

**Water and Sanitary Diseases Influencing Socio-Economic Conditions of
Oad Community in Sindh.**



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Islamabad

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Thesis submitted to Department of Anthropology Quaid-i-Azam university
Islamabad, in partial fulfilment of degree of Master of Science in Anthropology.

**Department of Anthropology
Quaid-i-Azam University,
Islamabad
2021**

Formal Declaration

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Islamabad 2021

Adil Mir

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ABSTRACT

The focus of this study is on the social problem related with water and sanitation. Topic of this study is water and sanitary diseases influencing socio-economic conditions of the Oad community. Under this topic, the major objectives of this study are first, to analyze the condition of water and sanitary practices in the community. Second, to find out the water borne diseases and their causes. Third, to document the impacts of water borne diseases on the socio-economic lives of community members. Fourth, to know the perception of community members towards water borne diseases and sanitary practices. Mix research methodology is used in this study qualitative as well as quantitative. Sampling method of this study are purposive sampling and accidental sampling. Researcher had participated in the community by the help of key informant. Data collection tools of this study are in-depth interviews and focus group discussion. Techniques of this research are, case study, audio recording, field notes, daily dairy etc. Related literature is part of this research study. Main finding of this research are consumption of water and sanitary practices, the community members use multiple sources of water for instance hand pump, water motor, water filter plant. Not only they drink this water but also, they use water for cooking and bathing purpose. Water borne disease is major reason of contaminated water and unhygienic practices. Community members are impacting by various diseases such as cholera, diarrhea, skin disease, throat etc. Sanitation practices are adverse, the members use PAKKAKHAYAL JAGAH and KACHA KHAYAL JAGAH, they also use ash as the cleaning and sanitizing agent. Drainage network of community is deteriorating. Socio- economic condition of community is contributing to this stage, they belong to lower class means their profession is garbage collecting. Mostly they are poor, and enough livelihood earning survival. Originally the Oad is schedule caste of Hindu community. Perceptions of community is different from contemporary period. Moreover, they have been busy in searching the solution of their illnesses and diseases through their religious myths and folklore According to above objects of research, the researcher has collected data from Oad community of city Moro, district Naushahro Feroze Sindh. In which, he analyzed water and sanitary conditions, treatment facilities, believe system, practices, perception, and socio-economic behavior of community.

Key words: Water borne, Sanitation, Hygiene, Schedule caste, Impacts, Condition.

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Chapter 1

Introduction

Water is considerable significance in Islam. It is called a gift from Heaven that gives and sustains life and purifies humans and the world. The Arabic word for water is "ma," which appears sixty-three times in the Holy Quran. The throne of Heaven is described as sitting on water, and paradise is described as "Gardens under which rivers flows." But just as it is excess and productive management increases the quality of life; its shortage and inefficient use has an adverse influence on society. Most people do not drink clean water, so the body reacts to water shortage or dirty water in several ways in symptoms such as diarrhea. Water, the most common component of earth's hydrosphere, is an inorganic, transparent, tasteless, odorless, and almost colorless chemical, which are fluids in majority of living organisms. For all known life types, it is essential even if it offers no organic calories or nutrients. The chemical composition of the molecules is H₂O, which means that they each contain a covalent bond of one oxygen and two hydrogen atoms. Water extends over 71% of the Earth's surface area, mostly in seas and oceans. Small portions of water exist in ground water (1.7%), in Antarctica and Greenland glaciers and ice caps (1.7%) and in the air as vapor, as clouds (formed by air-suspended ice and liquid water) and in precipitation (0.001%). In the global economy, water plays an important role. Around 70 percent of human fresh water goes to farming. Salt and freshwater fishing is a major food source in much of the world. A great deal of long-distance trading of commodities (e.g., Oil and natural gas) is carried by boat, river, lake and canal. For cooling and heating in industry and houses, large quantities of water, ice and steam are used. Water is an excellent solvent for a wide range of mineral and organic substances; as such it is used widely in manufacturing and cooking and washing processes. Water, ice and snow are also important to a variety of sports, such as swimming, water-boating, boating, sailing, fishing, diving, skiing and ice-skating. Here are some types of water which are given under. Drinking water and hygiene activities are among the key determinants of wellbeing. It is known that, among many other factors, the health of individuals depends directly on the quality of drinking water, as well as on the actions of individuals, families and communities regarding their medical, household and community hygiene. However, the degree to which societies in general and rural areas are aware of this inter-relationship needs to be studied. Related programs by the Government and non-governmental organizations are primarily aimed at raising community understanding of water,

sanitation, wellness, and hygiene problems. A lot of things that are important for healthy physical and mental health and well-being are clean hygienic water. Water is a crucial part of our lives. Human life depends on the climate. Clean water is important for good health, whether it is for some sort of use. Water is the center of human life. The world without water is inconceivable. A sufficient volume of water is very critical for the human body to function properly.

Sanitation refers to the collection, processing and subsequent safe end-use or disposal of facilities and services that are essential to secure management of human excretion from the toilet to on-site containment and storage, and care. Sanitation more generally also included the healthy disposal of solid waste and animal waste. Insufficient sanitation is a major cause of infectious diseases like cholera, typhoid, and worldwide dysentery. It helps to delay and impair cognition and affects well-being by attending to school, anxiety, and safety with lifelong effects, particularly for women and girls. Enhanced family, community and school services healthcare promotes progress on several health and economic development issues, including universal health and the fight against antimicrobial resistance. Water and sanitation are significant because that disturb human life directly and become reason of various infectious diseases through the world. People face effects socially and financially. Many causes behind impure drinking water and sanitation facility. Education, illiteracy unawareness and poverty are main cause of that problem.

A condition of full physical, emotional, and social well-being, not simply the lack of sickness and infirmity. (Who, 1946)It is inferred from the above description that good physical and mental wellbeing is necessary to lead a stable and happy life. In addition to the many other characteristics needed for social, physical, and mental well-being, wellbeing is one of the most significant. Health is not only a part of one's personal well-being, but at the same time it is important for the well-being of society as an individual suffering from bad health, sickness or some sort of sickness becomes a hindrance to social progress.

According to world health organization annually 827000 people affected from the poor water and lack of sanitation caused at least deaths of 432000 people worldwide, majority of people die due to diarrhea, and Carla diseases. (M, Ali, 2019).

Many developing and under developing country people have not facility of safe drinking water. People are compelled to use contaminated water. Water is basic need of every human if it is

dirty and having no standard quality it impacts human health. Sanitation is also necessary if it is not available properly health happen effect because use open toilet. According to UNICEF 2.4 billion people does not use toilet while 66300 million people have not improved water. Moreover, per that report 800 children die each day worldwide because of diseases caused by poor water lack of sanitation and hygiene. (Unicef, 2019).

In Pakistan, many children adult and old age people are being affected by the inadequate water and poor hygiene conditions. Approximately, 53000 Pakistani children fewer than five-year age die annually from diarrhea due to poor water and sanitation. Almost 44% of children in Pakistan affected by poor water and sanitation. Furthermore 70 % household use contaminated water. (Unicef, 2019).

However, the condition of Sindh is not better inside the Pakistan – many people and mostly children affected from unsafe water and inadequate hygiene according to a UNICEF survey about 74 % girls and 40 % boys in primary schools have etiquette toilet and 81 % girls and 75 % boys at primary schools have access to drinking water. Furthermore, it is estimated everyday about 67000 children miss school due to illness that are mostly water borne, there is no strategic policy national and provincial level for the sanitation. (ali, Imran, 2017).

Researcher topic is water and sanitary diseases influencing socio-economic conditions of Oad community in city Moro Sindh Pakistan. In this research, researcher has found water borne diseases which impacts on the health of Oad community. Because people of Oad community used to drink impure water and that impure water was used for many other routine purposes, due to these harmful activities, they got some stomach issues and various skin diseases appeared on people`s bodies, after that many deaths occurred in community.

However, people faced different socio-economic problems like: Numbers of people do not have enough money to treat the patients and reached the doctor, in addition to that people prefer a medical store and because of cheap treatment, people also had side effects of those tablets.

Here the researcher also found sanitation as the grave issue in the community because people of Oad community used to take water from their toilets, i.e., there was no distance seen between toilets and main drinking usage tank/ line.

Water and sanitation are not a new issue in the world as “World Health Organization showed that it was raised for the first time in United States America in 1942 and is still the main resistance towards living organisms on the earth”.

Researcher studied these issues from anthropological aspects in an ethnographic research and researcher discovered main causes of Water and Sanitary diseases influencing Socio-Economic conditions of Oad community in Moro Sindh Pakistan.

1.1 The Problem

Water and sanitation are a global issue which is marked by the many non-governmental and governmental organizations. Water is an essential element for the survival, the issue of impure water and sanitation has become a critical problem to solve thus, it is a real threat for precious lives. This issue causes frequent deaths and various numbers of health's hazardous diseases like cholera, diarrhea etc. People of community are involved in several infectious illnesses/diseases, the main reasons for those infectious illnesses/diseases are impure water usage and sanitation. In this study researcher focused on the problems, reasons and activities related to community members such as the method through they utilized water for drinking and other purposes. Researcher explore the water borne diseases, their impacts on the lives of people, cause of that diseases and the community perception towards diseases. In this research the researcher also explored the resisting factors in the community by which the lives of people became hard day by day.

1.2 Statement of Problem

This research focuses on pathogens that are waterborne. The key concern of the community in which this study has been conducted is waterborne and sanitary diseases. Analyzing of the Oad community's life pattern, illnesses and their origins, access to water, hygiene, and sanitation. These diseases arise by unclean drinking water and unhealthy hygiene practices. The prevalence of diseases among community members is normal due to lower hygienic conditions. They have been afflicted with cholera, diarrhea, skin, and other harmful health diseases. The main cause of these disease are water consumption and improper sanitation in the community. The condition of water is worst, which is used for routine activities, i.e., cooking, bathing, cleaning and many more. Considering the sanitation in community, researcher studied improper facility of sanitation and researcher also noted unhygienic practices that caused illnesses and deaths. However, the researchers have studied the consequences of illnesses and socio-economic behaviors of members of the group. The study is recorded with a lack of

knowledge of religious myths, water disposal practices, irrigation and wastewater facilities, sewage, and sanitary diseases. Poverty and analphabetism also cause severe neighborhood issues. The research focuses on multiple Oad disorders, different causes and consequences of diseases and major disease-led influences.

1.3 Conceptualization

Conceptual frameworks give fundamental to research in the context of theory and literature review and that help to collection of data. Present research concepts related with literature. Variables of research are suitable with the objectives of research. Such as water, sanitation, hygiene, perception of community, belief system, practices and social, economic and. Its clear concept which are used in thesis. In literature public health issue of water and sanitation and it impacts on the health of community. Occurring diseases due to usage of impure water, unsafe and hygiene practice of sanitation. Community members beliefs, myths, practice and treatment myths and cultural resistance. Social and economic impacts concepts on the community is clarified by literature. Literature related with water, sanitation, hygiene, perception, practices, myths, beliefs and socio- economic condition.

Water: It is the most precious thing for the survival of human beings because life without water is nothing. That is narrated water life joint report of World health organization and UNICEF. United Nations celebrated water decade 2005 to 2015, due to significance of portable drinking water thousand people are dying. It was included in the millennium development goals. (Who, 2015)

Sanitation: (Mahatma Gandhi said in 1923 sanitation is more important than independent). Sanitation is a big public health issue; it is cause of death. Children, elders have been afflicted from adverse sanitary practices. (Indira Chakravarty & Bindeshwar Pathak, 2019)

Hygiene: Cleanliness and hygiene can use interchangeably but hygiene relates with protection of health through washing body or its parts due microbes and bacteria's. (Hans Kromhout, 2016).

Disease: disease is commonly known as illness and sickness it relates with adverse biological situation and that situation is diagnosed by medical doctor. (Boyd, Kenneth M, 2000)

Health: According to world health organization constitution health is defined as social, psychological, physical, spiritual wellbeing and joy.

Sewerage disposal: Improper disposal of sewerage is harmful for health of human. Sewerage carried wastewater, that come from residential, industry and commercial areas. Better management of drainage beneficial for health. It can be polluted aquifers, agricultural land and water reservoirs. (Onyelowe, 2012)

Myth: Myths are narratives and stories some societies written myths but illiterates societies oral myths these are about the origin of world and morality. (Al.stein, Rebecca, 2016, p. 30)

Perception: That is general knowledge and ideas about society and world. Every behavior shows according to knowledge system of culture and perceive prescribe rules of society. (OU Qiong, 2017, p. 19)

Social: Social refers with individuals and groups. Humans interact with one another in society. Cooperation and companionship of individuals is also called social. Friendship, gregarious and sociable are examples of social. (Merriam webster, 2021)

Economics: It is management of household economy related with goods, services, and consumption. Earning livelihood for the better live style depend on the economics. (Nelson, Charles R., 2009, p. 04)

Schedule caste: Caste system has remained part of Hindu society. Generally, they are divided in many categories according to their believe system and work, remained part of subcontinent since ancient era. In the Hindu society there is an existence of caste system. There are many different castes lives in Hindu society. Some population of lower caste in Hindu society reside in Pakistan.

Profession: Occupation and profession are used exchangeable. Daily work for the livelihood is called profession. Profession can refer with different profession as teachers and doctors.

1.4 Operationalization

Operationalization is the measuring concepts in which researcher research objects, variables and indicators examined through practical work of data collection in this research such as

analyzed water sanitation consumption and its health consequences. Community cultural practice, beliefs, myths, and social and economic situation of community members.

Water: In this research water is major including sanitation water is necessary for the healthy life without water human cannot live. Researcher has discussed water quality of water availability and impacts of impure water on the community.

Sanitation: that is drainage system of community for the flow of waste water. Hygiene: it is cleanliness from harmful bacteria's and microbials. Because these are cause of illness.

Disease: it is condition in which human do not feel well.

Health: that is wellbeing situation in which people do not afflict any sickness. Sewerage disposal: that is infrastructure of urban area these drainage flow of waste water. Myth: that is oral narrative and story about any origin and ethic of society.

Perception: it is general worldview and understanding of public.

Social: that is companionship and cooperation which is based on the interaction among individuals and groups.

Economics: system of goods, services, distribution, and consumption is called economics. Management of household chores and purchasing necessary items is also economics.

Schedule caste: that is caste system which prevail in south Asia in Hinduism. Hindu society is divided in three tiers.

Profession: that is any work skill and job which is identified by its profession.

1.5 Hypothesis

Due to impure water, improper sanitation and unhygienic conditions people get diseases. The community belongs to lower caste system, there is scarcity of pure drinking water, sanitary practices or adverse, so that they are affecting from different diseases. Financially they are vulnerable, lack of education and improper awareness is impediment for the change of living style of the community.

1.6 Objectives of the Research

As the issue of water and sanitation is a global problem, so it is important to address the issue. In this regards the research aims to accomplish following objectives which can help to solve the issue under consideration at local, provincial, and federal levels:

- 1) To analyze water, sanitary and hygienic conditions in the community.
- 2) To document and analyze the causes unleashing the diseases in the community.
- 3) To examine the impacts of those diseases on socio-economic life of native people of the community.
- 4) To contemplate and substantiation the perception of the native people of the community towards diseases.

1.7 Research Questions

- 1) To analyze water, sanitary and hygienic conditions in the community.
 - How much community have accessibility of pure drinking water?
 - What are the sources of water in the community?
 - What is the quality of water which the community utilize?
 - Do you know about hygienic practices of sanitation?
 - Is there are myths related to water in the community?
- 2) To document and analyze the causes unleashing the diseases in the community.
 - Have you afflicted to water borne diseases and unsafe sanitation?
 - What are the conditions of water pipelines in the community?
 - What are the consequences of water and sanitation for the community?
 - Which type of diseases borne due to impure water and unhygienic conditions?
 - What is the main profession of the community?
- 3) To examine the impacts of those diseases on socio-economic life of native people of the community.
 - What are the main diseases which affects the community?
 - What are the socio-economic and physical conditions of the community?
 - What is the composition of family and marriage patterns in the community?

- What are the main sources of income in the community?
 - What is the caste and class system in the community?
- 4) To contemplate and substantiation the perception of the native people of the community towards diseases.
- How do you perceive diseases?
 - What is mythological cultural and religious treatment perception in the community?
 - What is the perception of the community towards male and female gender?
 - What are the hygiene and disease narratives of treatment in the community?
 - What is the socio-environmental perception of the community towards hygiene?

1.8 Significance of the Study

The current study is significant with respect to applied and academic point of view. It will be a positive contribution for academics and existing number of anthropological literatures on the issue impure water and sanitation. In addition, with applied aspect, this research would be beneficial for different researchers, who want get knowledge for water and unhygienic health related issues of Pakistan. The present research work can be implemented by organizations which are willing to introduce latest interventions related to sanitary and water in specific areas of Pakistan. Thus, I have chosen that topic because it will help me to collect information about impact of impure water and sanitation on health of human. It will be right to say that good water and sanitary facilitate human in better conditions of health. Most importantly, my work contributes bundle of knowledge about many things, how unhygienic water and improper sanitation activities causes illness. The selected locale is Oad community of city Moro. The residence of this selected area is not fully aware of the effects of drinking impure water, in other words they are somehow illiterate. The research has been based on field data and different perceptions that brought empirical analysis of the problems, that analysis can help many other communities to save their selves from the severity of sanitary and water. Hence, the conducted research and data can be used by some other researchers for further and future analysis on the issue.

1.9 Rational for the research topic and research site

The topic of this research is water and sanitary diseases influencing on the socio-economic conditions of Oad community. The main motive behind to select this topic is that the researcher wants to know about the diseases which are water borne and their impacts on the lives of the human beings. This research was conducted in Oad community of District Naushahro Feroze, city Moro. The main reason to select this research site is to document the existing issues related to sanitation, water, and hygiene. Water borne issues are not new there but highlighted now days on the local media, so researcher pays his attention to that community and found out the diseases and their impacts on the local people.

Chapter 2

Review of Literature

Literature is a main fount to collect about the research topic and easy for the researcher to understand the topic. Also helps researchers in their respective research study. Many articles, books, research journals, reviews, and reports by different organizations succor the researcher for the collection of data. I have collected literature from many sources like books, articles, reports by different organizations and from Jstor website.

2.1 Sanitation

The term sanitation however covers the purity, hygiene, proper collection, and environmental disposal of liquid and solid residues. (Unicef, 2006).

According to the national sanitation policy act 2006, the term sanitation includes the safety, health, proper storage, and environmental treatment of solid and liquid waste. Improper storage of liquid and solid waste are the major proponents of diarrhea, malaria, dengue, and cholera etc.

Safe sanitation systems are fundamental to protect public health. WHO are leading efforts to monitor the global, the burden of sanitation related disease and access to safely manage sanitation and wastewater treatment and factors that enable or hinder progress under the sustainable development agenda. (Anderson, jamie, 2013).

According to Jamie, Good sanitation systems are important for the safety of public health. WHO are leading efforts to track environmental health, the burden of sanitation related diseases and access to healthy sanitation and wastewater treatment, as well as factors that make or impede progress on the sustainable development schedule?

Contaminated water and inadequate sanitation are related to the spread of diseases such as cholera, diarrhea, dysentery, hepatitis A, typhoid and polio. Absent, insufficient or inadequately controlled water and sanitation systems subject people to preventable health hazards. This is especially the case in health care facilities where both patients and workers are at additional risk of infection and illness where there is a shortage of water, sanitation and hygiene resources. Globally, 15% of patients experience infection during hospital stays, with a far higher percentage in low-income countries. (M, Ali, 2019).

A report from WHO 2019, The transmission of diseases like cholera, diarrhea, dysentery, Hepatitis A, typhoid, and polio include contaminated water and poor sanitation. Inadequate water and wastewater systems are not being adequately regulated or managed poorly subject residents to preventable health hazards. This is especially the condition in healthcare institutions in which patients and workers, in the absence of water, sanitation and hygiene facilities, are at extra risk of infection and disease. Overall, 15% of people experience an illness after a hospital visit, far higher in countries with a lower wage.

2.2 Health and Sanitation

Health is a condition of mental, physical, and social well-being and not just the absence of sickness or illness. (Who, 1948).

According to Daniel Callahan in his article, named as ‘interpretation of word health’, which was published by WHO in 1973, in this article he done a critique on the people who sees health in a negative perspective but according to him health is the name of the truancy of ailment and wellness by cognition, physical, psychological, and social factors. All the human being uses the psychological or emotional state, and it is the concept that human in many societies uses their senses and this is the identification of wellbeing. His argument was justified by Who, and now days this is considered the official definition of health by Who.

A particular challenge in the prediction of health risks from sanitation improvements is the complex and interconnected pathways from excreta to human exposure in poor

sanitation urban environments. While investments in urban sanitation have tradition focused on centralized wastewater treatment plants at the city's periphery. It is now evident that a significant proportion of fecal waste does not reach treatment and is released to the environment at various points along the sanitation service chain (contaminated conveyance, treatment, and disposal from defecation to disposal). (Peterson, Juliet willetts & Susan, 2018, p. 1).

According to Juliet Willetts and Susan Peterson, there are complex and interconnected pathways to human exposure from excreta to poor health environments are a particular challenge when predicting the risks to health from sanitation improvements. While urban sanitation investments traditionally focus on centralized wastewater treatment facilities at the periphery of cities. A significant proportion of fecal waste is now obviously not treated and disposed of at various points throughout the sanitation service chain.

2.3 Health, Water, and Sanitation

The health risks associated with poor water, sanitation and hygiene are complex because exposures to fecal contamination occur both inside and outside the household. While numerous studies have linked poor water, sanitation, and hygiene with increased diarrheal diseases. Water, sanitation, and hygiene interventions had mixed effects on health. (Ali. m, 2018).

According to M. Ali, Health hazard are mostly associated with water, sanitation, and hygiene, because exposure to fecal contamination occurs both indoors and outdoors. However, many studies add to poor water, sanitation and hygiene interventions had a dramatic effect on health. Mostly diarrheal diseases caused because of the impure water, in hygienic conditions and poor sanitation. It is the necessary for the prevention of diseases which are water born and created from sanitation. Proper drinking water and clean environment should appropriate for that hazard.

For good health care, it is important to maintain clean and disposal human waste (feces and urine). Unfortunately, our feces and our urine may pollute the environment and cause serious health problems, such as diarrhea, worms, cholera, and bladder infections, if they are not treated safely. (Watkins, Kevin, 2006).

According to UNDP 2006 report, proper management of safe drinking water is very significant for the healthy lives of human beings. Sanitation is another major component of safe health and better environment of surrounding areas. Both water and sanitation produce a lot of diseases and hap hazard situation for health like diarrhea, cholera, bladder infections and worms. These are anti sustainable environment, human life, and health issues.

The health of the individual and sanitation are closely linked. Inadequate handling or processing may contribute to the transmission and spread of diseases caused by excreta. 5, 7% of all epidemics are caused by polluted water and in a sufficient condition. Kids, in fact, are vulnerable to illness. (Who, 2020).

According to world health organization, the health of the people is directly link with sanitary conditions like if we have good sanitary condition than our health is also good. In hygienic conditions and impure water is the cause of 5 to 7 % diseases. Mostly children become affected from such diseases, and it is all because of the human excreta. These are risky and life threatening. Many people lost their lives yearly all around the globe.

The health of the urban poor is particularly threatened by biomedical waste. Garbage dumps, such as mosquitoes that carry dengue, and malaria, are breeding grounds for rodents and insects. (Wael, Al-Delaimy, 2020).

According to Wael, Al-Delaimy, slums areas of cities are mostly venerable due to drinking water and sewerage system. Bio excretion and water is the main producer of mosquitoes, insects and other creature which are harmful for the health of population of relevant area. Due to unhygienic surrounding area people may involve in various infectious diseases.

Water safety and quality are fundamental to human development and wellbeing, providing access to safe. Water is the one of the most effective instruments in promoting health and reducing poverty. (Who, 2012).

According to (water safety and hygiene 2012) report that, Water protection and efficiency are important to human health and well-being, maintaining access to protection. Water is one of the most important tools for improving wellbeing and eliminating poverty.

An individual who does not have access to improved drinking water, such as from a secure borehole well or municipal piped supply, is forced to rely on surface water, unregulated and potentially polluted wells, or vendors selling water with unknown provenance and quality. For many people, water sources are generally far from their homes, and it is usually up to women and girls to spend a lot of their time and energy collecting water, a job that sometimes exposes them to attacks by men and even wild animals. (Who, 2012).

According to a report on water safety and hygiene 2012, persons without access to improved drinking water for example, from safe borehole wells or public piped supplies are required to rely on outlets such as surface water, unregulated and potentially polluted wells, or on providers of unverifiable supply and quality water. For many people, water sources are generally far from their homes, and it is usually up to women and girls to spend a lot of their time and energy collecting water, a job that sometimes exposes them to attacks by men and even wild animals.

Many children in low-income families without access to WASH are unable to attend school because they are sick with diarrhea. In the case of girls in rural areas, because they may spend significant portions of their day fetching water for their kin. For children in kindergarten, the condition could be no easier than at home: about a third of schools around the world lack clean water and proper hygiene, leaving children dehydrated and unable to concentrate, and requiring students to use insufficient latrines or go to the bathroom outside on school grounds. (Unicef, 2019).

2019 report shows by UNICEF that, School and childhood need to go hand in hand but, as a result of the illness of a diarrheal, many children in low-income households without access to WASH, or especially for girls in rural areas, they need to spend many days catching water for their families. The condition will not be easier for children in school than they are at home: about one-third worldwide may not have clean water and proper sanitation, dehydrated children can work, and pupils must use insufficient latrines and go to the toilet on school sites outside.

2.4 Water sanitation and diseases

Inadequate treatment and waste disposal is conducive to disease propagation. Dysentery (amoebic and bacillary), typhoid fever, cholera, pestilence edema, typhoid and contagious hepatitis are the most important diseases in this category. The ingestion of foods or water that has become contaminated with infected human or animal waste, or insect vectors whose main host are rodents and Vermin, can spread these diseases. (Melake, Demena, 2003).

According to the author, the non-appropriate disposal of waste and mixing of these wastes with water and daily food causes diseases like typhoid, cholera etc. Because of these little mistakes the society suffers to a great extent, the life is destroyed; skin and many other diseases are caused by these. We can avoid from this life-threatening disease by making basic amendments to our life.

Unhealthy, often crowded, dangerous environment entails severe health hazards, usually associated with poor sanitation, lack of waste disposal facilities and poor quality of the water. (Who, 2008).

According to a report of WHO 2008, health problems are caused in unhealthy and aggregated atmosphere due to the worst sanitation, lack of cleanliness, deficiency of deposable facilities and the impurity of water. Because of the scarcity of this basic facilities in the society the environment is polluted which often proves fatal for the human beings.

Poor health and water quality play an important role in the spread of infectious conditions (UNISEF 2012) estimates that approximately four billion cases of diarrhea are causing a total of 2.2 million deaths annually worldwide, most of them below 5 years old and indicate a significant link between the quality and mortality rate among children. (Cumming, Joanna Esteves Mills & Oliver;, 2016)

According to authors, the infectious diseases are mostly spread because of poor health and lack of water quality. The harm caused to the society due these basic requirements is unestimable. Because of these poor health and impure water quality approximately 4 billion cases of diarrhea are causing a total of 2.2 million deaths per year worldwide and most the patients who are affected are of 5 years old.

A significant amount of disease could be prevented through access to safe water supply, adequate sanitation services and better hygiene practices. Diarrheal disease alone amounts to estimated 36% the total DALY (Disability-Adjusted Life Year) global burden of disease and is responsible for the death of 1.5 million people every year. (Marcelo Sánchez Sorondo, 2012).

According to Marcelo Sánchez Sorondo, a large amount of illness may be avoided by access to clean drinking sources, sufficient sanitation facilities and improved hygiene standards. Diarrheal disease alone is estimated to be 36% of the overall DALY (Disability-Adjusted Life Year) global disease burden and is responsible for the deaths of 1.5 million people per year.

842000 or 58% of the people from all over the world died per year just because of unsafe water supply, sanitation, and hygiene. It includes 361000 deaths of children under age 5 years. Mostly deaths happen in the low-income countries. (Robbert, 2014).

According to Robert, 842,000 or 58% of people from all over the world die every year because of inadequate water sources, sanitation, and hygiene. This causes 361000 deaths of children fewer than 5 years of age. Most of the deaths occur in low-income countries.

In certain parts of the world, people are ignorant of the importance of proper hygiene habits in combating disease transmission. And while people are aware of proper health practices, they frequently neglect the soap, clean water, and cleaning facilities they need to make meaningful improvements to protect themselves and their communities. (Unicef, 2019).

According to 2019 UNICEF report, there is little or no understanding in certain parts of the world of proper hygiene practices and their role in reducing the spread of disease. And where people are aware of proper grooming habits, they frequently neglect the soap, clean water, and cleaning facilities they need to make meaningful improvements that will protect themselves and their families.

When water arrives from improved and more available channels, people expend less time and money gathering it manually. It will also enhance personal safety by reducing the need for lengthy or dangerous water collecting journeys. Better supplies of water

often contribute to reduced hospital expenses and individuals are less likely to become sick, have treatment bills and are more socially efficient. Children who face a risk of water-related illnesses can gain access to improved water supplies and therefore better attendance at school with positive longer-term impacts on their lives. (Unicef, 2019).

As per report of UNICEF 2019, People expend less time and money manually gathering water because it arrives from improved and more available streams, enabling them to be more efficient in other ways. It will also enhance personal safety by reducing the need to drive long distances or take chances to gather water. Better water supplies also mean reduced health-care rates because people are less likely to become sick and suffer medical bills, and they are better able to be socially active. Access to improved supplies of water, especially for children at risk of water-related diseases, will result in improved health and thereby improved school attendance, with positive long-term implications for their lives.

Chapter 3

Research Methodology

Research methodology guides the researcher from the very first step to the final step. A methodology includes all the tools and techniques used during research. It gives a framework to compliment the research process.

In this research qualitative data collection tools are employed. Pertaining to methodological approach, the data collection techniques employed were, focus group discussion, in-depth interviews, and participant observation.

In the initial days, the researcher was worried and hesitated because the respondents were not ready to give the relevant information about the topic. Moreover, the researcher took the help of key informants and told the respondents that he is a student, and this research will help him to complete his degree. Researcher spent more time with respondents and convinced to the inhabitants that the researcher does not belong to any force and gets their trust through the informal conversation.

It took twenty days to take people of that area in confidence, after that, respondents felt comfortable with researcher's presence, and happily participated in the research. Researcher conducted interviews from local people of community. People did not agree at the first instance to let him conduct their interviews, but later after knowing about him and getting acquaintance among the populace they allowed him to take interviews.

3.1 Key informants

A key informant is a person who belongs to that community where the researcher conducts his field work, and it is also the main source of collecting data about the field. This technique is the source to introduce oneself with the community. Through the key informant researcher interacts with the community and understands what sort of data researcher wants to collect.

The researcher has selected one key informant on the bases like the one who has good knowledge of the proposed research problem and the community members. Key informant must be a social person, hold a good character in the community, knowledgeable and trustworthy person who connects a researcher to the respondents and provide reliable information related to the research purpose.

In the importance of key informants, the researcher has selected key informant; Mr. Rajesh Kumar who helped the researcher to meet with the most relevant persons to the topic who have in-depth knowledge against the proposed research study.

Mr. Rajesh Kumar, he is a social and knowledgeable person, and everyone knows him very well in community, he introduced researcher with local people. It is with the help of Mr. Rajesh Kumar that enabled him to get information from people and got to know about the whereabouts of his target population.

3.2 Participant Observation

Participant observation is the foundation of cultural anthropology. It constitutes ethnographic field work and involves the researcher assimilating within the community as a member of the community to add an observation and subsequent recording of information relating to the way of life and the cultural resistance with the field. Participant observation is a qualitative data collection technique which helps the researcher to collect data via observing the little and minor occurrences happening around him while doing field work. It helps the researcher to include those aspects of their lives which are not possible via only asking questions.

In anthropological research participant observation is considered most important technique for data collection. Participant observation is a unique tool in anthropological research, to live with them for the primary data collection. To understand the culture of the natives, it is necessary to live with them at and the participant in daily life activities.

I participant in the daily life activities to collect primary information, through live participating in the community, I got different native knowledge regarding their daily life and research topic. Using the tool of the participant observation, I got information by participating, during discussion, conversation and taking interviews.

I applied this method in getting every kind of knowledge regarding the topic while in conducting interviews, FGDs, conversation and in present situation of the community.

By using this technique, researcher started sitting at common places; Otak and in gatherings with native people, while adopting the culture of natives was difficult for the researcher, because the researcher was not belonging to the same community and the same culture.

3.3 Sampling

From a huge population, it is necessary to do sampling, through sampling researcher can know the intensive deep information about a particular community. It is a small representation of the whole community. In sampling limited number of populations is selected for the study out of whole community. This is a key technique in the data collection methods because researcher observes relatively small portion of the very large population instead of wasting time.

Researcher will make sure to follow both styles of techniques, probability sampling and non-probability sampling. Sampling helps to a research to cover selected population in each time. There were two types of sampling used in this research, i.e., purposive sampling and accidental sampling.

3.4 Purposive sampling

Purposive sampling starts with a purpose in mind and the sample is thus selected to include people of interest and exclude those who do not suit the purpose.

The researcher chooses the sample based on who he thinks would be appropriate for the study. This was used primarily when there was huge population and selected those respondents in the sampling which health related problem.

This helped me in research during the conducting case studies, I chose this type of sampling because in whole community, it was difficult to collect information from house to house so key informant helped me in selecting the spectrum of sampling which helped in the knowing diseases specially.

In purposive sampling, the researcher has purposively selected the respondents who had best for his research topic Water and Sanitary Diseases Influencing Socio-Economic Conditions of the Oad community and who had prior experience on the topic. The respondents selected through purposive sampling were native people.

3.5 Accidental Sampling

Accidental sampling, also known as convenience or opportunity sampling is a form of non-probability sampling that involves taking a population sample that is close at hand rather than

carefully selected and collected. For example, a person who obtains opinions on a political poll in a shopping mall by randomly selecting passers-by uses a form of accidental sampling.

The researcher used this technique for the collection of data in an accidental time means during any sudden movement.

This sampling method was used in this research study, through using this method data was collected in sudden movement and not from any conformed respondent. During the walking through the community streets.

3.6 Tools for Data Collection

The researcher has collected the data using various techniques which includes focus group discussion, in-depth interviews, field observations, and participant listening. Using all these techniques the question pertaining to the research topic were asked in native language, whereas in some cases the occurrences were being just jotted down. The data was recorded using both recording via recorders and writing down.

3.7 Focus Group Discussion

In the focus group discussion researcher took multiple views on a proposed problem. In each focus group discussion six to ten respondents participated. The researcher collected the multiple views on research objectives. They shared their views about the condition of water, sanitation, and diseases in the community. This technique has its own strengths and weaknesses, it has been employed to make a contention on a given topics from multiple angles. It allowed the researcher to collect variety of responses, which helped a lot to enrich the data. Using this technique researcher had done group discussion, community were being gathered after dinner at their home, the researcher facilitated the discussion from a simple topic pertaining to their lifestyle and later probed into the details, with the passage of time all members of the Oad community took part in it and contributed to the discussion via narrating their stories, and by supporting the arguments of their fellows. The researcher has done with five FGDs from the community.

Some of topics main points which were debated during the field are given below:

1. Water, sanitary and hygiene condition in community and related myths.
 - Water taste, color, and purity
 - Sanitary and hygiene conditions in the streets, houses, and all over the community.
 - Source and access of water which is in use.
2. Water borne diseases and impacts on the socio-economic lives.
 - Name of diseases
 - Treatment method
 - Diseases impacts on the lives.
3. Profession of the community in the relation of health problems
 - Original profession of the community
 - Now days profession of the community
 - Health link between both professions.

3.8 In-Depth Interviews

Interviewing is a commonly used method of collecting information from people. The researcher conducted in-depth interviews from the respondents who have much knowledge about the research proposed problem. An interview is a verbal interchange and could be conducted through different techniques like, face to face and through the telephone, in which an interviewer tries to collect information and opinions from other persons.

The researcher has conducted five in-depth interviews from the native people, whom researcher had taken appointment, interviews were taken by those people who were knowledge about the topic. This technique in qualitative methodology is most often employed to investigate a given issue in detail, it helps the researcher to probe deeper and allows respondent to narrate their life stories. During the research, the researcher has taken interviews from community members, who narrated their point of views in detail. It helped the respondents to talk on those issues which they were not discussed and highlight in their daily life.

In the starting, researcher had rapport built through the key informant and told him to give me your precious time, researcher wants to conduct interviews from the community, and then got appointment, researcher called by them for interviews and went the, OTAK means guest house and shops of the community members and then researcher started asking question about the

topic; water and sanitary diseases influencing on the socio-economic conditions of Oad community and they shared their views about water, sanitation diseases and socio-economic factors, same as all interviews were conducted in-depth.

3.9 Case study

Case study is another method, which helped in collecting in depth and detailed data about a certain individual, action on phenomena. A case study is comprehensive presentation of ethnographic presentation of ethnographic data allied to some aspects of events, which a researcher selects to arrive at some conclusion. I have conducted case studies regarding health, sanitation, and poverty, through which I covered complete aspect of this research study. In cases a saw various grounds of diseases, which provide me sense of the birth of the diseases.

3.10 Field Notes

Taking fields notes is an important method to document the data; it requires the researcher to collect every piece of information observed during the research work. The writing of field notes gives an opportunity to recall the events and mode of discussion made with the respondents and with other community members. So, the researcher has made detailed notes of everything, he has observed during the field work, which helped in analyzing the results.

3.11 Audio Recordings

Making an audio record of the interviews and group discussions helps the researcher to recall it at any point of time, without losing even a bit of information. During the field work the researcher has collected all the information via recording it on electronic medium, which was later transcribed to analyze the data.

3.12 Photography

The researchers use photography during the field research as a non-verbal mechanical aid, to get and capture informal facts about the people and the locality, this also as a reminder and evidence in the form of picture. During the field work the researcher has taken several photographs of the field including the respondents who were willing to give a photograph.

3.13 Daily Diary

Maintaining daily diary is another important part of researcher's field work, it helps him to record whatever he is feeling about the field and his respondents; it also allows recording the instances of his personal life. As later in the analysis portion these details helps the researcher to overcome his biases. The researcher used daily diary, in the daily diary he wrote every inch of information regarding his personal life, apart from his research work.

3.14 Mapping

Map making technique is very helpful in knowing the internal lay out of the locale. Map making is a sketch of locale where research has been done, through sketching map it clarifies about housing pattern, number of houses, hosteling, temples and drainage lines. I draw a sketch map of the Oad community, which is shown in Figure 1.

3.15 Secondary Sources

Collecting and studying information about the field and topic is as important as collecting the primary data. It allows the researcher to understand the topic and the locale in detail. Along with this it also draws a framework of his analysis. So before and during the field work the researcher reviewed various documents like newspapers, and journal articles pertaining to the researcher topic under consideration.

3.16 Research site

Before the studying any socio-cultural plight of any area it is necessary to know about the social, cultural, political, economics, religion, environment, and demography of that area. In this chapter researcher has explained historical background, geography, religion, ethnicity and culture, languages, population, education, and other setups of district Naushahro Feroze.

3.17 Locale

The research has been conducted in the Sindh province, city Moro, Oad colony, which is present in the north side of Moro city, taluka Moro, district Naushahro Feroze.

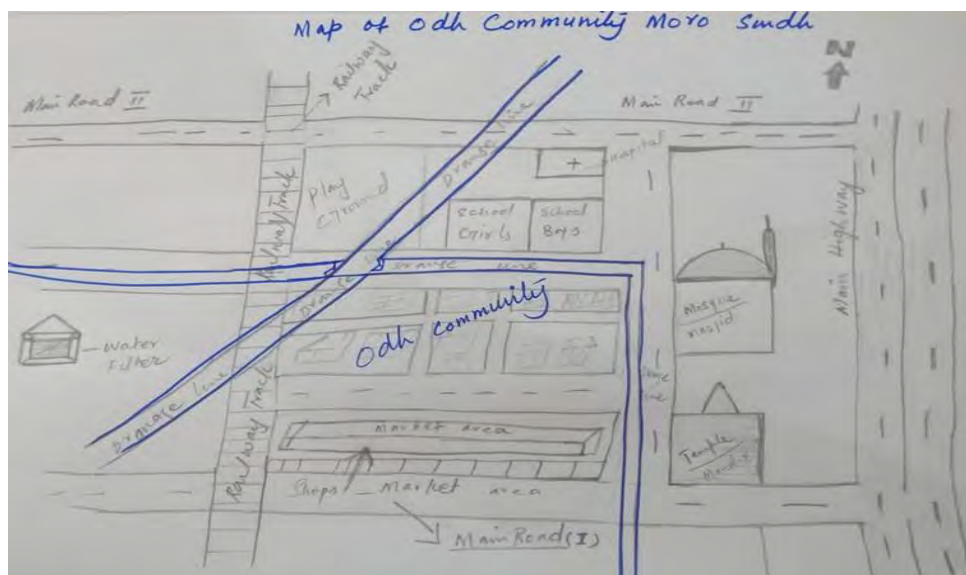


Figure 1 Map of Oad Community

3.18 Historical background of Naushahro Feroze

This region has traditionally been ruled by various dynasties, including the Soomras (1024-1351), the Summas (1335-1520), the Arghuns (1520-1650), the Kalhoras (1657-1783) and the Talpurs (1783-1843). The Kalhoras were defeated by the Talpur dynasty in 1783 A.D, and the Talpur Mirs split Sindh, for administrative purposes, into seven parts. General Charles Napier, a commander in the British Army, defeated the Talpur dynasty when Britain invaded the subcontinent, and captured Sindh in 1843. As the first Governor General of Sindh, he was named. The province was divided into various administrative sections and allocated to the British government to collect taxes from ZAMINDARS means landlords. Later, these areas

were established as urban centers by the rulers. People have also moved and begun to live here from other districts and provinces. These tiny, developed areas were called 'Talukas' by the British Empire. They have created a network across the province of highways, schools, dispensaries, and many other civic amenities. This district remained ignored by the authorities after Pakistan's independence in 1947. But this district has dramatically changed the incremental phase of growth. (Raheema Siyal, 2006)

3.19 Geography

This district is bounded by the Khairpur district to the east, the Larkana district to the north, the Dadu district to the west, and the Jamshoro and Shaheed Benazirabad districts to the south. In 67° 48' 2" to 68° 26' 51" east longitudes and 26° 32' 45" to 27° 13' 36" north latitudes. The Indus Rivers flow along the district's western frontier. In both winters and summers, the climate of the district is extreme. The average maximum temperature during summers is 44 °C and the minimum temperature during winters is 25 °C and the average maximum temperature is 24 °C and the minimum is 5 °C. The total rainfall is a high of 42 mm in the months of July and August. This district's land structure consists of plain fertile land ideal for cultivation. The entire district has irrigation facilities, resulting in grasslands and irrigated crop lands, because of a well-organized canal system and proximity to the Indus River. (Raheema Siyal, 2006)

3.20 Languages

There are predominantly Sindhi-speaking people in this district, but there is also a large Urdu-speaking population in this district, and Seraiki, Punjabi and Balochi are also spoken by others.

3.21 Religions

In this district, Islam is the dominant religion, as 96.72% of the population is Muslim, followed by 2.89% of the Hindu community. (USAID, 2014).

3.22 Political parties

The main political party in this district is the Pakistan People's Party Parliamentarians (PPPP). But in this district, the Jatoi family has considerable political influence as well. The PPPP is doing its hardest to make it into the politics of the district but has yet to succeed.

3.23 Administration

Naushahro Feroze district has its district headquarters in Naushahro Feroze city. There are five talukas called in this district: Naushahro Feroze, Bhiria, Digri, Moro, Kandiaro and Mehrabpur. There are 51 union councils and 233 (revenue village) mouzas. Of the total mouzas, 194 are rural mouzas, 3 are urban, 15 are partially urban, 7 are forests and 3 are mouzas that are unpopulated. (USAID, 2014).

3.24 Communication Networks

The road network is considered a tool for social change and economic growth. Not only does an effective road network establish a fast and efficient transport system, but it also opens new areas that have so far remained closed. It facilitates social integration between the rural and urban sectors and contributes significantly to providing access to basic needs, such as schooling, health facilities, etc. It puts rural areas in close communication with the urban segment of society and provides a greater understanding of social progress and political consciousness. The district of Naushahro Feroze covers an area of 2,945 square kilometers, but there are only 472 kilometers of high-quality highways, which are grossly insufficient for the region and the population². The National Highway (N5) links Naushahro Feroze with Hyderabad and Karachi (Sindh province's capital). The district headquarters of Naushahro Feroze are linked by metal roads to their taluka headquarters in Moro and Kandiaro. (USAID, 2014).

3.25 Irrigation

The district has a canal irrigation system that is well developed. The Rohri Canal crosses the middle of this district and irrigates the district's central and eastern parts. The river Indus flows along the district's western boundary. The bulk of the mouzas in this district are irrigated by canals, as seen in the table below. Irrigation canals are used to irrigate 201 (91%) of the 221 rural mouzas. Tube wells irrigate 166 (75%) of the land, while rivers irrigate 52 (24%) of the land.

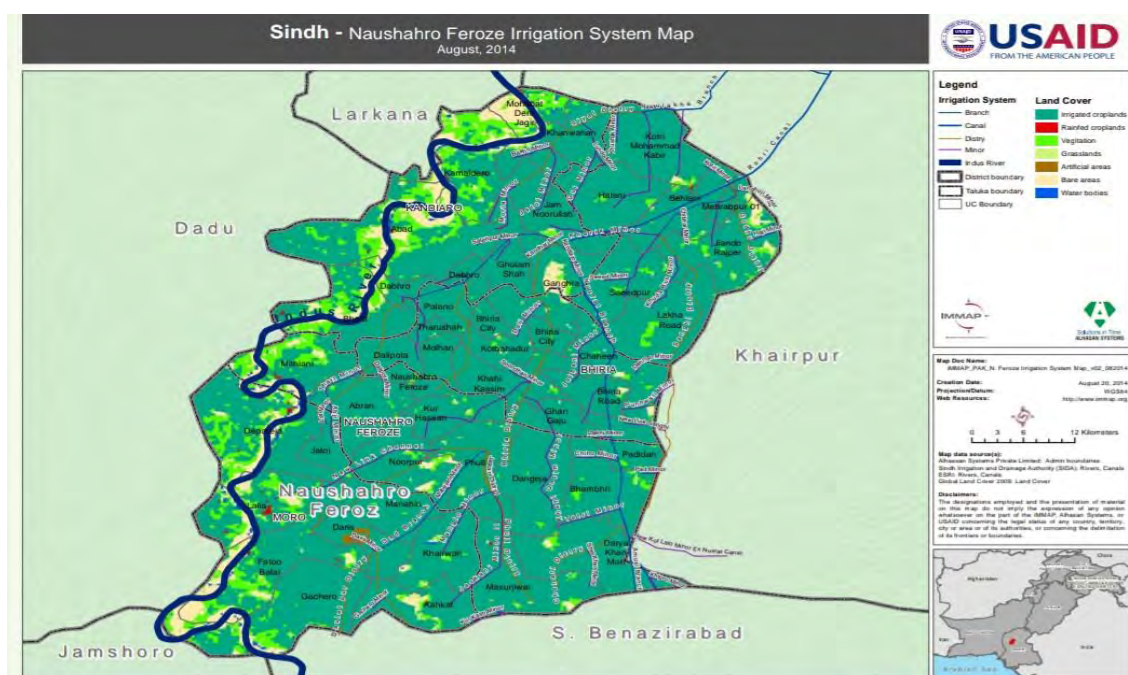
Administrative units	Rural popularized mouzas		Canals	River	Tube Well	Arid Barani	Flooding
	Number	Percent					
Naushahro Feroze District	221	100	201	52	166	2	10
Naushahro Feroze Taluka	58	100	56	17	41	-	-
Bhiria Taluka	31	100	31	-	26	-	-
Moro Taluka	49	100	38	20	43	2	4
Kandiario Taluka	49	100	42	15	46	-	6
MehrabPur Taluka	34	100	34	-	10	-	-

Table 1Irrigation system by Mouzas

In the 2008-09 growing season, 97 percent of the overall sown area was irrigated, with 100 percent of the irrigated area being irrigated by canals and tube wells. There is a 2% decline in overall sown area and a 3% decrease in canal irrigated area from 2008-09 to 2009-10. Information on irrigation in the district is shown in the table below.

Irrigation type	2008-09	2009-10
Canal	145,198	140,893
Tube well	13,721	13,629
Total Irrigated Area	158,919	154,522
Un-Irrigated	5,521	6,345
Total Sown Area	164,440	160,867

Table 2Irrigation by type



Source: Google maps Figure 2Naushahro Feroze Irrigation map

3.26 Livelihood source

Agriculture is the main source of employment for the rural population of the district, and people are engaged in various other economic activities in the urban areas of the district, such as commerce, services, private industry, government, and private jobs. The principal trading center of this district is Naushahro Feroze city. Most of the male population is related to farming. Services, personal business, and labour sectors are the most recorded sources of employment for the male population in some categories. Since the district of Naushahro Feroze is a rural district, where 82% of the population lives in rural areas, the livelihoods of the resident

population are less diversified and as mentioned above the agricultural sector is the dominant employer for the population of that district.

3.27 Agriculture

The agricultural industry plays an important role in Pakistan's overall economic output. This sector currently provides 45 percent of the labour force in Pakistan with job opportunities. This sector provides 60% of the population in rural areas with a livelihood. Agriculture contributes 21% to Pakistan's Gross Domestic Product (GDP). Naushahro Feroze is a major contributor to Sindh's agricultural sector since its climate is ideal to produce various food products, including Kharif maize, rice, sugar cane, cotton and rabi wheat crops. In addition, fruit orchards in this district are plentiful.

3.28 Industry

Industries are largely concerned with agriculture in Naushahro Feroze. The sugar mills are the most popular among these, as sugar cane is grown in this district on a large scale. In the 2000-01 manufacturing industry census, 14 industries with a total asset value of 794 billion rupees were registered in this district that year. In 2000-01, these industries registered a daily employment of 1,217 people.

3.29 Ethnic groups

Naushahro Feroze has a traditional Sindhi culture which is rich. Women usually wear Shalwar Qameez but quite often dress in the traditional attire, Ghaghra or Parro as well. Women wear bangles historically. Men typically wear a Shalwar Qameez and a traditional Sindhi style hat, characterized by wider bottoms. The mostly population of the district Naushahro Feroze belongs to sindhi ethnicity while others are belonging to many others like Baloch, Saraiki, Punjabi and Muhajirs. There are more than 1000 castes currently living in the district Naushahro Feroze. The major and old castes of district Naushahro Feroze are Shah, Qazi, Soomro, Chandio, Jatoi, Mallah, Machi, Solangi, Ansari, Sehto, Mughal, Korejo, Bhurt,

Panhwar, Unnar, Magsi, Mastoi, Kalhoro, Abbasi, Bhatti, Burgri, Ghanghro, Tunio, Mashori, Qambrani, Memon, etc.

3.30 Education

The educational status in the Naushahro Feroze district is much higher. The average literacy rate (for the 10-year-old population and above) is 60%; it is 77% for males and 40% for females. The urban literacy rate is higher than the rural one, which is 77 percent (male: 87 percent and female: 66 percent) for the urban rural comparison; while the rural literacy rate is 56 percent (male: 75 percent and female: 35 percent). The adult literacy rate is 57 percent (for the 15-year-old population and above). In Naushahro Feroze, the primary level Gross Enrollment Rate (GER) is 79 percent (Male: 92 percent, Female: 66 percent), 98 percent in the urban population (Male: 98 percent, Female: 98 percent) and 75 percent in the rural community (Male: 90 percent, Female: 59 percent).

S. No	School Types	No. No Schools.
1	Number of Primary schools	2179
2	Numbers of middle schools	150
3	Number of secondary schools	169
4	Higher secondary/ collages	19
Total		2517

Table 3: Number of schools and colleges in District Naushahro Feroze.

3.31 Health

According to the Technical Resource Facility (TRF) Health Facility Evaluation 2012 (HFA), the total number of health facilities in the Naushahro Feroze district is 95. In the district, there are two Tehsil headquarters hospitals. These health facilities are suitable for just 34 percent of the district's total 2014 population. Next page table shows the detail of health facilities.

	Type	Number	Bed strength
1	Teaching hospitals	0	0
2	District head quarter hospital	1	105
3	Tehsil head quarter hospitals	2	50
4	Rural health centers	12	92
5	Basic health units	48	96
6	Govt; Rural dispensaries	30	-
7	MCH centers	1	-
8	Sub health centers	1	-
Total		95	343

Table 4 Number of health facilities by type

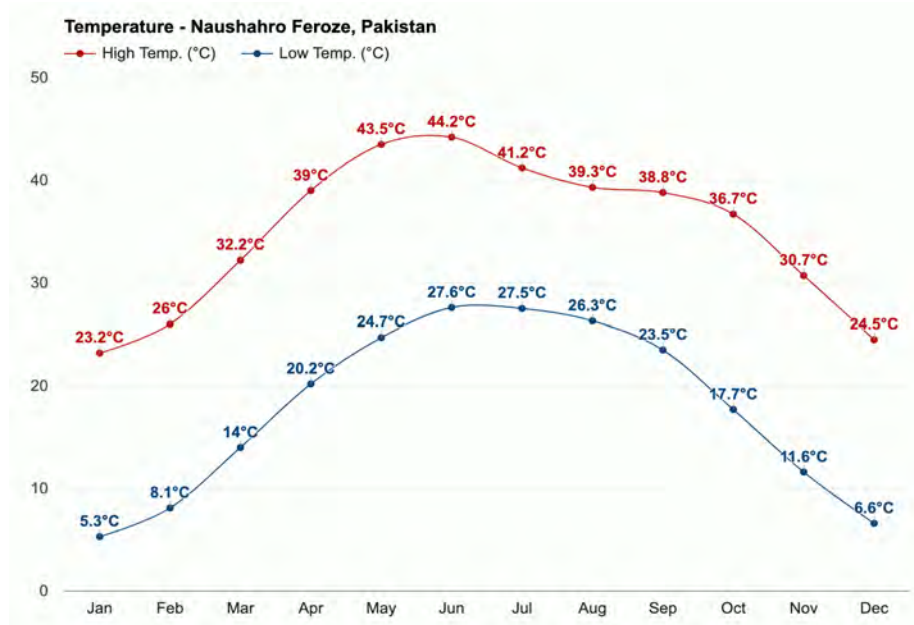
3.32 Immunization

Estimates of immunization availability are used to track immunization programs and to drive attempts to eradicate and reduce diseases. This metric tests the number of children 12-23 months of age that received all doses of the BCG vaccine, three doses of the polio & pentavalent vaccine and one dose of the measles vaccine in one year. Around 48 percent of pregnant women have received tetanus toxoid injections in the Naushahro Feroze district. This figure is 62 percent in urban areas and 37 per cent in rural areas. Record-based Naushahro Feroze district immunization data indicate that 34 percent of children aged 12-23 months received full immunization (Male 38 percent: Female 29 percent). This proportion is 47% in urban areas (35% for males: 57% for females) and 32% in rural areas (Male 39%, Female 40%).

3.33 Climate

The Naushahro Feroze district is located at an altitude of 38 m (26°50'0N 69°7'0E) (127 feet). Naushahro Feroze has a tropical and desert atmosphere with very hot summers and cool winters. There is very little rain, and usually from July to September during the monsoon season. Naushahro Feroze city is situated on the lower plain of Indus. In the summer, the annual high and minimum average temperature is 44°C and 24°C. In winter, mean average and

minimum temperatures are respectively 27°C and 6-11°C. The annual average pluviosity is 108.5 mm, and humidity varies from 30% to 50%.



Source: Google maps Figure 3Temperature map of Naushahro Feroze district

3.34 Seasons

Maximum Average

Minimum Average

Average Annual

Seasons	Maximum Average	Minimum Average
Winter	27	06-Nov
Summer	44	24
Average Annual	40	20

Table 5Temperature of Naushahro Feroze

3.35 Population

The total population of the Naushahro Feroze district is 1612373, according to the 2017 census. There are 832569 males in the total population, 779747 females and 57 transgender males. From 1998 to 2017, the overall annual growth rate is 2.09.

S. No	Urban	Rural	Total	
1	Population	1,232,571	379,802	1,612,373
2	Male	637,153	195,416	832,569
3	Female	595,399	184,348	779,747
4	Transgender	19	38	57
5	Household	212,073	63,620	275,693

Table 6 Population of district Naushahro Feroze

Chapter 4

Condition of Water, Sanitary and Hygiene

4.1 Water

Present condition of water in community is worst and cannot be explained in words. The water is not fit to use in any work. The water is mostly collected by hand pumps and water motors. The water completely changes its color and taste, it becomes yellowish in color with small visible particle of something and salty and harsh in taste.

The samples of water have been tested in “Office of The Assistant Agriculture Chemist Soil and Water Testing Laboratory N-Feroze” and evidence report received from laboratory is shown below:

OFFICE OF THE ASSISTANT AGRICULTURE CHEMIST SOIL AND WATER TESTING
LABORATORY N-FEROZE.

NAME... *Adil Mir KoraJe*..... MOBILE NO;... *0304-323007*..

VILLAGE *Bukhari pir Muhalla*..... DEH..... *Moro*..... NO. *209*..... *Moro*

TALUKA *Moro*..... DISTRICT..... *N-Feroze*.....

Sr.No:	Bore	Depth	E.C	T.S.S	pH	Remarks
<i>01</i>	<i>Hand pump</i>	<i>60</i>	<i>1.54</i>	<i>985</i>	<i>7.3</i>	<i>Sec. class</i>
<i>02</i>	<i>Motor</i>	<i>70</i>	<i>1.86</i>	<i>1190</i>	<i>7.3</i>	<i>Sec. class</i>
<i>03</i>	<i>Motor</i>	<i>70</i>	<i>1.82</i>	<i>1164</i>	<i>7.4</i>	<i>Sec. class</i>
<i>04</i>	<i>Motor</i>	<i>70</i>	<i>1.62</i>	<i>1036</i>	<i>7.4</i>	<i>Sec. class</i>

Ratio= 01-----to-----700 First class
=701-----to-----1200 Sec. class
=1201-> Unfit

Naushetro Feroze
Assistant Agriculture Chemist
Soil and Water testing Laboratory
Naushetro Feroze

Source: Office of the Assistant Agriculture Chemist Soil and Water Testing Laboratory N-Feroze. Figure 4 Water samples

The researcher takes 3 samples of water from target population while 1 sample of water from water filters plant. The sample number 2 has collected from water filters plant, it has second class quality and high rate of T.S.S (Total Suspended Solids) means the bacteria's which are present in the water are not easily filtered. This water filters plant is present in the main center of the community. But the quality to that water filters plant is worst.

Sample number 1= collected from target population

Sample number 2= collected from water filter plant

Sample number 3= collected from target population

Sample number 4= collected from target population

All the 4 samples of water collected by the researcher belongs to the second class of water means water is not on its best level for drink, it may cause different diseases.

After analyzing the above report, it is concluded that impurity of water is one of the basic reason due to which people face many problems and there occurred deaths in children of community. The people of the community have not any other source of water. The conditions of the water filter plants are worse than the condition of water present in the hand pumps and water motors.

According to report checked by an authentic doctor is shown that the quality of water as mentioned in the report is not well and causes different infectious diseases. When the T.S.S of water becomes high the water will lose all minerals and change its color and taste because when the water changes its color and taste the bacteria's which are present in the water change its shapes in toxic shape and directly attacks on the health of human beings as well animals. The people of community possess mostly deficiency of vitamin A, skin, cholera and diarrhea diseases. It is all because of use

of impure water. The main reason behind impureness of water is the mix up drainage and sewerage lines and most of the time the plastic disposals may cause in the impurity of water.

S.No	Name	Age	Gender	Occupation	Disease
1	Kialashkumar	14 years	M	Scrub collector	Vitamin A deficiency
2	Arjun kumar	28 years	M	Labor	Skin
3	Neraj	6 years	M (boy)	NA	Diarrhea
4	Kishoor	8 years	M (boy)	Scrub collector	Skin and Stomach
5	Dasoo mal	52 years	M	Labor	Intestine
6	Haresh	30 years	M	Shop keeper	Vitamin A deficiency
7	Ram Oad	24 years	M	NA	Vitamin A deficiency
8	Dinesh	18 years	M	Student	Skin, Cholera
9	Shankar	20 years	M	Worker	Abdominal pain
10	Jettu	9 years	M (boy)	NA	Diarrhea, Skin

Table 7 Respondents

4.1.1 Case study

Kishoor an 8-year-old garbage/scrub collector boy is suffering from stomach pain and skin disease. According to his mother, when he was 3 years old his father left away, and we did not take his problem in the serious manners because of my husband death trauma. The whole-body skin of Kishoor was damaged slowly by itching. Now he is suffering from skin disease as well as stomach pain and according to his family point of view it is all because of his profession, improper sanitation, improper hygiene, drinking and using impure water. Just because of Kishoor disease we migrated from our community and by the grace of god now he is recovering from his skin disease

4.2 Sources and Condition of water

There are so many sources of water, from where the Oad community members easily get water for different purposes. Some main sources of water and condition of water in the Oad community are mentioned and discussed as under.

4.2.1 Hand pump

We all know that in the village like communities the hand pump is present in the houses as well as in the center of the village / community and important because the members of that village / community easily access the water for their need. And in the Oad community same as, about 60% hand pumps were present in the community. According to the above-mentioned report from “office of the assistant agriculture chemist soil and water testing laboratory n-feroze”, (See figure 4), sample number 1 was collected from hand pump by the researcher and the condition of hand pump water in not good because it belong to second class category and not fit for drinking or use for any other purpose because that impure water causes many diseases and illness.

4.2.2 From Water Filter Plant

Now a day’s Water Filter Plants are present in every village / community, city because according to the report of (WHO 2018), “The issue of impure water is increasing day by day

and now the world arrived at the stage of impure water. The underdeveloped countries go to the mouth of death because they have not any access to drink pure water. About 73% of the water in the world is not fit to drink”. (Paul Farmer, 2018)

Researcher also get sample (sample number 2) from the Water Filter Plant for the satisfaction of himself but after when he gets report from the “Office of The Assistant Agriculture Chemist Soil and Water Testing Laboratory N-Feroze”, the researcher falls in amazed and was feeling sad for the unaware public of the Oad community. According to that report (See figure 4), the condition / quality of sample number 2 means that sample which the researcher gets from water filter plant also belonged to second class category and even it has high T.T.S (Total Suspended Solids) among all samples. The condition / quality of water filter plants water was worse than the condition of water present in the homes of the community and that condition of water causes many diseases and illness, according to a WHO report the impure water causes many diseases and illness and researcher also found water borne diseases from the community.

4.2.3 Water motors

Water motors are the need of everyone because it is the easy way to store or get water. The condition or the quality of water which gained by the researcher from water motors were not good because according to the report get by researcher from “Office of The Assistant Agriculture Chemist Soil and Water Testing Laboratory N-Feroze”, the condition of water is not impressive. Sample number 3 and 4 of water (see figure 4) were get from the water motors and it also have the same issue of high T.T.S(Total Suspended Solids) and belonged to second class category. Means these two samples of water also have the same problem of high T.T.S and second-class category causes different infectious and harmful diseases and illnesses in the communities.

4.2.4 Access of Water

The access of water in the community is 100% but it also depends on the quality and condition of the water which they access.

Safe drinking water is an essential human right, but the major parts of the Sindh Pakistan have no access to clean water. (R. Ahmed, 25-12-2017).

Here in the Oad community the community members have also faces a lot of challenges for the access of clean, pure water. About 5% members of the Oad community have access to drink pure water while rest of the 95% haven't any resources to drink pure water and according to the point of view of the community members and personal observation of the researcher at field work, that 95% of the members from the community haven't any access to drink or use clean, pure water because 40% members believe that that water is pure and it directly flows from the Ganga Mata and to whom it drink, will purify their sin. 55% of the member of the community has not any access to buy pure water.

S.NO	Access of Water	Percentage	Reason
1	Clean, Pure	5%	Financially fit / affordable to buy pure water
2	Impure water	40%	Religious beliefs and myths
3	Impure water	55%	Unaffordable to buy pure water

Table 8 : Access of Water

4.2.5 Taste and color of the water

As we all know the fact that water is tasteless and colorless but when some poisonous viruses and bacteria are mix with water through different ways then water becomes poisonous and change their taste as well as color. Same situation arose in the Oad community that, water of the community also changes their taste and color.

The water was salty and harsh in taste means when someone drinks water than he/she felt small particles/molecules of anything like solid material in their mouth. According to native perspective, our jar mix with the salty rocks and it happened because of natural disaster like flood.

The water becomes yellowish in the color. According to the local information from the community members that the color of the water is yellowish because our surrounding areas mostly affected by the floods in every year and due to the flood, our "jar" change its color. According to, (Paul Farmer, 2018), "About 50% of the water in the world is not fit to drink". There were a lot of myths connected to the taste and color of the water in the Oad community. Due to the change in the taste and color of the water of the community people faces many challenging health issues and harmful diseases. But as I mentioned that they are unaware to

this disastrous and painful story about the water just because their majority are simple and illiterate.

4.3 Water usage related Myths and Beliefs

According to J Carloye, “There is not any society in the world where Myths are absent”. (J Carloye, 2016).

There were so many myths and beliefs about the water, some of them are mentioned below:

- a) About 40% people of the Oad community members drink impure water just because they believe that water is comes from *GANGA MATA NADI*. They believe that if someone drinks the water as this is water of *GANGA MATA NADI* then his/her all sins go away from him.
- b) The community member believed that if they boil the water than all the minerals and Originality of water will be lost.
- c) The community members believed that if they take shower before the sun rise than all their works will done in good manners and even the body of the person will healthy and fit.
- d) A small 1% sub-caste of the Oad believed water as god and pray to Bhagwan Varuna (the god of water). Means they were followers of Bhagwan Varuna and they believed that water as their god, because water is symbol of their god.

4.4 Water Produced Diseases

The community members of the Oad community have so many illnesses and diseases like:

- a) Cholera
- b) Typhoid
- c) Vitamin A deficiency

- d) Hepatitis A
- e) Skin diseases
- f) Thought infections.
- g) Gastroenteritis disease
- h) Dengue

According to the (IUCN) International Union of Conservation of Nature, Pakistan has faced the 60% of the water borne diseases and it is the high ration in the Asia. (M. K. Daud, M. Nafees).

The community has faced a lot of challenges towards the water borne diseases issue because firstly about 95% members of the community drink impure water just because of their religious beliefs and some other economic reasons. This water borne diseases already caused deaths in the community but there was not any other source than drink that impure water.

4.4.1 Case study

Kailash Kumar a young 14-year-old boy have deficiency of vitamin A and that illness take more than his half of life, 7 years means he is suffering from that illness for last 7 years and still it goes on with him. This strong boy said some words about their illness that, all the diseases and illness are given by god to their loved ones and said “being accepted by my family has meant a lot to me. I don’t think I would have made it without them in my life”. This confidence that stems from social support allows Kailash to view his illness in the most positive light possible and to consciously adhere to his treatment schedule.

4.5 Sanitary and Hygiene conditions

The garbage and other waste products make unsafe and unhygienic environment in community. It was observed that there was no distance between toilet and other tank, people were using same water for toilet as well as drinking purpose. It was also seen that drainage system was not properly maintained; rainwater could not be drained out that is why all the water comes into homes of community people.

4.6 Sanitation facilities

There was not any care about the sanitation; the community members have 80% access to manage sanitation and hygiene in the community but mostly members of the community avoid taking care of the sanitation and hygiene in the community. They have access of the latrines, bathrooms, and public latrines in the community but unaware of uses those access properly in the managed way.

4.7 Availability of latrines

Most of the houses have cemented (PAKKO) made latrines (KHAYAL JAGAH) but the condition of the cleanness of those latrines were not good. Everyone was used it, but no one care to clean it. About 80% members have the (PAKKO KHYAL JAGAH), cement made latrines at their homes and about 20% of the member have not access of the (PAKKA KHYAL JAGAH), cement made latrines, so they use both public latrines of the community and open defecation.

S.NO	TYPE OF LATRINE	TOTAL %	Sanitation and hygiene care
1	Cement made latrines (Pakkokhyaljagah) at homes	60%	30%
2	Public latrines	20%	10%
3	Open defecation	20%	0%
		100%	40%

Table 9 Type of Latrines

They just care about 40% of the sanitation and hygiene in the community. According to the Joint Monitoring Program of WHO and UNICEF, 71% of Pakistani's rural population does not have the facilities of improved sanitation, and 40% of the rural population resort to open defecation. (F. H. Mughal, 2011).

4.8 Sanitary practices

There were so many sanitary practices takes place in the Oad community, some of them which takes place in the on the daily basis are given below.

4.8.1 Method of purification after using latrine service

The people of Oad community have faces many different problems after using latrine service means they do not clean their latrines after latrine service. Everyone just used the latrine and then busy in other work. They do not maintain the sanitation condition in the community like to clean their latrines properly. The researcher observed that there was only just 40% care about the sanitation practices in the community.

4.8.2 Availability of drainage system in the houses

In the Oad community, the system of drainage system was present, but the drainage system was so old which made by the local contractors about 60 years ago. Now days the drainage system were not in the good condition because the lines (Naikal, Nalyoon) were somehow damaged from many centers of the community and the dirty water flows through the streets of the community. And, that dirty water overflows towards the houses of the community members during rains or in the condition of main disposal off.

4.8.3 Availability of the sewerage system in the houses

Almost every house has the facility of the sewerage pipeline to store their water. The conditions of sewerage pipeline in houses were same as the condition of drainage pipeline. The sewerage pipeline was also damaged from many portions and the drainage and sewerage pipeline almost collapsed with each other and that is why the water becomes impure. Those disastrous issues of the mixture of the pipeline where not big deal of the community member may be, they were aware to that but ignore at on their own risks.

4.8.4 Availability of drainage and sewerage systems in the community

The community has overall the availability of drainage and sewerage systems but due to the damage of the pipelines in the whole community people faces so many challenges towards their health as well as during travelling. The dirty, impure water stay at the streets and main road of the community which flows from damaged piped lines. It caused different problems of health, the main issue like dengue. The people of the Oad community have no access to build the drainage and sewerage systems because of the economic reasons. They have no proper set up for rain also. Researcher conducted an interview from his respondent from the community at his Otak and suddenly rain comes than the researcher himself noted and observed that condition of the pipelines, their streets, houses, and roads. Researcher noted the conditions of mixture of both pipeline with each other, the dirty water in the streets, houses, and main road of the community during the rain fall.

4.8.5 Garbage

The people through their garbage from their house to the side of the main center of the community, the garbage mix with the damaged pipelines during the rains and flows in the houses of the community, that was hazardous health threatening condition observed by the researcher during his field work. The member of the community burns that garbage on the weekly basis and that was also the dangerous act done by the community because it rises the issue of the air pollution. Means the condition of the Oad community according to the sanitation and hygiene perspective was not good enough.

4.8.6 Distance between latrines and main drinking water lines

There was just 3 to 8 feet distance between the main drinking water lines and latrines. Most of the community members even take water from the latrines for the many useful daily purposes.

Chapter 5

Causes of Water and Sanitary Diseases

Safe drinking-water, sanitation and hygiene are crucial to human health and well-being. Safe WASH is not only a prerequisite to health, but contributes to livelihoods, school attendance and dignity and helps to create resilient communities living in healthy environments. Drinking unsafe water impairs health through illnesses such as diarrhea, and untreated excreta contaminate ground waters and surface waters used for drinking-water, irrigation, bathing, and household purposes. (Paul Farmer, 2018)

The degree of pollution varies in various regions, depending on the health and living conditions of the population. Ideally, drinking water does not contain any pathogenic micro-organisms and a colony count of between 10 and 100 colonies is considered polluted. Contaminated water can look pure and tasteless and colorless, but it retains microscopic harmful microbial agents. Contamination of processed water occurs from increased turbidity, inadequate disinfection procedures, cross-linking or lack of water control. Drastic changes in water pressure can dissolve bacteria from colonization sites in the sludge and sediments lined with pipe walls and result in an unstable and fluctuating selection of species. Defective chlorination often results in low water quality. There is clear evidence that, at least in some areas, water is the primary medium for the spread of diseases. Water-related diseases are categorized according to the transmission process as water-borne, water-washed and water-based, or water-related insect vectors. Waterborne outbreak is described as an event in which two or more people report common water-consuming or epidemiological data involving water as a cause of illness. Waterborne and water-related pathogens combine and are expected to be the main victims in developed countries. Most of the infectious agents of diarrhea are spread by orofecal route, with water being a transmission agent in certain diseases such as cholera, typhoid, dysentery, hepatitis, and bacterial infestations.

Safe water and sanitation are the basic and important factor to save the human health because a good health is the total wealth of an individual. Sanitation also has the importance in the Islam as well as in Hinduism, like “Safae nisfee eman ahy in Islam”, Saucam Hindi word means cleanliness /sanitation, and it is one of the divine qualities which one must practice. (Local community member’s perception.

5.1 Water and sanitary diseases name

There are a lot of water and sanitary diseases in the world, but researcher found seven water and poor sanitary borne diseases in the Oad community, which are given below.

5.1.1 Cholera

Infectious and sometimes lethal small intestine bacterial disease, commonly caused by polluted water sources, causing extreme vomiting and diarrhea about 20% percent of the Oad community members have cholera disease and most of them were women and children.

5.1.2 Typhoid

Typhoid is a sudden fever-related disease caused by the serotype Typhus / typhi bacteria of Salmonella enteric. About 7% of the community members have typhoid illness. Mostly found in every age group.

5.1.3 Vitamin A deficiency

Vitamins are substances that our bodies need to develop and operate in a normal way. Vitamin A deficiency means the deficiency in the blood and tissues. It is common in poorer countries, especially children and women of reproductive age, but rarely seen in more developed countries. About 20% of the community members have Vitamin A deficiency.

5.1.4 Skin diseases

Any disease or disorder that affects the skin of humans. They have got a wide range of causes. Skin rash caused by Lyme disease, visible changes in the texture of the skin, such as rashes and hives, may be indicative of serious illness. About 25% of the community members have skin issues and mostly found in every age group.

5.1.5 Throat infections

Infection of the throat, sometimes referred to as pharyngitis, may be either bacterial or viral infection leading to inflammation of the tissues of the throat that causes redness, pain and swelling of the walls or of the throat. About 3% of the population of the community members have those infections and mostly found in age group between 20-30 years, common in both males and females.

5.1.6 Gastroenteritis disease

Gastroenteritis is an inflammation of the intestinal lining caused by a virus, bacteria or parasites. Viral gastroenteritis is the second most common disease in the U.S. The cause is often norovirus infection. It spreads through contaminated food or water or through contact with an infected person. Simply known as gastro disease, in the community and about 16% members of the community have that gastro diseases and mostly common in age group of 40 years.

5.1.7 Dengue

Dengue is a mosquito-borne viral infection that triggers serious flu-like illness and often triggers a possibly fatal condition called extreme dengue. The prevalence of dengue has grown 30-fold in the last 50 years. Mostly common diseases in the season of heavy rains in Pakistan, it is about 9% found in the members of community and dengue was the grave issue because mostly their surrounding areas were fully full of garbage and ponds (khada).

S.NO	Name of disease	Percentage	Age groups and gender
1	Cholera	20%	Women and children of every age group
2	Typhoid	7%	Common in every gender and age group
3	Vitamin A deficiency	20%	Children and women of reproductive age
4	Skin diseases	25%	Common in every gender and age group
5	Throat infections	3%	Male and females of 20-30 years
6	Gastroenteritis disease (Gastro)	16%	Mostly in male of 40 years
7	Dengue	9%	Common in every gender and age group
		100%	

Table 10 Name of diseases

5.2 Causes behind water sanitary diseases in the community

The causes behind the water and poor sanitation in the community are given below.

5.2.1 Impurity of water

Impurity of water was central cause of the diseases in the community. The community members drunk impure water, the water which they drunk has no capability to manage their health and that is why the people of the community mostly affected by the drinking impure water first. It causes different diseases like cholera and typhoid. Secondly, they use that water for the bathing purposes means they also use that water to clean their face and then they fall in the skin diseases. Impurity of water also raise the issue of poor sanitation in the community like the impure water were present at the road's streets and houses of community members and so many mosquitoes were spreading around that water, it also raises in the ratio the diseases like dengue and malaria.

5.2.2 Lack of hygiene

Lack of hygiene is second most effective cause of the diseases in the Oad community which are water borne. The houses of the community members have not cleaned as they can avoid automatically from those harmful diseases. According to a respondent, about cleanliness our house conditions have about 50-50%. During the participant observation the researcher noted about their community cleanliness condition that, mostly the community have not any setup for the cure of diseases and made hygiene as their key role. During the rain, the hygiene condition of the community goes into the vein means all the houses streets and roads were under the rainwater, there were not any permanent setup for the drainage lines.

5.2.3 Garbage

The thirds major cause of the water and poor sanitary diseases in the community was Garbage. Everyone through their garbage in the streets, center, and roads of the community, already they have faced a lot of problems during rains, but they are still performing that act. The garbage totally mixes with the rainwater and some time with the damaged drainage pipeline. Then same dirty impure water goes to their houses and disturbs their health and caused several infectious health problems like, throat infections and skin diseases. On the weekly basis they burn that garbage, and they faced many difficulties during burning like the smoke of the garbage disturb the health and daily life of the community. It also caused the air pollution and disturbed the healthy environment of the community as well as their surroundings.

5.2.4 Mixture of Drainage and Sewerage pipelines

The sewerage and drainage pipeline were fully rusted and damaged from many places. The distance between both pipes line was just under 5 foots and the main reason behind the impureness water and poor sanitation was the mixture of sewerage and drainage pipelines.



Figure 5: Damaged pipelines, mixture of drainage and sewerage lines.



Figure 6: Damaged pipelines, mixture of drainage and sewerage lines.

5.2.5 Lack of washing hand practices

The community members were not paying attention towards that harmful act like after using latrine service they do not wash their hands. The people of the community members believe that they were fully responsible for their acts. Researcher observed main thing there that the community member after using latrine service they did not wash their hand but also, they did not take care of their cleanliness of body.

5.2.6 Lack of use of sanitizer / soap

We are living in the modern world; everyone can know the modern technologies and modern made things but there are some traditional societies who completely disagree with the use of modern things. Same situation here in the community researcher observed that, the people of the community mostly use the ash (KHAAR) after any kind of service. Like a person who collect garbage or do any other work than he / she wash their hands with KHAAR means ash.

5.2.7 Storage of rainwater near the houses

The rainwater surrounded the total area of community; the Oad community was totally covered by the small ditches from the four sides. The rainwater stored in the small ditches and gave a lot of harm to the community member health and their houses. The rainwater flows in their houses in the rain. The people of community face many different challenges towards the storage of rain. They face many health issues just because of water pollution and soil pollution.

5.2.8 Profession of the community members

Mostly the community member's profession was garbage collector and built mud walls (ODKA KOT). Just because of their profession they were busy in different harmful health tasks. The half of their child population and under 20 years of age members doing that profession with full of their strength, the members collect garbage on the daily bases and due to that collection of garbage they go to the polluted places and fall in many diseases.

5.2.9 Lack of awareness and illiteracy

The Oad community members were unaware to the challenging problems in their community, they were simple and traditional people, they did not even approach directly to the doctor when they become ill, they prefer healer first than when then situation goes out of the healer's hand than they approached to a doctor but take completely treatment from the doctor. The people the community were mostly illiterate and never saw the door of school.

5.2.10 High poverty

The people of the Oad community members faces many difficulties because they were poor mostly, only 5% of the community members have full access to faces modern world expenses. The 95% of the community members were daily wage labors or we may say that they were private servants.

5.2.11 Case study

Suneel Kaka is the senior and old member of the Oad community, when I met with him and introduced myself. At the first instance he looked towards me with anger but later with the help of my respondent, we get trust of him. According to him, 10 years ago some persons came in their community for the research purpose, he believed that they were not came for any research work, but they came in the community for any other purpose like stealing some kind of private data. When I asked questions from Suneel Kaka about waterborne diseases and improper sanitation, he said that there is not any kind of disease which is water borne but may be diseases happened due to improper sanitation. He said, when I was 13 years old and I along with my village people herds our cattle we all drink water from ponds. He believed, if there are water borne diseases than why they and their old friends have not any symptoms of water borne diseases. He believed, all the diseases and illnesses are due to improper sanitation and unhygienic conditions.

Chapter 6

Impacts of diseases on the socio-economic lives

6.1 Social life

Every society, community or region have its own social conditions, same as others the social conditions of in the Oad community is quite different from its surrounding. It is a marginalized community of Hindus lower class.

6.2 Standard of life

Oad members have simple living standard of life, their lives face a lot of discrimination due to their caste and work. The interaction of the community on the daily bases was very strong because in the evening all the members of the community have get to gather on the cup of tea in the streets of the community. Due to their caste and work, they feel difficulty in to interact with their surroundings. This community contributes 30% of the daily wage labor in the city of Moro, Sindh.

6.3 Family structure

The Oad community is consist 70% of nuclear families and 30% of the joint families. According to a respondent, nuclear families are the main source of behind creating wall between our relatives. In the past we, Oad lived in the large families like extended families but due to the urbanization “RASH, TARAKI means development, everyone was spilt and that is because of the urbanization our family structure is changed.

6.4 Marriage

About 60% of the people of the Oad community prefer child marriages because they believed that the actual age of marriage is 14 years girl and 16-17 years boy. The prefer exogamy

marriages, they do not marry with their cousin brothers/sisters just because they believed they are brother and sister. They believed in the boy and girl fortune script named as “kundli”. If kundli of boy and girl matches with each other than they are fit for marriage with each other. If kundli of boy or girl are not matches than they searched for their matching partners.

6.5 Class and Caste system

The people of surrounding categorized Oad as schedule caste and feel that they are not equal to their status. They discriminate the Oads based on their status and caste. But within the Oad community there are certain classes and sub castes. They all belong to middle and lower class but more they categorized themselves in middle-middle class and lower upper class. Oad is the main caste but there were more than 8 sub castes of Oad which are part of Oad community. In the sub castes of Oad the Dewaat caste is considered superior to others because they have economically and socially strong than other sub castes of Oad. Following are the sub castes of Oad.

S. No	Caste	Class Status
1	Gadae	lower class
2	Gurgat	lower class
3	Dewaat	middle class
4	Kalhia	lower class
5	Kharor	lower class
6	Jeprot	lower class
7	Dodhyo	lower class
8	Godhri	lower class
9	Bajrangi	lower class

Field Source Data Table 11 Sub castes of Oad

6.6 Education/literacy rate

The Oad community members were not more educated but have a lot of their life experiences related to education. The literacy ration in the Oad community is not well enough and just because that they have fall in different kinds of diseases. The Oad community members were categorized by their sub-caste in the educational context. The Oad was the main caste while there are more than 8 subcastes which were living in the community. The below table shows the educated and uneducated ratio of the of the Oad community.

Subcastes	Educated	Uneducated
Gadae	20%	80%
Gurgat	6%	94%
Dewaat	95%	5%
Kalhia	40%	60%
Kharor	10%	90%
Jeprot	30%	70%
Dodhyo	20%	80%
Godhri	9%	91%
Bajrangi	13%	87%
Others	5%	95%

Source: Field Data Table 12 Educated and Uneducated ratio of the community according to their subcastes status.

6.7 Health

The health conditions in the community were not good, as discussed in the previous chapter that the conditions of health regarding to the water and sanitation was not good enough for a simple life in the community because in the community the water condition were worst enough due to the unhygienic issues of Cleanliness situation.

The condition and situation of the cleanliness in the community was quite worst because when this research was conducted in the Oad community, the rains and sewerage lines fully destroy the cleanliness factor from the community. During this research, lot of things like sanitation,

unhygienic water and dirt observed by the researcher because these things were the main cause behind to create health issues in the community.

6.8 Cultural patterns

Oad community members have many cultural patterns related to water and sanitary diseases. The main motive to define the cultural patterns of the Oad community in this research is because of to look after the water and sanitary diseases which were prevent by different cultural practices. Most of the members treat that disease according to their cultural patterns like by performing different practices. Some of them are given below.

1. Some of the community members grow their beard and while interviewing in this research, a member told that, by the help of beard we can overcome and get rid from skin diseases mostly like on the faces.
2. When they fall in any disease like temperature or blood pressure issue, they use their cultural and religious practices like if a person falls in temperature, they believed that someone has did magic on it and they prevent him by performing burn some red chilies. If a person has blood pressure issue than he/she use some indigenous practices 'TOTKA' like, salt and water to drink.
3. Mostly if any member of the community may fall in any disease, first they go to their community religious practitioner named as '*BHOPOO*' because they believed that '*BHOPOO*' is the man who knows about everything. *BHOPOO* is the man who performed black magic.
4. They used mud baked pot for drinking water '*DILLO*' alternative of water cooler. They believed that we use mud baked pots for drinking water because we can cover that water borne diseases by using these pots.

6.9 Festivals

Festivals are the identity of any country, nation, religion, or community. There so many festivals practiced by the Oad community but there are two major festivals during that, they prevent the upcoming diseases and hard situations on the community.

6.9.1 Lal Loi

This feast is performed on the 13th of the January every year. In this feast the children bring would sticks from their grand parents' aunties and like a fire camp burnt those sticks in the night. People were enjoying and dancing around the fire, and the women through some oil in the fire and make wish. Some women broke the coconuts in the side of fire on the fulfilment of their wish.

According to the respondent named as Mr. Guneet about that festival that, this festival is the main festival in our community because, we know that no one is live without their religious believes. In this festival our children and women have major role because god love the children and respect the women. So mostly this festival is because of the fulfilment of the wishes. During that festival most the community women wished for the good health of the community and their income.

Figure 7: Lal loi festival work before pooja



Source: Field data

6.9.2 Dhanteras

Dhanteras is the festival performed annually in the Oad community and all over the world in Hindu religion. In the Oad community Moro, this festival has a lot of importance and considered as auspicious day for the shopping especially silver, gold ornaments and kitchen utensils. Basically, the word Dhanteras is derived from Dhanvatri, means the creator of Ayurvedic Health science or the god of good health. Dhanteras is celebrated before of Laxmi

Pooja. In the community there is not any tradition of big Pooja at home or shop, they only perform big Pooja on the day of Dhanteras where all the community members are gathered at one place and worship to Lord Dhanvatri and ask for boon of good health. The people also worship Lord Kuber, the god of wealth. In last all women made sweet dishes ‘MITHAE’, ‘BORENDA’, ‘Sweet meal’ and distribute among all the community as PARSAD.

There is a Myth related to Dhanteras festival that, according to the purana story, there was a king named as King Hima, when god blessed King Hima with son, astrologers predicted that, this boy will die on the fourth day of his marriage. When the boy married, the wife of that boy was very talented, bold and intelligent girl. She was already aware to the astrologer’s prediction., on the fourth night of their marriage the yamraj enters in their room, he saw a girl who was busy in the Pooja by singing religious songs. Yamraj realized that what is the crime of that girl, who even did not see her life. Then yamraj finally decided to go back.



Source: Field data Figure 8The place where Oad community members perform Pooja

6.10 Food Patterns

Oad community members have different cuisines taking practices like they mostly enjoy sweet dishes make up from handmade sugar “GUR” in the sindhi oil “GEEH”. They are non-vegetarian but did not eat beef and mutton. Rather than beef and mutton they eat all things which is halal in their religion, but they mostly prefer to eat green vegetables “SAEBHAJI”, DAAL CHANWAR, MITHO LOLO, coconuts, fruits, FISH KARE and TARYAL PATATA, etc.

6.10.1 Eating and Cuisine making practice

The Oad community members take/ate their food mostly on sitting on the floor with the whole family. A woman who has all rights to distribute the food among the whole family members. The cuisine making practice is same as all over the Sindh province, because of the hot environmental conditions of province Sindh the Oad members take light masalas in their dish and use all the herbs like coriander seed “SUKKA DHANA”, coriander leaves “SAWA DHANA”, mint leaves “PHODINO”, fenugreek “HURBO”, bay leaf “KAMAL PAT”, and Curry leaves “KURRY JA PATA”, etc.

6.10.2 Food timings

Oad community members were mostly daily wage labors, they take their breakfast between 7am - 8 am, they take their lunch with themselves on their work, and they eat their lunch between 1pm – 1:45pm and when they came back from work, they take their dinner between 7pm – 8pm.

6.11 Food and Hygiene Quality

As, I mentioned above in the food patterns that. they take simple diet including DAAL CHANWAR, MITHO LOLO, FISH KARI, TARYAL PATATA, etc. they take very healthy food with full of ingredients but due to the hygiene quality in their kitchens and usage things, all their healthy diet converts in to the unhealthy. The big example of the quality of the hygiene was the usage of impure water in their food item like they use water in corn and other dishes.

6.12 Economic life

The economic lives of Oad community members are facing a lot of challenges. Oad community members are discriminated and neglected based on their religion, caste and work. They feel lot of difficulties to search for permanent job. Then they busy themselves in work like garbage collector.

6.13 Profession

The original profession of the Oad community was made mud walls “ODKA KOT” but later when everything is sustainable than they leave this profession and make garbage collecting as their main profession. The garbage collectors were mostly children and men.

According to a respondent, we faced and still faces lot of challenges due to shift in our profession because our new profession is the main element behind our low prestige. In our society everyone think that garbage collectors are not human. They see us as schedule caste and that is the big problem behind our class. We do not know any other profession because when we have shift in our profession, we choose that profession for our survival.

6.14 Source of income

80% of Children and men were garbage collectors, while all women were houses wives and made traditional chadar “RILLE and BHART”.

6.15 Poverty

Poverty is the major issue of the underdeveloped countries as well as communities, Oad community is one of them. The ration of poverty is increasing day by day in the community because of the discriminated and noncooperation nature of the people of surrounding and members of community. No doubt the interaction within the community is strong but here in this situation the cooperation matters. Only 5% of the people of Oad community have access to manage modern day expensive while rest of 95% of the people of Oad community are facing this serious issue.

6.16 Impacts of diseases on socio-economic life

According to the above factors of social and economic life, Oad community members have face a lot of challenges towards diseases which are water and unhygienic borne. That disease may disturb their social life as well as economic life. The use of impure water may fall them in serval infectious diseases life cholera, malaria, typhoid etc. If any member of the community

may fall in disease than he/she is responsible to protect himself/herself from diseases and protect his/her other community member from that disease. But due to their low income, cultural and religious believes that harmful diseases directly attack on their health. And those diseases also disturb their socio-economic life.

Chapter 7

Community members perceptions about diseases

7.1 Water treatment methods

Oad community have different water treatment styles like boiling the water, put a piece of coal in the backed mud pot “DILO” and water straining through fine cloth. They believed that by doing that water become pure and easy to drink. But they did not purify/filter water according to the guideline of WHO. They did not use the modern technology to filter/clean the water and save their lives from disastrous diseases. About 50% of the community people used coal purify method, while 40% of community people used boiling and straining from cloth method to purify water. The members of the community have lack of knowledge, have their different practices, believes, myths, and concept of purity towards water and water borne diseases.

7.2 Awareness

Awareness was the major issue in the community, people were unaware from the major issues related to health. Half of the community members strongly believed that all the things are happened with the help of god. But a main thing noted in this study is that they live their life just in the race of survival not for a maintain of a good sustainable lifestyle. They were completely unaware from the health care system, education profit, and other determinants by which they live their lives comfortably. There was need of awareness and proper education, due to lack of awareness about the usage water and sanitation practices. They are becoming afflicting from diseases. They have no sense and significance of cleanliness because of that they do not clean properly surroundings of community. Government and nongovernment institutions must arrange awareness section for the betterment of community knowledge to prevent them from water borne diseases and sanitary impacts.

7.3 Lack of Knowledge

Oad community members have not any proper knowledge about that water borne diseases but somehow know about the diseases that they are harmful. The Oad members were facing lot of health hazardous challenges because of lack of knowledge. Mostly members of the community prevent these diseases through their culturally and religious ways. They did not facilitate themselves from the modern technologies but still hanged in the traditional cure to water treatment and water borne diseases. That unchanged behavior of the community may cause a lot of disturbance and serious health threatening issues towards their lives. The major issues like they burn the garbage in the side of their houses, and they may affect their lives more silently but in the form of very dangerously. This is all because of the lack of knowledge that they may face a lot of health issues.

7.4 Practices

People adopt such types of practices ultimately, those practices impact on their health, surrounded environment and society life. Safety practices are awareness about the benefits and harms of water and sanitation appeared from their practices. How much they know about safety usage of water and protective measures of health, that is also show from the practices of the community. The people of community practiced many activities, which boosts the diseases like.

1. They use impure water in the cooking, drinking, and bathing.
2. They Burnt of garbage near their community which may cause air pollution and soil pollution, this practice may directly effect on the health of whole community members.
3. They used drinking water from damaged pipelines.
4. They used medical assistance like medical store or religious practitioner.
5. They used Ash “KHAAR” as the cleaning agent, they mostly used it in the cleaning of pots and little bit in hand washing.
6. Stored rainwater and damaged water pipeline in the community streets and use of that thing caused serious health issues.

7.5 Believes and Myths

Believe is known as faith of any community. Commonly believe system is related with religious faiths of community, which depends on knowledge, rituals, morals, norms, traditions and ethics along with believers of religion. They practice these believes in their daily life, that established word view of community behavior.

Belief plays a major role in the life of every individual. Same in the members of Oad community belief is the key element in everyone lives. The members of that community have different believes about the water and diseases. Some believes related to diseases are given under.

1. Some people believed that, when we boil the water, we may lose originality of water because water have full of minerals.
2. They believed that, by the help of performing religious rituals and practices, we can overcome the diseases.
3. They believed that we spend half of our lives with those diseases, so we are adjusted with them.
4. Some of the people believed on the power of amulet (TAWEEZ), so that when they and their any family member become ill, they go to their religious healer (BHOOPO).
5. Another myth related to community, when they became ill, they practice camphor (Kapoor) ritual. They burn it and keep on the hand, and then they perform pooja.

7.6 Narratives about Hygiene and Diseases

The community members believed that hygiene is the key element to live a healthy life and more in their religion, hygiene and cleanliness have a major important.

- According to a point of view of a respondent named as Neeraj, there is not any permanent setup to maintain hygiene conditions in the community that's why diseases and illness have free mod of spreading from one member to another member. More he said, these diseases and illness are not new in our village because my father told me that his elder brother, who was a labor and died due to gastroenteritis disease.

- During the focus group discussion with community members, the members showed their different narratives about hygiene and diseases. Half of the members believed that their work is the major cause of breakdown of the hygiene and spread of diseases in the community as well as their surroundings.
- One of my respondents during focus group discussion said that, taking improper advantages from tools and guideline for the hygiene given by the municipal committee also affect our lives. More he said, since many of years our community did not use the tools and guidelines which is given by the government. I think that all the diseases and illnesses which are water borne and due to improper sanitation are just because of the low awareness among the community.
- Mr. Dinesh 18-years old student said that the indigenous religious and cultural treatment patterns of the community and due to poverty, the use of local medical store medicine, the diseases and illnesses does not leave the shadow of the community. He also said the community need awareness to secure their lives and I am thinking about that, I will motivate and aware them one day.
- During field work, when the question asked from the native people of the community about the prevention of the diseases, they told me that, keep clean houses, streets, clothes, dishes and surrounding environment, avoid eating oily or fatty things, drink pure water and eat fresh food are prevent us from diseases.
- The people of Oad community are belonging to Hinduism religion and as I asked a question from my respondent Mr. Heeromal that how you see these diseases in your community and what are the causes behind those diseases? He replied, the diseases are very dangerous and harmful for our community as well as our surroundings, I lost my little 3 years' baby boy just because on diarrheal disease. More he said we are Hindus and believe in our religious rituals, since 1000 of years we are performing Navratri and after Navratri we sacrifice a goat in the name of Shani bhagwan because all that hazards on our community are given by Shani bhagwan. He also said that when Shani bhagwan got angry he gave problems, diseases and other harmful tasks to people.

7.7 Socio- environmental conditions

There are so many things like climate and environmental conditions directly affect the nature of people, here in the Oad community many of the people link these diseases with the environmental conditions. They believed that due to the change in the environmental conditions and other physical determinants all the diseases caused. Some norms of Oad community that directly effect on their health like, during the temperature they go to healers for treatment. Some other determinants like, air, water and soil pollution which damaged the health of the community members and effect on their social and psychological nature. The worst quality of air and use of impure water directly attacked on the health of people of Oad community.

7.8 Gender disparity

All humans are equal without any restrictions of creed, caste, nation, color, and gender. God creates equally all males and females. Gender disparity or gender inequality was observed in this study. The Oad people have categorized themselves based on strength. In the gender disparity male and female are described based on different characteristics as color and strength. Every society divide work based on gender orientation as also observed in this community. Some people in the community believed that all genders are not equal, god gave potential to only male gender. Below are some perceptions of Oad people towards gender roles which the researcher borrowed from his research interviews.

1. According to a respondent named A, our women mostly spend their time in the houses and made something like “RILLE” for their own interest, but we do not give permission to go outside.
2. According to a female respondent named B that, before moving to big cities our community women helped the males in their work.
3. A respondent Mr. Daso Mal who was 52 years old, according to him all the species on the earth specially human’s male female and other genders are equal in the eyes of god. But our society categorized them based on strength, beauty and other objectives. More he told, when I was 20 years old, the gender inequality was less than now day it exists in our community.
4. Females of community cooked meal, that was responsibility of female. After providing food their male partners, they ate remaining food.

5. Mostly women and children were bringing the water from filter plant. That filter plant was 1 kilometer away from the last sided community houses.

7.9 Cultural resistance

Cultural resistance is major hinder for their conditions because they cannot want to change their situation. They are performing old rituals of culture as well as religion. They do not clean their surroundings, there socio-cultural and economic situation is worst as already researcher has told, they belong with schedule caste of Hindu. Their profession or occupation is collecting garbage and daily wage labors. That is also negative perspective for them in their community. That is major resistance they cannot change themselves. Due to above reasons, they have not facility of pure drinking water and safety sanitizing facility. Because of impure water and dirty conditions of sanitation, they become afflicted from communal and noncommunal disease.

7.10 Case study

Safer health treatment better for the life because that keep safe from hazard diseases. Water is obligatory for human being and other species on the planet, excepting it life is impossible. But when we use impure and untreated water it generates various diseases which are threat for life. As well as appropriate sanitation is necessary for the healthy life. Sometime people use mythical treatment and folk health techniques for the treatment of their ill people. That is harmful and unscientific practice. During the research field work researcher meet with a respondent his name was Arjun kumar Oad. He was 28-year-old, he was also member of Oad community. He narrated an incident which happened with him. He said his son who was 3-year-old when he became ill. He had difficulty of stomach pain. They treat this little boy with home health techniques. That is salt and sugar in water and him himself purchased some medicines for his son from local medicine shop. In the home they tried some religious practices. Such as wearing amulet (tawiz) and reading religious text on the water. Unfortunately, they could not safe life of little boy from illness. Within few days he died.

7.11 Case study

Water is blessing of god that is gift for human being. Accessibility of water is big problem. Some people cannot afford pure drinking water. That is responsibility of government of that nation and province provide essential facilities to their people. During the research respondents told the researcher. They are deriving from that facility. Due to lower caste and garbage collector profession. They were neglected by society and government institution. They are compelled to drink contaminated water. Pure water is inaccessible for them. Pure Water drinking plant is on the distance. Children and women cannot bring water from that plant. Because according to community norms that is work of children and women. Male member of society does not remain in home during daytime. From morning to night, they go to their work.

Chapter 8

Summary, Conclusion and Suggestions

8.1 Summary

This research is conducted on the socio-economic and health quandary of water and sanitary diseases. The focus of this study was finding the conditions of community regarding the pure drinking water availability and proper mechanism of sanitary as well as circumstances of hygiene in that area, where this study was conducted.

Research analyzed, the conditions, causes, impacts and perception behind the water borne diseases of the native people of the community.

This study is important for the community and relevant social and health institutions. It is a big issue of public health because many people cannot get water and sanitation facilities. Due to that consequence's mortality occurs in these communities. Water borne disease and improper sanitation generates various diseases. Along that issue poverty and lake of literacy is the main problem for these communities where that problem exists.

In this research, the researcher used mix methodology. Before collecting data, the researcher entered in the field, he generated good rapport building with community members by the help of key informant. In this research sampling method is used and furthermore researcher used purposive sampling, accidental sampling, and snowball sampling. Through these types of sampling researcher had initiated to collect data. In this research the data collection tools were interviews, in-depth interviews, structured interviews and focus group discussion. Researcher had also used participant observation method during field work. Techniques which were used in this research were field notes, photography, audio recording, daily diary secondary sources and case study.

This study was conducted in the Oad community. Oad was a schedule caste of Hindu, they live in city Moro Sindh. They live separately in Oad colony that is separated from the surrounding population. There is savior issue of pure drinking water and adequate system of sanitation, so that they are facing much health regarding issue. This area is in the boundary of district Naushahro Feroze, taluka Moro, Province Sindh.

In this research literature has taken from different articles, books, newspapers, reports and official documents. Water, sanitation, health, and disease related literature is included in this research.

➤ Sanitation

Sanitation generally refers to the provision of amenities and services for the safe disposal of human urine and feces. Poor sanitation is a major cause of disease worldwide and improving sanitation is known to have a major beneficial impact on health both in households and across the communities. The word sanitation also refers to the maintenance of hygienic setting, through services such as: garbage collection and wastewater disposal. Sanitation refers to the principals and practices concerning to the collection, removal or disposal of human excreta, household wastewater and reject as they impact upon people and environment.

➤ Water

Consumption of contaminated drinking water, improper disposal of human excreta, lack of personal and food related hygiene and improper disposal of solid and liquid waste have been major cause of many diseases in the community, lots of members suffered from water related and other viral, bacterial, fungal and infectious diseases. Children were mostly involved in various chronic diseases. Cause of poor sanitation were lack of appropriate sanitary facilities. Impure water along with the improper sanitation and unhygienic conditions caused serious health related issues and diseases. Community faces many challenges towards their health because of impure water and improper sanitation.

➤ Hygiene

Hygiene refers to the condition of maintaining cleanliness regarding personal as well as things related to a person. Hygiene is generally understood as preventing infections through cleanliness. In broader term, scientific stipulations hygiene is maintenance of health and healthy living. To understand the situation, it is most important to have knowledge about the hygiene, in the field not only bad sanitation was found but also poor hygiene condition found in the community.

The preliminary results of this study combine an examination of water conditions, affordability, scarcity of pure drinking water, water quality, and municipal water supplies. This study also

looks at waterborne illnesses, sanitary conditions, and the state of hygiene. The group uses hand pump and filter water as sources of water. It is a simple, pure drinking water filter that is accessible from afar. The community should not exercise hygiene in a responsible manner. Their hygiene deteriorates because of insufficient water intake and sanitation procedures, and they become afflicted with numerous diseases. In that place, a destructive and inefficient drainage system exists.

The above analysis provides a good view of the local infrastructure, people's water uses and sanitation, and water supplies. Polluted water contains germs, it gives birth to bacterial diseases and when a person drinks water, it became unsafe for their health. Water borne diseases specially gastro, typhoid and skin diseases are owing to water impurity. Use impure water can caused water borne diseases.

The second major finding of this study is the sources of contaminated water and sanitation, which resulted in health problems among community residents. The haphazard state of health is an apparent result of impure water and negative neighborhood practices. Any diseases were also prevalent among the elderly, infants, women, and children. Coverage to contaminants of waste disposal sites potentially have negative health effects on population living in close surrounding area. Living in neighborhoods close to garbage disposal sites has negative effects on the respiratory health of the children mostly and outcome in increased family costs related to treatment of associated respiratory symptoms. There were not any appropriate bins for the garbage collecting in the houses but when they clean their houses, they toss dust and garbage outside of their houses, where mountain of garbage already existing.

The third set of results from this study focused on socioeconomic life and examined the relationship between disease and water, sanitation, and community economy. Social identity, gender, economic status, and schooling all play a significant role in society. For it is through this that we will build our own identities. When a problem arises in this culture, socioeconomic and educational factors play a role. Their career is low in society, their economic situation is unsatisfactory, schooling is a major concern, and the caste system influences their living standards.

Finally, the researcher discussed how faith, mythology, and folk lore influenced people's perceptions of water, hygiene, and the consequences of illness, as well as how religion, myths, and folk lore influenced people's perceptions of care. The final chapter of this study discusses

cultural perceptions of water purification, disposal processes, religion, and misconceptions. These factors influence people's attitudes, causing the culture to oppose reform.

Water and sanitation are public health concern in this community in the Naushahro Feroze district. It is not only causing health problems for the residents of that city, but it is also adding to it because they do not change their living standards. They are of a lower caste, and their trade or profession is often of a lower social status. They do not abandon unhealthy activities for the environment, such as a lack of schooling and poor knowledge about water use and sanitation protection, resulting in a slew of health problems. The government and society have failed them.

Human have been fighting with disease thousands of years and the trouble only became more pronounced when people started living in closely condense areas. As cities developed, so did the multiplicity of diseases, along with variety of colorful challenges at preventing it. Different nations got in touch with different levels in their disease's prevention strategies. In developed nations, for example, crucial steps like sanitizing drinking water, providing fresh living conditions, and using widespread vaccination programs have demonstrated to be very effectual at preventing certain illnesses in communities at large.

During field work when question asked from the native people of the community about the prevention of diseases, they told me keep clean house, street, clothes, dishes and surrounding environment. Avoid eating those things which may create serious health issues.

8.2 Conclusion

Drinking and using impure water is the main and major cause of diseases like cholera, diarrhea, skin etc. Lack of awareness and high rate of illiteracy affect the socio-economic lives of people. People who are using impure water worldwide are suffering from the health and life-threatening issues. Hygiene is the most attractive factor for the safe health in any community, society, village, or city. Garbage and other things which burn near the houses of village may cause serious problems of respiratory system and increase the soil and air population ratio. Use of unclean streets and playing of children at the garbage area may cause diseases like skin and malaria. Poverty can also be a disaster for the lives of people. It is big issue of public health and that issues mostly spread with the contribution of any society, community, or village members itself. Most of the time the people do not adopt safety measures regarding the sanitation and hygiene. Pure drinking availability was absent, they were compelled to use contaminated water. In the result of impure water and sanitation, diseases occurring was normal among the village. Children, men, women and old age member of village were facing various complication of health. Lack of education and awareness was also heinous in the community. Economic status, caste system and profession were also hinder for any community standard of life. Infrastructure, environment and geographical conditions also affect the lives of people in the context of health.

8.3 Suggestions

First there is need of a systematic education system in the community. Second awareness regarding water consumption and sanitation should be arranged by government and nongovernmental organization for the community. Government should install pure water plants and proper drainage infrastructure. People take proper medical treatment from the doctors. Socio-economic lives of community are worst. Government should take measures for enhancing lives of community through education and better earning environment.

- First, the community need educational in a systematic way.
- Second, awareness is the major tools for fighting against waterborne diseases.
- Members of the community should adopt the modern scientific treatment system.
- Community should fight against developing barriers which disturbed their lives.
- People must think about their future.
- Governmental, Non-governmental organizations and surrounded people should play role by doing some serious works in the community like install water filter plants, maintaining cleanliness by allocate sanitary workers in the community, gave proper awareness about sanitations hygiene and importance of education.
- Education is the tool by which the community may get rid from poverty.

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Interview guide

What is your name?

What is your age?

What is your profession?

What is your socio-economic status?

What is definition of health in your perception?

What is disease in your perception?

What you know about sanitation?

Have you ever heard about word hygiene?

Which type of water you prefer to drink?

What is the access of water?

What are the sources of water?

Water you drink, is it pure?

Which type of difficulties you face after drinking water?

Which type of diseases you carry due to impure water?

Which type of toilets you use for excretion?

Would you wash your hands after toilet service?

Which hygiene material you use after toilet service?

Which type of diseases mostly found in the community due to impure water?

What is the condition of hygiene in your houses?

What is the condition of hygiene in your community?

Which age group of your community suffering more from water borne diseases?

What is the main cause of these diseases?

Do you think these diseases are because of drinking impure water?

How much you have accessibility of pure drinking water?

Is there any myths related to water?

Have you afflicted to water borne diseases?

What are the conditions of water pipe lines in the community?

What are the consequences of that diseases to you r community?

What is the physical condition of the members of the community?

What is the mythological cultural and religious treatment perception in the community?

What are the hygiene and disease narratives of treatment in the community?

What is the Scio-environmental perception of the community towards hygiene?

When you suffer from any illness or disease, you approach to a doctor of healer?

What is the role of government in the development of your community?