

**EVERYDAY LIVED EXPERIENCES OF DRINKING WATER SCARCITY**

**(A CASE STUDY OF BASTI DALANA, DISTRICT DERA GHAZI KHAN)**



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**Islamabad, Pakistan**

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Thesis submitted to the department of Anthropology Quaid-i-Azam University, Islamabad, in partial fulfillment of the degree of Master of Science in Anthropology.

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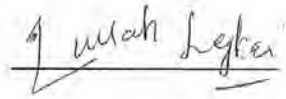
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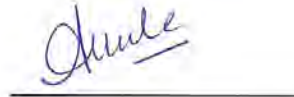
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## **DEDICATION**

This research is dedicated to my father, He gave me strength and support to complete my project and motivate me throughout this work.

## **Formal declaration**

I declare that this thesis is made by me and that the work was not published or submitted to any other examination. I certify that the work presented is my own, apart from those ideas taken directly or indirectly from the third-party source are indicated as such.

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Islamabad, 22-09-2021

MUHAMMAD ALI HAMZA

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## 1 INTRODUCTION

Water scarcity deals with water-related problems. Water is an inalienable resource that is essential for biological, economic and social life. Water scarcity is linked to every region of the world. Too much water can cause flooding and death, while unpredictable or unstable water supply can reverse planting cycles and variations. The presence of water is very important for human daily uses. At the same time, the availability of more water, better quality, and easier access to water can improve human life (Bakker & Morinville, 2013).

Climate change is increasing water scarcity in human life. Water supply problems are found in many areas, including the Middle East and Asia-Pacific, where people spend a third of the day filling up for drinking water. Water is a basic human need as it is used for drinking, agriculture, and livestock. It is also used for power generation and industry. But millions of people around the world live without access to clean water for a year or so. China and India have the largest number of people facing persistent water shortages. Moreover, Libya, Pakistan, Saudi Arabia, Somalia, and Yemen have been facing severe water shortages throughout the year. The people who live there face much stress and lack of clean water has endangered many lives (Cain, 2018).

The unavailability of fresh and drinking water is Asia's basic problem. Most of Asia's land is barren or semi-arid, just as much of West Asia is barren due to lack of water. Most of South, Central Asia, and North China face water scarcity due to the lack of water supply. The lack of rain in the spring and summer months makes it difficult for people living in remote areas to access water. Four billion people out of the world's total population are facing water scarcity. A

total of half a billion people live in China and India. These densely populated Asian regions are located near a few major rivers. The ten most important of these rivers originate from the so-called "Water Tower", the Hindu Kush, the Himalayan region, and its vast mountain ranges. But, only one part of Asia's water challenge has been explained and human activities explain the rest of it. The devastating pace of Asian development, and its growing population, is depleting the continent's water resources in various ways (Engelke, 2016).

In developing countries, women in rural areas spend one-third time of the day coping the water shortages. Carrying water is a difficult task for women and girls. Because of this weight, they suffer from many physical ailments such as muscle aches, and constant tension in the spine. These problems affect women of all ages. Carrying 30 to 40-liter water bottles and walking to their homes can have a detrimental effect on their health (Mjoli, 1998).

Women face more difficulties than men in getting water. There are many societies where the classification is based on easy access to drinking water. Clean water is an important aspect of living a healthy life. Some people collect water and sell it at double the price and take advantage of it. Ensuring water supply is everyone's right. In some places, high water prices make it very difficult for women and lower classes to get water, and sometimes they are deprived of water because they are unable to pay for it. Domestic water supply is the responsibility of women. Women have a huge role to play in dealing with water scarcity. Water supply works are related to women and water management in domestic use is also related to women. The use of unclean water has a significant effect on the health of the people there. It is impossible to get water from remote areas without the necessary equipment or skills to fill it. Early in the morning, the woman's first responsibility is to manage the water. They often follow the traditional method of

filling water. Due to the daily replenishment of water, they gain a lot of physical stress from this exercise (Krishnaraj, 2011).

Pakistan is facing water scarcity at an alarming level. Many canals, rivers, and ponds in Sindh have completely dried up. As reported by South Asia's annual renewable water resources (2012), the government of Pakistan will have to make careful arrangements to avoid water wastage. If water wastage is not well managed, Pakistan will soon face water scarcity. Pakistan is an agricultural country and about 90% of water is used for farming, the remaining 10% is used for domestic purposes and industry use. The biggest reason for water scarcity in Pakistan is the lack of proper water management. If the water wastage is not controlled, the people here will face severe water shortages in the future (Basu & Shaw, 2013).

Water is a key element in maintaining life and it is directly connected with the food chain and human quality of life. It is closely linked to access to fresh and clean water for drinking and other domestic purposes. One of the major causes of water scarcity is the wastage of water. Such water conditions are mostly misused in the country. Therefore, there is an urgent need to understand the issue of water. In Pakistan water is wasted in some places and in many places people spend one-third of the day getting water (Khalid & Khan, 2020).

The research was conducted in Basti Dalana, District Dera Ghazi Khan, Punjab. The main problem in Dalana is water scarcity. It is a mountainous area and people face many difficulties in getting necessities of life like water because there are few water sources (Pond, Boring system, Khoe) . Many people live in that areas where there is no pond or boring system for water availability so people fetch water from the pond. The practice of fetching water is difficult and people face a lot of stress and health problems due to lack of water. People in the research locale face a shortage of water. In selected locale, water is available 3 to 4 miles far

from their homes. They are mentally and physically stressed due to water shortage. The water available to them is not drinkable but they are forced to drink available water. Some people boil water before drinking it while other people drink water without boiling it. Most women have reproductive problems due to drinking unclean water. Those who drink unboiled water have diabetes, typhoid, dysentery, gangrene, diarrhea, and cholera.

## **1.1 Statement of the problem**

This ethnographic research describes the everyday lived experiences of drinking water scarcity in Basti Dalana, District Dera Ghazi Khan. This research further explains the coping strategies for water fetching. Moreover, it also describes water management in domestic use.

## **1.2 Objectives**

The main objectives are

- To understand the water fetching strategies.
- To find out the management of water in domestic usage.

## **1.3 Definitions of Key terms**

The key terms are as under

### **1.3.1 Water scarcity**

Water scarcity means the unavailability of water, and this term also covers up the lack of clean water for a healthy life.

### **1.3.2 Fetching strategies**

There are techniques to gaining water with different methods and are often based on social status.

### **1.3.3 Domestic water use**

It is the usage of water for domestic purposes. The whole domestic tasks including drinking, cooking, bathing, washing clothes are related to water.

## **1.4 Significance of the study**

This study aims to explore water-related problems like drinking water scarcity, water fetching and also covers the management of water in domestic uses. This study helps to provide data on the coping strategies of water. Most of the researcher's works on water scarcity are in natural sciences but there are few researchs conducted on the water from an anthropological perspective. The current anthropological study provides data on water and its fetching strategies. This study also attempts the access and the management of water for domestic purposes.

## 2 LITERATURE REVIEW

This chapter reviews relevant literature on water scarcity and water-related issues. The reviewed literature also covers the management of water for domestic purposes.

There are three elements of water insecurity, adequacy, access, and way of life. People face various difficulties in improving access to water and lifestyle. Water experts are still considering how to get access to water and how to avoid water scarcity in the future. There is a lot of focus from anthropologists on improving human life. Access to water for primary use and the presence of water is an important part of maintaining a social component (McDonald et al., 2011).

Water is a basic need for sustaining human life. Getting water and using it properly is an essential asset for survival. Everywhere in the world, water supply is recognized as a key right to development. In Bangladesh, 33% of the total population suffers from some form of physical or financial water shortage. Struggling for water is an important part of people's lives in various areas, including industry and horticulture. Water imbalances and water shortages are spreading in many districts and nations. As a result of hostility to limited assets, people in poor countries suffer from water shortages. There is a huge potential for water assets on the planet. Yet as long as people want better and cleaner water to drink and also water for irrigation. As water experts point out, water supply and access to it is the responsibility of the agricultural metropolis. Most water use in rural areas includes irrigation and household chores. Poor water quality has adverse effects on human health. A large number of people suffer from many diseases due to poor drinking water. These include tumors, heart disease, and skin lesions. Drinking saltwater has a very bad effect on people's health. Significant risks of high blood pressure in pregnant women in Bangladesh are higher in coastal areas than in non-coastal areas. Women who drink tube wells or groundwater are more likely to be healthy than those who use lake water. The health effects are



also much greater in the dry season than in the monsoon season. Drinking contaminated water not only has negative health effects on people but also wastes time and education and professional activities in collecting water. All of these affect the development potential of an individual and a community. There are many agricultural countries in Bangladesh where women are concerned about water supply. Internationally, it is estimated that 64% of water collection is the responsibility of women and they perform this duty well (Benneyworth et al., 2016).

In India, in 1999, 18.6% of Indian households had to travel 40 to 50 minutes every day to fetch water. Many steps were taken to ensure the presence of water. Even then, the responsibility of filling the water was imposed on the woman. Women fill the water tank and do all their household chores on time. The situation has not changed much since. Women spend a third of the day refilling water. The pipeline has been started by the Indian government, which has installed official water taps in every house, which brings water on time. They are useful for drinking water, cooking, and other household chores. The problem of fetching water for women is almost gone but people in remote areas still work hard for water. Installing a water tap has brought prosperity to the lives of all the residents there (Motiram & Osberg, 2006).

Asia's water problems are a symbol of the world's water problems. If the climate continues to change, various forms of environmental corruption will seriously affect Asia's surface water resources. In such a scenario, if various Asian countries like China, India, and Pakistan neglect to overcome their rapidly growing water interests, they will face water scarcity in the future. Wastewater use will reduce their groundwater resources. In this way, water scarcity will become the norm in large parts of Asia, which will not be enough to meet their needs. Here China will play a much bigger role than the current dramas. China, which owns major waterways in East, Southeast, and South Asia, will ignore the demands of its downstream neighbors and

redirect measures to divert river water for its use. In such a situation, water would become a source of Asian uncertainty and, for example, a flashpoint for the struggle between India and China, instead of helping to build trust in troubled districts, it will turn into a basic well and surprisingly clear quest (Engelke, 2016).

Pakistan is part of the 36 countries facing a water crisis. Many factors have contributed to the water crisis in Pakistan, such as population growth in urban areas, agriculture, mismanagement of water systems, and climate change. If water wastage in Pakistan is not addressed, it will be very difficult for thousands of people to make ends meet due to water scarcity. The World Rankings show that Pakistan is currently facing a severe water shortage and this shortage will soon occur in cities as well. Because the annual water supply is less than a thousand cubic meters per person. In 2005, the Pakistani nation crossed this level by wasting water. If this figure reaches 500 cubic meters, the country will face a severe water shortage by 2025. In Pakistan, 80% of people living in 24 major urban areas do not have access to clean water. In Karachi's slums, 16 million face water scarcity. People who do not have access to running water rely on water trucks to fill their personal and family water tanks and use water. The water truck can only come once a week. People in Karachi buy water to alleviate water scarcity. By taking advantage of this water shortage, the water mafia sells double the price of water and takes advantage of it. There is a group of people who sell water at double the price. The government has no role in this process and no authority is stopping this illegal business. Although a few years ago the public authority tried to stop the water mafia gatherings and the illegal sale of water but failed due to the strong mafia nexus (Akbar et al., 2021).

About 60 million people in Pakistan are at risk of drinking water shortages. Drinking unclean water causes people to suffer from internal infections, skin diseases, heart problems,

diabetes mellitus, gangrene, and endocrine organ problems, liver, kidney, and bladder problems. Sadly, the supply of clean drinking water has so far been neglected in some areas. In almost every district in Pakistan, there must be a water problem from a different angle (Humayun et al., 2015).

Similarly, Pakistan has failed to address the shortage of better water storage and clean drinking water. In many places, clean drinking water is not available in Pakistan. Many people suffer from various diseases due to drinking unclean groundwater. Most of the children in Pakistan have suffered from many diseases and deaths due to drinking unclean water. As pointed out by the Pakistan Economic Review Legislature, about 50 million people in Pakistan do not have access to safe drinking water, and 42% turn to canal water, of which 65% are in metropolitan areas and 30% Percentage are in provincial areas. In metropolitan areas, about 30 percent of the population lives in ghettos. According to a survey, 14% of children under the age of five have diarrhea. In Pakistan, 670,000 children regularly miss school due to water-borne diseases and waterborne infections. Pakistan is losing Rs 112 billion every year due to sanitation-related diseases. The dangerous thing is that this number is increasing. Infections caused by bad water are increasing deaths (Zahid, 2018).

Water governance in the home is entirely in the hands of women. Women decide who gets how much water and how the water wastage can be eliminated. They know how to pay for water services. Women determine equality and efficiency in the distribution of water resources. Only balancing water use in social activities and can sustain life. In water management, water policies and their establishment and implementation are also the responsibility of women. All the work of water management in the house is handled by women. They do this job better than men (Camkin & Nato, 2016).

Lack of clean water and infection with available water significantly affects a women's daily life. The women complete their recommended portion in their families and then go to fetch water. Therefore, limited resources for clean water and sterilization affect the well-being, physical and mental health of women and men. Discrimination between men and women affects how to respond to changes in water assets. Men and women know how to make water drinkable to avoid water-related diseases. Water management in domestic storage is very important. Women who take on the responsibility of fetching and managing water also fulfill it on time. It is women's participation in every task that empowers them (Leite, 2010).

Managing water is a difficult process for people in many remote areas of many developing countries. Most women do the water filling. In some houses, little girls are constantly on duty to fetch water. Some places where women and children usually bring water to their homes. Young women spend more than three hours a day fetching water. In many developing countries, including India, women do the important work of filling or storing water. Also, stay ahead in-home care. Just like a woman, ignoring her pain continues to do all the work and keeps filling up with water, which can lead to her death. At the community level, irrigation water is fully managed by men and is seen as the domain of men. Who is known as 'farmers'. The farming system, livestock and orchard care and food collection, processing, and household welfare are all done by men and women together (Mitra & Rao, 2019).

Water supply should be suitable for individual and domestic use. According to the World Health Organization (WHO) for drinking, washing clothes, cooking and family hygiene, there should be approximately 5 liters of water per person. Daily so that their needs are met. If it is reduced or clean water is not available, many health concerns will arise. Water should be stored so that everyone has access to water. Everyone has the right to clean drinking water, according to

the WHO. Proper adherence to drinking water will only improve life. Everyone must bear the guarantee of safe drinking water. The water needed for home use should taste good. According to water experts, everyone has to take significant steps for the availability of water. It is an honor for everyone in society to keep the water clean and available for the welfare of their family and the environment around them. The WHO added that the water source should be within 100 meters of the house and the fetching time should not exceed 30 minutes (Camkin & Nato, 2016).

Drinking water sources and home water treatment practices vary from family to family. It is everyone's responsibility to find solutions to the water problems that arise in remote Kenyan towns and to ensure water supply. When people go to fill their drinking water, the people there face difficulties from different sources of water. Due to the scarcity of water, it takes about 2 to 3 hours a day for people. Each person in the family is assigned a turn to get water. People who do not have access to clean drinking water turn to canal water. Water experts are unable to guarantee that drinking water is available to all people in Kenya. Anyone familiar with water filling techniques has a special knowledge of water cost and wastage at home. But the growing need for water is also exacerbating water shortages. According to past inspections, Kenya has two major water needs. The first is that clean water for home use and a full supply of water for agriculture is an important part of life. As stated by the United Nations Millennium Development Goals (MDGs), if significant measures are not taken to conserve water, there could be dire water shortages in the future (Maestu, 2015).

Protecting water now is a guarantee that water shortages can be reduced in the future. The use of water in the home and the presence of water is generally considered a woman's responsibility. In many places, men, like women, take on the important responsibility of

providing water at home. Only by taking different measures to deal with the water supply can people survive. Men and women sometimes work together to overcome water scarcity. The complete management of water in the house is in the hands of the woman and on the other hand, the men go to fill the water and then work outside. The framework offered by water experts states that each person needs about 20 liters of water a day. He further said that the main task of the government is to provide access to water to the people living in remote areas. In some places, the supply of water depends on gender and it is said that filling water is the sole responsibility of the woman. Due to such schemes, there is considerable discrimination against women and men. According to water experts, a person who drinks water should have no tension in filling and managing it. Therefore, to alleviate the water shortage, everyone has to do their part and fulfill their responsibility regarding water (Boelens & Seemann, 2014).

Currently, 44% of the world's population has to go out of their homes to fetch water. This water is used for drinking and other household purposes. This type of water supply and the people who use it live mostly in sub-Saharan Africa and South Asia. Women and children have to go to low-income countries to fetch water. This water fetching exercise takes more than an hour and people make several trips to fetch water daily. Although the global timing of water intake is well known, the majority of the adverse effects on water-related health have reduced water quality. Time and health are completely neglected in obtaining water. The cost of time to bring water and the ability to carry a physical load is an important part. Past research has shown that there is a strong correlation between the amount of water used and the cost of water. In some areas, people have difficulty accessing water because water sources are found within 30 minutes of their homes. The need for water and storing it accordingly is a sign of a better life. The water available for the house is connected to every work. For example, some women in their backyards

are three times more likely to wash their hands regularly with a piped water supply than mothers who use wells or public standing pipes outside their homes. Many people in East Africa live in places where they do not have access to water in their homes, so they turn to places where they can get water (Pickering & Davis, 2012).

Providing clean water to the people in rural areas should be the top priority of the government. The constitution presented by water experts considers that access to clean drinking water is a fundamental right of everyone. On December 19, 1997, the President passed the Water Services Act, 1997, a law pledging to provide access to water, and strengthened the project by signing it. Access to water can be made important only by following the necessary water supply and necessary sterilization arrangements. The policy focuses on the fact that many people have difficulty accessing clean water. Under this policy, the development program was committed to providing 25 liters of water per person from a standpipe within 200 meters. So far within five years, 10 million households have been provided with the best water supply. In this regard, the government fulfilled the proposed policy. The next step of the policy will be to meet the water demands of the people due to the lack of water in rural areas. Involving women in the water project in particular and getting their feedback on water and following it can significantly reduce water issues. And various policies have been formulated to reduce the burden of water filling on women in rural areas (Hemson, 2000).

The transparency of water and its better sources play an important role in human life. Water experts, after reviewing the effects of improved water practices, concluded that several measures are being taken to protect spring water flow and its storage in rural Kenya. A survey has revealed that lack of clean water is increasing the incidence of various diseases in many children. And deaths are on the rise. The survey found that the lack of clean drinking water is

reducing the life expectancy of 3% of people and their health is deteriorating day by day. So far no welfare work has been done for the full supply of water. Water experts in rural Kenya suggest that managing many water sources involves standardizing drinking water. Drinking water storage and home water management procedures are everyone's responsibility. Experts in Kenya have looked at what steps people have to deal with when they are filling up their drinking water. Also how to prevent wastage of existing water sources. Many families do not have access to clean drinking water. For these individuals, this survey has considered the creation of those water sources. This project will provide water to all these rural families as it is available to other people (Onjala et al., 2013).

The presence of water and the task of its complete water management is considered the duty of women. The work of many women's rights organizations is to draw attention to women's participation in access to water. While this is a very important and necessary aspect of creating debate around development, poverty, gender, and water. Not only women but also men have to play their part in accessing and supplying water. The world believes that every individual has an important role to play in ensuring water supply. Water is a limited asset. If it is not stopped from being wasted, half of the world will face severe water shortages in the future. Understanding the cost of water and its reserves is very important to avoid water scarcity. Only then can any useful step be taken. Where there is a lot of rain, the rainwater refreshes the rivers, streams, and groundwater. Rainwater is an important part of running a particular ecosystem. The livelihood of plants and other human beings depends on rainwater. Man has mistreated the earth by depriving it of its ability to obtain, maintain and store water at every level. Deforestation and mining, for example, have eroded the ability to maintain water availability. In developing countries, it is common for women to travel long distances in search of water. For farmers, water scarcity



means hunger and poverty. As the drought wipes out their crops. For children, this means life-threatening illnesses and occasional deaths due to dehydration. Water experts have begun to say that water is a basic need of human life (Loots, 2011).

The availability of water in each area is a social and political force. Water availability is an important factor, especially for the residents of Kejitia, a local gold mining area. There is no borehole or any other source for drinking water at the mining site. No boreholes have been drilled for the lower class which makes it very difficult for the people there to access clean water. According to the survey, if a borehole is installed there, it will help them to get drinking water. It was further stated that there are many people whose source of water is the river but drinking the water of this river has dangerous effects on their health. Because of the current water situation, providing clean water to the miners is an important responsibility of the Kejitia government. The government must further improve the welfare of gold diggers. Water shortages in several valleys in the Dorset area of southern England have affected many locals. People manage water with their help. Collective control of water for the use of individual families and sports in the local area is a government responsibility. The proper availability in all homes with increasing use of water is an important component (Long et al., 2013).

A large number of women do their household work and are fully involved in water-related chores. Women are also responsible for cleaning the house, washing clothes, and fetching water regularly from remote areas. All the work of women in this regard has gone beyond social boundaries. In any case, women do all the work related to domestic water supply and water on time. Of the 35 countries, only a few are in the process of considering water supply and conservation projects. Water systems are distanced from men because women are more skilled than men at addressing water-related interests and family needs. The consensus of interests

among people related to water is being accepted. One-third of South Asians will soon be suffering from water scarcity. In Pakistan, 5% of the female population work in agriculture with men and perform various household chores. Excessive use of water is not limited to men but women also benefit from it and use it mostly for domestic purposes. Water management for domestic animals, cooking, and farms also play a role in the water supply. Most of the work is considered the responsibility of women. Affiliation with water sources in South Asia shows that women have a much higher stake in water management than men. The situation in Pakistan is somewhat different. The discharge of water here and its cost has always been linked to the landlords (Siegmann & Shezad, 2006).

Drinking water scarcity is growing as a global problem. If the wastage of water is not stopped in the same way, then in the future man will face a water crisis. Water wastage is destroying our planet's environment. The fact is that man is slowly depleting all-natural resources. If human habits and the use of water resources are not changed, water scarcity will increase and reach critical levels. As before, water disputes remain unresolved. In the future, there will be more fighting between different nations because of water. Water scarcity is a major problem but unfortunately, it has not been given due attention in the past, and now the situation is deteriorating. Pakistan was once blessed with water but is now suffering from water scarcity. The survey found that poor water storage systems in Pakistan are having a detrimental effect on irrigation. As a result, 60% of its water is being wasted. Pakistan uses more water than other countries to grow crops. Similarly, Pakistan gets water from rain, rivers, snow, and glaciers. Pakistan will soon face a serious water crisis due to various factors including changing climatic conditions, growing population, poor cropping system, and unavailability of water resources. Increasing water use will be a major cause of water scarcity in the future. Many rural areas in

Pakistan are already facing famine and water crisis but this time Pakistan's water crisis will intensify in the coming years. This is a bad situation. Only after studying all the problems of water can any strategy be made to save it and by reducing its excessive use, water scarcity can be avoided (Zhang et al., 2021).

### 3 RESEARCH SETTING AND METHODOLOGY

The third chapter includes a detailed description of the research setting and its methods that were used during fieldwork while conducting interviews. The first part of the chapter deals with the locale of the study. However, the second part of the chapter discusses the applied research methodology for data collection.

#### 3.1 Locale

The current ethnographic research was conducted in Basti Dalana, district Dera Ghazi Khan, Punjab. Basti Dalana is located on the west of the Dera ghazi khan city. It is 18-kilo meters away from the main city. It is a mountainous area of the Koh Suleiman range. Koh Suleiman is the hilly range that starts with Balochistan and ends at the start of KPK and touches Punjab's boundary. Basti Dalana is located with the start of Koh Suleiman in Punjab. It is a tribal society and the Khosa tribe is prominent in Dalana and they handle each issue in the community even social or political. Khosa tribe is "*Tumun*" the head of the tribe and a political power relate with Tumun in theirs. They are bilingual; they can speak Balochi and Saraiki. But Balochi is their mother language. In their most of the people are daily wagers.

In the research locale, there is neither any kind of school nor any education system to literate the people and not even any training center for basic skills. So literacy rate is very low and on the other hand, there are two "*Madradas*" (religious institutions) in Dalana. Dalana is in Punjab due to its geographical location, this area is known as a tribal society. The political and social issues are handled by a single person "*Sardar*" the head of the society and for the justice and judicial system they call a Jirga where the head of the "*Jirga*" will announce the judgments.

“*Jirga*” is the group circle of some people who have the authority to handle political and social issues.

The purpose of this research is to find lived experiences without water. Geographically the research locale is located on the west as in short distance away from the Dera Ghazi Khan city. It is a suitable place for my research and also relevant to my topic so I choose this locale for my research.

### **3.1.1 Punjab**

Punjab is one of the most crowded provinces of Pakistan. The complete space of the region is 79,284 square miles. Its populace is 82 million. The number of inhabitants in the territory covers almost 56% of the all-out populace of the country. Lahore is the capital and the biggest city in the Punjab area. Other significant urban communities of Punjab are Gujarat, Sialkot, Faisalabad, Gujranwala, Jhelum, and Rawalpindi. It imparts the line to India, east of Punjab lays the Indian territory of Punjab and Rajasthan. In Pakistan, Punjab is lined by Azad Kashmir by northeast, the south by Sindh, the southwest by Baluchistan, in the west, it lies the region of Khyber Pakhtunkhwa and toward the north Islamabad capital region (Mazhar et al., 1999)

### **3.1.2 History of Punjab**

The history of Punjab refers to the Punjab region, a geographical, cultural, and historical region of South Asia, comprising the regions of East Pakistan and North India. Ancient Punjab was the basic geographical boundary of the Indus Valley Civilization, notable for the modern technology and facilities used by the people of the area. During the Vedic period, Punjab was called Sapta Sindhu, or the land of seven rivers. Punjab was historically a Hindu region at that time. Intermittent wars between different states were characteristic of that time, except that they

were temporarily united under the Central Indian Empires or the invading powers. When Islamic guidelines started in India, it went on for a significant stretch of the district's set of experiences, and the greater part of western Punjab turned into the focal point of Islamic culture in the Indian subcontinent. A period of Sikh rule under Maharaja Ranjit Singh and his Sikh Empire briefly saw the revival of traditional culture, until the British annexed the area to the British Raj. After the end of colonial rule, Punjab was divided on religious grounds - the Sikh and Hindu-majority districts of East Punjab moved to India, while the rest of the Muslim-majority districts of West Punjab moved to Pakistan. Because of its area, the Punjab locale went under steady assault and saw hundreds of years of unfamiliar intrusions by the Persians, Greeks, Scythians, Turkic people groups, and Afghans. The northwestern piece of South Asia, including Punjab, was over and over attacked or vanquished by different strong unfamiliar militaries since the beginning, including those of Alexander the Great, Genghis Khan, Timor, Nadir Shah, and others. The Area of Punjab, Pakistan, and the degree of the Indus Valley Civilization destinations in and around it the most established proof of life in Pakistan has been found in Soan River valley. It was here that the absolute soonest indications of people have been found during the unearthing of ancient mounds. Tools up to 2,000,000 years of age have been recuperated in the Potohar level. In the Soan River, numerous fossil-bearing rocks are uncovered on a superficial level. Punjab was important for the Indus Valley Civilization, over 4000 years prior (Ibid, 1999)

### **3.1.3 District Dera Ghazi Khan**

Dera Ghazi Khan is the mid-point of Pakistan and is situated in the flood plain of the Indus River. The town was established by "Ghazi Khan" who has a place with a Baloch clan. The old town was to some extent obliterated by a surge of the Indus in 1908. The new town is established in 1911. It interfaces Balochistan by street and different sides associated with

connecting Tounsa flood, "Ghazi Ghat an extension that interfaces two regions". Rug weaving and the creation of wooden toys are conventional businesses including rice and flour processing and fiber items made around. Dera Ghazi Khan is situated at 30'03 "N and 70'38" E. The general environment state of the city is dry with next to no precipitation. Winters are gentle, yet summers are extremely blistering. The normal temperature in summer is around 10 107 ° F (42 ° C), while in winter it is under 40 ° F (4 ° C). The current breeze bearing is north-south. Because of the fruitless heaps of Mount (Solomon Mountains) and the sandy soil of the space, wind blasts are normal in summer. Throughout the late spring, the temperature is generally most noteworthy in Pakistan (Mazhar et al., 1999).

### **3.1.4 Festivals**

There are many festivals celebrated by the peoples in Dalana, related to their cultural perspective as well. "*Sangh Mela*", is a "*Vaisakhi*" (it's a festival, after the wheat harvesting) during March and April, and has been celebrated in "*Sakhi Sarwar*" (A place, located in few km away from Dalana) people coming there from Jhang and Faisalabad for centuries. This celebration is praised by Hindus and Muslims, particularly at the hour of wheat gathering. In some places, it is known as "*Basant*". An enormous number of devotees coming from various religions turned into the supporters of "*Sakhi Sarwar*". Most of the men from Dalana are participating in that festival.

### **3.1.5 Religion**

There are all Muslims who live in Basti Dalana. They can be divided into different sects like Deobandi and Barelvi, Deobandi sect is dominant in Dalana, and the minority of the people from the Barelvi sect. They have separate mosques for each sect. the preaching and the whole

religious services are related to “*Mullah*” a religious specialist. The decision of mullah is dominant in religious activity and sometimes in a religious ceremony.

### **3.1.6 Languages**

In Basti Dalana, the native language is Suleiman Balochi and they speak Saraiki as a 2<sup>nd</sup> language. The Balochi language is compulsory in the tribal area as well as in the Koh Suleiman range. Most of the people communicate also in Saraiki and they know how to speak the Saraiki language but many people are not familiar with the Saraiki language so they speak their native language. Many of my respondents have not spoken to Saraiki, so during my interview, my key informants could help me to translate Balochi into the Saraiki language.

### **3.1.7 Dress patterns**

Dalana is a tribal society so the dress patterns of men have a “*shalwar kameez*” and turbine on their head and the women’s has also in culture dress, they wear some kind of frock with the work of stones and small mirrors on it and the chadar for women is compulsory when she went outside because it is the rule of their culture and they must follow the whole rule.

They made their dress on their own. They sew their clothes and make different designs on them. It shows their culture in dressing. Men sew their clothes from the DG khan city. Women sew their clothes and their children's clothes.

### **3.1.8 Marriage Patterns**

The marriage pattern is Endogamy in Basti Dalana because of its location. It is a tribal as well as traditional society and the “*Khosa*” tribe lives in Dalana. The marriage is held within the family. But over time, they change their marriage patterns because some people educate themselves and neglect their cultural perspective and change the marriage patterns. In the same way, now many people marry outside the family.



### **3.1.9 Electricity**

In the research locale, there is no kind of electricity in Dalana but at the start of the Dalana's territory, the electricity is available in one mosque. Near the mosque there are army cant is located so they give a wire of electricity just for the mosque. The rest of the people in town live without electricity, they spend the night by the lamp but some of the people have a high status, so they bought a solar system and use it at night as well.

### **3.1.10 Climate conditions**

The climate condition of Dalana is very bad because of less rainfall, so the temperature is remaining hot for 7 months. The climate is warm day time and the temperature gets low after sunsets. Due to its mountainous location, the night is cold as compared to day time. The overall condition is better because of less traffic and the air is clean because there is no traffic and no industry which keeps the environment clean.

### **3.1.11 Medical Centre**

There is no special facility for health care. The one-man respond to a role as a doctor, he did a short medical diploma and look after some minor case's in there but if any serious injury is held they get the patient to DHQ Dera Ghazi Khan. The DHQ is located 20 km far from Dalana. Otherwise, the so could doctor handle all minor cases and run his small medical Centre in there.

### **3.1.12 Mini Market**

There was one mini-market in Dalana. It is located near with boring system. There were 5 to 6 shops for different kinds of products like one shop was merchant store and also a stall for vegetables. There were selective items in there so they called it a mini-market in their area.

## **3.2 RESEARCH METHODOLOGY**

The methodology is a technique for collecting data to fulfill the research purpose in social science. I used some particular methods for data collection. The focus of my research is to find out how many people spend their days in search of water and what their life experiences are due to the water fetching. My research is based on several methods which include Participant Observation, Focus Group Discussion. I have got reliable data from this technique. Semi-structured interviews were also conducted. The recording also helped me a lot and it is an excellent research tool. This research is based on qualitative methods. I used the interview method in my research. I did also in-depth interviews.

I have spent four months in the fieldwork and in those four months, first I made rapport-building among the respondents. It also made it easier for them to share their experiences with me, as there was a continuum of communication between me and my respondent. It was only after my first month of building my identity and bonding with them that I got to know something. I used to gossip with them a lot and I got answers to many of my questions from them in the same style of conversation. Moreover, Methodology is the base of research. It also provides a basic framework to start the research.

### **3.2.1 Rapport Building**

Rapport building is the most important step of the research. Rapport building means the relationship between researcher and respondent which is mostly based on trust and mutual understanding. I used the rapport-building technique after the start of my research. Therefore, first, I met senior members of the society; I introduced myself and discussed the research objectives with them. I spent some time with people in the locale and then tried to explore their perceptions related to my research topic. After meeting, I try to create a bond with those who had

enough knowledge about my topic. During fieldwork, I introduced myself and discussed the purpose of my research. I met local people of the community which included teachers, the old age people, and young boys. These are the people who shared their ideas about my research topic. They have well experience related to my topic. Some of them were literate while few others were illiterate.

### **3.2.2 Participant Observation**

Participant observation is an important method in anthropological research in which anthropologists spent a specific time duration in research locale to collect reliable data through observation.

During my fieldwork, I have also used this tool. The participant observation method is used for pure data and also observing the practice through participant observation. It is a type of data collection technique in qualitative research. Using this method, I collected data as a participant-observer. One of the advantages of this method is that it can easily collect data related to their topic by observing the participants. As a participant-observer, I used this technique where I became a part of the community and I observed them as being their member. This was a direct way for me to get information from them. It helped me in getting close to people and making them feel comfortable enough with my presence so that I can observe and record information about their lives.

### **3.2.3 Key Informants**

Key informants are those people who have more knowledge about the locale and issues. Key informant is like a bridge between researcher and respondent. So, the key informant helped me in the selection of respondents and also helped me to translate “*Balochi*” into “*Saraiki*”.

I select 2 people as my key informants, which had extensive knowledge about my topic and my locale. They were natives and one of them was a primary teacher. I added them in every group discussion. I also carried in-depth interviews by asking open questions to them with the help of key informants.

### **3.2.4 In-depth Interviews**

It is used for collecting information from the selected sample. I conducted in-depth interviews during my fieldwork because some of my questions have no one-line answer so the solution is in a long discussion, so I continued to get the pure data. The main benefit of these interviews is that I got useful data from the respondent, and this type of interview also helps the respondents to speak on the specific problem and their experiences.

During my fieldwork, I have collected 12 in-depth interviews. I met the respondents on a boring system where they used to collect water.

### **3.2.5 Focus Group Discussions**

Focus Group Discussion is a group of people who have a lot of data about the research topic. Although group interviews are often used as a fast and efficient way to collect data from multiple people at once, Focus Groups Discussion considers group interaction to be the key method. This means that the researcher encourages people to take turns talking to each other, asking questions, and commenting on each other's experiences and perspectives, and sharing their experiences, rather than asking each person a question.

I also gather the respondent's groups and asked them some basic questions according to my research, and then they all shared their opinions in turn by turn, which made it much easier for me to the collection of data. Focus Group Discussion is a useful technique in social research because everyone has some knowledge and they discuss their opinions in a group. Some people

feel it easy to speak in a group discussion, so I set up a discussion group, which I found this tool very useful for data collection.

I arranged 3 Focus Group discussions for sake of reliable data and there were 10 different people in each group. It was very helpful for me to collect data in group discussions instead of collecting data one by one from them.

### **3.2.6 Sampling**

Sampling is a technique to select the people in the whole community for reliable data. I used the sampling method during the process of dividing the population according to the suitable questions. The main target of my sampling was to choose men for better data, and my aim was also to question my respondent to his female relative on the fetching experiences because Dalana is a tribal society, they cannot allow anyone to open talks with the female.

I used purposive sampling during the research. In the purposive sampling technique, I selected many members of the population to participate in the study from my judgment, and I applied this technique for the sack of reliable data without any biasedness. Through this technique, it was easier for me to divide the population according to my objectives.

My sample size is 20 which included men and young boys. I divided the population into different groups according to age.

### **3.2.7 Case study method**

The case study is the tool for qualitative research. It is used to get in-depth information from the respondent. I used this technique for reliable data in the form of a story. In each case, I asked the respondents to tell me their water fetching story in detail and also her female family members' watering experiences. I confirmed them and asked them if, should I write their name in

my research everyone has refused to write their names. So, I did not mention the respondents' names.

I collected 7 case studies during fieldwork. It is a useful technique to get data in the form of a story.

### **3.2.8 Field Notes and Field Jotting**

I have written my collected data in field notes and to write the experience of the day and I also did field jotting to not miss any information. I observed and noted the daily routine of respondents, their certain behavior towards a situation during fetching. So, by using these methods, I collected valuable and reliable data from respondents during fieldwork.

### **3.2.9 Daily Dairy**

One of the important tools of fieldwork is the daily diary, which I used during fieldwork. It helped me to record the behavior in written form it also helped me note the hesitation of the respondent in my questions. It helped me in remembering the event which happened in the locale. During the research, I also maintained my diary. In daily dairy, I not only wrote observations and interviews but also wrote my experiences in the field.

### **3.2.10 Audio Recording**

The method of audio recording is useful during fieldwork and conducting interviews with the respondents, it was difficult to write each and everything in detail in insufficient time. So, for the secure time and to get data in form of audio recording is beneficial. Audio recording helped to cover all information that was answered by the respondent during interviews.

During the data analyzing audio recording is very beneficial to analyze the collected data.

### **3.2.11 Photography**

Photography is one of the important techniques in research. During fieldwork, I used photography to record photographic data of my locale and I put some photos in this thesis those photos I captured in fieldwork.

## 4 WATER FETCHING METHODS

This chapter addresses the first objective of the study and explores the different water fetching styles and tools they used in getting water. It records the various perception of locals to achieve water needs from different sources. This chapter also covers the methods during water fetching.

Water fetching is a very difficult task; it affects physique as well as psychological problems because this difficult task is done from the beginning of the day which has a bad effect on their health. One respondent added, fetching water is a very difficult process, and fetching water in a mountainous area is even more difficult. The research locale is a mountainous area, so the process of replenishing water for a living is difficult. He added people travel three to four miles away from their homes for water collecting. The underground water level is low about 150 to 200 feet. In the research locale, the other source of water is a “*boring system*” (Borehole). Due to this source of water, they can get groundwater easily. Another source is a “*pond*”. Their ancestors built a pond for the sake of storing rainwater; they select a specific space and made mud walls around the space. It looks like a pond. All community members fetch water from the pond. People who live in remote areas fetch water once a day. Sometimes during fetching they take a break in the mid-way because it is very difficult to carry a 30 liters water bottle or “*Mashkeza*” (a bag made by goat's skin for storing water). It is only when they carry the burden of water and due to this the psychological pressure is high and they feel restless during fetching. Sometimes they want to end their lives and feel helpless in this condition of fetching because it is very hard work and need much strength to do this. In some families, the men are dedicated time and strength for this task because the male structure is suitable for lifting weights as compared to women or girls, but when a woman goes to fetch water, she faces many difficulties to carry that burden. It is very necessary to set a time for fetching water, from the beginning of the day, they



fill the water accordingly and make a water fetching and distribution schedule for using water all day. This is the technique of giving a specific time for this duty. I also focus on daily life experiences without water, for its survival and its absence. The other respondent said in the research locale, who live far from Pond have set aside; they spend 2 hours in a day to fetch water, either at the beginning of the day or in the evening, but before sunset. This duty is performed on time because every work is connected with water, such as drinking, cooking, and other household arrangements; all these works are connected with water. So this water fetching is done on time. The choices of time and energy consumption are a key part of this exercise. The participation of women in research locale is considered to be very significant and more than half of the women fetch water for their household needs and also take care of their children. On the other hand, most men fulfill their other responsibilities, such as taking care of outdoor work such as farming or herding their animals, or going to work in the city, so women stay at home all day and look after the whole domestic tasks.

Most women did this job and worked with the men at every turn, whether it was other household chores or the arduous task of fetching water. An individual must consume 10 liters of water in their daily routine. But the people in the research locale, do not have much water and the available water is not drinkable but people are forced to drink that water in compulsion. They are in a very bad situation because of the unavailability of water. This is the problem of almost every house in the locale. People drink less water as per routine and the rest of the water is stored for other purposes such as bathing, cooking, washing clothes, and sometimes for animals. Both women and men are known about their duties and they have done them on time. 50 years old respondent said, his wife's fetching routine when he was ill. He said, First, she gets up early in the morning and does their housework and then they go with their animals (donkeys, goats) to

fetch water in water cans or “*Mashkeza*”. Due to the hot temperature, most of the women go for fetching early in the morning. The respondent said, it is a very difficult task to accomplish after the sun rises in the summer season because the temperature gets hot and this exercise takes energy and time to bring it, so this task is done in the early morning and looks after the other domestic chores.

A 30 years old respondent said that most women are doing the water fetching and also take care of their children and other household tasks. The physique of women is not made for taking such kind of weight lifting as like water bottles but the need of water forced them to do that. The contribution of men in water fetching is less because they are doing other duties like they go out for paid work. In many families, young boys do this job with women. The fetching and carrying burden is not tough for young boys as compared to women. The participation of each person in water fetching or managing the water-related task is a very important subject. In some families, they have divided the days along with the member for water fetching and everyone knows about their turn. If anyone does not do their duty on time then the routine of cooking and other water-related task is get late. So the water fetching is done on time. He added that the contribution of women is highly appreciated for water fetching and the management of water in the house. The important subject is the management of water, if they have water but are not used to the management then they get in trouble because, if they did not manage the water distribution then water gets wasted and the rest of the task would never be done through the water scarcity.

Gleick argued that the water need of a single person is approximately 20 liters per day (Gleick, 1996)

## 4.1 Sources of water

The data showed that they have three sources of water in Dalana. The main source of water is a fountain, the water of the mountains which flows towards the land, which accumulates in one place and stays there for about 3 to 4 months, so all the settlers have named it as “*pond*” (mountain water) that water is usable for about 3 to 4 months. Or in the rainy season, when it rains and the water flows from the mountains to the land and these people combine it with different techniques and fulfill their needs from that water. All these techniques were made by their ancestors for water storing and they still store water from the same mechanism and use it for a long time. The people built a wall around the area where the water stopped. They use this water for about three to four months. This water is for drinking, cleaning, bathing, and other household uses. To avoid the hassle of fetching water, most people have built houses near the pond and settled there or near the fountain because life depends entirely on the availability of water. Population and residential areas depend on the pond or the place where the water is available because they have easy access to water and face fewer struggles than others. From the pond humans and animals drink water in the same place; they face this kind of struggle in research locale.

## 4.2 Pond

Another source is to meet the water availability and water needs are “*pond*”. They chose a straight place and built a mud wall around it. As soon as when it rains, all the water flows from the mountains and gathers in one place. They built it for water storing and the whole community fulfills their needs from the pond. This is a community-based action for storing water. In this pond, there is completely rainwater and this water is used in almost every home for drinking and other household purposes. In this situation, it is easy for people who live near ponds to fetch

water, but most people live in remote places, so they face many difficulties in fetching water. In every household where there are more people, they have assigned one person to work according to the days of the week and everyone remembers the day to fetch their water, thus they have arranged to fetch water.

If someone has domestic animals like a donkey or a camel, they take it to the pond and untie the ropes of the animals and let the animals drink the water. On the other hand, they start filling the water they need. It takes at least 3 to 4 hours on one cycle to fetch this water. One of the benefits of animals is that they load water cans on donkeys and carry them home.

(A pond)



Figure 1, Source: Researcher's photography, 2020

### 4.3 “*Khoe*” Well

Another source of water is “*Khoe*” it is some kind of borehole about 9 to 10 feet underground and gain water from them. They dug a borehole and after some time the water shows in there within the soil here it feels wet, the groundwater gets wet in the soil, they sifted it through a lawn cloth and Separated the water and put it in a pot. In the rainy season, when rains come, they put the utensils under the rain and collect the rainwater. the respondent said they store water in utensils. During the raining the earth sucks the water due to this the groundwater level rises, it is easier to dig a borehole and this exercise is done when the pond is dry. He more added, when women gather in the well to fetch water, no man is allowed to go there because the research locale is a traditional society and all of us follow the rules and values there. One “*Khoe*”

well is used to get water at one time; if anyone needs more water then they have to dig another “*Khoe*”. After filling the water *Khoe*, the animals also drink water in the same place. Animals also suffer from water scarcity like human beings. The participation of women is very important to fetch water but digging of *Khoe* is a very difficult task so only men dig *Khoe* and then women get water from it.

In the western part of Dalana, most people live on flat land. So he showed me a borehole on the surface which he had dug himself for water supply and he used to get water from it. It was a kind of well about 60 to 70 feet below ground level. He added that they have various tools to draw water, namely a long rope and a steel jug that was tied to the rope. He also showed me the water coming out of the well. The color of the water was light orange, that water contained large amounts of unsafe minerals and ground salts which adversely affected our health. "We know that the water available is full of dangerous salts and this affects our health, but we drink it compulsorily because there is no source of water near our house," he added. So they are forced to drink water. The 40 years old respondent said, "I dug this well together with my two sons and now they are getting water from it." He added about his health, drinking this water often makes his stomach upset. "I have a lot of allergies on my hands and face that I can't cure because of drinking their lost water," he added. I have dug a lot of wells but they did not meet the water requirement so I was forced to dig a well and now we meet our water needs with it. There is not much difference in quality. Getting water from *Khoe* is not a good solution as new wells have to be dug every day which is a difficult process.

(A Kheo)



Figure 2 Source: researcher's photography, 2020)

#### 4.3.1 Case study 1

Mr. X was a 40-year-old man. It has a nuclear family. "I fetch water from the well for my family," he said. The practice of digging ditches is a very difficult process. It is very important to choose the right place to dig. My wife and I get together to get water. When I see a special place to dig a hole, I dig there and my wife helps me. As soon as the excavation is complete I go for other work. My wife fills the well with water through the technique of fetching water. The technique is to put the wet mud in a lawn cloth and squeeze the cloth from the top into a pot, then

the water collects in the pot and she keeps repeating the same process. He showed me the water of the well. The color of the water was light orange. "We drink it under duress," he said. I don't have a motorbike or a donkey to get water from a boring system or a pound by loading water on it. he said,

"As I digging the Khoe, I realize that water is a great blessing and that there is no concept of human life without it.

#### **4.4 Boring system (borehole)**

Another source of water is the "boring system" (borehole). This has been installed at the beginning of the research locale. They had to fetch water from the boring system every day. They collect groundwater in the tank with the help of a machine and the machine is used to draw water from the borehole. The whole construction of the boring system was community-based action. The tank can store 400 to 500 liters of water. They also take care of and protect the motor pipes and other valuable equipment used in the machine. A motor that was connected to the solar system and no one runs the motor at the beginning of the day. Then the water goes into the tank through the pipes. Once the tank is full of water, they turn off the motor. There is a tap at the bottom of the tank and the whole community gets water from there all day long. This "boring system" and water system is playing a very important role in their lives because the water here is clean and easily drinkable. On the boring system, everyone brings their water cooler or can to fill the water and get water in their turn. Those people whose homes are close to the "boring system" have less effort to fetch water and come on foot to fetch water. If someone has a motorbike, he comes to fill it with water. If someone does not have a motorbike, they load water on their animals and use the animals to fetch and carry water. "Most people have motorbikes, they come from remote areas and if they have this kind of facility, they take advantage of it and meet their



needs," he said. Those who do not have a bike or an animal, carry water on themselves to meet their needs.

In the research locale, there is a mini-market near the boring system, from where they buy essential products. In this market, one shop is for utility goods, another shop has a barber and fruit stall and the next shop is for selling petrol and diesel. The data revealed that old people sit near the mini-market, under the shade of a tree from morning to evening and talk to each other and spend all day there. In the research locale, it is considered a place of social gathering. The older people take care of the boring system to ensure the availability of water throughout the day. They protect the "boring system" in every way to ensure that no part of the machine breaks down and the flow of water is stopped. The respondent said that sometimes when many people come to the "*boring system*" to fetch water at the same time, there is a great rush and there is a rule of filling water that whoever comes first fills the water first. So everyone waits their turn and then fills up with water. The respondent further said that when they go out to fetch water from the house, if there is any shortage or need for household utility items, they buy it from the money market during or after refilling. There is also a doctor in this money market who treats minor ailments and performs his duties. General matters are handled by a doctor but only when there are injuries or other serious cases do they go to the main hospital 10 to 12 miles from the city. Sometimes, if they get seriously injured, they never get to the hospital on time, so they have a lot of deaths on the way to the hospital. The respondent said that once my uncle was shot and he died on the way to the hospital as there was no health facility in the research locale.

The respondent added most of the men or boys sit in the money market and it is like a small meeting place for men and they also discuss social issues or sometimes they also discuss water-related issues. Do When it is someone's turn to fill the water, he puts his bottle or drum under the

tap and sits down to join the adult gathering. He said that Dalana is a traditional society and it is in their culture that they have to participate in all kinds of social gatherings and sometimes they have to take part in such discussions and express their views. People also sit there and discuss the water crisis and its solutions. He said, Sometimes we even ask each other for advice on what is the easiest way to get water and less difficulty to face. Everyone has their point of view and opinion about bringing water there.

#### **4.4.1 Case study 2**

Mr. Y was a young boy about 23 years old. I met him on the boring system he was there to fill the water. He was my random model. I asked her about the water filling routine and after some more gossip, she told me. I have 2 sisters and a mother in my house and my father has passed away. "I come here twice a day to fetch water," he said. I have my motorbike on which I load water to meet my needs. This water is used for drinking and cooking because the water here tastes better and is drinkable. I fill the water tank with water and take it away. I came here on my motorbike and with two cans of water. My house is about 7 miles from the boring system. He told me that, in the past, he had a bicycle on which he used to fetch water. "I fetch water on time because everything in the house is connected to water, so the availability of water is my priority," he added. He also told me a story that happened when I was returning home from a boring system filled with water. On the way, my motorcycle tire punctured and I had two cans full of water. I had to suffer a lot that day physically and mentally. He said that if there was no such accident, it would be more difficult to fetch water on foot than on a motorcycle.

## 4.5 Rainy water

After the rain, the rainwater flows rapidly down the mountains from different places to the ground, and the people of the whole community work together and make a waterway, and all that rainwater is in one place. The only difficulty is in making way for water. They consider that water to be completely clean. They use this water for drinking, bathing, and other purposes, and it is also used for drinking animals. About 25 to 30 days, it is not clean for drinking. This water is used only for bathing. If they drink that rainwater, it has a bad effect on their health. In the past, they drank rainwater under duress, and still, the situation is not much better for a few days. When the Khoe dries, they spend it on rainwater and use it for other purposes. Almost, rainwater is used for bathing and washing clothes.

The data showed, rainwater is used for bathing and it is also used for agriculture and they have made a path for water from the upper place to the lower place and thus carry the water to their fields. Rainwater has its minerals so they don't need to use pesticides to kill germs and get salty water to grow a good field. This is a very useful technique to cover rainwater and avoid wastage of water. Most of the time, people build their homes above ground level. It is beneficial to manage the water supply through their fields. Adjusting the water supply depends on the need. Water synthesis and water distribution system has the best technology and they make every effort to save water from being wasted.

The 35 years old respondent said that during the rain most of the people put the utensils under the rain and they get water from it and store it for a while, this water is for drinking and cooking. Those who have many utensils for storing water put the whole pots under the rain and collect the rainwater.

## **4.6 Strategies of water fetching**

The strategies to compete for water and its needs are like a pure classification system or based on social status because if anyone has a high status, he brings water on a motorbike. On a motorbike, he brings two bottles of water at a time. There is no calculation of fuel consumption for fetching water. Most of the people in the town have their domestic animals like donkeys and camels and they get water with their help. First, twist the rope and place a net-like cloth on the donkey's back and attach the water bottles. This means of fetching water is useful and convenient for the majority. With the help of animals, they load water on them and walk with them. This type of fetching pattern is not so expensive because almost every household has an animal, in this type of practice they only need animal feed. They walk with donkeys and fetch water. The last water fetching style is on its own; this exercise is tough because carrying a water bottle or water container on your shoulders and walking is a very difficult process but they do it well and they have to walk about 3 to 4 miles. It all depends on the distance to the home. This stressful practice has a very bad effect on their health, but they have no idea of living without water and they have no other way. The respondent said, the struggle to fetch water makes them feel alive and able to survive. Halfway through the watering journey, they get to rest for 10 to 15 minutes and then begin their journey. In exchange for lifting this weight, the growth of the body stops most of all because lifting weights causes tension in the muscles and joints and hurts the body, but when you put all this aside and take the water home all their fatigue is gone.

### **4.6.1 Water fetching on bike**

Filling water is entirely based on financial status because in the town, those who have a motorbike use it to fill water. These bikes make it easy to fill up with water. Filling water on a bike takes less time and does not require much effort. It takes them 2 hours to fill two cans of

water and they bring two bottles at a time. The involvement of the machine in this work is very useful for obtaining water but it also increases the fuel consumption and costs a lot. This type of water filling style is beneficial and in this style, the respondent has less difficulty in carrying water. The respondent said that he keeps his motorcycle ready at all times. Whenever they go to fetch water, they first check the motorbike thoroughly and if there is any deficiency, they fix it so that they do not face any difficulty while filling the water. Most of the young boys do the work of filling water on motorcycles. The respondent added sometimes the bike runs out of petrol on the way or sometimes it has to suffer a lot due to tube puncture. Whenever they run out of petrol, they have a hard time dragging a heavy motorbike and 40 liters of water into the mountains. The machine has given a lot of benefits to human beings but sometimes there is a lot of trouble due to the breakdown of the bike. This method of fetching water is easy but buying a motorbike is not for everyone.

(A borehole)



**Figure 3** Source researcher's photography 2020

#### **4.6.2 Water fetching on animals**

This method of loading water on animals is common in research locales because everyone has pets such as donkeys or camels with which they get water. Women go to fetch water with their animals and sometimes take their children with them. They make a so-called jacket with ropes for the donkey and put water bottles in the pocket of the jacket and load it on

the donkey. They go to the pond with the animals and start filling the water. First, they fill a glass with water and then put it in a can. Filling a glass of water with glass can be a daunting task. The 40 years old respondent that this work takes a long time to complete. When they reach the pond, they leave the donkey open so that the animals can drink the water comfortably. In the research locale, humans and animals drink water from the same place. I have seen the scene where women were filling water from the pond on one side and animals were drinking water from the other side of the pond. The respondent said that in this way of fetching water, they only have to provide food for the animals.

(A donkey is ready to load water)



Figure 4, source researcher's photography 2020

This method of fetching water is common to everyone because everyone has a donkey or similar animal on which they can load water. Women go to fetch water with their animals and bring their children with them. They make so-called donkey jackets with ropes and put water bottles in their pockets and load them on the donkeys. They go to the pond and start filling water in the can. First, they fill a glass with water and then put it in a bottle. Filling a bottle with glass is a difficult task. This work takes a long time to complete. They untie the donkey's rope and the animals drink water from the other side of the pond at the same place. I have seen the scene, where the women were filling drinking water from the pond on one side and the animals were drinking water on the other side. The respondent said they are forced from life to drink that water and we are living and drinking it in compulsion. In this water filling technique, they just only need animal feed.

Many people in the research locale have their pet dogs, goats, and cows, so they have to fetch water for their animals as well. Fetching water for animals is also a difficult task as animals drink more water than humans so every day they take all their animals to the pond and all the animals drink water from there. In return, they have to bring an extra bottle for them. After filling up with water, they load the water on donkeys and start their journey home. Somewhere in the middle of the journey they also take a break and rest there for some time. And then start your journey again. This exercise is associated with young boys because they are active in controlling or handling animals. The data showed that this type of exercise takes a lot of time and almost all day is devoted to fetching water. When they get home, their first task is to store one-third of the water, and they use it regularly throughout the day. Everyone is accustomed to storing domestic water to avoid water scarcity as the same water has to be used throughout the day. The respondent added that water storage is also a basic need. They store water in bottles, pots, or



sometimes in a pitcher. But storing water in a pitcher is a dangerous process because the pitcher is made of clay and if the pitcher breaks, there is a fear of losing water. One of the advantages of the pitcher is that the water in the pitcher is cold and clean which is easily drinkable.

#### **4.6.3 Fetching water on your own**

This is the most difficult type of water filling because they carry water cans or water bottles on their shoulders and then walk about 3 to 4 miles to their homes. During this time they face many difficulties. Women or sometimes young boys adopt this style of getting water. This is the last and most difficult type of water filling. The respondent said that carrying this load of water causes pain in his body. Filling the water sometimes slows them down in other household chores because the fatigue of filling the water makes them slow. Women face great difficulties in overcoming water scarcity and ensuring its presence. In mountainous areas, it is very difficult to carry such a load on one's shoulders and walk on a mountain. Women's health is badly affected in this exercise because women's body is not built for this hard work but still, women have a very important role to play in meeting the need for water. When a boy or a girl reaches the age of 5, they go to fetch water with their elder siblings or sometimes even with their mother. The 34 years old respondent said children are required to participate in this exercise. It is an important form of socialization to maintain water fetching routines. For children, this type of exercise has a detrimental effect on their health and development, but it also makes it easier for them to meet their basic needs and replenish water in the future. They know our health is being affected by the fetching but if we do not bring water, life will not be possible.

Even in today's age of development, they are facing many difficulties due to a lack of necessities like water. When the water runs out, all their work stops because all the work is connected to the availability of water. He added that those who do not have a ride to fetch water

bring their water at the same time. It is very difficult to go back again and again and refill. Two or three people go together to fetch water and fetch the required water at a time. Only half a day is spent on this exercise. No one has any superiority over another to accomplish this task. Everyone knows their job and does their job on time. But women's participation is commendable as they handle all household chores and address water shortages.

In the pond, several women come to fill the water at the same time. It is a kind of social place for gathering women. They share the events of the day at the pool. If an incident or problem arises, everyone is informed about it, so it is important to include or maintain daily routines. It is a kind of social gathering or sharing platform for women. This meeting of women continues throughout the day. Some women fetch water early in the morning and some women first complete their household chores and then come to fetch water. The children come there with their mothers and play there.

#### **4.6.4 Case study 3**

Mr. Z told me about his routine of fetching water, that I am 18 years old and that I carry this duty of fetching water for my family. He said I have four sisters and I live with my parents. I am the only brother or young boy in my family. When I was 10, I used to come with my father to fetch water, but now my father's health is not good. So now I fill the water myself for the whole family. After my father became ill, my mother and I used to fetch water and meet the need for water. Now I fill water for my family. I also occasionally fetch water twice a day. It depends on the use of water. On the day when water is used more, I go to fill it twice. I get up early in the morning and go for getting water with two bottles. One bottle holds about 15 liters of water and I fill 30 liters at a time. "I fill 30 liters of water a day and walk about 3 miles," he told me. It's hard work but the need for water forces me to do it. I also take a break in the middle of the trip and

then walk home with water bottles. After filling the water, I do other things like being a shepherd and taking care of the goats.

## **4.7 Water Fetching tools**

There are many tools for fetching. First is water cans, in water can they can carry 30 liters of water at a time, so it is the best tool to bring the huge amount of water. Almost all the houses have these plastic cans for fetching water. This is the best way to fetch or store water in the house. They carry water can on their shoulders. It is very difficult to carry 30 liters of water on your shoulder and go home. If someone has a motorbike, they attach the two bottles with a rope and fill them with water and get a huge amount of water. This is the best option to bring more water in one term. The rest of the people have small plastic bottles like a 1.2 or 2.25-liter bottle in which they fill about 10 to 15 bottles of water in a single term then they put all these bottles in a sack and carry them on their shoulders and walk to the residence.

### **4.7.1 Mashkeza (A bag made of goat's skin for water storage)**

*"Mashkeza"* is also a useful tool for fetching water. approximately in *"Mashkeza"*, there are 15 to 20 liters of water stored in it. Even in this, the water remains in its clean form. There is also a belt of Mashkeza, so when they bring water in it and hang it on the shoulder like a bag. When children take part in this exercise, they get to bring water into the plastic jar because the jar does not weigh as much as a can. Sometimes children spend time fetching water with their mothers or sisters. The children also carry a half-liter bottle just to participate in the practice. This helps them in water filling training from childhood and that is why they are sent with the adults. If we did not have any kind of struggle for fetching then parents would think of their children's education, but they do not have the resources and they cannot be forced to study.

### **4.7.2 Watering can**

Other ways to save water are water cans or plastic bottles. Water cans are a great source of filling water. They fill it with water and store it in it for a while. It keeps the water clean and safe from dust and germs. The water can store 30 liters of water in it. As soon as they return home filled with water, they put the can for a while, and then the small particles of waste material are settled down to the bottom of the bottle. They transfer the water to another container like in a water drum or sometimes in a “*Thaal*” (a drum made of steel for storing water). The “*Thaal*” has 10 liters capacity to store water in it. They save this water for later use. It is a very useful source of water.

## **4.8 Health issues faced during water fetching**

Getting water and meeting the water requirement is a very difficult task in Research Local. Both men and women struggle to fetch water as they have to ensure the availability of water for their children and other household chores. They consider it their responsibility to make water available. In the tribal areas, women are considered family caregivers and most of them have to do heavy housework. At the same time, women are also given the task of fetching water. Sometimes women go to fetch water when there is no man in their house to fetch water. The data revealed that they came from far away to fill water like a pond. Women have a hard time carrying a heavy load of water. He added that there is no potable water in the area but they are forced to drink it and save their lives. Both men and women face similar health problems. However, women suffer more than men when filling water because they also have to take care of children and families. And it is the responsibility of men to earn money and give it to their wives and to meet their needs reasonably. Women stand shoulder to shoulder with their families in all kinds of difficult times. Women, in particular, are worried about their own and their children's

health due to lack of clean water, but there is nothing they can do and that is why their health continues to deteriorate.

Drinking unclean water has a very bad effect on the health of both men and women. Most women suffer from reproductive problems due to weight lifting and some of them suffer from diabetes, typhoid, dysentery and diarrhea, and cholera. Drinking unclean water spoils their stomach which makes their health worse. 25 years old respondent said his wife had a miscarriage due to constant drinking and fetching of unclean water and her health was severely affected. Several women are suffering from severe health problems due to dehydration and weight lifting. He said, his wife was fetching water when her foot slipped on the ground and she fell to the ground, breaking her shoulder bone due to heavy lifting. Another woman was fetching water when a water bottle fell on the ground due to the mountain path and all the water was lost. The shaking of the water bottle also broke her arm and she fell. The weight gain at an early age has a detrimental effect on the development of most young girls. Because at a young age the bones and muscles are not stronger than in adults.

#### **4.9 Disturbances in daily routine**

The anxiety of women in their daily routine is absolute from the presence of water. Women seem to struggle with their daily routines. In the research locale, women divide their time into several tasks such as cooking, cleaning, and family time. But lack of access to clean water makes a big difference in their daily routine as they have to fetch water from ponds and boring systems. Women need more time to fetch water and when they return home they have to do housework with fatigue and that is why it affects other family members and their health. Is affected. Defendant said that women have to work at home at all costs. The respondent said I got married two years ago. I go to earn a living and my wife manages the water along with the

housework. He added that she has a joint family system and it is difficult for women in our household to get pure water. But as soon as there is water, my wife fills it. Carrying heavy water bottles and other heavy utensils makes them very tired which leaves the rest of the household chores.

#### **4.9.1 Case study 4**

Mr. X described the abortion of his wife and brother-in-law, who were badly injured by fetching and drinking unclean water. the respondent said, I work in the city and go to work every morning. My wife takes care of all the household chores including fetching water and also takes care of the children. Once when there was no water available in the house, my wife woke up and saw that there was no drinking water and all storage pots are empty. She picked up a can of water and went to the pond to fill it. As soon as she returned from filling the water, she felt pain in her abdomen and she fell. Her pregnancy fell due to a fall, which worsened her health. This was a very bad incident for me and then I took the responsibility of water fetching by myself and since then I have been filling water for the whole family.

## 4.10 Summary

In Dalana, people spend most of the day fetching water. Repeating the same process of water fetching is an important part of life. People in Dalana spend one-third of the day for drinking water. Different techniques are used to fill the water and water is obtained with the help of different tools. Different water filling strategies are adopted in Dalana. It depends entirely on the status. Some people use their animals to fetch water and some fetch water with the help of their motorbikes and those who do not have such facilities bring water on their own. During the monsoon season, people collect and use rainwater in their household pots. Rainwater is considered clean and pure and is also used for drinking and cooking. To allocate this water shortage, water filling duty is also imposed on everyone daily. Thus, everyone needs to remember their water filling day. The presence of water is an important aspect because every task of the house is connected with the presence of water. Sometimes the need for water increases so people have to go for water twice a day or more at a time. Most of the water filling responsibility is placed on women and they do the job well. Management of filling time plays a very important role. Filling water and tidying up other household chores is also less difficult for women, but in Dalana, women do it happily. Children are given special training from the beginning to save water and prevent its wastage. When children are young, they are taken with their adults to fetch water. Sometimes people suffer from mental retardation due to the unavailability of water but they tolerate it because they have no other way to survive without water.

## 5 MANAGEMENT OF WATER IN DOMESTIC USE

The following chapter seeks to focus on the second objective of the study. It investigates water management for household purposes. And also covers the source of managing water and its uses.

Water management is one of the basic techniques for maintaining a water balance in the home. The respondent said that most of the water management and water supply is done by women as they take care of the availability of water along with other household items and stay connected with it. This type of duty is suitable for women because men do other work such as labor, farming and taking care of animals, and meeting other needs of the family. Women's participation in every work and, like other purposes, plays a key role in running or building a family. Women sometimes go to fetch water so that they can learn to manage water. The women working in the research locale are considered active in water fetching, management, and other for tasks. Women work for the family and take care of the whole family. Therefore, the training of a girl is very different from the training of a boy. Water management is a basic part of the home and to meet this need, the girls are trained specialists and they are told about water management. The 30 years old respondent told his wife's routine of fetching water that my wife takes care of everything from filling water to water management. Its biggest responsibility is to prevent water wastage and to bring water on time. The socialization of girls is important in every context because that is why working women are considered a necessity of society. Women run the house and take care of household chores and water. At the research locale, fetching and arranging water for daily use is everyone's top priority.

The participation of women in getting water and management is very important, as they bring water for themselves first and take care of it without wasting water management. Secondly,



men's participation in bringing or managing is low because they do not know how to manage water and do not even know how to control water loss. However, water-related work is a big responsibility of women and they also handle all the household chores. She knows how much water is enough for her daily routine. The most important task is water storage and management which is achieved by the respondents of the research locale after going through many difficulties. It was very difficult to distribute water for different purposes. The data showed men bathe in the pool but for other purposes they carry water. They store the water in different containers after each filling. This makes it easier to use the water whenever needed. Among other problems, management is a big problem as there is no pipeline system of any kind. Therefore, he has to fetch water from the pond daily as there are about 9-10 family members in his house. Drinking clean water is a priority for every household. All the people were very much aware of the water issue. Men often bathe in the pool but women fill water for their baths, drinks, and dishes washing. For this purpose, women go to the pond sometimes two times a day.

### **5.1.1 Case study 5**

Mr. Y said about his water management for domestic purposes. It's my daily routine, I get up early in the morning and go to fetch water. After fetching, I put one-third of the water in a special container for backup because we use backup if water is lost through an incident. So that we don't run out of water or have any problems. He told me a story that once a plastic bottle full of water slipped from my hand and fell and broke and all the water in it was lost. This water bottle contained about 10 liters of water which I had stored in a bottle, that moment was very painful for me. The water that was wasted was clean and kept for cooking and drinking. The accident happened to me at night. It was midnight and it was not a good time to fetch water. Then I got angry at my condition and I was very thirsty but we were out of water. That night was

very painful for me because we didn't even have a sip of water to drink. And I waited until midnight when it would be morning and I would drink water. water.

## **5.2 Drinking water**

The available water is not potable because the water is salty. They are forced to drink water and this salty water has badly affected their health, such as diarrhea, hepatitis, stomach problems, and urinary bladder stones. The water they have contains toxic minerals. Due to the presence of many salts and other minerals in this water, its color has also changed. They drink this water and also know about their health which is affected by it but they drink it under pressure and also know that there is no life without water so they get stuck in it and are forced to drink water. Everyone in the research locale is forced to drink salty water and thus they drink water because they do not have any trick or tool to purify the water. The average water consumption per household (if there is an extended family) is about 40 to 50 liters per day, he added. 15 to 20 liters of water is allocated for drinking and the rest is kept for other household chores. The need for drinking water increases when the family structure belongs to an extended family. Therefore in this situation, the distribution of 6 to 7 glasses of drinking water a day for each person has been arranged. Water management and distribution are an important part of daily life.

Bringing water in the summer is one of the most difficult tasks. This exercise is very difficult due to hot temperatures and due to high water consumption in summer, water is filled twice a day. Some people fetch water before sunrise because the temperature does not get hot but it becomes difficult to do so after sunrise. Women fetch water during the day. First, they do the housework and then fetch water until the sun rises. The use of water increases in the summer season, so there is a lot of struggle for water. Most of the summer season they bring water twice

a day. Due to the high temperature, water is widely used for drinking and household chores. Bringing water in summer is more difficult than in winter. Due to heavy rains in summer, water is available in ponds or streams and they do not face any difficulty in getting water.

It is easier to fetch water in winter as compared to summer as they fetch water once a day due to low water consumption. The main use of water is for drinking and cooking and if there is a decrease in drinking water in winter, then the presence of water remains, and other tasks like cooking are done on time. He said In winter, even we do not bathe twice a week, this way the use of water is reduced.

### **5.3 Water for preparing food**

Among other responsibilities, water management for cooking is also linked to women. The water available was not suitable for cooking. If someone has a water boiling system, they boil the water first and then use it. This water purification system is not suitable for everyone. Many people use ponds of water and drink the same without boiling and use the same for cooking. This water has a bad effect on their health as food is not prepared with clean water. Water for cooking is stored in the kitchen to avoid a shortage of water for cooking. This water is only for cooking. Because sometimes they use water for different purposes. When filtered, they sometimes filter the water with a lawn cloth. So it is only used for cooking. Respondents added that filtering water for cooking or drinking is not a daily routine. To preserve this water, they store it in large steel pots and use the same water for cooking.

## **5.4 Water for clothes washing**

The water is also used in washing clothes. It is very difficult to fetch water for washing clothes. So women go to the pond with all their clothes and wash clothes there. This duty is performed once a week. All women choose a specific day for washing clothes. They also gossip with each other and happily complete their work. The clothes they wash first are put under the sunlight to dry. There is a set laundry day, the respondent said. On the same day, all the women bring water cans or jugs and go to the pool with fair clothes. First they wash the clothes one by one and put them under the sunlight to dry and then they start filling the bottles with water. Gossip takes time and the clothes dry well until they are filled with water. They put all the clothes in a row and wrap them in a "sheet" (it uses a special square cloth to wrap the clothes in) and make it into a so-called bag and put the clothes in it and bring it home. -

One day a week is set aside for laundry, the respondent said. Half the day is spent on this work. On the day of washing clothes, all the women come to the pond and start washing their clothes. Men are not allowed to go to the pool on this day because Dalana is a traditional society, so men are not allowed to go there when women are working on the pond, not even to fetch water. On the same day, most of the young boys fill the other side of the pond with water.

## **5.5 Water for bathing**

Water management is based on the use or storage of different types of water for bathing. In the summer we bathe once a day because in the summer there is a shortage of water and its use increases. It is more difficult to manage water in summer than in winter. In winter, most people bathe once a week due to lack of water. Due to the cold weather in winter, they only wash their faces. Water consumption also decreases in winter and they also drink less water due to cold weather.

When they take a bath, they use different techniques to prevent water loss. Some men bathe in ponds but women fetch water for bathing and they bathe at home. They use buckets and small mugs to save water so that water is not wasted.

## **5.6 Wastage of water**

The water management system is used agricultural, they have dug a Kasi (two feet deep in the ground) to prevent wastage of water. Helps in the flow from top to bottom so that irrigated lands can be irrigated in time. Those who have land grow different seeds with the right weather and take advantage of it. Water is used in all household chores and the used water is conveyed to the fields with the help of Kasi in order. This type of watering technique makes it easier for respondents to provide water for the crop.

## **5.7 Water for animals**

Dalana is a rural area, most of the people have pets like goats, cows, and camels so they bring them during water filling. Sometimes they take the animals with them to fetch water. They fill water on one side of the pond and the animals drink water on the other side. They take their animals with them when they go to fetch water. But this strategy is mostly used by young boys because they have a lot of power to control the herd and they do it well. Most of the women take the donkey to the pond with a bottle of water. And load water on it and bring it home. They water their animals once a day. So they also provide water for them. It is not easy for a woman to fill the water and it is very difficult to control the herd of animals. So she takes her pet dog with her so that the animals can be taken to the pond in order.

## **5.8 Mental stress and water shortage**

When they run out of water, they become very depressed. Because everything is connected to water and if water is not available, they become depressed. During water fetching, they also have the psychological effect of managing or guiding daily routines for water. Sometimes, in anger, they delay fetching water because sometimes the mental and physical stress increases, and they blame it for the unavailability of water. They can't stop fetching water because they can't live without water and on the other hand the only solution to this problem is to fetch water. In this case, stress affects their health badly. They also manage stress and water intake because the two are connected by nature.

35 years old respondent said that this situation is very difficult to deal with if the water runs out at night or during the day. And it is impossible to survive without water because they have no other solution to meet their water needs. So they can't afford to fetch water. People use a variety of techniques to control water unavailability because it is difficult to manage water without sorting. They never thought of a water solution because he knew the struggle to get water would continue until death.

### **5.8.1 Case study 6**

Mr. Z described his stress for water. I am 35 years old and I am the head of my family. I fetch water for my family and work outside. She was my random model. I met him at the pool. "I am the head of my family and I take care of my family's needs, including fetching water," he said. Sometimes I bring water twice a day depending on my water use. "No one in my family stops wasting water, they waste it wherever they want, because they never have to struggle to fetch water," he added. Whenever I'm in a cold mood they waste water in front of me, I don't say anything to them but the pressure inside me increases because after a while they ask me for water

and I have to go to get water. Most of the time, water routines make me feel bad and when I hear the word water from someone, my stress also increases. I have this condition due to the unavailability of water. Many people like me have a lot of pressure on water and they are angry about wasting water. Sometimes when the water runs out in the middle of the night we go out with a torch to fetch water.

Most of the time, women are less stressed about water management but they face many difficulties on the freaking track such as carrying water load, the walking track is full of rocks and sand, compared to straight ground. It's hard to walk on sand. Women face many difficulties in fetching water because they fetch water and manage it as needed and they have to control the loss of water throughout the household. Women are involved in every task in the house so it is easier for them to manage and control water loss so they face less stress for water management.

## **5.9 Utensils for water storage**

There are many utensils for storing water but most people use Mashkeza. Pitcher and water cans.

### **5.9.1 Mashkeza**

The main source of water storage is Mashkeza. The water in the glass is safe and clean. A belt is also made with the mask, so they hang it on the wall. They built a ditch at the bottom of the mushroom, which they use to get water like a water cooler. Another advantage of storing water in a glass is that the water does not heat up quickly and remains drinkable. But if he puts water in another pot, the water gets hot. In every house, they have a facility to store or fetch water. The mashkeza is a hand-crafted water-retardant tool made from goatskin. The belt is also

made with the mashkeza, so they fill the water in it and they carry the belt with their shoulders. The belt makes it easy to carry water. They hang it on their shoulders like a bag.

### **5.9.2 Pitcher**

Another water storage vessel has been invented. The pitcher is made of clay which keeps the water in the pitcher colder than other pots. The pitcher can store 30 liters of water, so they fill and use the pitcher like a water cooler. The pitcher is designed to store water because it keeps the water clean. Another advantage of the pitcher is that if they add salty or muddy water to it, the dust particles settle down and no other type is needed to purify the water. the respondent said that the pitcher is a must in every house. Women were used pitchers for fetching but sometimes the pitcher falls and breaks, all the struggle was wasted. They avoid bringing pitchers but use them to store water in their homes.

The pitcher is only used to store water. They bring water in every vessel except the pitcher because it is made of clay and there is no handle to lift the pitcher. When the water fills up, it gains more weight and is not easy to carry with the water, or sometimes it breaks when slipped by hand and all the water is lost. Use other tools, but store water in a jug. The water in the jug stays cool and pure because it is made of clay. So the water in it stays cool in summer. On the other hand, the water in the pot gets low temperature in winter and the water is drinkable.

### **5.9.3 Watering can**

The other source of water-storing is cans or plastic bottles. They fetch water in it and store it for a while. The water gets safe and clean from dust and germs. In a watering can there are 30 liters of water stored in it. In the plastic bottle, the little particles of garbage in water fell at the bottom of the bottle, and then they put into another utensil like Drum or sometime in *Thaal*



(A steel-made bowl). *Thaal* has 10 liters water-saving capacity. They also use it for water storage. It is a very useful source for water storage.

### **5.10 Water fetching on the festivals**

Everyone's participation is required for a special occasion to ensure water supply but the task of fetching water is given to a responsible person. The research Local is a tribal society and in a tribal society, everyone has to participate in any work without any excuse. When many people gather in one place, the use of water increases, and the need for water is met with the help of others. Physical participation in fetching water is valuable and sometimes, people also bring their water tools or utensils such as water cans or jugs and take part in filling the water. The respondent said that whoever has a motorbike brings it there and meets the need for water. If they use too much water, they have to fill it twice. A festival is a community-based process to meet water needs. On special occasions when people have to gather somewhere, people in the community help each other to get water.

### **5.11 Water fetching in marriage ceremonies**

The participation of relatives and neighbors in the wedding ceremony is a very important part of financial support in the form of water for them. At the beginning of the first day, the men have to get together and share all the work. Sometimes two or three boys have to meet their water needs and they are assigned this task so that they all have access to water and the other task is distributed as capacity. Everyone also brings their water cans (jugs, water cans, or drums) to fetch or store water. This type of activity enhances social relationships and is based on both sides.

The housework of the bride and groom is almost the same as they practice endogamy, so the whole community comes together and shares all the work. Older people also contribute to water management. Women are completely free to participate in this exercise because men are responsible for filling water in a ceremony which includes fetching water and managing water. During these days, men are responsible for completing the entire task.

### **5.11.1 Case study 7**

Mr. X described his brother's wedding ceremony and his practice of bringing water to the ceremony. That I had two male cousins and three neighbors and we all fulfilled the responsibility of fetching water. I have a motorbike that I gave them to fetch water to make their job easier. Both boys bring 5 liters of water in one term. Everyone knows how to do their job on this occasion. My cousins also took part in the internal affairs of my sisters and mother and helped them. My relatives also brought their water containers. Like water drums, water cans, etc. We decided on a place where the water drums would be filled. Where there is no difficulty in fetching water and the place is close and easily accessible to all. Before most of the function started, we fetched water and filled the drums and cans with water. Then my cousins and I distributed water among the men. There is no drinking limit on the spot. So we had to save water from being wasted and we did our duty to meet our water needs.

## 5.12 Summary

Bringing water from far-off places is a difficult exercise but using and management of water as needed is an important task. They adopt many of the techniques to stop water wastage in domestic use. It is a skill to prevent it from being wasted and to distribute water equally for all household chores and this skill is only in women because she does all the household chores herself; furthermore, women are done this duty perfectly. They know how much water is needed for every task and women also manage it and save it for use. After filling the water, the first thing to do is to put the water in different pots so that the water shortage can be avoided and even if the water is wasted due to some negligence, some water remains with them and due to this the presence of water remains because of this technique, they do not suffer from water scarcity in daily basis. Many techniques give benefit them greatly and make life easier for them. Managing water is a very difficult process for a man because he does not know the layout of water and its cost so the woman is in charge of water management. From drinking water to bathing, cooking, dishwashing, these are all used under the supervision of a woman. Sometimes even they have to manage water for their animals and they do it well. They complete the work of fetching water on time because every work is connected to water and it is the use and management of water that helps sustain life there.

## 6 CONCLUSION

The research work aims to point out the various problems related to water needed in daily life in the research locale as well as to learn the technique of getting water from different sources and different techniques. Therefore, the first objective was water fetching from different techniques of gaining water. The purpose of my research was to find out how water scarcity affects the everyday life of humans and how the natives deal with water scarcity. The purpose of choosing this research locale was that in specific Locale people face water problems and spend one-third of the day fetching water. Furthermore, my second objective of the study was to explore water management in the home. The research locale was Basti Dalana located in South Punjab. In the selected locale, the community faces many difficulties due to the unavailability of water. Dalana is a mountainous area located in south Punjab, district Dera Ghazi Khan. Basti Dalana is in Koh Suleiman hill range in Punjab's boundary. The groundwater level is very low so they are deprived of groundwater but their livelihood is completely dependent on rainwater.

The second chapter reviews relevant literature on water scarcity and fetching strategies worldwide, in South Asia, Pakistan, and local contexts. The later part of the chapter reviewed the literature on the management of water for domestic purposes.

The third chapter contains the research settings and methods that I applied to collect data during fieldwork. My field locale was Dalana District Dera Ghazi Khan. This area is located about 17 km away from the main city to the west. This is a tribal area and the Khosa tribe is prominent there. This research is based on qualitative. I spent 4 months in the field and collected data. My sample size was 20 and I divided my sample according to age which made it much

easier for me. I also used participant observation in fieldwork for collecting data through observation. This made it easier for me to look at my respondent's fetching practice and analyze their responses.

The fourth chapter discusses the routine of water fetching and its source and how they gain water for their needs. In Dalana, there are few sources of water. They are concerned with rainwater to meet their needs. In the rainy season when water flows from the mountain towards the ground, it also brings with it many kinds of rocks. This rainwater is collected by the people during whole the day. People are spending one-third of the day on water fetching. This water filling exercise is sometimes performed by young boys and in some households, women perform this process and ensure the presence of water. The major source is a *pond* (Rainwater) and this water is used by the people approximately in 3 to 4 months. Another one is the “*boring system*” (borehole). Different styles of water fetching are practiced by natives in Dalana. It depends entirely on the hierarchy that the one whose status is high will have a different way of fetching water. As some people fill water on motorbikes it is different and easier than other types. Some people load water on their pets like, donkey and the third type is to fill can fill with water and carry its own himself. This is the most difficult tactic, as it is quite a difficult practice to walk on the mountain carrying 20 or 30 liters of water can. But they are forced to replenish water because they know there is no concept of life without water.

The fifth chapter explores water management in domestic use. The management of water in the home is connected to the women and also the women are mostly responsible for fetching water. Because men work outside such as herding goats and camels, and some men work as laborers in the city so the availability of water is entirely in the hands of women. From fetching water to making full arrangements for its domestic use, storing water, ensuring the availability of water, all the work is the responsibility of the woman and women carry out this work properly and fulfill the whole need related to water. In Dalana, the women fill the water tank as well as take care of their household chores and their children. In some homes, young boys meet their water needs and bring water for their families. The young man just brings water. The woman manages the water completely and she knows how much water is available for what purpose and also knows about how to control the wastage of water. This is a technique where women put water in different containers to ensure better water management. Like the water for cooking is stored in the kitchen. Similarly, bathwater is kept in the bathroom. In the same way, water management is in the hands of women and they do it better. They store water in different tools like in a bathtub, water can, Mashkeza as well.

## WAY FORWARD/RECOMMENDATION

- This research study was conducted in the small town of District DG Khan. If the research time is broad, it could be expanded to the whole district from different perspectives.
- Increasing clean drinking water resources can improve the lives of the people there. Furthermore, improving and sustaining water infrastructure can solve people's problems.
- Government should make a water supply mechanism and also raise water awareness among the people with the help of applied anthropologists. The applied anthropologists should take part to develop healthy communication with the people of Dalana and provide them the best of their knowledge about how they can save water and how they can get rid of water management tasks.
- The water turbine project by the government could make the lives of the people there easier.
- Only when easy access to water is possible, they will be able to participate in other social activities. If the problem of water scarcity would get resolved, the lives of the people can be significantly improved.

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## **INTERVIEW GUIDE**

- What are the basic difficulties in water fetching?
- Who fetches water in your home and from where and how?
- How far do you travel for getting water?
- Which method for gaining water is affordable to you?
- What should be the coping strategies for water fetching?
- What watering tools do you have?
- What are the health-related issues regarding water fetching?
- Where most of the water is used in your households?
- What should be the solution to this problem from your point of view?
- How do you save water for a longer time?
- How do you cope up with these hardships as everyone also has to do another household task?
- Where are most of the water used in your home?
- Is available water is pure enough for drinking and cooking?
- If not so, which methods do you use for the purification of water systems?
- How do farmers manage water for agriculture purposes?
- For how long this community is struggling for clean and healthy water?
- How animals are suffering from water issues?
- Is available water is affecting crops as well?

- How women are suffering from water scarcity?
- How do they manage to get water from far-off places as they also have to take care of their children and home as well?
- Women need double energy for this purpose, how do they manage?
- Is this issue also affecting girl's leisure time?