ISSN: 2278-4632
Vol-10 Issue-8 No. 4 August 2020

SOCIO – ECONOMIC BACKGROUND AND COST INCURRED FOR THE TREATMENT AMONG WATERBORNE DISEASE PATIENTS IN COIMBATORE

"What can be added to the happiness of a Man, who is in health, out of debt, and has a clear conscience?" *- Adam Smith - Wealth of nations (1776)*

Dr.G.SHANMUGA PRIYAA*
*Assistant Professor, Department of Economics, Nirmala College for Women, Coimbatore.

Abstract:

The health of the population may be a resource for the well-being of its members. It is human beings who make a society. Healthy human beings make a healthy society. However, every society has its share of unhealthy human beings. The promotion and protection of health of the people is essential to sustain economic and social development. Polluted and dirty water is very harmful for living organisms especially for health of humans. It causes many serious health problems which can ultimately lead to death if not treated at early stages. Water borne diseases including cholera, Typhoid fever, Diarrhea, Ulcers, Hepatitis, Respiratory Tract Infection, Kidney Damage, and Endocrine Damages are very risky for lives of individuals and especially for humans ultimately leading to death. These diseases are mainly due to drinking water problems because of presence of different harmful bacteria and germs which may cause these drugs. So, in this article, causes and effect of these diseases, treatment and cost incurred for treatment are summarized briefly.

Keywords: *Health, Waterborne disease, bacteria, cost, treatment*

Introduction:

The health of the population may be a resource for the well-being of its members. It is human beings who make a society. Healthy human beings make a healthy society. However, every society has its share of unhealthy human beings. The promotion and protection of health of the people is essential to sustain economic and social development. It should be a national objective to attain the highest possible standard of health, as good health is the basic foundation for the promotion of creativeness, self-discipline, self-confidence and dynamism in people, which are necessary to

ISSN: 2278-4632
Vol-10 Issue-8 No. 4 August 2020

increase the productive capacity of the nation. In fact, Health is an important input in any process of development. (Chaparwal *etal.*, 1999). Polluted and dirty water is very harmful for living organisms especially for health of humans. It causes many serious health problems which can ultimately lead to death if not treated at early stages. Water borne diseases including cholera, Typhoid fever, Diarrhea, Ulcers, Hepatitis, Respiratory Tract Infection, Kidney Damage, and Endocrine Damages are very risky for lives of individuals and especially for humans ultimately leading to death. These diseases are mainly due to drinking water problems because of presence of different harmful bacteria and germs which may cause these drugs. These diseases can be cured with proper medications and treatment courses. Along the treatment, there are different ways to prevent from these diseases. So, the lives of human beings can be protected from these water borne-disease. The water treatment can also be used so no one can drink or use dirty or untreated water and can be saved from these effects. So, in this article, causes and effect of these diseases, treatment and cost incurred for treatment are summarized briefly.

Data sources and methodology:

The second largest city of the state, Coimbatore, is one of the most industrialized cities in Tamil Nadu, known as the textile capital of South India or the Manchester of the south. Among all the districts of Tamil Nadu, Coimbatore district is one of the most affluent and industrially advanced districts of the State. It has been reported that the city stands second to Chennai in Tamil Nadu for highly affordable and quality Health Care delivery of International Standards. At the same time, there has been a need for getting an insight into the Health Care Services in the urban Coimbatore. Coimbatore is also the preferred healthcare destination to the floating population from nearby towns and districts and also nearby districts of Kerala. The growth of the hospitals in the city can be attributed to the vision of the industrialists here to bridge the gap between growing health needs and the existing services. Many of the private hospitals in the city are promoted by industrialists as an extension of their business portfolio and their service to the society. Notably, majority of the big private players in the city are registered as trust hospitals. The ushering in of the corporate multispecialty hospitals a decade ago has intensified the completion among the private hospitals. This intense competition has necessitated advanced medical technology and better patient care. The present study is unique in its examination of

ISSN: 2278-4632
Vol-10 Issue-8 No. 4 August 2020

socio economic background and cost incurred for treatment of the sample respondents in Coimbatore Hospitals, Tamilnadu.

Review of Empirical Studies:

KalpanaOjha et.al (2013) on their study "Impact Of Colourful Textiles Prints On Ground Water Quality Of Sanganer Jaipur, Rajasthan(India)" they examined that various physico-chemical parameters PH, electrical conductivity, total dissolved solids (TDS), total hardness(TH), calcium, chemical oxygen demand (COD),chloride, alkanity which were analyzed. The recent study shown that ground water is highly susceptible to pollution from treated or untreated discharged industrial effluent. The result of this study should that most of parameters were within the permissible limits to compared to the bureau of Indian standards which enable confer there is no drastic changes but it is safety for drinking purpose is accompanied with slow rate of effluent discharge activity in the region.

Amte.G.K and TruptiV.Mhaskar (2012) in their study "Assessment of the Toxicity Of Waste Water From A Textile Dyeing Industry To Fresh Water Teleost OreochromisMossambicks" they investigated that toxicological effects of effluenced discharged from the textile-dyeing industry from bhiwandi city, Maharashtra, INDIA to fresh water orechromismossambicks. It depends on dose and exposure duration and they can import serious damage to aquatic life. Several cases for fish mortality due to nature of operations which required high volume of water evently results in higher waste water generation. The total efficiency treatment was 71.42 per cent of safe discharged concentrations of the effluent for untreated and treated effluent which is highly useful for limit the acceptability by the aquatic animals. It is observed by treated effluent impact toxicity in fresh water an therefore the present level of treatment of effluent prior to discharge appears insufficient.

Emmanuel Palmer (2010) in their study on "Acute Health Effects After Accidental Exposure To Styrene From Drinking Water In Spain" they reported that styrene in water reached concentrations up to 900mg/l symptoms were 46 persons (attack rate). The most frequent symptoms are irrigation of throat (26 per cent), nose (19 per cent), eyes (18 per cent) and skin (14per cent). General symptoms were observed 11 per cent abdominal pain and 7per cent diarrhea. This study concluded that accidental contamination led to very styrene concentrations

ISSN: 2278-4632
Vol-10 Issue-8 No. 4 August 2020

in water and was related to a high prevalence of subjective symptoms of the eyes, respiratory tract and skin. Some of the gastrointestinal symptoms also observed in this population probably due to a local irritative effect.

Waterborne Disease:

Water is one of the most important natural resources for all living organisms, whether unicellular or multicelluar, since it is required for their various metabolic activities. In addition, water is required in various domestic purposes, irrigation, shipping, sanitation, power generation and industries. About 73 per cent of the earth is covered with marine and fresh waters, which is present in oceans, lakes, ponds, glaciers. Out of the global water content, only 3 per cent is fresh water suitable for human use. The stupendous increase in world's population resulting in spurt in urbanization, industrialization and agriculture has put tremendous pressure on the limited fresh water resources thereby threatening the fresh water bodies with pollution. One would agree that most of the problems of water pollution are man-made and are result of indiscrimate of unwise use of water bodies and its mismanagement.

Water pollution is a serious threat around the globe. Water pollution may be defined as, "a natural or induced change in the quality of water which renders it unusable or dangerous as regards food, human and animal health, industry, agriculture, fishing or leisure pursuits". Many rivers in the world are either completely polluted or getting polluted. In India, the holy river of Ganga is getting polluted through household and industrial sewages and also by throwing dead bodies in the river. The Government of India is trying hard to save Ganga through Ganga Action Plan (GAP). In Tamil Nadu koovam in Chennai and Noyyal River in Tirupur were completely polluted. Hence, the use of small water bodies is becoming vital in all the places. The following lists display causes of water pollution and the effects it has on human health and the environment.

Types of Waterborne Diseases:

Organisms that cause disease are called pathogens. Pathogens include bacteria, viruses, and parasitic organisms that infect humans and cause illness. Some pathogens occur naturally, and others pollute water when human or animal waste washes into the water. Some of the most

ISSN: 2278-4632
Vol-10 Issue-8 No. 4 August 2020

common illnesses caused by pathogens in water include most dangerous water related diseases that occur in India, which are described as follows:

- **Anemia:** Anemia is a lack of red blood cells and hemoglobin. This results in a reduced ability of blood to transfer oxygen to the tissues. In the milder form anemia is asymptomatic. In the more severe form it is associated with fatigue, weakness, dizziness and drowsiness. Signs include loss of normal colour in the skin and in the lips, tongue, nail beds and the blood vessels in the white of the eyes.
- **Cholera:** Cholera is an acute, diarrheal illness caused by infection of the intestine with the bacterium Vibrio Cholerae. A person may get cholera by drinking water or eating food contaminated with the cholera bacterium. The disease can spread rapidly in areas with inadequate treatment of sewage and drinking water. The cholera bacterium may also live in the environment in brackish rivers and coastal waters.
- **Dengue:** Dengue is an acute infectious disease caused by a virus and transmitted by the bite of the aedes mosquito, also known as break borne fever and borne-crusher diseases. Dengue fever is a severe, flu-like illness that affects infants, young children and adults but rarely causes death.
- **Diarrhea:** Diarrhea is frequent discharge of watery faeces from the intestines, sometimes containing blood and mucus. A strains of bacteria that causes severe diarrhea with bleeding and adnominal cram. Primarily spread through uncooked meat, it can be contracted by swimming in contaminated water. Diarrhoea due to infection may last two days or several dehydration and shock.
- **Dracunculasis or Guinea Worm Diseases:** A Dracunculasis or guinea worm disease is a preventable infection caused by the parasite Dracunculusmedinensis. Adult female Dracunculus worms emerge from the skin of infected persons annually. Persons with worms protruding through the skin may enter sources of drinking water and unwittingly allow the worm to release larvae into the water.
- **Hepatitis:** In medicine hepatitis is any disease featuring inflammation of the liver. Two of the viruses that cause hepatitis can be transmitted through water, food and from person to person. Hygiene is therefore important in their control. The illness starts with an abrupt onset of fever, body weakness, and loss of appetite, nausea and abdominal discomfort,

ISSN: 2278-4632
Vol-10 Issue-8 No. 4 August 2020

followed by jaundice within a few days. The disease may range from mild to severe disabling disease. Both hepatitis A and E are found worldwide. Hepatitis A is particularly frequent in countries with poor sanitary and hygienic conditions.

- **Polio (Infantile Paralysis):** Polio is a communicable disease, which is categorized as a disease of civilization. Polio spreads through human-to-human contact, usually entering the body through the mouth due to faecally contaminated water or food. The disease is usually fatal if the nerve cells in the brain are attacked causing paralysis of essential muscles, such as those controlling swallowing, heartbeat, and respiration. There is no specific drug for treatment.
- **Ring Worm:** Ring worm or tinea is superficial eruption of the skin caused by a fungus, chiefly Microsporum, trichophyton, or Epidermophyton. The most common affected area is the feet, dut any area of the skin may be affected, including the scalp and nails. Fungi are present on the bodies of most persons, but some individuals are more resistant to fungus invasion than others. It is spread by direct contact with an infected person or animal, contact with soil or by indirect contact with items contaminated by the fungus.
- **Typhoid fever:** Typhoid and paratyphoid enteric fever are acute, generalized infectious caused by salmonella typhoid and salmonella paratyphoid respectively. The main sources of infection are contaminated water and especially in urban communities, food handlers who are carriers. Their germs are passed in the faces and urine of infected people. (U.Kumar, 2000)

Effects of water pollution:

Flowing waters such as rivers and streams show a great self-purification capacity. After discharge of an organic waste in them, they show the reversal of polluted conditions to the original after flow of water to some distance. Some of the organisms in the polluted portion of stream are quite different from those present in the unpolluted portion lying before the waste discharge.

ISSN: 2278-4632
Vol-10 Issue-8 No. 4 August 2020

TABLE- 1
DETAILS OF CASES AND DEATHS DUE TO THE ACUTE CHOLERA IN TAMIL NADU

YEAR	ACUTE AND DIARRHOEAL DISEASES		CHOLERA	
	CASES	DEATHS	CASES	DEATHS
1997	78025	520	78025	520
1998	77677	368	77677	368
1999	74583	266	74583	266
2000	64130	195	64130	195
2001	59511	159	59511	159
2002	69889	199	69889	199
2003	58784	66	58784	66
2004	77333	119	77333	119
2005	70465	65	70465	65
2006	52555	22	52555	22
2007	37556	19	37556	19
2008	57463	62	57463	62
2009	87207	21	87207	21
2010	60314	45	60314	45
2011	206669	24	206669	24
2012	198317	17	198317	17
2013	189288	24	189288	24
2014	176795	6	176795	6
2015	183868	0	183868	0
2016	184952	0	184952	0
2017	150429	1	150429	1
2018	135558	0	135558	0

Source: (Ministry of Health, 2019)

The table explains that "Details of cases and deaths due to the Acute Diarrhoeal Diseases /cholera in Tamil Nadu" Acute Diarrhoeal Diseases and suspected cholera are common among the water borne diseases. Tamil Nadu is endemic for Acute Diarrhoeal Diseases with sporadic outbreak of cholera in most of the districts throughout the year, and in epidemic proportions during the rainy seasons and peak summer periods. All the District Level officials and executive authorities of local bodies take necessary preventive measures including proper disposal of solid

ISSN: 2278-4632
Vol-10 Issue-8 No. 4 August 2020

wastes and maintain sanitation and hygiene chlorinate all water sources and undertake fly control measures.

Preventive Measures of Water-Borne Diseases:

Like the most famous saying that prevention is better than cure, taking cautionary measures before any illness hits badly, it is of utmost priority. The first thing that one can do is to consume good drinking water and practice hygienic ways at home. However, here is what person need to do to keep them safe from any kind of water-borne disease.

- Make sure that he/she consume water that is free from silt, dirt or sand particles.
- Drink water that is purified from water purifiers.
- Always develop hygienic practices of washing our hands before and after any meal.
- To ensure that the child stays safe from harmful disease makes sure that they wash their hands after they finish playing their games or when they enter the house.
- Make sure that the food is washed properly before one cook them. Also, washing food with contaminated water can lead to serious sickness that can turn out to be fatal for person and their family.
- Make it a point to use disposable glasses and plates if persons are consuming outside food.
- Avoid consuming previously prepared food as this may lead to food poisoning.
- Also, make it a point to get water purifiers serviced as most purifying filters in these systems need servicing very often.

Most water-borne disease can turn out to be a plague that can kill many in a short time. However, we need to make sure that we stay safe this monsoon and practice good hygiene that will ensure that ourselves and our family stay safe. Also, keep in mind that prevention is better than cure and caution our surroundings, may it be our friends or relatives on the effects of water-borne diseases.

ISSN: 2278-4632
Vol-10 Issue-8 No. 4 August 2020

Relationship between Selected Socio-economic Characteristics and total expenditure for Treatment:

An examination of the differential amount spent by the sample respondents for their treatment across their selected background characteristics is appropriate here so as to understand which sub-groups of the sample respondents were able to spend more or less for treatment. Data is analysed accordingly with the help of mean amount spent across the different categories of the characteristics under consideration, and results are presented in Table 2.

TABLE: 2
Relationship between Socio-Economic Characteristics and Total Cost among Waterborne Disease Patients

Social factor		Total Cost (In Rs.)				Total
		below 400	401-601	602-802	above 803	
Age	21-40	6 54.5%	3 27.3%	2 18.2%	0 0.0%	**11** **100.0%**
	41-60	19 27.9%	38 55.9%	10 14.7%	1 1.5%	**68** **100.0%**
	61-80	13 68.4%	5 26.3%	1 5.3%	0 0.0%	**19** **100.0%**
	81-100	1 50.0%	0 0.0%	1 50.0%	0 0.0%	**2** **100.0%**
χ^2 - value 15.415 , df 9, sig. level .080						
Sex	Male	19 30.6%	31 50.0%	11 17.7%	1 1.6%	**62** **100.0%**
	Female	20 52.6%	15 39.5%	3 7.9%	0 0.0%	**38** **100.0%**
χ^2 - value 5.732, df 3, sig. level .125						
Social background	SC/ST	13 61.9%	6 28.6%	1 4.8%	1 4.8%	**21** **100.0%**
	MBC	0 0.0%	2 66.7%	1 33.3%	0 0.0%	**3** **100.0%**
	BC	26 34.2%	38 50.0%	12 15.8%	0 0.0%	**76** **100.0%**
χ^2 - value 12.388, df 6, sig. level .054						
Marital Status	Never married	1 33.3%	1 33.3%	1 33.3%	0 0.0%	**3** **100.0%**
	Married	36 37.9%	45 47.4%	13 13.7%	1 1.1%	**95** **100.0%**
	Widowed	2 100.0%	0 0.0%	0 0.0%	0 0.0%	**2** **100.0%**
χ^2 - value 4.166, df 6, sig. level .654						
Education	Illiterate	20 64.5%	9 29.0%	1 3.2%	1 3.2%	**31** **100.0%**

ISSN: 2278-4632
Vol-10 Issue-8 No. 4 August 2020

	Primary	5 22.7%	13 59.1%	4 18.2%	0 0.0%	**22** **100.0%**
	middle school	6 30.0%	10 50.0%	4 20.0%	0 0.0%	**20** **100.0%**
	Secondary	7 29.2%	12 50.0%	5 20.8%	0 0.0%	**24** **100.0%**
	higher secondary	1 33.3%	2 66.7%	0 0.0%	0 0.0%	**3** **100.0%**
χ^2 - value 17.701, df 12, sig. level .125						
Occupation	Agriculture activity	4 80.0%	0 0.0%	0 0.0%	1 20.0%	**5** **100.0%**
	Household industry	2 50.0%	1 25.0%	1 25.0%	0 0.0%	**4** **100.0%**
	Government job in organized sector	5 35.7%	6 42.9%	3 21.4%	0 0.0%	**14** **100.0%**
	Trade/business	1 9.1%	6 54.5%	4 36.4%	0 0.0%	**11** **100.0%**
	Unemployed	2 66.7%	1 33.3%	0 0.0%	0 0.0%	**3** **100.0%**
	At home	15 51.7%	11 37.9%	3 10.3%	0 0.0%	**29** **100.0%**
	Others(labor)	10 29.4%	21 61.8%	3 8.8%	0 0.0%	**34** **100.0%**
χ^2 - value 38.550, df 18, sig. level .003						
Monthly income (In Rs.)	Below 10000	14 36.8%	20 52.6%	3 7.9%	1 2.6%	**38** **100.0%**
	10001-16000	5 35.7%	7 50.0%	2 14.3%	0 0.0%	**14** **100.0%**
	16001-22000	1 12.5%	4 50.0%	3 37.5%	0 0.0%	**8** **100.0%**
	22001-28000	1 25.0%	1 25.0%	2 50.0%	0 0.0%	**4** **100.0%**
	Above 28000	1 25.0%	2 50.0%	1 25.0%	0 0.0%	**4** **100.0%**
χ^2 - value 9.648, df 12, sig. level .647						
Total monthly family income (In Rs.)	8000- 18000	24 45.3%	25 47.2%	3 5.7%	1 1.9%	**53** **100.0%**
	18001-28000	8 28.6%	14 50.0%	6 21.4%	0 0.0%	**28** **100.0%**
	28001-38000	5 45.5%	2 18.2%	4 36.4%	0 0.0%	**11** **100.0%**
	38001-48000	2 25.0%	5 62.5%	1 12.5%	0 0.0%	**8** **100.0%**
χ^2 - value 12.840, df9, sig. level .170						
Total asset	Below 200000	8 30.8%	15 57.7%	2 7.7%	1 3.8%	**26** **100.0%**

ISSN: 2278-4632
Vol-10 Issue-8 No. 4 August 2020

	200001-350000	5 62.5%	2 25.0%	1 12.5%	0 0.0%	**8** **100.0%**
	350001-500000	2 25.0%	2 25.0%	4 50.0%	0 0.0%	**8** **100.0%**
	500001-650000	2 66.7%	0 0.0%	1 33.3%	0 0.0%	**3** **100.0%**
	650001-800000	0 0.0%	0 0.0%	1 100.0%	0 0.0%	**1** **100.0%**
χ^2 - value 17.681, df12, sig. level .126						
Total		39 39.0%	46 46.0%	14 14.0%	1 1.0%	**100** **100.0%**

The table 2 portraits the relationship between the Socio-Economic Characteristics and Total Cost of the Patients. Out of 100 sample patients, a majority of 54.5 per cent of patients of the age group of 21-40 are spending below Rs.400 of Total cost, majority of 55.9 per cent of patients of the age group of 41-60 are spending between Rs.401-Rs.601 of Total cost, Majority of 68.4per cent of patients of the age group of 61-80 are spending below Rs.400 of Total cost, Majority of 50 per cent of patients of the age group of 81-100 are spending below 400 and between Rs.602-Rs.802 of Total cost. Hence age of the sample respondents with ($p<0.80$) level of significance. While analyzing the sex status of the sample respondents a majority of 50 per cent patients of the male group receives Rs.401-Rs.601 of Total cost and majority of 52.6 percent patients of the female group spending below 400 of Total cost. Hence sex of the sample respondents with ($p<0.125$) level of significance. While analyzing the SC/ST categories, a majority of 61.9 per cent of patients spending below Rs.400 of Total cost, while in MBC categories, a majority of 66.7per cent of patients spending between Rs.401-Rs.601 of Total cost. Hence Social background of the sample respondents with ($p<0.054$) level of significance. While analyzing the marital status of the sample respondents a majority of 33.3per centof patients who never married spending below Rs.400, between Rs.401-Rs.601 and between Rs.602-Rs.802 of Total cost, a majority of 47.4per cent of patients who is married spending Rs.401-Rs.601 of Total cost, a majority of 100 per cent of patients who is widowed spending below Rs.400 of Total cost. Hence marital status of the sample respondents with ($p<0.654$) level of significance.

It is interesting to note that a majority of 64.5 per cent of the illiterate people spending below Rs.400 of Total cost, a majority of 59.1per cent of the patients who have finished their primary education spent Rs.401-Rs.601 of Total cost, a majority of 50 per cent of the patients

ISSN: 2278-4632
Vol-10 Issue-8 No. 4 August 2020

who have finished their middle school education also spent between Rs.401-Rs.601 of Total cost, a majority of 50 per cent of the patients who have finished their secondary education also spent Rs.401-Rs.601 of Total cost, a majority of 66.7 per cent of the patients who have finished their higher secondary education spent Rs.401-Rs.601 of Total cost. Hence marital status of the sample respondents with ($p<0.125$) level of significance. While analyzing the Occupation of the sample respondents a majority of 80 per cent of the patients who is involved in agriculture activity spent Rs.400 of Total cost, and majority of 42.9 per cent of patients who is in government job or private job spentRs.401-Rs.601 of total cost, and majority of 54.5 per cent of patients who involved in trade/business spent below Rs.400of total cost, a majority of 66.7 per cent of patients who is unemployed spent below Rs.400 of total cost, a majority of 51.7per cent of patients who is at home spent below Rs.400 of total cost, and a majority of 61.8 per cent of patients who work as labor spent between Rs.401-Rs.601 of total cost. Hence Occupation of the sample respondents with ($p<0.003$) level of significance.

Regarding monthly income of a person of the sample respondents is concerned; a majority of 52.6 per cent of income below Rs.10000 spent between Rs.401-Rs.601 of total cost, a majority of 50 per cent of income between Rs.10001-Rs.16000 spent between Rs.401-Rs.601 of total cost, a majority of 50percent of income between Rs.16001-Rs.22000 spent between Rs.401-Rs.601 of total cost, a majority of 50percent of income between Rs.22001-Rs.28000 spent between Rs.602-Rs.802 of total cost, and a majority of 50percent of income above 28000 spent between Rs.401-Rs.601 of total cost. Hence Occupation of the sample respondents with ($p<0.647$) level of significance. The households whose total monthly family income is between Rs.8000-Rs.18000 a majority of 47.2 per cents pent between Rs.401-Rs.601 of total cost, a majority of 50 per cent between Rs.18001-Rs.28001 spent between Rs.401-Rs.601 of total cost, a majority of 45.5percentbetween Rs.28002-Rs.38002 spent below Rs.400 of total cost, and a majority of 62.5 per cent between Rs.38003-Rs.48000 spent between Rs.401-Rs.601 of total cost. Hence Occupation of the sample respondents with ($p<0.170$) level of significance. Regarding total asset of the sample respondents, a majority of 57.7 per cent below Rs.200000 spent between Rs.401-Rs.601 of total cost, a majority of 62.5 per cent between Rs.200001-Rs.350001 spent below Rs.400 of total cost, a majority of 50 per cent between Rs.350002-Rs.500002 spent between Rs.602-Rs.801 of total cost, a majority of 66.7 per cent between Rs.500003-Rs.650003 spent below Rs.400 of total cost, and a majority of 100 percent between

ISSN: 2278-4632
Vol-10 Issue-8 No. 4 August 2020

Rs.650004-Rs.800000 spent between Rs.602-Rs.802 of total cost. Hence Occupation of the sample respondents with ($p<0.126$) level of significance. Water quality is a major issue in rural areas in India. Unsafe water causes 4 billion cases of diarrhea each year, and results in 2.2 million deaths, mostly of children under five. This means that 15 per cent of child deaths each year is attributable to diarrhea – child dying every 15 seconds.

Conclusion:

Water is the basic necessity of life. Water is polluted when it is changed in its quality or composition, directly or indirectly has a result of human activities, so that it becomes useless or less suitable for drinking. Any human activity that impairs the use of water has a resource may be called water pollution. Due to water pollution there is a scarcity of fresh water for drinking purpose. Polluted water, if used for drinking transmits various diseases such as cholera, typhoid, jaundice, dysentery, intestinal infections and also viral diseases. The selected respondents are affected by unsafe drinking water. Due to water logging and poor sanitation facilities the people living in slum areas suffer the most. The risks highlight the need for an integrated risk assessment during the development of new policies at national level or local level, taking into account the possible health effects and how to reduce these risks. The study revealed that the selected household samples suffered from dengue fever. The main cause for water borne diseases is water pollution. The industrialists need to treat their waste water before dumping it in the rivers and lakes. The selected areas have many active health centres engaged in eradicating the prevalent water borne diseases. These available opportunities need to be fully utilized in order to finish water borne diseases from its roots.

REFERENCES:

1) Amte.G.K And TruptiV.Mhaskar (2012) “Assessment Of The Toxicity Of Waste Water From A Textile Dyeing Industry To Fresh Water Teleost OreochromisMossambicks”.
2) Chhaparwal, Mishra and Chaskar (1999). “Health Management Education”, University News, 37(28): 7-10.
3) Emmanuel Palmer (2010) “Acute Health Effects After Accidental Exposure To Styrene From Drinking Water In Spain”.
4) Kumar.U (2000), “Waterborne Diseases”, Water, Environment and Pollution, p_p (206-254), (288-318).

ISSN: 2278-4632
Vol-10 Issue-8 No. 4 August 2020

5) KalpanaOjha et.al(2013) “Impact Of Colourful Textiles Prints On Ground Water Quality Of Sanganer Jaipur, Rajasthan(India)”.

6) Nazrul Islam (2006) in his study “IRLP or the Ecological approach to rivers”, economic and political weekly, vol:34,pp 1693-1702 $p_{p;}$ 179-187.