) studied about practices of handling of hospital waste and also awareness in the hospital among sanitary workers in Faisalabad City of Pakistan. One hundred twenty Sample was taken from the major hospital of the city through simple random method. The study explored that about creation and practices about wastes and awareness current situation in the hospital. The results show that low level of knowledge and awareness about proper handling of bio medical wastes in the hospital. That situation was very dangerous for the health of workers and also concerned person in the hospital. The study suggests that there is the need to create awareness about proper handling of waste in the hospital.

RESULTS AND DISCUSSION

This portion was statistical analysis of the data that are collected from the population about awareness of hospital wastes and effects on the health of doctors and patients in district Dera Ghazi Khan.

The patient's demographic tables are given below

Category	Response Category	Frequency	Percentage
Gender	Male	120	60.0
	Female	80	40.0
	Total	200	100.0
Occupation	govt. Job	15	7.5
	Labourer	35	17.5
	Unemployment	20	10.0
	Business	10	5.0
	Agriculture	55	27.5
	Student	5	2.5
	Household	60	30.0
	Total	200	100.0
Education	Illiterate	114	57.0
	Primary to Matric	63	31.5
	Inter to graduate	16	8.0
	Postgraduate and above	7	3.5
	Total	200	100.0

The demographic table's results show that 60 percent respondents were male, and 40 percent respondents were female. 30.0 percents respondents occupation were household, 27.5 percent respondents occupations were agriculture; 17.5 percent respondents occupation were laborer, 10.0 percent respondents occupation were unemployment, 7.5 percent respondents occupation were govt. job, 5.0 percent respondents occupation were the business man and 2.5 percent respondents occupation were students. 57.0 percent respondents were illiterate, 31.5 percent respondents education were primary to matric and 8.0 percent respondents education were inter to graduate and 3.5 percent respondents education were postgraduate and above.

The hypothesis tables about patient's response given below.

Hypothesis: Greater the awareness about hospital waste; lowers the chances of infectious disease among patients.

H_0 : There is no association between greater awareness about hospital waste and lower the chances of infectious diseases.

H_1 : There is an association between greater awareness about hospital waste and lower the chances of infectious disease.

Table: Values of Chi Square statistic and corresponding p-values for "awareness about hospital waste" and "chances of infectious diseases."

Awareness About Hospital Waste	Chances of infectious diseases											
	HIV AIDS		Hepatitis B		Hepatitis C		Respiratory		T.B		Skin	
	Chi - Square	P-value	Chi - square	p-value	Chi - square	p-value	Chi-square	p-value	Chi-square	p-value	Chi-square	p-value
Perceive	7.280	.122	6.124	.190	13.248	.010	41.913	.000	21.258	.000	4.183	.382
Realize	7.514	.111	2.019	.723	14.877	.005	22.288	.000	2.693	.610	20.725	.000
Conscious	8.719	.069	11.757	.019	7.745	.101	2.253	.689	55.365	.000	17.875	.001
Understand	7.970	.093	10.292	.036	7.272	.122	3.964	.411	56.563	.000	15.910	.003
Attentive	8.780	.067	6.459	.167	13.676	.008	42.981	.000	21.824	.000	4.304	.366

Level of significance: 0.05

Explanation of the table

The testing of the hypothesis awareness about hospital waste and the chances of infectious disease results indicates relationship about each variable. These tables result represent on the basis of P value and level of significance. The indicators to measures Independent variable awareness indicators, perceives, realize, conscious, understand and attentive about hospital waste in which result indicates against the indicator to measures the dependent variable such as HIV AIDS, Hepatitis B, hepatitis C, respiratory disease, T.B and skin disease. The independent variable awareness indicator perceive about hospital waste in which the association is exist among Hepatitis C and T.B, but there is no association between Hepatitis B, HIV AIDs, skin and respiratory diseases. The realize about hospital waste in which association are exist among Hepatitis C and skin disease but there is no association between HIV AIDs, Hepatitis B, T.B and Respiratory diseases. Conscious about hospital waste in which association are exist among Hepatitis B, T.B, skin diseases but there is no association between HIV AIDs, Hepatitis C and respiratory diseases. Understanding about hospital wastes in which association exist among Hepatitis B, T.B, skin diseases, but there is no association between HIV AIDs, Hepatitis C and respiratory diseases. Attentive about hospital wastes in which association exist among Hepatitis C, respiratory disease, T.B diseases, but there is no association between HIV AIDs, hepatitis B and skin diseases.

In sum: The hypothesis table's results indicate that there is a link exists between awareness about hospital waste and chances of infectious disease among patients. In the majority of the cases, H_1 is accepted, and H_0 is rejected. The association between awareness and infectious disease exists, if increase the awareness about hospital waste to lower the chances of infectious diseases. A study result shows that because mostly patients were illiterate they have not awareness about effects of hospital wastes on health.

SUMMARY, CONCLUSION AND RECOMMENDATION

The hospital wastes comprise solid, infectious, sharps and radioactive substances. Dera Ghazi Khan is the deprived city of Pakistan because there is no proper disposal facility of hospital wastes in hospital. The research was conducted in Dera Ghazi Khan, and the researcher observed that there were improper wastes managements and disposal of hospital wastes in the hospital. The researcher measures the awareness about hospital waste and its effects on the health of patients.

Conclusion

DHQ Hospital was failing in providing the healthcare facilities to the patients because improper wastes managements; nothing meets the standard of health. No one is conscious about proper handling of infectious wastes at hospital. The study results show that patient's awareness were very low they don't know about the effects of wastes because majority of patients were illiterate. Higher the chances of infectious diseases like hepatitis B, hepatitis C, HIV AIDs diseases among the patients. Awareness of patients was very low and adverse effects on the health. The infectious hospital wastes are responsible for transmission of various infectious wastes to every person who has contact with such wastes at hospital.

In the light of a study finding, the conclusions are summarized as below.

- Lack of awareness among patients higher the chances of various infectious diseases in the hospital.
- The mostly patients don't realize the infectious hospital wastes they consider it like household wastes because they were illiterate.
- Improper handling of infectious wastes in the hospital because such condition are responsible for transmission of infectious disease among patients.
- Improper disposal of wastes in the hospital that are create an infections\ among the patients.
- The patients were higher risks in the hospital due to improper handling of wastes in the hospital.

Recommendation

- The researcher conducted the research on the effects of hospital waste on the patients by taking a sample from district hospital D. G. Khan. It is recommended by the researcher that another research may be initiated by taking the sample from large scale at division/province/country level.
- The researcher studied to see the effects of Hospital waste on patients. It is suggested that a study may be initiated to see the effects of hospital waste in a general public.

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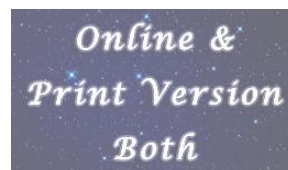
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