

**FACTORS INFLUENCING POLIOMYELITIS ERADICATION  
IN PAKISTAN**

*(Case Study of Killi Mandan Haiderzai Yaru District Pishin)*



**By**

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**Department of Anthropology**

**Quaid -i- Azam University**

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**2021**

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**Islamabad, 2021**

**Syed Irfan Ahmed**

**Quaid-i-Azam University, Islamabad**

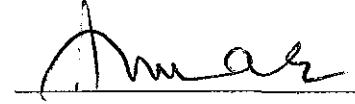
(Department of Anthropology)

**Final Approval of Thesis**

This is to certify that we have read the thesis submitted by Mr. Syed Irfan Ahmed. It is our judgment that this thesis is of sufficient standard to warrant its acceptance by the Quaid-i-Azam University, Islamabad for the award of the Degree of M.sc in Anthropology.

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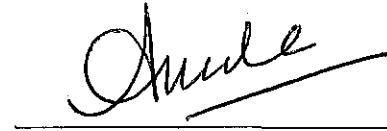
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Thanking you all for the honor, I own on this most beautiful phase of life.

**Syed Irfan Ahmed**

## **Abstract**

The study is conducted on The Factors Influencing Poliomyelitis Eradication in Pakistan. The research area is a small village in the district of Pishin Baluchistan.

Identification of issue: it is (eradication of poliovirus in Pakistan); the initial problem is based on Pakistan's policymaking and health sanitation sector that needs to identify and address by the ethnographic informed and applied anthropology research to the health sector. This contribution to sanitation, policy, and management.

The focus of the research is on the main thing that influences the way of eradicating poliovirus in Pakistan. Those influences exist at the local level in Pakistan and make the country still polio-affected in the world. And the local community resistance and factors for the eradication of poliomyelitis.

Research methodology: the research has been conducted through to qualitative research method there is used purposive sampling in the targeted population, in-depth interviews conducted from the local people, religious scholars, and polio workers. Participant observation, group discussion, case studies were also part of the research methodology. Field notes, audio recording, and photography are used as research techniques.

The main finding of this research is the social and cultural barrier from the side of local community people, which influences the eradication of poliovirus and polio eradication programs in the country. The religious barrier, which depends on the religious scholar, religious society, and highly religious followers, becomes the rigged problem for the polio eradication program and their belief in polio disease and vaccines. Moreover, the government's strategies to ensure the eradication of poliovirus at the local level and the people's reaction against the policies become the main reason and factors influencing the eradication of polio disease from Pakistan and still become an endemic country.

**Key words:** Social barriers, religious, government policy factor.

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# Chapter 1

## Introduction

Polio is a form of the disease caused by the poliovirus that paralyzes a person for their whole life. These forms of viruses target the spinal cord of children at an early age to affect them. A person has lost part of a body from destroying the spinal cord. It contains the exchange of signals between the brain and the body that the virus has infected (Rahim, 2020). This infection originated from the worst toilet system in densely populated areas in the population. Polio viruses live in an infected person's intestine and mouth, passing from person to person. This fastest distribution of a virus in the population has covered the whole world, and there are cases present in each country (Shaikh, Kasode, & Bhujade, 2020).

Before the 20th century, polio was an unexplained condition that occurred in prehistory. polio is an endemic pathogen, which is survived peacefully until the 1900s, when significant epidemics started to target the world, firstly appear in Europe. Soon after, in the United States, widespread epidemics emerged. In all over world polio heavily influenced America and Europe in the 20th century. In the 1916s, more than 27,000 cases have registered in America, and more than 6,000 deaths occurred in New York (Wright, 2020).

On the other hand, modern Europe has also suffered from an outbreak of poliomyelitis and many cases and deaths. After these two regions America and Europe, a polio-virus epidemic to alarm all the countries to defend themselves against this polio disease. The medical world starts efforts to find a poliovirus treatment and make effective medicine to eradicate the poliovirus from the world (Chatterton, 1957). The medical world successfully prepared a vaccine in the 1950s to 1960s to eliminate this virus from the earth. Until the 1970s, the world has united to eradicate poliomyelitis from nations, but it did not become possible. Poliomyelitis was once again the emerge highly in 125 countries around the world in the 1980s. More than 350000 cases of poliovirus are reported in the world. The World Health Assembly voted for the Global Polio Eradication Initiative in 1987, when there were 125 countries with endemic polio. The Global Polio Eradication Initiative (GPEI) program to eliminate poliomyelitis and create a polio-free world was introduced in 1988 by the World Health Organization (Aylward, et al., 2006).

The Global Polio Eradication Project is a public-private collaboration between the World Health Organization (WHO), Rotary International, the US Centers for Disease Control and Prevention (CDC), the United Nations Children's Fund (UNICEF), the Bill & Melinda Gates Foundation, and the Gavi Vaccine Alliance, led by national governments with five partners. Its goal is to eliminate polio globally. In 1994, the Western Hemisphere was certified as poliomyelitis-free, and in March 1997, the last case of paralysis due to endemic wild poliovirus was reported in the WHO Western United States. In the WHO European Area, wild poliovirus was last found in south-east Turkey in November 1998. Poliomyelitis had been eliminated from most of the eastern Mediterranean region by the end of 1999. No virologically confirmed cases had been recorded for more than two years in South and North Africa, except Egypt. The geographical scale of the distribution of the remaining poliovirus continues to shrink. Wild polioviruses circulated in a maximum of thirty countries at the end of 1999, mainly in sub-Saharan Africa and South Asia (Swennen & Levy, 2001).

All countries in South Asia have eradicated the poliovirus, but some countries, such as Pakistan and Afghanistan, are still plagued by polio. According to India, these two countries have a limited population, but India has removed the virus from their soil.

India is a densely populous country in South Asia and nearest neighbor country to Pakistan. India eradicated poliomyelitis from the country successfully. India was proclaimed a polio-free nation by the International Polio Eradication Certification Committee in 2014. In eradicating polio, the country has faced unique obstacles. The high population density and birth rate, weak sanitation, widespread diarrhea, inaccessible terrain, and the refusal in some pockets of a segment of the population, especially members of the Muslim community, to accept the polio vaccine were among them. In India, the biggest challenge was the denial by some polio vaccine groups because of illiteracy and misunderstanding. However, more than 2.5 million health staff were hired by the Government of India and other partners, including the public, and now it seems to have virtually eradicated polio. However, difficulties remain, particularly in some areas where the oral polio vaccine (OPV) immunization rate is barely adequate. Sustained efforts and vigilant monitoring would be the secret to achieving India's polio-free position. But as Afghanistan and Pakistan are the only polio infected countries, polio eradication's mission also poses a significant barrier for humanity (John & Vashishtha, 2013).

Pakistan is the sixth country in the world to have a high number of populations. Pakistan is one of the other nations around the globe that is plagued with poliomyelitis. In Pakistan, a poliovirus immunization program was initiated in 1974. However, a formal immunization campaign for eradicating polio around Pakistan began in 1994 (GPEI). The campaign started more than 25 years ago in Pakistan, but Pakistan still counts as an infectious nation globally. There are some barriers and threats to disrupting the destruction of poliomyelitis in Pakistan. Social and cultural hurdles to eradication, lack of awareness of vaccinations, protection for employees, number of workers, women's workers, terrorism, missing children in the immunization program, war conflict, Afghan refugees, and more.

The number of kids absent during vaccine efforts is a big issue for polio eradication in Pakistan. Children not accessible at the period of vaccination are split into three types. The first group consists of children in the local area at kindergarten, the second group consists of children in the larger city, and the third group consists of children who are further fetched. Children in the first two classes will be contacted and viewed on their arrival back through local cooperation. The main concern is the third group: children in another region of Pakistan who are far away. Even after efforts to revisit them, children who avoided vaccines in the weak period of 2017 are 858 000. The figure of unvaccinated kids is high, presents a significant risk to the goal of polio eradication (Larson & Paterson, 2014).

In Pakistan, polio patients' figure in 1997 was 1155, which declined to 28 in 2005. There were strong feelings that Pakistan would soon become a polio-free state. But the conflict on tribal violence and drone attacks in FATA made it impossible for health care workers in these regions to pursue their polio vaccination initiatives. Many areas were impossible for polio workers, and human relocation from the war-torn areas to many other cities became a widespread phenomenon that destroyed any significant polio eradication attempts. The Zarb-e-Azab operation, which much supported Pakistan's security situation in North Waziristan, was launched in 2014. It beat the shelters and safe places of the terrorists in the city, and there is no forbidden district for polio workers to enter. Several extremist terror cells are active in the assassination of polio staff. In Pakistan's Northwest province, the most current attack on polio teams took hold on July 01, 2017. Since December 2012, over 100 people had killed in such attacks. Pakistan is committed to eliminating polio from the nation despite the attacks (Hussain, Boyle, Patel, & Sullivan, 2016).

The misunderstanding of individuals regarding the polio vaccine remains a significant concern in the eradication of polio. They have a belief that the polio vaccine causes infertility. Across each polio program in Pakistan, thousands of parents refuse to vaccinate their kids because of this gossip about the vaccine. In determining whether to vaccinate their offspring, parental analysis plays a vital role. The religious scholars openly blamed the polio drives for the West's effort to decrease the population of Muslims by infertile women and men. The health system is relatively low in Pakistan. Still, families often reject polio drops while asking questions from polio workers why they are not provided free services by the government on other health facilities. They claim there is a specific purpose for the state or donor organizations behind these programs, so they send polio groups to their houses each month. The attitude of persons like this has seriously harmed donation organizations' credibility and has had an impact on polio elimination efforts (iqbal, Ashraf, & Farooq, 2018).

### **1.1. The problem**

The eradication of Polio virus is one of the serious problems for the global arena. The presence of this virus in just two countries i.e Afghanistan and Pakistan, is a threat for the rest of virus free world. Some factors influencing the eradication of polio in these countries and specially the locale of my research are social and cultural barriers, religious barriers, and unsatisfactory steps taken by government in this regard. The district Pishin having border with Afghanistan and the flow of people across the border is among the highly affected areas of Pakistan. The above-mentioned problems must be addressed properly to eradicate the virus in the region.

This study will help us understand the behavior of the people towards the eradication of polio virus. In order to carry out this research ethnic groups and local communities were contacted; therefore, this research can be categorized as anthropological. This research will help the readers to understand the real problems for eradicating polio virus at ground level. The current research has found the above-mentioned barriers as gape in the past research work in the research locale. And it mentions the work of the government for the eradication of polio disease and the response of people against strict roles of the campaign. The mentioned variables are the main barriers for poliovirus eradication.

## **1.2. Statement of the problem**

In this research I have focused on the factors influencing the eradication of poliomyelitis in (Killi Mandan Haiderzai, U/C Yaru, Pishin) Pakistan. This research tried to find the social and cultural barriers and perceptions of local people about poliomyelitis. The research has also focused on religious barriers that how religious thoughts have influenced the eradication of polio virus. And this research has evaluated the governmental policies about poliomyelitis eradication in the study locale and how the locals perceive and reacts to these policies.

## **1.3. Conceptualization and Operationalization**

The conceptual framework provides a fundamental foundation to any research in the context of a particular theory or literature review. And it helped researchers with the collection of data. In the current research, conceptualization has been developed based on literature review. The variables of literature reviews are related to the objects of the study, such as sociocultural consequences behind the eradication of poliomyelitis.

**Social barrier:** The word "social barrier" refers to the differences that exist between persons in a community. Several factors contribute to the disparities, including socioeconomic position, religion, race, ethnicity, and gender. The community's culture creates social boundaries, which are strongly affected by individual behavior. Unrealistic expectations, arrogance, rudeness, and disrespect, to name a few factors, are all typical causes of social obstacles (Blau, 1974).

**Cultural barrier:** Cultural barriers are obstacles to cross-cultural communication inside an organization. When people from various cultures interact in different ways, such as by speaking other languages, holding different cultural values, or using distinct gestures and symbols, their cultural differences may create hurdles to professional success. A barrier is due to a lack of cultural understanding, education, and communication (Munter, 1993).

**Unawareness:** Unawareness refers to a lack of perception rather than a lack of knowledge. A decision-maker does not know which event occurred in the absence of information, but the agent may not have ever considered an event in the absence of conception (Schipper, 2014).

**Rumors:** A rumor is commonly defined as an unconfirmed narrative or explanation of events passing from person to person and related to an object, event, or topic of public concern. However,

most theories agree that rumor entails some remark whose validity is seldom or rarely proven (Peterson & Gist, 1951).

**Trust:** Trust is seen as a critical component in encouraging good working relationships and achieving a competitive economic edge. According to studies, trust promotes strategic collaboration and cooperation, citizenship behavior, and dispute resolution. Employee attitudes such as work happiness and organizational dedication and criteria measurements such as fairness views and customer satisfaction are connected to trust (Yang Jang, 2013).

**Perception:** Perception is the organization, interpretation, and conscious experience of sensory information. Bottom-up and top-down processes are both involved in perception. Bottom-up processing relates to how perceptions are formed from sensory data. Our accessible information, experiences, and ideas, on the other hand, impact how we perceive such feelings. Perception is known as top-down processing (Pelowski, Markey, Forster, Gerger, & Leder, 2017).

**Government policy:** As governments are relied upon to solve more complex challenges, policy capacity has emerged as a critical concern. The increasing complexity of many modern policy problems, along with rising public expectations, provide unprecedented difficulties to governments' ability to develop and implement successful policies. The 2008 global financial crisis, for example, highlighted industrialized nations' incapacity to manage the global financial industry, not to mention developing countries where these and other capacity deficiencies are extraordinarily apparent and chronic (Wu, Ramesh, & Howlett, 2015).

**Campaign:** Campaigns are long-term attempts to achieve a particular goal. For example, they are forcing a firm to sell its money, shutting down a coal power station, or compelling the government to do a climate change impact assessment. Campaigns are a practical approach to strategically increase group capacity and expertise. Simultaneously, efforts for social justice achieve significant wins (Scott, 2020).

**Operationalization** is the process of measuring concepts by which researchers developed variables. Operationalization is a systematic way to evaluate research and data collection; it helps researchers make that specific and limited to research; operationalization examines the indicators and variables of the research topic and their objectives. In the current study, there are many indicators, such as a social and cultural consequence behind eradicating poliomyelitis. In this indicator, researchers



examine the sociocultural and religious barriers towards eradicating poliomyelitis. Similarly, governmental policies for eradicating polio.

1. Poliomyelitis. A specific type of disease that makes a person disable and affects some part of the human body.
2. Social barrier. the researcher has used that the barriers created by the people of society
3. Cultural barrier. The barriers have been created from the value of culture and the role and regulation of people.
4. Unawareness. People did not know about the going issue or did not have any information about such things.
5. Rumors. The circulating stories which People make up their minds about an issue that has no reality and doubtful truth about polio vaccine and polio disease in the society.
6. Gender issue. A researcher has used the problem concern between the relation of the male polio worker with female in the society.
7. Trust. It is a belief in the polio vaccine, and polio workers work in society.
8. Perception. People perceive and understanding the polio issue.
9. Ethnic perception. The specific group understanding of the polio issue.
10. Government policy. The principals or the strategies made for the eradication of polio from the side of the district government.
11. Refusal. People who have refused the vaccine give the drops to children.
12. Campaign. The specific work has been done for the achievement of polio eradication.
13. Virus. The tiny organisms produced the specific disease in the human body.
14. Vaccine. The use of a specific substance to increase the antibodies in the human body against the poliovirus.

#### **1.4. Objectives of the study**

Any type of report or research has some aims, objectives and goals which keep the research on the track. This ethnographic study is all about to explore the barrier toward polio virus eradication from the side of local people in Pakistan. How they are socially connected and coordinated with one another. The main objectives of this research are:

- To find the social and cultural barrier toward poliomyelitis eradication from the side the local community.
- To understand the perception of local People which inhibits the eradication of poliomyelitis.
- To find religious barriers toward poliomyelitis eradication in the community.
- To find the Governmental policies toward poliomyelitis eradication in the local area.

## **1.5. Research questions**

1. To find the social and cultural barrier toward poliomyelitis eradication from the side the local community.

- What do you know about polio?
- Do you know the reasons for polio?
- Do you know what happens from polio?
- Did someone talk about the symptoms of polio?
- What is giving in a campaign?

2. To understand the perception of local People which inhibits the eradication of poliomyelitis.

- What do you think about polio?
- What is the name of polio in a local context?
- What do you think that polio exists here?
- Why is it not finish till now?
- What do you think about the polio vaccine?

3. To find religious barriers toward poliomyelitis eradication in the community.

- As a Muslim, you believe in polio disease?
- What do you think (Molvi) religious scholars will do the cure polio?
- As a religious scholar, what you think about polio?
- As a religious scholar, what do you think about the medical cure?
- Is it legal or illegal in Islam? If it is illegal, then why?

4. To find the Governmental policies toward poliomyelitis eradication in the local area.

- Why polio still exists?
- What was the policy of government before, and what is it now?
- How many days were the campaign in a month before?
- What kind of things can affect the campaign?
- What are the reasons for refusals?
- What is the strategy to cover refusal?

## **1.6. Hypothesis**

Polio eradication is a severe problem in Pakistan; it will be possible whenever people support the eradication program socially and culturally because society and culture are creating barriers in the way of eradication. When socially and culturally polio is accepted in society, it will be eradicated very soon from Pakistan. Secondly, religious support is one of the most tangible ways to eradicate polio whenever religiously people accept polio as a disease, and religious scholars help in the polio eradication program so people will not create barriers in the name of religion. It will not be targeted from the side of religious extremism.

## **1.7. Rationality of the study**

The selected site for the research was Killi Mandan Haiderzai Yaru. It was a small village containing hundred or more houses, village's people were backward and socioeconomically very poor. Most of the people were doing private job and some of them were government servant and few people have their own business. Mostly important they were unserious about the health issues and to care of the disease on time. Because most of the population are very religious and superstitious minded people. They were socially and culturally very traditional. The literacy rate of the village was low, very less amount of the people has higher education.

I have selected the recent topic (factors influencing eradication of poliomyelitis in Pakistan) for the research because it is the main issue in rest of the world. In which most of the countries have eradicated the poliomyelitis from their land except the two remaining countries Pakistan and Afghanistan. Both countries are sharing a longest boundary line with one another, and thousands of people are crossing the border and going to both countries and carrying the crucial virus with themselves. If the poliomyelitis does not eradicate from the remaining countries, so once more outbreak of the virus will come all over the world. And it is very important to identify the barriers

on the local level to solve and make sure the illumination of the poliomyelitis from the remaining world. So, the selected topic in the research locale was very necessary to address the social and cultural understanding of the people. Moreover, the selected locale also has polio affected cases.

### **1.8. Significance of the study**

My research of this community Killi Mandan Haiderzai, will have both academic and applied significance. The significance of the study in academic is to fulfill the research gap and provide the literature for other researcher to find new gap for further research topics. In applies context the significance of this study to address the problem for the Government and Non-governmental organization to solve the issue or make suitable policies for problems.

The significance of this study to me is to complete my M.Sc. research and degree. It will become a baseline for me in the MPhil to do more research on the same topic or issue. It will help me in the publication of research paper. And it is also benefited for my department to provide the research topic about polio issue.

This research will become for other researchers as baseline who want to research related to polio. And the other importance will be for policymaking about the betterment of society health concern issues. The data gathered for this research can also be used by government and non-governmental organization for the community problem-solving.

The significance of the study for the society to give the opportunity for societal development and it may be useful for other agencies who want to bring community changes in the society will be very easy because this study will give an analytic account of society. And it helps to understand the community people of the study locale easily, because the geography, religion, social and economic status of the community is considered in this study.

Polio having a huge risk for the world must be eradicated, so this current study addresses the barriers in the way of eradication at root level. And spot out the main barriers to concerned authorities. By this way we may live in a polio free world. Specially in the locale of my research district pishin which is among the most affected area of Pakistan.

On the other hand, this study is helpful in the vaccination of newly emerged world pandemic: covid-19 and vaccinate people against tis deadly contagion. Because this study has focused on

ground level issues which influence the modern treatment against the disease and people perception about the unknown medicines. Governmental and non-governmental organization can make it as a baseline for tackling the issue of Covid-19 vaccination in the study locale specifically and in Pakistan generally.

## Chapter 2

### Review of Literature

This chapter provides an explanation of the research topic which already been conducted. In the review of the literature chapter researcher trying to examine previous studies which are reliable with current research. This chapter's major plan is to find gaps in previous studies and try to fill those gaps in the present research. Continuously the focus of this chapter is explained and cover global to local (research local) topics related to studies, such as global challenges towards polio eradication. Pakistan and Baluchistan interventions towards polio eradication barriers.

*Because parts of endemic countries face armed conflict, terrorism, and other security concerns, it is difficult to operate the kind of vaccination programs that have been successful in reducing cases of polio elsewhere: door-to-door campaigns wherein oral polio vaccine (OPV) is provided multiple times to all children younger than 5 years by vaccinators. Recruitment, training, and retention of local vaccinators in areas with conflict is also difficult. Moreover, the effort has faced direct threats, such as bans from armed groups (SteelFisher, et al., 2015).*

According to the study, polio-endemic countries in the world are facing difficulties in the way of eradication. Armed conflict, terrorism, and security problems are affecting the vaccination campaign to reduce polio cases in the country. These conflicts make the movement difficult for the worker to vaccinate children and cover door to door campaigns for oral vaccination. Further, completing the immunization against poliovirus is difficult in those areas where the worker facing direct threats and arms groups bans on polio vaccination in their control areas.

*To what extent imported polio cases pose a threat to the health of European citizens is matter of debate. The last endemic case of paralytic polio in the WHO European Region was reported in Turkey in November 1998, but a large outbreak of about 500 cases of poliomyelitis, due to a WPV1 imported from India, occurred in Tajikistan in 2010. In today European Union countries, an outbreak of 71 cases (59 paralysis and 2 death) occurred in an unvaccinated religious community in the Netherlands, whereas other 3 cases were identified among Roma children in Bulgaria. (Stefanell, Buttinell, & Rezza, 2016).*

According to the study, the European region faced polio cases in the countries without a break—those regions eradicated the poliovirus from their countries that were alarming from neighbor countries. In 1998 last endemic cases were recorded from turkey. After that, European countries eliminate poliovirus to make Europe polio-free in the world. In 2010 polio-free Europe has recorded 500 cases which imported in the shape of emigrants from the Asian and central Asian countries India and Tajikistan; both were polio-affected countries that outbreak the poliovirus in Europe. After that poliomyelitis outbreak, 71 cases were identified in the Netherlands from the unimmunized Muslim community from a religious perspective. And 3 cases are recorded in Roma community children from Bulgaria.

*some observers argue that Islamist insurgents' animosity towards polio vaccination programmers is theological result of Islamic theology. If this is the case, we would expect the hostility to be constant to reflect the fact that the theological tenets of Islam have not changed over the past decade or so. Alternatively, others stress the role of political dynamics. It seems apparent that some Islamist insurgents have come to realize that interrupting polio campaigns is a useful strategy because it generates international attention for the insurgents and enables them to force concessions from their opponents (Kennedy, McKee, & King, 2015).*

According to the study, the Islamic thoughts used as a weapon from insurgents' side interfere in the polio vaccination. Because most of the time, the insurgents use wrongs the Islamic theology to achieve their purpose. This exploitation method has not changed for a decade, and it will be the way to use and get the target. The insurgents think it is a suitable way to interfere in the polio campaign to attract the glob attention, and they believe it will be bringing stress on their enemies to accept their demands. And further, they have propagated the polio campaign that it is working as an intelligence institution against them. From the help of the polio vaccination campaign, they identify the resident of Osama bin Laden and the American intelligence CIA has increased the drone attack on us with the help of polio campaign. They said that polio vaccination campaigns are using in espionage activities in the region.

*One of the justifications given for the boycott was the belief that OPV spread HIV and caused sterility in Muslim girls. An understanding of the religious elements at play, which, in northern Nigeria, are intrinsically interwoven with ethnic identity, is therefore key to*

*understanding the power this accusation had. The north of Nigeria is home to a Muslim majority. Hausa and Fulani – the main ethnic groups in the north – are culturally distinct from the predominantly Christian population groups in the south and Islam is an integral part of their identity (Ghina, Willot, Dadar, & Larson, 2013).*

According to a study, Nigeria is the only polio-endemic country in Africa with polio cases from so many challenges toward polio eradication. One is the instability of political and security conflict to government and other is the boycott from the vaccination from the side of Muslims communities. The belief that polio vaccination will bring infertility in women is the primary source of the HIV virus spreading in Muslim societies. In north Nigeria majority are Muslims, they believe in religion very strongly, and religious elements play a role as an ethnic identity. They are strongly following their religion and culture and never compromise on it. Hausa and Fulani are two Muslim ethnic groups in south Nigeria; they are different culturally from the Christian and Islam is the basic ethnic identity of those Muslims. They have divided in part and made the political colonies from the Muslims and gives the secular title to the independent Muslims and start the anxiety between them in 1914. This rivalry became tension and permanent public discussion.

In 2002 northern states and the federal government have a conflict on the country's law before the boycott of polio vaccination. Muslim majority want sharia law in the country, and the Christian majority was against this. The president of the supreme council for Shariya in Nigeria, Dr. Datti Ahmed, said if someone challenges the issue, we will start a war against them. after one year, the Muslim population started a boycott from the polio vaccination. To stress the government's acceptance of the demands and Dr. Datti Ahmed plays the leading role in the boycott. This kind of challenge faced the Nigerian government with competing for the crucial virus on their land.

*The association between polio outbreaks and civil unrest and wars in endemic countries (Pakistan, Afghanistan, and Nigeria) and countries with a reemergence of polio cases (Syria and Iraq). The years 2011 through 2014 were selected based on the availability of data for the selected variables for Afghanistan, Cameroon, Equatorial Guinea, Ethiopia, Iraq, Kenya, Nigeria, Pakistan, Somalia, and Syria, from the Global Polio Eradication Initiative. endemic regions resulting from wars, level of violent crime, level of political instability, and the risk of outbreaks of poliomyelitis (Akil & Ahmad, 2016).*



According to the study, poliomyelitis affected the world back from some countries by some endemic problems. In some polio-free countries, the poliovirus is reemerged from their neighbor countries, immigrate. Poliomyelitis outbreak in polio-endemic countries from the conflict of war, instability of government, and displacement of people from one place to another. The three countries Pakistan, Afghanistan, and Nigeria are polio-endemic from the head because of the presence of war, instability of government, and displacement of people. Pakistan is a polio-affected country because of the ongoing war conflict situation and unstable government. People in Pakistan start the rejection of the polio vaccine from the incident of the Lal masjid and Osama bin laden death. In Nigeria, religious people come up against the polio vaccine; it is not allowed in Islam, and it is the source of the spreading sterilizing of young girls. Afghanistan is the most affected country where the war conflict is on the top, and vaccination against polio is not a proper system being like in other countries. These three countries are polio-endemic from the start. Other countries have eradicated the polio virus from their land, but the wars, instabilities of the governments, and displacement of people from one place to another which become the source of the reemergence of poliovirus.

*Chad faces many challenges in its goal to eventually eradicate polio, including its poor health infrastructure and the risk for importation of polioviruses from Nigeria, the only polio-endemic country in Africa, where WPV strains still circulate. A significant challenge has been the difficulty in improving immunization coverage of the relatively small nomadic populations, whose rate of polio infection is disproportionately high, accounting for 12% and 40% of cases in 2011 and 2012, even though they represent between 3.5% and 6% of the population (Ndiaye, et al., 2014).*

According to study in the Africa region poliovirus has been competed by well polio vaccination in all countries except Nigeria which is still endemic country. Chad region had eradicated poliovirus from their soil in to 2014 but still facing so many challenges for the outbreak of poliovirus. Chad area is near to Nigeria, which is the only polio affect country in Africa, from there a nomadic people walk toward Chad in the season. The large population of the nomads are unvaccinated against poliovirus which is a huge challenge for the Chad to save itself from the polio outbreak. Secondly, the week health system is also a challenge for Chad in the coming of unvaccinated nomads to the country, which bring virus from Nigeria. So, the big challenge for the Chad

government to immunize the nomadic population against poliovirus. the nomads are highly polio affect people in 2011 and 2012 in which 12 to 40 percent cases were in the nomad's people that present 3.6% and 6% of population. Some other problems were also affecting the nomad people vaccination against poliovirus that is language and culture. The vaccination of nomadic children, pregnant women and animals are very important before the interring Chad territory. Then the government planed strategy for the vaccination of nomad, first they have talked to their society elders to help in the vaccination for poliovirus. secondly, government has started strong vaccination campaign on the border. After that inside Chad the supplementary immunization activities (SIAs) and national immunization days (NIDs) made strong to vaccinate nomads at any areas. The government were vaccinating children on age because more the 14 years old also not vaccinated against poliovirus. These strong strategies saved Chad from the outbreak of poliovirus.

*This was shown in outbreaks of type 3 polio in Brazil in 1986 and in Mexico in 1989. Before the outbreak in Brazil, the formulation of the OPV used was 10(6), 10(5) and 10(5.5) for types 1, 2, and 3 (a 10/1/3 ratio of amounts of types 1, 2, and 3 components in the vaccine), as recommended by WHO (Henderson , 1992).*

According to study the eradication of poliovirus from the western hemisphere was the initial challenge to all the countries. In the western region polio cases were in huge number only 20000 cases in the United States and more than 100000 cases in all over the American continent. Before the 1955 the inactivated polio virus (IPV) was used for the control of acute flaccid paralysis (AFP) cases in the America. 1956 to 1959 the polio cases were increased in the western hemisphere than in 1961 initial monovalent oral polio vaccine (OPV) had made for the eradication of polio virus. Then Canada firstly prepared trivalent (OPV) for polio type 1,2, and 3 to kick out the disease from the western hemisphere. Oral polio vaccine (OPV) became useful in the control of polio cases, America, Europe, and USSR also recommended the oral polio vaccine (OPV) for polio eradication. Other useful reason of the oral polio vaccine is that it is cheap in price and good ability of work against poliovirus instead of inactivated polio vaccine.

On other hand some problem also faced in America for outbreak of poliovirus in some countries which was alarming others for virus. The outbreak of poliovirus type 3 in two countries of the America; In 1986 in Brazil and in 1989 in Mexico. The recommended usage of oral polio vaccine from the side of world health organization (WHO) was formulated in 10(6), 10(5), and 10(5.5) for

all type of polio disease and ratio was (10/1/3). In Brazil the vaccine used in the incorrect ratio (10/1/6) which cannot work against poliovirus and cases emerged once again in the country. In 1989 in Mexico outbreak came from the usage of local vaccine in the campaign that was made in Mexico which has not immunized the children against poliovirus and the cases came once again. Then in both countries' vaccination was started in the control of WHO recommendation and last in 1990s the western hemisphere competed poliovirus and eradicate from the America and got the international commission certificate of health from the side of WHO. And also recommend the same equipment for the eradication of poliovirus in other part of the world to compete the crucial poliovirus.

*The effects of Boko Haram in these zones include violence against polio workers, disruption of immunization campaigns, and reduced access to health care and to immunization. Targeted killing of healthcare workers, destruction of healthcare facilities, and displacement of huge populations have been reported (Bigna, 2016).*

According to study the resistance of religious extremist group Boko haram against polio eradication effort in sub-Saharan Africa. Two polio endemic countries were remaining in the Africa region where Boko Haram has great influence that are Cameroon and Nigeria. In 2014, Nigeria and Cameroon have reduced the cases of poliovirus in the countries, and in 2018 the Africa region eradicated poliovirus completely from all the countries. The problem toward the polio vaccination in Nigeria was the interference of Boko haram, they are against polio vaccination. Nigeria was in war field where the campaign was disturbed, and refusal were on the tope in number. Boko Haram create violence against polio worker, interfere in immunization programs and affect the access of health care and immunization activities in their control areas. The terrorist group killed health workers, destroy the healthcare facilities from which a huge number of migrated populations have been reported. Which have interrupted the immunize areas and expand the virus in vaccinated regions. Then the government have diced to fight against both virus and Boko Haram group and make the strategy for the polio eradication in the war situation. They have started training of the vaccination to the soldiers to vaccinate the children in war conflict area to control the poliovirus from expedition. Strategy worked and reduced the cases of poliovirus from 49 in 2013 to 9 in 2014, and in last they compete the virus on their land in war time. The same

strategy should be used in the war going countries to eradicate poliovirus from the world and save the lives of expansive people.

*Many studies from different regions of the world have studied factors that contribute to low immunization coverage and/or high immunization drop-out rates. Low maternal literacy, especially health literacy, poor socioeconomic status, and difficulty in accessing immunization services have been identified as the main barriers to immunization completion. There is also evidence suggesting that stunting in the child and parental education can affect vaccine seroconversion. Pakistan faces all these challenges and more (Owais, Khowaja, Ali, & Zaidi, 2013).*

According to study Pakistan still polio affected country because of facing different type of challenges to compete virus on the land. In different region of Pakistan researchers have contributed the factor about the low immunization coverage and high immunization drop out to children for the polio virus. In which the low maternal literacy, literacy about healthcare specially, low socioeconomic status and the barrier of the access to difficult areas was in the way of immunization to children. Some other kind of problem in Pakistan for polio eradication is parental education also effect on polio vaccine that it is not make good antibodies against antigens from which they have stopped vaccination for children. Secondly, in Pakistan the annual huge birth rate around 180 million which is the highest number in the world, it is also a big challenge for the vaccination against poliovirus. on the other hand, complicated geographical shape of Pakistan where the highest mountain and cold glaciers are present, that make difficult the work for the polio workers to vaccinate children against polio disease. The vast land of Baluchistan and the displaced people of FATA make difficult the public satiation and healthcare services delivery in Pakistan are the strong challenges in the way of eradication of poliovirus from Pakistan.

*Unfortunately, some Taliban leaders see polio not so much as a danger but rather as a weapon in their war against the Us and the Pakistani State. In the middle of June 2012, an important militant leader in North Waziristan, supposedly 'moderate', Hafiz Gul Bahadur, decided to ban polio vaccinations for the territories under his control. His analysis is as follows: The Us drone attacks have killed 250 persons in North Waziristan in 2011; and only 14 polio cases appeared during the same period. «On one hand, the Us spends*

*millions of dollars to eliminate polio, while on the other hand it kills hundreds with the help of its slave, Pakistan», as he explained in his statement on this matter (Chaudet, 2013).*

According to study polio is still present in Pakistan for this that some people make the propogandas about polio vaccination. some Taliban leaders think that polio is not a dangerous disease it is used as weapon against them from the side of united states of America and Pakistan in war. In 2012 in north Waziristan a militant commander Hafiz gul bahadur has band polio vaccination in the area. Because they said that US drone attacked on us and killed more the 250 persons in Waziristan and at the same time polio cases were appeared in north Waziristan. It is all the game of US and his slave Pakistan state both are fighting against us in the shape of polio vaccination which is using as new weapon against them. they said, on one hand US is killing us by the dangerous drone attacks and on other hand they are spending thousand million dollars on polio vaccination to save us from the virus. As soon as the other Taliban commander has followed the same steps against polio vaccination, whenever any doctor or foreign funded agencies have supported the polio vaccination that will be very dangerous for them in the Pashtun areas. This kind of strong statement against the polio were create fear situation in the Taliban control area wanah. From the situation of war in the area people migrates toward other part of the country and make the vaccination difficult and spread virus in the vaccinated areas of Pakistan. which make still Pakistan a polio affected country in the world.

*However, it was strange that we faced a strong resistance from even well-educated people. Though they did not have religious reasons but were not in favor of vaccinating their children. Most of them claimed that they had administered polio drops privately but failed to produce a vaccination card or certificate (Junaidi, 2017).*

According to study polio eradication not only faced resistance from the side of religious people and uneducated people even educated people did a strong resistance against polio vaccination in Pakistan Islamabad. The reason of the resistance of educated was not a religious neither in favor of vaccination for their children to do resistance. The reason of the resistance was the private vaccination of the children against polio and the government was not provide a certificate of vaccination to them. They were claimed if we are giving vaccine to our children privately why they cannot give a card of vaccination to us as like other vaccination against disease. And had

vaccinated our children against poliovirus and gave complete doses to children we are not accepting more doses for children.

*The major barriers to eradicating polio in Pakistan are persistently missed children during vaccination drives, a high percentage of environmental water samples testing positive for polio virus, vaccine refusal, misconceptions about the polio vaccine, killing of polio workers, and low performing districts (Waheed, 2017).*

According to study Pakistan is facing most of the challenges toward polio eradication, but the most important issue in Pakistan is children missing in vaccination campaign. The parents are hide their children from vaccination or gives the incorrect data about family member. Secondly the extreme number of poliovirus in the environment and water sampling is positive for poliovirus. The which can affect the other people very easily because environment is full of poliovirus. on the other hand, local rumors against the polio vaccine from the side of uneducated people which effect the daily vaccination very worst. From the rumors the numbers of the refusal increased which is the serious problem in Pakistan for poliovirus eradication. In some region the terrorists have killed polio workers from that the number of worker team affected and the process of vaccination became week and the virus become strong. Some irresponsible activities have performed from the side of districts management for the polio vaccination campaign. These issue make difficult the eradication of crucial virus for the Pakistan to become polio free and stope the transmission of poliovirus in the world.

*The controversies about polio and other vaccines have taken their roots from cultures and religious beliefs in Pakistan, India, Nigeria, and Afghanistan. Their perception about polio vaccine that it is hormonal polluted vaccines. It is plan of USA to reduce the population of Muslims in the world. The clerics of FATA and KP announced in 2007, that it is infidel campaign against Muslims to control their birth rate. They said, this vaccination belongs to Kuffar (Non-Muslims) and it is not according to the will of Allah. (Rehman, Sahir, Yaqoob, & Zulfiqua, 2017).*

According to the study that main reason for the polio cases presence in the three remaining countries of the world is their harsh culture and religious beliefs which make them still endemic. They belief that this vaccine is made by a non- country America which keeps some danger materials in vaccine to interrupt reproductive system of Muslims women and fall down the

population Muslim countries. In 2007 ethnic people of FATA and KP announced the door-to-door campaign is a huge game for the birth control of Muslim majority in the world. These vaccines are the production of non-Muslim nations which is going against the will of Allah. They are considering vaccine as war against the Allah and his lord system because they believe that Allah have wrote all the luck of children before coming in world. And the uneducated population of the tribal area and imam of the masjids are uncustomed about the knowledge of science and technology in the modern world that why they are against the polio vaccine and reject it for their children which is the biggest factor for the eradication of poliovirus in Pakistan.

*Data collected up till August 14, 2018, both Afghanistan and Pakistan have been victim to political and security conflicts for many years now. Additionally, the thin border between both countries has played a huge role in virus transportation across both nations. All cases of polio in these border areas are reported in the mobile population, especially the returning of displaced population (Hamid, Ali, & Hamid, 2019).*

According to study Pakistan and Afghanistan are the only two countries in the Asia which is still caring poliovirus. both countries have their security conflict and instable political situation from many years. Pakistan and Afghanistan sharing one of huge length border with one another that become the main source of virus transportation for both countries. All new cases were recorded in the border area where the vaccination process is very hard because of high number of people are crossing border every day. Afghanistan has one of the worst sanitations, healthcare polio vaccination system from the circumstance of war more than 40 years. The vaccination of children is not that much strong Afghanistan as much strong in Pakistan. The polio eradication is not possible because most people are doing migration from Afghanistan to Pakistan every day that is why the success is very hard to eradication of poliovirus. High number of cases were recorded in the Afghan immigrants especially when the return from Afghanistan and the bring the virus with their selves in Pakistan. the vaccination on the border made strong to vaccinate the coming people from Afghanistan to Pakistan.

*In the univariate analysis, anemia was significantly associated with decreased PV3 seropositivity; however, in the multivariate analysis, the association failed to reach significance. In Pakistan where iron deficiency anemia is quite prevalent. It has been*

*recognized that zinc deficiency exacerbates diarrhea, which decreases OPV immunogenicity (Habib, et al., 2013).*

According to the study the factors of the polio cases in Pakistan is the deficiency of nutrition for the limited age of children. The efficiency of iron and zinc in the nutrition which effect on the poliovirus 3 type immunization. From the deficiency of iron in the body of children which decrease the seropositivity for poliovirus 3type in the blood. The deficiency of zinc in the body also effects the antibodies of the polio virus because from the deficiency of zinc diarrhea occurs to person. The proper percentage of the electrolytes in the body is very important part of the nutrition to body strong against the disease. The highly populated cities of Pakistan are on the top level of perfect nutrition that become the strong factors for the polio cases in Pakistan.

*The security problem affected the polio program by causing difficulty for supervisors to conduct proper monitoring during campaigns. 'The poor security arrangements caused inadequate team deployment during campaign days making major challenges' Expert. 'The government is required to give proper security to the teams while they are working in the field to fully implement the micro-planning prepared' Expert. (Fetene & Sherani, 2013)*

According to study the research has been done with help of WHO for the polio eradication to “stop the transmission of polio” in the high-risk province of Pakistan in Baluchistan. Study is about the challenges for the polio eradication and security conflict. The researcher has taken the recommendation of expert in the area about the tread to polio eradication divided in to nine different challenges. Those are the campaign preparation in the area, polio campaign teams, polio campaign monitoring and reporting, refusal and missed children, security problem and extra. This are the challenges toward polio eradication noted by experts in Baluchistan.

The biggest problem in the Baluchistan for the eradication of polio was observed by the experts are security challenges. That the security problem makes difficult the supervision of and the proper monitoring of the campaign during workdays. The weak arrangement of the security in the high-risk area of province is originating the shorth numbers of the workers teams for the vaccination in the campaign of polio eradication. About the experts the for the complete work of poliovirus eradication the government of province should require the solid body of security management for the worker in campaign to vaccinate the children in affect areas of Baluchistan. The low security



numbers in the campaign are a big factor for the refusal and missing of children in vaccination of Baluchistan according to experts.

*Because of genetic variation, antibodies formation may be variable in different population, some populations show excellent response while some selected populations show very poor response and other populations may show intermediate response. The author has postulated that some genetic factors may have played imported role for poor response to OPV in children from Bihar and Uttar Pradesh (Paul, 2007).*

According to study that the eradication of poliovirus in India have different type of factors to keep country endemic. The initiative program for polio eradication have stated 1995 in India to make polio free till 2000. But some factors have affected the eradication of poliovirus in India. Like the environmental factors, proper cold chain, and the biggest factor to influence the eradication of poliovirus in India that is genetic factors to response polio virus antigen. In the body there is specific genes to work against the antigen to produces antibodies. But some people body has genetic mutation that does not work properly to make suitable antibodies against disease. It depends on different population genetic variation in some population its response well to antigen, in some population it is normal but in some population its response is very low to make antibodies. So, in India the genetic factor of children to response poliovirus antigen is low in two cities: Bihar, and Uttar Pradesh. In these two region polio cases were reported in huge number in India. Because of the genetic problems of the children are not working against poliovirus to make proper antigen. Which is the biggest challenge to Indian government to eradicate poliovirus from India. For the solution of genetic problem Indian government change the policies of the vaccination of children against poliovirus. To introduce the injectable vaccine in Bihar and Uttar Pradesh but there is the problem of parent response and secondly, to make new vaccine for the children to fight verses poliovirus and make India polio free country in the world.

*The reduction in cases among high-risk districts that did or did not conduct mop-ups was similar (78% and 78%, respectively, in 1991, and 29% and 27%, respectively, in 1992). In retrospect, it was very unlikely that these mop-ups could have interrupted polio transmission, as they were conducted in relatively small geographic areas while wild poliovirus circulation was still widespread (Aylward, et al., 1997).*

According to study effort of Egypt to eradicate the poliovirus from their soil and factors in the way of eradication. Egypt was the only endemic country to keep the immunization as national priority to vaccinate children against polio disease. Egypt was ancient polio affected country in the world which cases of poliomyelitis. About study Egypt started the eradication program in 1970s around country. Egypt gave full attention on the eradication of poliovirus and undertake those problem from which the remaining countries are still endemic. The rate of Acute Flaccid Paralysis cases was very high in country but there is other type of paralysis cases was also present. But Egypt government was forced on national immunization days to vaccinate children and collect both affected paralysis for the investigation in the laboratory. The government of Egypt started mop up house to house vaccination all over the country to defend the virus because of all the north Africa and Arab states depend on the progress of Egypt against poliovirus. but some factors were influencing the eradication in Egypt was high risk districts where the mop up campaign was not strong, from which the poliovirus was circulating in the country. In those high-risk area where the mop up campaign had done or not but the cases were same because that mop up will stop the transmission of poliovirus. This mop up has done in the limited areas that is why the poliovirus is still present in the Egypt land. Otherwise, they got the victory against the ancient wild disease and huge number of infected people from a long time in the country.

*The number of specimens collected from each patient can affect person sensitivity. Prevalence of infection in the population, the AFP case definition, and the completeness of AFP case detection and AFP case investigation can affect population sensitivity directly. Some of these factors reflect the biology of the viral infection and can vary considerably from patient to patient. Others reflect operational characteristics of AFP surveillance and can vary considerably from one location to another (Gary, Jr, Sanders, & Pallansch, 1997).*

According to study that the global initiative had started for the eradication of polio virus from the world. From the eradication of polio virus to take sample of acute flaccid paralysis patient in 14 days for the laboratory test to identify the presence of virus in the specimen. From poliovirus surveillance there is two factors are affecting for all type of sensitivity. Laboratory sensitivity and collection efficiency, laboratory sensitivity is only for the detecting the poliovirus in the stool of infected person to isolate virus from the pieces of patient. The laboratory depending on collection of stools from the patient, if the collection has the efficiency from the infected person, then

laboratory will be in danger to identify the polio virus in the samples. Because the detection of virus in the population also from one infected person in the area if in the region they got poliovirus in the stools so, that area will be detected polio infected. Because the population sensitivity will be depended on person sensitivity to identify poliovirus in the environment. So, identification of the poliovirus is very risk work for the laboratory worker and for the sampling collectors. Both things will be affecting the testing of patient, if some things happen wrong, they will keep in risk all the population for poliovirus. The collection of stools from polio infected patient will also affecting on the sense of collector. Because poliovirus differentiate from population infection and it definition will influence directly on the area. These kinds of factors will change the biological form of virus and it will vary from patient to patient and also place to place.

*WHO declared that Pakistan is responsible for 80% polio cases recorded globally and imposed strict travel limitations to stop the possible spread of polio virus from Pakistan to other countries because few cases of polio are reported in China and Egypt which linked to the polio virus strain endemic in Pakistan for this reason the eradication of polio from Pakistan is so important (Shah, et al., 2016).*

According to study Pakistan, Afghanistan and Nigeria are polio affected countries in the world, from the sack of some problem facing in the eradication of poliovirus. Nigeria has done good effort for the eradication poliovirus, and the remaining two countries are still fighting with poliovirus. in Pakistan some terrorist groups like TTP in FATA and KP are propagating against polio in their areas to avoid polio vaccine for children. Sometime the terrorist organization has assassinated kidnap polio worker from the campaign to spread terror in the region for polio work. They are also propagating about polio vaccination campaign that it is the game of CIA; like fake hepatitis vaccination did in Pakistan campaign to find the residence of Osama Bin Laden and killed him. Be like that America is killing our elder, women, and children in drone attacks and secondly in the shape of polio vaccine is doing on name of protection us from the disease. On the other hand, Zarb e Azab operation had started against TTP in FATA most of the unvaccinated people had migrated toward KP province which decrease the vaccination from 70 percent. These problems make Pakistan polio endemic in the world till now.

Further the WHO announced that Pakistan is responsible for the 80 percent of poliovirus affect population in all over the world. And the put on the restriction for traveling on Pakistanis to others

polio free countries. Because some cases were recorded in the two polio free countries in Egypt and China and cases were linked to Pakistan. for this kind of reason, the eradication poliovirus from Pakistan is very necessary to put out the restrictions. If poliovirus were not eradicated from Pakistan once again it will attack on the glob and take hundred to thousand lives again which will be very dangerous for humanity.

## Chapter 3

### Research methodology

A researcher needs to devise a series of methods to deal with the phenomena chosen. These techniques are instruments and systems used for the execution of a study. The procedures and techniques allow the researcher to gather relevant data and, if possible, to produce the solution. The analysis technique requires a structured process for collecting, describing, and explaining the problem or a condition (Ellram, 1996).

In my research, I have used the qualitative method to conduct the data in my fieldwork

#### 3.1. Participant observation

I have used the Participant observation technique, which provides me a good opportunity of collecting qualitative data in the community; by using this technique, I immerse myself daily life of people. It involves getting close to people and making them feel comfortable enough with my presence to observe and record information about their life.

Rapport building was a compulsory and initial technique to use in field research for the participant observation. In the begging, people avoided the meeting and skipped interviews because polio was a sensitive issue. They do not want to keep themselves in danger, and for me, it was also challenging to meet directly with people. With time, I have established good relations with key informants and respond as, like friendly, they feel comfortable discussing the issue and giving information about my research. Rapport building was vital to me Because I went to a new community to get information about their native point of view.

Participant observation has been used by which I interact with my respondent daily. This technique was being used to find out in-depth and accurate information about the problem. Because I became a part of this community, and I was involved in their daily based activities. This technique was used to collect actual data. In this way, I would be closer with my respondents, and they did not feel uncomfortable. After living together with them, I felt they did not hide anything from me, Because I was around eight to ten hours with my respondents in the society. So, therefore, I was part of their everyday life they talk openly about the issue with me. Participant observation was

the very best way to understand things, such a way I conducted research data through this technique.

### **3.2. Key Informant interviews**

I chose a key informant as a source of access because community members did not engage and avoided discussing the issue, making it impossible to meet directly with my respondents. As a result, I needed to rely on key informants to gain access to them. I chose two key informants for data collection and easy access to respondents: one was the head of the social work organization, and the other was a social mobilizer in polio.

In reality, a good informant served as a cultural bridge between the respondents and me. Because it was hard to have direct interaction with members of society and polio workers because they refused to give interviews because they didn't know who I was or what I was doing. As a result, I'll need a crucial informant. I would be able to communicate easily with the respondents and form relationships with them due to this person.

### **3.3. Sampling**

Sampling is a method to excerpt the sample of a study from the whole population. It is a critical stage in research because the sample of research impacts the outcome of a survey. As it is the process to select a part of the population to test a statement for the assessment process, interviews, and study, it must reflect the whole population. I have drawn my research sample from a non-probability technique using purposive sampling that allows the researcher to select relevant sampling units and pertinent data.

According to 2017 census the total population of district pishin is 736903, population of tehsil Karezat 137466, population of union council Yaru is 39275 and the research locale where the research has been conducted population was 2000 and sampling size of my research was 21 in target population. Data of the topic was conducted from different people on research topic.

#### **3.3.1. Purposive sampling**

In my research, I have used purposive sampling in the research, I have communicated with those people in the fieldwork who well about my research objective and variables. I gave the attention to those people must who have attached with the polio work. To give me knowledge from his

experience and address me about the social problems where he has communicated on the issues. Farther he told me more relevant sources to collect the data according to my research topic in the fieldwork.

### **3.4. In-depth interviews**

In-depth interviews are an essential and fundamental data collection approach. I have conducted face-to-face interviews with people. I used this approach to get in-depth and trustworthy information as well as people's local perceptions. In addition, for data gathering, I used semi-structured interviews. In the study, In-depth informal interviews with active community members (like active members of society, uneducated people, religious scholars, Tablighi people, and polio workers) were also conducted. Questions were asked by the respondents related to the research topic their objects.

### **3.5. Focus Group discussion**

Focus group discussion is a straightforward technique to gather data from multiple respondents at the same time who share different views on the concerned polio issue. I have gathered data whole side of this group discussion. They were talking about various points of view, but I was targeted to concerns my topic. This method was beneficial for me to checking cross answer operationalize their objectives. I would be capable of noting interviews at once time from more people dialogue. Because so many people have different minds sharing views on the same issues. Moreover, during the field conducted to date, I initiated a group discussion between two people from the polio campaign, two students from Bolan medical college Quetta and others from community members. I initiated the discussion on polio eradication between them where the Bolan medical college student were talking about the polio affection and the benefits of polio vaccine. The polio workers were talking societies created problem and the community people were against the ongoing system of polio eradication in the society.

### **3.6. Audio recordings**

The audio recording method becomes an essential research tool in qualitative research that has replaced handwritten notes during an interview. During the interview and discussion, it is difficult for a researcher to capture respondents' narrations completely. It is also essential to focus on an

interviewee's body language rather than only capturing the verbal information. This method enables the researcher to conduct a successful interview without any interruption. After the informed consent of respondents, I will record the formal interview and focus group discussion. The recorded data will be transcribed and analyze later.

### **3.7. Secondary Sources**

It is very difficult for researcher to collect all the data from primary sources. In Anthropology most of the information is collected through participant observation, interviewing; but information is also collected through secondary sources that includes locale NGOs, Internet, Newspaper, Magazines, journals, books, articles and various related organizations which already is work on topic. Study conducted by researchers. For this study data collected almost from the Pakistan national action plan, world health organization's reports and Pakistan polio eradication council. This research start collecting research data from secondary sources and takes the data from related books, articles and from online websites. I was connected with my supervisor and that specialist Anthropologist who has researched on this topic.

### **3.8. Daily Diary**

Daily diary is mostly used to record daily activities in the fieldwork. It helps researcher to remember that what is done on the day and planning of fieldwork. It is another important method to keep the record straight and without errors that was being followed by the anthropologists while in an un-known community gathering data for the research purposes. It has been just like a science of a practical notebook in which a researcher during research, note downs his or her daily activities and experience. I noted several problems and my experience in my daily diary.

### **3.9. Photography**

Camera is one of the major items of Anthropology's luggage. Direct preservation of the event is possible only through photography; I was also going to take some photographs of relevant things, event, and persons and for capturing the activities and during interviews I take photos. The researchers used photography throughout the entire period the field research. As a non-verbal mechanical and in order to pick up and capture informal facts about the lives of people and the locality. Photography is the main parts to get the pictorial evidence. With the help of photography,



I was able to draw an attention to the different scenes and references and to offer it as a part of my field research and it was easy to perceive the condition described. Mostly I had taken the photograph, with the agreements of the respondent's as well while they were using and updating activities on social media.

### **3.10. Ethical considerations of field research**

The ethical concept of research carried out multiple dimensions; research ethics are also dependent on the study's topics. The ethical foundation of research aims to identify the research and the researcher himself in the field. If you are working for donor projects, you must be shown that never hidden it. Both interviews and discussions were conducted with the will of the respondents in the field. Photographs have been taken with the permission of respondents, not forcedly trying to convenience them for photography.

Similarly, Interviews have also been conducted according to the will of the respondents. In some situations (in critical research), the respondents want to hide their position in the research, and as a promising researcher, it is our responsibility to hide his position. Continuously if any respondent is busy in a personal moment, I have waited for that in an ethically way, and the primary ethical consideration of research is that I must never be realized to the respondent that I am a superior then you.

### **3.11. Reflexivity**

Part of a specific community spent four months in field research. And while working on a sensitive topic, there were different reactions of people towards research questions, to which my own bias also influenced the study. Sometimes, the respondent's answer gave pure data about my research question, but my own understanding and belief differed from that which affected the research data. But sometimes, a respondent wants to hide his truth and react differently to his mentality. According to him, poliomyelitis was a common disease. Still, I think it was a deadly disease that differentiated between my beliefs and the respondents' responses, which affected the collection of research data. My opinion and decision regarding the barriers discussed by the respondents were different in that they have set all these barriers for other purposes, which affected the research data. I used to listen to the researcher only to make the statistics pure. I would write and record everything he said so that I would not interfere in the research data because there was a big

difference between the thinking and the thinking of the people in the community. They belonged to a different culture and way of thinking, and I came from a different culture and way of thinking. And that's the difference that has had the most impact on research data.

### **3.12. Research site**

Before the research documentation of any area, first must be understood the historical and structural dimensions of location and complete information are very necessary. So therefore, in this chapter, I try to address social, cultural, political, economic, religious and explain other social institutions of this region. "Because anthropology is an interdisciplinary approach". Furthermore, I will be defined in this chapter population, geography, demography extra.

### **3.13. Locale**

The locale of the research is Killi Mandan Haiderzai Union Council Yaru, district Pishin, division Quetta. Killi Mandan is in the north of Quetta city and is distanced 40-kilometers from it. The locale is situated in the south of Pishin city and is distanced 16 kilometers from it. Quetta Chaman N25 road passes through this locale which is an international highway connecting the capital of the province with bordering city with Afghanistan (Chaman). Killi Mandan is containing 110 houses and more than 2000 population. Furthermore, locale of research exists exactly on google map at the latitude 30°28'26.01" North and longitude 66°57'18" East.



**Figure 1.** Handmade map of research locale.



**Figure 2.** google map of the field locale.

### **3.14. Geography**

Pishin district is present in the north of Baluchistan province, which connects Pakistan to the Afghanistan border. Afghanistan lies in the west, Kila Saifullah to the East, Kila Abdullah to the north, Quetta and Ziarat districts to the south of Pishin. The Geographical Area of the pishin is 787,400 Square km. Pishin district consists of 4 Tehsils and 38 Union Councils. Furthermore, the district Pishin lies on the google map with latitude 30°34'49"North and longitude 66°59'46" East (Kakar, 2017).

### **3.15. Demography and population**

The overall population of district Pishin in 2017 was 736,481, with 51.48 percent males and 48.52 percent females, up from 376,728 in 1998. The male-to-female sex ratio is 106.09, with a 3.58 percent annual population growth rate. The district has a total population of 143,142 people (19.44 percent) in the city and 593,339 in the countryside (80.56 percent). The average household size in the district is 5.75 in the city and 5.08 across the rural area (Kakar, 2017).

### **3.16. Topography**

The Pishin's topographically nature is mountainous. Toba Plateau covers the northern part of the country. The mountains are very homogeneous, with long central ridges and numerous spurs. The height of these spurs ranges from roughly 1,500 to 3,300 meters. The region comprises a succession of valleys that range in height from 1,370 to 1,680 meters above sea level and are surrounding by mountains to the north, the Toba Kakar Range. The Lora River and its tributaries are the primary sources of water that flow through Pishin (Kakar, 2017).

### **3.17. Weather**

District Pishin is near the equator point where four kinds of weather come winter, spring, autumn, and summer. The winter season is tricky because the weather is so cold that the temperature falls to -15 cc in December and January. Due to the severity of cold increased, people in the summer, the weather is not as hard as campier to cold season the temperature goes to 35 to 37cc in July and August. But this is very hard for the people because the weather is sweltering for the people. The spring and autumn are standard in the region the people are happy with the weather. All greenery becomes fresh in the spring season, and the weather fills very well, especially in April and marches;

these two months are the spring season. Autumn is coming in October and September. Mostly rainy season of the region is winter, December and January are the rainy months. In these two months, snow is also falling in colossal level, And the region of the Pishin is out of moon soon area, where the rain is raining in very little level (Kakar, 2017).

### **3.18. Agriculture**

Pishin is fertile land with a variety of agricultural supplies. In pishin, the residents of the district grew seasonal fruit and vegetables. The ecological pishin is a cold zone for agriculture, with a longer duration of coldness than hotness. As a result, the crops and fruits are about cold patterns, in which they are developing a robust seed that is unaffected by cold weather. As a result, Wheat, cumin, barley, fodder, onion, vegetables, melons, tobacco, and potato are among the possible primary crops in the district, which has a total cultivated area of 155,189 hectares. Almond, apricot, apple, grape, plum, peach, pistachio, and cherry are among the possible fruits in the districts. Tube wells, wells, and Karezes (springs) are the most frequent irrigation sources for agriculture (Kakar, 2017).

### **3.19. Tribes and ethnic groups**

The main tribes of the district are the Kakars, Tareens including Achakzai and Syed's. The majority of the population comprises the Kakar tribe. Prominent villages inhabited by the Kakar tribe include *Sanzerkhail, Bayanzai, Mehtherzai, Bazai, Ahmadkhail, Panizai, Sargari and Gharsheen*. The Syed majority villages are *Gangalzai Syad, Sulamanzai Syed, Huramzai Syed, KakazaiSyed, Shakarzai Syed, and Yaseenzai Syed hiaderzai Syed, Alizai, and Abubakar Tareen* are the areas where the Tareen tribe (including Achakzai) resides (Rao, 2011).

### **3.20. Houses and settlement**

In 1998, the Pishin district had 54,048 housing units, with 51,520 in rural regions (95.32%) and 2,528 in urban areas (4.68%). The conventional pucca walls composed of baked bricks/blocks and stones with cement bonding are found in around 6.03 percent of dwelling units in the Pishin district, compared to just 4.77 percent in rural regions. More than 91 percent of dwelling units in the rural areas and 67.68 percent of housing units in urban areas in the Pishin district are made of baked bricks supported by wooden beams and planks or girders. The roofs of 4.02 percent of homes

are built of cement, for example (3.31 percent rural and 18.51 percent urban). Unbaked bricks with mud bonding make up 85.19 percent of the walls. The vulnerability of the latter in case of earthquakes is very high, as was seen in 2008.

In 1981, the population density was 37.5 people per square kilometer; by 1998, it had grown to 46.96 people per square kilometer. The population of Pishin Town and its environs is dense. During the 1998 census, the average household size was 9.1 people. The settlements in the Pishin district have a population of 30 to 300 people.

All housing units featured kitchens, baths, and a separate or communal latrine, according to the District Census Report (1998). The bulk of the population (66.72%) lives in residences with two to four rooms. According to the Multiple Components Focus of the group (MICS) (2004), there were 3.1 people per room in the Pishin district, with 0.9 percent of the population living in one-room homes. Households with access to water supplies accounted for 47.9% of the total. 23% of homes had sufficient sanitation, 78.4% of households had electricity, 45.4 percent of families had access to radios, and 8.9% of households had access to television (Rao, 2011).

### **3.21. Culture**

Pishin has traditional Pashtun culture based on purely Pashtun cultural aspects. The residents strictly adhere to the prominent norms and values of the culture. Attan (cultural dance) is joyfully performed by both young and elderly people on Dhol (dream beats) and sing Kakarai Gharhi and Tapey during this dance. The People of Pishin are also associated with Pashtu literature and poetry. They keenly listen to Naqal (folk stories) which are most of the time based on the stories of valor and love of old hero and heroine. These stories which are told by the elders provide certain lessons. Some of the main aspects of their culture which include religion, food, dress, marriage, livelihood, Pashtunwali are elaborated below.

#### **3.21.1. Religion**

Religiously majority of district Pishin people are Muslim's some of the population belong to minorities. All people of the district Pishin are firmly following the Hanafy school of thought. And there are no other three Islamic schools of thought are present. Pishin is the home of the madras, where in every village we can find the madras. Every madrasa is the branch of the duibandya schools.

On the other hand, district Pishin people are also Tablighi, where a big Tablighi center is present. A very well management system of the Tabligh is going in the district; most of the villagers in Pishin have gone in the way of Tabligh for a year or four mounts. So, all the community people are following the religion very strongly, and they are not accepting any critic in the religious activities. Because religion is considered the primary part of life, the majority of the population are Muslims in the district Pishin.

### **3.21.2 Dress**

In Pishin, people's clothing is entirely Pashtun cultural clothing, with men and women wearing a variety of distinctive clothing. And they are known for their unique clothes. In Pishin, men wear shalwar kameez and often waistcoats, the elders of the society wear a unique Pashtun turban on their head, and most young Pashtuns wear a Pashtun unique cape. And young men do a special kind of embroidery on their clothes which is very rare, which is called the Pishin people (*Qandari Ghari*) in Pashto. Men change their clothes pattern in winter in which they carry lamina (*pahto*) with them. They have a beautiful sheet on their shoulders which has beautifully embroidered. And older men wear a special kind of long and warm coat, a Pashtun cultural coat called in Pashto (*chapana*). In Pishin, women wear different designs with their age. In which older women wear a special and unique type of round (*kali*) dress, the traditional dress of Pashtuns. And young women wear a special kind of dress according to the Pashtun custom on which they embroider in various ways and at the same time make beautiful flowers on the clothes by hand and make the clothes more attractive. There are many other things on the clothes decorates. In Pishin, wearing a dupatta with women's clothing is an essential component that flies over the head, which is necessary for women of all ages. Women make unique styles of cloth for their children by decorating them with small pieces of iron or placing them on the clothes made by hand. They make clothes on which they adorn small amounts of a mirror or put different kinds of things by hand on the clothes which make a particular dress. And at the same time, veiling is a part of women's clothing in which some women wear the Pashtun cultural burqa or especially cover their face with their dupatta. At the same time, some older women wear a special type of hat, which is now rare in Pashtun society.

### **3.21.3. Food**

The people of Pishin District like to eat a prominent and healthy diet, whose residents eat a variety of traditional foods. In which they want to eat the meat of oxen and rams in the form of "roast"

and not only that, the people of Pishin prefer bread made from pure flour. Because the favorite food of the people of Pishin is "roast" and pure bread, they like to eat "roast" more during all regional events. In every part of the region, the nutrients are in the form of a roast. Secondly, another unique and well-known food of the people of Pishin is "*Landi*" (meat dried by wind or sunlight).

For which they especially slaughter the lamb and let its meat be dried for food. This food is eaten especially in winter when the temperature is shallow. Because *landi* is a powerful food and according to them this food keeps human bones strong and protects them from various diseases. On the other hand, the people of Pishin also eat vegetables. They like to eat peas and okra with gusto. They prefer to drink homemade "lassi" with their meals. Since lassi is the most popular drink of the Pashtun belt, they keep the cow indoors so that it is not difficult to drink lassi.

#### **3.21.4. Marriage**

Weddings are performed uniquely in the Pishin district, where weddings are always planned according to Pashtun traditions. First, the women of the groom's house go to the bride's house to see the girl and talk to the family about marriage. Then the parents of the girl go to see the groom. Then both families elder talk on the agreement of marriage. And then, the groom pays the bride's family *walwar* (the amount paid to the bride's family for jewelry, household items, etc.) according to tradition. The bride and groom's family determines the bridegroom (as a price) in ups and downs before the wedding. Different numbers of people go to the bride's house by the groom and then the marriage ceremony is performed. And gifts are given to everyone by the bride's family, which is called in Pashto (Dasmal). After a while, the groom goes to fix the marriage date, which is called (Khalasa). According to Pashtun custom, there are some women with the bride at the wedding called (Khishani), and the marriage ceremony lasts for three consecutive days and for three days, the bride is put in place called (throne). They make special programs to increase happiness. It is called (Bandar) in Pashto. It has four to eight singers who play a special kind of musical instrument. This program takes place on the first day of marriage. And almost on the third day of the wedding, husband and wife come closer to each other and start their new life together.



### **3.22. Education and Literacy**

The district's literacy level is 31.4 percent (male literacy rate is 47.29 per cent, and the female literacy rate is 13.15 per cent). In the district, there are about 800 schools. The private enterprise manages Mohalla or home schools, 37 mosque schools<sup>19</sup> (primary level), and a limited number of elementary schools. International funders and non-governmental organizations help several of the government's elementary schools. The GoB oversees vocational training, middle schools, high schools, colleges, and teacher training institutions.

All government elementary, middle, and secondary schools in Pishin district educate Urdu. Only one private middle school offers English classes. Pishin does not have a technical school, polytechnic facility, or college. All government schools for boys and girls are overseen by District Education Officers, one male and one female.

There were 911 schools (six hundred and sixty-five for boys and two hundred and forty-six for girls) [please note that different sources report different statistics]. Enrollment in government schools totaled 67,917 students, with 43,508 males and 24,409 females; primary school enrollment totaled 38,336 students, with 23,491 boys and 14,845 females. Primary school teachers were 880 males and 454 females; Pishin has 87 middle schools, 53 for boys and 34 for girls. Up to 2008, 15,267 students were enrolled in middle school, including 9,053 boys and 6,214 girls (59 per cent boys, 41 per cent girls). The teaching faculty consisted of 533 males and 261 females.

In Pishin, there were 33 high schools: 28 for males and five for girls. The total number of students enrolled was 12,861. Girls accounted for 2,825 (15%) of the total, while boys accounted for 10,036. (85 per cent). The Baluchistan Board of Intermediate and Secondary Education in Quetta is the examination body for high school pupils. In high school, there were 569 male and 154 female teaching staff; the district has around 232 shelter-less schools; 92% of the schools were situated in villages where students lived, and 97% were within two kilometers of students' homes<sup>20</sup>; and the overall number of students enrolled grew by 6.22 percent from 63,942 in 2002 to 67,917 in 2008. Male students grew by 19.46 percent from 36,422 in 2002 to 43,508 in 2008, while female students increased by 42.96 percent from 17,07 in 2002 to 24,400 in 2008, a substantial rise. The private sector's engagement is minimal. International funders have aided by fostering an enabling

environment, particularly in rural regions for elementary and secondary education for girls (Rao, 2011).

### **3.23. Health**

Patients in Pishin are treated by allopathic physicians, hakeems, and homoeopaths in addition to allopathic doctors. There are also a lot of quacks operating. In the Pishin area, women's health is low. Migrant ladies are thought to have an even worse health situation. There is no information on their calorie intake. The Executive District Officer of Health in Pishin controls health services, vaccination programs, and medication regulation. The District Headquarter Hospital is overseen by the Medical Superintendent.

The district's medical facilities were included in 2006-07. Pishin District Hospital, 45 beds; 29 Basic Health Units; Six Rural Health Centers, each with 10 beds (for a total of 60 beds); 19 public dispensaries; Four Mom and Baby Healthcare Facilities, nine health specialists; One TB clinic; One mobile health unit; The district has three school health care units, two private hospitals with ten beds, and expanded programmed on vaccination (EPI) centers, family welfare clinics, reproductive health clinics, and nurse training schools. Out of 69 doctors in the district, 55 were male and 14 females; of seven nurses, two were male and five females; there was one pharmacist, 40 LHW/V and 62 midwives (Rao, 2011).

### **3.24. Drinking water**

The quality of ground water in Pishin district varies from place to place. The water quality in Karezat subtehsil is acceptable from Qili Qasim Bostan to Choormian, while it is bad in Pishin bazaar and its environs. Other locations, such as Saranan, Hackalzai, Khudaidad-dad-zai, Karbala, Shadizai, and Davian, have poor water quality (saline or brackish) and are unfit for human consumption. According to the Public Health Engineering Section (PHED), 57 percent of the population has access to drinking water (this does not include amount or quality). Many individuals in rural regions rely on ponds and other unsanitary sources of water. The Town Committee is in charge of water supply in Pishin town.

Water is obtained in the Pishin district from a variety of sources, including tube wells, hand pumps, wells, karezes, and springs. Tube-wells have surpassed all other sources of water as the primary

supply of water. PHED's projects are all piped 100 percent of the time. These services were made available in 88 heavily inhabited regions. Of all connections, 90 per cent are for households and 10 per cent are for commercial purposes.

The district's primary source of drinking water is groundwater. 40% of the district's entire population has access to PHED-supplied drinkable water. 38 of the PHED's 88 water schemes have been handed up to the public. Contractors have been handed some of them. This is due to the fact that many schemes are oversized, not demand driven, and little attention is paid to the per unit cost of operation. Users do not want to pay hefty user fees, and communities do not want to take accountability for the schemes. In the Pishin district, 57% of the population had access to improved drinking water supplies, 49% of households had access, and 52% had access within one kilometre or half-an-hour return journey time. Improved drinking water sources were also provided (Rao, 2011).

### **3.25. Sanitation**

Due to uncontrolled urban expansion and a lack of appropriate sewerage infrastructure, the district's public health conditions are poor. Only 2% of the 57 percent of the population with a better water supply safely disposed of wastewater. Only 23% of the population has access to adequate sanitation. 91% of people wash their hands before eating, while just 21% wash their hands after returning from the toilet.

In a sample of 374 toilets, 0.2 percent are linked to public sewers, 0.6 percent to septic tanks, 7.9% have spill flush toilets, 0.8 percent have ventilated improved toilets, 12.7 percent have traditional (closed) pit latrines, 0.3 percent use bucket latrines, and 0.1 percent use public/communal latrines, while 77.5 percent defecate in open spaces.<sup>25</sup>

Households in Pishin and Khanozai town connect their flush systems to septic tanks. Household waste is disposed of by open sewers, which flow into a water body. Water to drain into the Pishin Loralai Basin through cemented outlets in urban areas like Pishin Bazaar. In the Pishin district's rural regions, the sanitary situation is even worse. There are no drains, and the streets are not paved. Outside dwellings, stagnant wastewater breeds mosquitoes and flies. Specific foreign donor agencies have offered financial and technical help to communities in some regions to enhance sanitation in recent years (Rao, 2011).

### **3.26. Tribal conflict and local Economy**

The districts' primary tribes are the Kakar, Tarin, Syed, and Achakzai. The tribes in the area have deep religious and cultural links. In social life, religion plays a very important role. Kakar is the district's most powerful tribe. Though there aren't many tribal disputes, when they do occur, they generally revolve over land and children. The majority of these issues can be resolved by the local jirga systems (Kakar, 2017).

### **3.27. Conflict resolution**

In most cases, individuals turn to the courts when they are involved in disputes of a larger scale. Local Jirgas, on the other hand, mediate and resolve minor disagreements on a local basis. People in Pishin believe in *Badal* (revenge) in the case of killings in some conflicts (revenge). Families or tribes must first equalize the data before sitting down to negotiate a settlement outside of the courts.

Pashtunwali, the Pashtun code of Jirga, is also used here. Ceasefire, *Nanawathi* (when someone is guilty to another and go to them for apologies), and *Sulh* (to forgive the sincere for peace) are some of the actions that have been taken. Typically, elders in the region take an interest and bring the warring sides together for table talks and mediation. Except for murder, everything can be solved. Murders always need the use of *Badal* (Kakar, 2017).

### **3.28. The role of women**

In the district, Pashtun women have a bad situation. Most of the ladies marry at a young age. Cleaning, childbearing, washing clothing, and caring for animals are just some of the responsibilities that women have in the home. They have little social standing and are frequently denied access to property or other possessions. They're also constrained by religious and cultural norms. When it comes to women's concerns, the Pashtun population in the region is quite sensitive. They put in a concentrated effort to marry the girl as soon as feasible.

### **3.29. Woman status**

Women play a little part in the decision-making process in Pishin District. In the case of marriage, however, their viewpoint is taken into consideration. She also has the authority to make choices

about household matters such as cooking and housekeeping. Muslims make up the majority of the Pishin district's population. However, the majority of people do not allow women to inherit, even if it is legal.

A woman's domestic responsibilities are restricted to cooking, washing, maintaining the home, and raising the children. At the community level, they play a little or non-existent role in social and economic activity. Similarly, the women of Pishin district do not participate in politics in any way. However, only a tiny percentage of women voted with their husbands' approval and instructions. Women's roles have improved in Khanozai town, a rural location, as a result of a higher literacy rate. Some women's organizations have received income-generating training from the Social Welfare Department (Ghaus, Pasha, Ghaus, & Chaudhary, 1996).

### **3.30. Land use**

The Pishin District Government acknowledges that natural resource management in Pishin must be examined considering the district's growing water scarcity, poverty, and lack of access to essential services. This is set against a backdrop of high aridity and recurrent drought, as well as a movement away from arid agricultural and animal grazing and toward irrigated agriculture and orchards. Lack of forest management, overgrazed rangelands, and low-productivity cattle; reduction in animal populations; and overgrazing of rangelands (notified state forests, and forest vegetation).

The district's overall geographic region is 8,812 km<sup>2</sup> (881,200 hectares) or 787,400 hectares. The stated size is 293,868 hectares (about 37.32%), whereas the non-reported area is 493,532 hectares (about 62.68 per cent of the total geographical area). According to Baluchistan's Agricultural Statistics (2008-09), the area not suitable for agriculture is 82,150 hectares (27.95%).

The Pishin District Government recognizes the need of using land use management as a strategy for boosting its agriculture and horticultural industries, as well as harnessing the benefits of being close to Quetta and the RCD Highway. The Pishin District Government will collaborate with the Pakistan Survey Department. To see if satellite image related modalities could be used to validate land uses, the Pakistan Space and Upper Atmosphere Research Commission, the Board of Revenue, and private sector organizations such as the World Wildlife Fund (WWF) and the International Union for Conservation of Nature (IUCN) collaborated with the Pakistan Space and

Upper Atmosphere Research Commission, the Board of Revenue, and private sector organizations such as the World Wildlife Fund (WWF) and the International Union for Conservation of Nature (IUCN). Procurement of archive maps of the district will be undertaken (Rao, 2011).

### **3.31. Forests**

According to Gov announcements, the entire forest area of Pishin district is 73,775 hectares. This contains a portion of the Surghund Forest as well as rangelands like Maslakh (28,243 hectares). An another 475-hectare artificial forest reserve is located near Bund Khush Dil Khan.

Forests are essential for providing environmental services and preserving an area's biological equilibrium. They play a significant role in the production of wood and non-wood products such as water, pasture, and Medicinal and Aromatic Plants (MAP); sustaining watersheds; wildlife habitats and relying on species of wild animals and plants; erosion control and soil conservation; carbon sequestration; provision of countryside recreation and ecotourism.

The Forest and Wildlife Department oversees managing forests and plantations, as well as rangeland administration. In the Pishin district, there are two types of woods: natural forests and artificial forests comprising range land, plantation, conifers, and other types of trees. Officer in Charge of the Executive District Forest is the department's district chief, and he is supported by Area Forest Officers, Foresters, and Forest Security. For forestry activities in the district, seasonal labor is used. The Surkhab natural forest reserve has been cut and used as fuel largely by refugees. During the early 1980s, Surkhab was one of the largest refugee camps, more than 156,000 refugees were registered there (Marwa, Hussain, & Khan, 1989).

### **3.32. Disaster risk mitigation and preparedness**

#### **3.32.1. Earthquakes**

Baluchistan as a whole is located in a seismically active area. In the past, the province has been hit by devastating earthquakes. Many parts of Pishin district, particularly those surrounding Khanozai, are earthquake prone. The Suleiman range, which lies southwest of the Himalaya and is part of the Hindu Kush, is tectonically active.

The Shahrigh earthquake of 1931, the Mach earthquake of 1931, and the Quetta earthquake of 1935 were all major earthquakes in Pishin. The 2008 Ziarat Earthquake, which had a far-flung

epicenter, also impacted the Pishin region. A major earthquake struck Pishin in 1993 (with a magnitude of 5.7 on the Richter Scale) and another in 2000.

### **3.32.2. Droughts**

The previous drought, which affected the whole province, lasted nearly six years (1998–2004). This drought is regarded as one of the worst in Baluchistan's documented history. Droughts necessitate water conservation, storage, and a system for procuring water for vital requirements. During the extended drought, the situation was particularly dire, since cattle suffered the most, not only from a lack of fodder and water, but also from infectious illnesses (e.g., foot and mouth disease). Communities had inadequate understanding on how to care sick animals, and many animals died as a result. Household earnings and nutrition levels have both plummeted.

The drought hit Karezat and Barshore tehsils hard, but Pishin tehsil was only mildly impacted. Floods, cold waves, and landslides are all possibilities. Because the water recharge capacity of woods, rangelands, and cultivated regions has reduced substantially, floods are prevalent in Pishin district. During the winter and spring, westerly storms bring rain on mountain terrain and a large catchment area.

### **3.32.3. Landslides**

Storms, earthquakes (such as the one on October 29, 2010), fires, and the steepening of slopes can all trigger landslides (by erosion or human modification for building of roads, housing, or other infrastructure). During heavy rains, flash floods are common in parts of Pishin. The floods wreaked havoc on homes, standing crops, orchards, animals, and water supply systems, affecting tens of thousands of people and communities, as well as cutting and destroying road networks.

Heavy snowfall and harsh cold can paralyze some sections of Pishin, but seldom. Even places that are accustomed to moderate winters can be struck by large snowstorms or periods of intense cold. Flooding, storm surges, blocked highways, downed power lines, and hypothermia are all possible outcomes of winter storms. Citizens' health, livestock, and natural resources can all benefit from precautionary response tactics (Ainuddin & Routray , 2012).

### **3.33. Communication and infrastructure**

Communication infrastructure, such as farm-to-market roads, motorways, and railroads, is critical for speeding economic growth. Three national highways, black and shingle roads, and railways service the region. The Pishin district is connected by road to the rest of the province and nation. The closest airport facility is in Quetta. Rural roads, especially farm to market roads, are inadequate.

Quetta to Chaman through Pishin and Quetta to Zhob via Karezat tehsil are two significant roads. Through the tehsils of Barshore and Hurrainzai, Pishin is connected to Khanazai in the East and Qila Abdullah in the west. Pishin district is crossed by the 42-kilometer Quetta-Chaman railway line. In Pishin, there is an abandoned concrete runway from the British Royal Air Force's era.

Radio is used as a source of information and entertainment in both communities and distant locations. Radios were utilized by 61.4 percent of people, 13.6 percent of people watched television, and 22.0 percent of people read newspapers on a regular basis. In certain locations, such as Pishin bazaar, Khanazai, and Bostan, internet access is also available.



## Chapter 4

### Social and cultural barriers

In fieldwork, I have seen people's different opinions on polio disease, polio vaccine, and polio campaigns. These three sides were the main things that were mostly targeted by the people on which different types of social and cultural barriers existed to the polio progress. Those barriers were the factors that were influencing the eradication of polio disease from the region. Because in every area, people have their own values, customs, folkways, and cultural identification on which they can never compromise in every condition. Whenever something happens in the opposite direction of the people's social and cultural status, that thing will have too many barriers and will never be accepted by those people. Because society and culture were giving status to people, they identify by their values, and those things have learned from the society in that a lot of things are band. All the people are looking to the problem by social and cultural aspect. And sometimes, it is solved by society and their cultural values, but occasionally cultural disconnection becomes the solid and significant barrier for solving the severe problem in society.

#### 4.1. Rumors

Rumors are unverified information, usually false news, that negatively impacts the public and society. Because of the nuclear tragedy in Japan caused by the earthquake and tsunami, there is a myth that iodized salt may prevent radiation harm and that sea salt is unsafe because radioactive material has contaminated the seawater. As a result of the increasing usage of iodized salt over sea salt, iodized salt prices rose, negatively impacting the general people. In 2012, a Chinese man became psychologically disturbed due to the apocalyptic myth, injuring 23 schoolchildren. A rumor-spread model describes how rumors spread through persons known as Ignorant, Spreader, and Stifler; the latter is the one who feels knowledge is obsolete. The forgetting process, on the other hand, puts an end to the rumor (Zhao, Wang, & Huang, 2015).

There were different types of rumors were circulating in the society toward the polio vaccine, polio campaign, and polio disease. Two different types of rumors existed in society about the vaccine. Those who have not got the drops of polio vaccine that were saved from the effect of polio and those children who got drops of polio vaccine were in danger. They thought that the polio vaccine

brings infertility in the children, and they will never become parents of children. The new generation will not proceed with their family, the boy will be weak or sterilized, and girls will never become mothers of children. Those children who got the vaccine at the start of the polio vaccination program when they got married and became parents, then society changed their mindset about the polio vaccine. When they saw that the polio vaccine was not happening infertility in the children, they said the polio vaccine is accelerating the secondary growth of the child. Polio vaccine reached the child very fast to the adulthood stage and increased the sexual feeling in them from which child lose on high-level intelligence ability that is dangerous to him. On the other hand, they were thought that those children vaccinated against polio have desires of obscenity in society and have liberal thoughts.

*“The west wants to make our children liberal to follow their culture and system. In the polio vaccine, they have used that thing which can make children young very fast, and they will be lazy, but he has a lot of sexual thoughts. When they become adults by body and sex, but his mantel activities are very weak for those who cannot get vaccine drops”.*

They have a significant doubt on the campaign where the workers took the data about families for the vaccination against the polio disease. They thought that which data they were taking from us then it will be used for some purpose against us. Or they will share this data with the west to get control of us more vital than now, and they will know everything about us in the future. This campaign expands the culture of boys and girls working together in our societies and the west, trying to introduce their culture in our communities. They keep themselves away from the campaign worker, and they are trying as much as possible to make an excuse for the vaccination of children. Secondly, they do not share pure data with workers to write about their family members, and no one makes them disturbed.

*“An example of expanding obscenity in our communities is a campaign work they are doing to eradicate polio disease, but it has some other campaign purposes. If we go fifteen to twenty years back, there was one or two-time campaign in a year to give the vaccine, and only men were working in that but now a day in one month seven days it is going on both girls and boys are working in the campaign. Those girls and boys working in this campaign are strangers, and they are not relatives, so they become very shameless and doing anything then in society”.*

One of my respondents said that polio is the game played with us from the side of the developed countries. They want to experiment with their innovation of medical treatment to be helpful for human beings. That is why they are pressurizing the Muslim population to vaccinate against polio. To see the work of it for which they have made it. My respondent said that I have worked on the medical side I know the reality of the polio vaccine and disease. These all propagandas were playing for the control of the world population. And take over control of developing and underdeveloped countries for their purposes. Specially polio is used as a controlled weapon against the Muslim world and reduces the population of Muslims. Further, he said that polio is America's production to be imposed on us to recognize well by our political figures in Pakistan. This polio vaccine came particularly for the pregnant women from the side of America in Pakistan to kill the fetus inside the mother's womb. Or to keep down the ability of reproduction in the new generation after such a limited time.

My respondent said in 1992, America told our prime minister Benazir Bato to inject polio injections in Pakistan to pregnant women. To which she responds that it is illegal in our religion Islam to kill someone. Because these injections were used as an abortion method to lose the pregnancy, she rejected the injection. She signed the polio vaccine campaign with America for population control and pregnancy reductions. In 1994 the proper polio vaccination program had started in the country and vaccinated children to control the population in the future. After some years, another head of the government said that I would control the population of Pakistan after twenty to thirty years and started the polio vaccination of children forcefully inside the country. Now we can see after twenty years, the children who had been vaccinated against polio most of them do not have children. And we are witnessing the loss of pregnancy rate is increased. Most of the mothers are losing fetuses in the fifth or sixth months. The present procedure of the polio vaccination is hundred percent wrong and population control. And it will full infertile our children, and they will not be able to bring children. The girls will lose the egg-producing ability, and boys will lose the perfect amount of sperm-producing and motility sperms to target the egg.

## **4.2. Unawareness about polio**

I have examined the people who were entirely unaware of the polio issue, and they want to keep themselves away from the polio discussion. They think polio is a drama cast from the government's side to make aware themselves by every activity of the societies. Polio was one simple type of

disease for them that can affect nothing to a person. Some of them did not know what was happening from the polio disease, and they thought polio was like flu or another type of disease present inside the body. They became worried to listen that a small type of virus invents polio, that how a tiny thing damages a substantial human body, and it is impossible for them that someone will die from polio disease produced from a microscopic organism. So, they thought polio was an incurable disease that would continue forever, and the government would be taking its money from the West. They were looking to polio as a hidden game of the West that is played as a source of economy to give the Pakistani government an enormous amount of money. They doubt how someone becomes merciful on us without any purpose and provides free treatment of disease to take all the expenditure; there is a big game that will show the dangerous result. Otherwise, they think that the government does not want to eradicate the polio disease from Pakistan because many people make money on polio jobs. They are showing new cases to the world.

They considered the polio vaccine useless because it is simple water given to our children, and it does not have the power to cure the disease. All these things are doing for the showcased to the that we are working on polio, but they are just cheating with the world and getting money. The parents have heard from the people that the polio vaccine is not the perfect thing for polio disease. It is a secondhand vaccine, not the original one. They believe in unknown sources that we heard to keep away the children from the vaccination and they do not want to try knowing the reality only looking to the people what they are saying toward polio.

### **4.3. Gender issues**

According to a study, differences were discovered when boys' and girls' vaccination status in the same domiciliary and community was investigated in Africa. Girls were sent to health care centers for immunization at an early age, but later on, they were the primary dropouts for follow-up vaccinations or booster doses. In contrast, boys were more likely to receive complete immunization (Pillai & Conaway, 1992).

According to a study in India, pre-birth sex determination of a child alters parental behavior, which is more visible in urban areas where more care is given to the mother if the child to be born is a boy. In contrast, such facilities were not available in rural areas, so pre-birth sex determination-related care was not visible. In contrast, the boy was given more significance in rural regions after

birth, but in urban areas, this aspect was comparably considerably less essential to parents (Choi & Lee, 2006).

Bad experiences and tragic stories were present in Killi Mandan about incidents related to polio vaccination was widely influence the development of trust. Because Killi Mandan society was conservative, and this conservativeness involves gender norms and positioning. Where people were having problems with the opposite gender presence in the polio vaccination team, some people preferred females to vaccinate female children inside the house. And females' members of the home feel more comfortable discussing their problem with females' workers about the polio issue. This element was more common in the village to not accepting the opposite gender to vaccinate their children. Because most of the Killi Mandan families were religious-oriented families, they did not prefer a female polio worker to work in a polio team and vaccinate children in a stranger house. This phenomenon has extended into the vaccination services as female vaccinators in the polio campaign.

When male polio workers were vaccinating the children, their mother usually hesitates to talk to a strange male person. To address this gender gap, bring the hurdles in the vaccination, and the vaccinators missed so many children. They did not want to talk with the male worker, and without any argument, they closed the door. The male worker did not inside the home or could not use force for the vaccination of children. So, to solve the problems, they have one female vaccinator in the team with whom the mother can easily discuss, and she trusts the female vaccinator, and she goes inside the home and vaccinates children.

Whenever mothers accompany the children during vaccination, so they hesitate to talk to the male vaccinator. As in the conservative society, it is difficult for the male polio workers to interact with the ladies; for that reason, females' membership was visiting the children inside the home. Female to female interaction is much easier in comparison to opposite gender interaction. But the problem was that some elders of the families did not allow the female worker inside the home to immunize their children. They thought that it is spreading vulgarity in society. So, in both cases, the gender interaction issues were coming, which affecting polio eradication. Such people were strongly avoiding the presence of a female in the campaign to work with boys.

#### **4.4. Trust**

Research that looked for a link between parents' vaccine views and their choice to refuse or postpone vaccination for their children discovered that the delay or refusal was due to safety concerns and a limited perception of vaccine advantages. The role of pediatricians is critical in this situation, as they must both educate and reassure parents regarding vaccination. Similarly, confidence in vaccine providers contributes to increased vaccination awareness (Smith, et al., 2011).

According to a study, when it comes to childcare, most mothers' traits are the same whether they are educated or illiterate. The sole differentiating characteristic discovered was that education makes a difference. It was found that educated mothers had more knowledge and awareness about health care, location of facilities, type of coverage that health care center provides. And the limitations of that health care center all influence the level of trust and development of trust in a health care facility by mothers in particular and parents in general (Streatfield, Singarimbun, & Diamond, 1990).

Parents' incentive to have their children vaccinated is boosted when they develop trust with the vaccine giver. The key idea was trust in the medical profession. They discovered that trust in pediatricians and feelings of pleasure regarding vaccinations were positively influenced by discussions with pediatricians that did not require them to go against cultural norms. Similarly, new moms' lack of trust and relationship with their physician created an alienated feeling that stopped them from getting their children vaccinated since they were unmotivated. As a result, the building of trust and healthy connections is critical in giving moms the confidence to have their children vaccinated (Benin, Wisler-Scher, Colson, Shapiro, & Holmboe, 2006).

Due to a lack of knowledge, the tribal people in Pakistan face several barriers, leading to rejecting foreign ideas and customs. In regions where a recognized vaccinator is appreciated, and parents observe more cooperation from such vaccinators, affiliation and familiarity of vaccinators have a crucial effect. When developing health promotion efforts, cultural variables such as a “familiar or known” health care provider or vaccinator should be kept in mind. Hiring locals who can readily communicate and offer services with few barriers can aid in a successful vaccination campaign (Obregón, et al., 2009).

Developing the trust in polio vaccination was a big issue in the Killi Mandan. It is hard to convince people about the benefits of vaccination for the children to save their child from the crucial poliovirus. Some of them were strongly avoided talking with polio workers. When they saw that their neighbors and other people showed trust in polio workers, they were at least ready to talk about it. Then polio workers explain to them everything about the polio vaccine and the benefits of the vaccine. The local worker was trying to build trust between the polio worker and the people of the society. But sometimes, they were not in the right of local person argument about the polio vaccine. During the campaign, the local workers have used the primary source to make the trust of local people on the vaccination of children against the poliovirus.

Some people have not trusted the vaccination that how they are giving the free treatment where the doctors were taking thousands of rupees on the treatment. And they were opposed to the vaccine that government was not provided other health facilities but how they were vaccinating our children against the disease in free. On the other hand, some people were propagated against polio vaccine to disturb people's trust in the vaccine that these vaccines are not good in quality that is way government gives in free. So, people became worried about the polio vaccine's ongoing situation, which made them in double mind to trust the vaccine for the children.

Developing trust was a slow and steady process. The People did not accept strangers as polio health care workers, especially when it comes to child polio protection. Because of this reason, gives the specific areas to polio worker permanently to build the trust of people on the vaccination. Now, from that worker's hard work, some people trusted vaccines more than before, and they were accepting the vaccine for their children. Some people acted immorally, which reduced our energy, worked hard, and became disappointed in them, and it became hard to vaccinate every child in the area.

## Chapter 5

### Perceptions of people

The perceived utility of vaccination is determined by the perceived advantages and hazards associated with that vaccine. More significant benefits with fewer dangers generate a favorable impression, and people are encouraged and motivated to enroll their children. Assurance from a health care provider regarding vaccine safety might influence parents' perceptions, resulting in a trust-based relationship between the two play a pivotal role in deciding for vaccine uptake (Song, 2014). Other than socioeconomic factors, factors that influence vaccination include general knowledge, the effect of vaccine debates in the media, and parental attitudes. Educating and enlightening parents on the advantages of immunization can assist them in making an informed decision to get their children vaccinated. Cultural and religious disputes, such as those in Nigeria in 2003 and India in 2006, impact vaccination efforts. This problem can be solved by involving religious and community leaders. Concerns regarding vaccine safety among parents influence their attitudes toward vaccination (Lorenz & Khalid, 2012).

Vaccine perspective can be framed positively or negatively for patients independent of vaccine side effects and disease (Positive framing). And sick people who get the disease and vaccine adverse effects (Negative structure) influence people's expectations depending on the net gain or loss due to vaccination. Positive framing raises the expectation of benefits while lowering the expectation of adverse consequences (Connor, Pennie, & Dales, 1996).

Although there is a widespread assumption that vaccinations protect against disease, many are concerned about vaccine side effects, mainly when a new vaccine is introduced to the market. According to research performed in the United States, when parents learned about the link between autism and the MMR vaccine, immunization coverage against Measles, Mumps, and Rubella (MMR) was impacted (Freed, Clark, Butchart, Singer, & Davis, 2010).

#### 5.1. Perceptions about polio disease

In the research work, I have interviewed the respondents to identify their perceptions toward polio disease, on which they have very different types of perceptions. Their perceptions were that polio is one of the common diseases present more than a hundred years in the area. To polio, they called



in the local context by three different names (saiye marz, loeya thaba, and iblij m,arz), which was a very common disease. For them, polio was the new name of that common disease given by the west world to make it cure-less disease for the world. And a type of pressure applied to accept polio is a dangerous and cureless disease, but for them, it has a simple treatment they were giving in their own houses. And some safety procedures have been told by ancestors to save himself from paralysis and never attacked by it, if they keep away himself from taking a bath at nighttime, alone sleeping, and going over the garbage at evening time so they would be saved from the polio disease. Suppose someone affected by polio keeps them inside the room for forty days, and he becomes healthy. This treatment was a traditional method which was more suitable from the medical treatment for the patient near to them. They thought that medical treatment was useless in polio disease, and they did not trust medical experts.

Secondly, they were accepting the happening of the polio disease to Human beings but not that it only happens to children. They said that it is affecting both adults and children to make them disabled, but the difference is that he gets healthy soon when it is happening to adults. Children have gradually become healthy because a child is not taking good nourishment except the mother's milk. According to them, polio disease happens to children by not taking well nourishment from parents' side. So, he becomes weak, and his body cannot sustain growth well from that somebody part of a child becomes cranky to which they give the name of polio disease. This argument was about polio disease happening to children when a child takes perfect food to be safe from the disease. Another reason they thought that it is becoming the source of polio disease to both adults and children is that they are not saving themselves from the cold in the winter season. Because coldness is blocking the blood circulation in the body, it affects a person's brain from which paralysis occurs, and sometimes death will also happen from it. If someone completes the arrangement against the cold in the winter season, a person will never be affected by paralysis disease and will not use the treatment for the disease. This safety will be the treatment of the polio disease, not giving the vaccine to the children to save them. Because this requirement will not complete by the vaccine to kick out illness from the body, giving the vaccine only makes the person mentally disturbed. It keeps the trust in the medical treatment, not in traditional treatment.

*“One of my respondents said, polio disease happens from coldness and vaccine provide temporary temperature in children's body, but it does not work for a long time and have some other side effect on children. That way, we are not so much serious about the giving of vaccine drops to our children.”*

## **5.2. Ethnic Group perceptions**

According to a study, Child health is linked to poverty, which is exacerbated by ethnicity. Minority community parents do not place a high value on their children's health. Immunization inequalities were discovered in research conducted in the United States among children of black, Hispanic, and inner-city populations. According to the Centers for Disease Control and Prevention data, black and Hispanic people were more likely than white and Asian people to participate (Middleman , 2004).

The ethnic group perceptions were very hostile toward the polio vaccine, which they avoided in society for their children. They were thinking that the polio vaccine has made for the reducing the number of children to give them polio vaccine and bring the sexual weakness in our children. Because everyone wants more than five children in their house and one or two children having shamefulness for them, they rejected the polio vaccine for boys because they would be proceed their family. They said before in all the village two people who did not have children but now more than six pairs; They do not have children. No children were very hopelessly staged in the society because a massive number of the children were a strength for them in future. That is how they kept boys away from polio vaccination to save themselves from the smaller number of family members.

*“In Pashtun society, we want a large family, and if I give the drops to my son tomorrow, he will get the marriage and not bring children. In our area, one person was doing two or three marriages in the past and had more than ten children. Now in this thirty-year, the number of weddings and children became less everyone has one marriage and has two or three children.”*

Secondly, they were very strongly avoiding the polio vaccine for their girls because they thought it would bring infertility in the woman or reduce the birth ability in the woman. Girls will not remain in the father's house, and she will get married to go into the father-in-law house where she is spending her whole life if she is not giving birth, so it becomes a painful situation for her parents and husband. And she will spend her life without a sibling, which becomes very hard, and they

never want this situation for their daughters. They never want their daughters to have destroyed her life and take the happens of children from her.

On the other side, they were avoiding the polio vaccine for this that how a stranger people were asking from me about my family, and they were not accepting when someone asked about secret things of the family. Like the workers were asked about their newly born baby for the vaccination, which made them wonder. They feel very badly when a stranger person comes to knock on the door of his house a mere month. And giving the strange thing to their children, which is unacceptable for them. The most defame thing they were feeling is the using of fours to accept polio vaccine and bring security to their houses.

*“The second reason for not ending polio disease is the worst polio campaign system is responsible for polio existence. It will present till that time until they cannot make the campaign policy according to our culture, and they learn our mindset. There are several things they ask from us in the campaign that we cannot share with anyone, and they know about family members and newly born babies”.*

## **Case study**

One of my respondents told me that we were conducting a polio campaign in a village. Whenever we knocked on the door, a man came out and told us what we were doing here. When we told him that we belong to the polio vaccination team, we are giving polio vaccines to children so that children can be protected from polio. In the campaign, we collect data on family members, how many people are in the family, and how many children are of limited age to be vaccinated against polio. We try to cover all the children. We asked him how many members are in his family, how many members are married, and how many children are under six months old. So, he got angry about why you guys ask about my family member, and it is not your job to ask about my married couple. Nor do I tell you about them and what you want to do with babies under six months old. You plan a specific program to enter people's families and get all the data about their members. Then you use this data from my family against us. We told him that it was only to record how many children had been vaccinated against polio.

No more Still, this person told us that it is unethical for people to ask someone about their family, their wives, and a way to gather data about children and couples. Is. And then they are used against

the same people, and you want to get complete data about families. This data is not primarily about getting children's information about polio. Whenever we tell him that we are not collecting data for any other reason, it is only for polio vaccination data. Then he said, no, this is a game you are playing with us; you are all servants of the West. You are using this method to discover the Muslim population and then try to use polio as a controller and reduce the Muslim population. "I will never tell you about my family, and I do not want to vaccinate my children," he said.

With this vaccine, you want to disinfect people's children to control the country's population. We tried to persuade him for vaccinations and data. He told us that if you asked me about my family, I would kill you. Now you guys should get away from my house. I will never accept giving this medicine to my children. And I don't want to liberalize my children who destroy my society. Nor do I want to tarnish my family's name with these children in the future.

### **5.3. Perception towards polio vaccine**

Most polio workers had almost the same reply to the question about people's perception of vaccines. A very negative attitude has been seen from society towards the vaccine. Most vaccinators who had been working for a long time described that it was challenging to convince parents or heads of the families every time for the vaccination. Still, sometimes, the attitudes have changed towards the polio vaccine. They agree to vaccinate the children. There were different reasons for the negative attitude or perception of parents toward the polio vaccine. That is why it is almost impossible for polio workers to vaccinate all the children in Union Council (UC), but the polio team tried to work hard to vaccinate a single child in the area.

Most people consider the polio vaccine is a bad thing for their children's health. Their statement about the vaccine was that when this vaccine makes our children healthy, it was going for a long time in the country. Why are still coming cases of polio inside the country. Some people say this polio vaccine does not have the power to protect our children from polio disease. It was only a type of virus polluted water given to our children for twenty years. And the polio vaccine was the primary source to bring disability in a child. There was no disabled person in the village before, but now two to three children are disabled because of this vaccine. Polio vaccine is a type of poison for their children, and they don't like the drops of polio vaccine for the children. People are being educated about the vaccine importance of other diseases, but they strongly avoid the polio vaccine.

Most people did not know about polio disease and what is happening from the polio disease. Still, they were blaming the polio vaccine that it is responsible for the condition. People were not aware of the polio vaccine that is why they were not giving drops to their children. Because Polio Campaigns were happening every month throughout the year, people did not trust the polio vaccine. So, that was hard to trust people on the vaccine to accept for their children where the government was forcing them to vaccinate their children every month.

Superstitions had always been a decisive influencing factor on society, due to which people concluded that polio vaccination was not a healthy thing for their children. They were always giving importance to their traditional and superstitious method for the treatment of any disease. Because of for a decade, they were performing those methods for the treatment, and it was tough for them to reject that and accept the modern treatment methods. Secondly, traditional medicine had given fast results in every disease treatment, but the polio vaccine did not show any quick results.

Another view that was quite common among the people was that the polio vaccine is a western conspiracy to control the population, and something is inside the vaccine to make them impotent. But now, people have changed some views about the polio vaccine. It is not only controlling the population after some years but also showing some immediate effect on the people. About them, this polio vaccine makes the new women generation weak to provide milk to children. The main reason for the polio vaccine was to reduce natural nutrition, which makes children strong against every disease. According to them, this vaccine vanishes the mother's milk from which children became weak against the disease, and the western people sell out the vaccine and make strong their money. This polio vaccine is not the kindness of the western people to provide free polio vaccine.

On the other hand, the educated people also doubted the vaccine, which they could not like for their children. Some educated people have given the seven doses to the children, which is necessary to control polio disease. But after the seven doses, most of the educated people had avoided more doses for children. They argued that more the seven doses of polio vaccine were not suitable for children. But some educated people were vehemently refusing the vaccine for their children where they had not given a single dose to the children. They believe that vaccines were not increasing the immune system of children. It is a type of antibiotic medicine that brings several changes in a child's body before time, which is very harmful to children.

## Chapter 6

### Religious barriers

Religion has an important influence in raising health awareness and changing people's views. According to research done in India, religious leaders' engagement boosted vaccination coverage. One excellent example is the engagement of Muslim religious and community leaders in polio campaigns, which led to a decrease in the percentage of children who did not receive the vaccine from 5% to nearly 0% in just two years. Similar effects were observed in Pakistan as a result of religious leaders' engagement, with notable outcomes (Obregón, et al., 2009).

This problem is also a critical factor in the failure of immunization initiatives in Muslim nations such as Pakistan and Afghanistan. Pakistan's tribal areas are one of the most pressing problems in this respect, representing one of the most significant obstacles. The transmission regions in Afghanistan are near the Pakistani border. The local Taliban have produced fatwas claiming that vaccination is a Western effort to halt or control the Muslim people. The issue has worsened because of the porous border between the two nations, with no record of individuals traveling between them. Another misconception about the immunization program is that it is an endeavor to protect Allah's will (Warraich, 2009).

Religion is one of the closest things to the followers on which someone will never compromise and solve every problem in the circle of religion. Every follower wants to take the teaching of religion and act on that strongly in any matter. But sometimes, religion becomes a factor for the solution of things, especially those that belong against religion or the control of other religious followers. Because no one wants to ignore their religious order, which the Holy book has told, religion plays a fundamental role in the life of Human beings, and it can stop many illegal things. And some societies follow the religion than everything in their life and it has a very high place in every situation. Religion gives the teaching of legal and illegal things which they can follow and cannot. But most of the things were present which religion support that and there is no problem in adopting those things. Sometimes the supporters' belief becomes the barrier toward success, and in some societies, religion is used as a weapon against something. In the Pashtun society, religious beliefs, religious scholars, and strong believers (Tablighi people) become a barrier toward polio eradication, which I have to categorize in a subheading.

## 6.1. Religious society

Pashtun societies are one of the strongest religious societies where nothing is higher than religion. Every person of the society that should be elder or child for them religion is everything. They were thinking about polio that which is a well-thought-out conspiracy to spoil our society and convert the religious thought people into the liberal thought that they are never acceptable in society. Everyone thought that polio would change society's religious environment into a secular society, and the West is trying to weaken our faith. They thought that polio is controlled by NGOs that always want to destroy Islam and damage Islamic societies by spending money. They have the mindset about NGOs that it wants the equality of man and woman in every side of life. Polio is the part of arousing the girls for the job and giving the training of feminism in the society. My one respondent says about polio

*"We live in an Islamic society, and this polio is one type of game played from the west side to destroy Muslims. They want to accelerate liberalism in the name of the polio campaign in our society where girls work with stranger boys in one place. West is spending money on the name of the job to destroy the Muslims societies and religion".*

The polio campaign was one of the doubtful things for them which was going on in their society, especially where girls and boys are working at one place for the vaccination without the veil. Because they are not accepting that those girls go outside the house and work with a man to earn money, if girls become able to earn money, they will start disobedience of Islamic law because girls cannot go outside of the house in Islam. They do not accept that girls go from one village to another with stranger people for the vaccination. They consider this movement will bring obscenity in the mind of girls; then, they will do everything in society. If this kind of job is going on in the society and elders are supporting them, we will lose one of the beautiful Islamic societies. According to them, polio is present only in Islamic societies and why the other religion follower societies become free from polio in the globe. The west is deliberately targeting the Muslim societies only the expanding their culture inside the society. They think if we do not start the resistance against the process of polio in future, we will lose every norm and value of our society. And it is not only affecting our religious faith, and it will destroy our culture, social contact very thing gradually with the help of polio work or other related games.

## 6.2. Religious scholars

Religious scholars were respectable and important figures of the society, where every person was doing the obedience of the scholar. They were the people in the society; when they made the decision, no one wanted to reject that, and they were giving the solution of every problem to people. I have interviewed religious scholars; they had very different thoughts about polio disease and polio vaccine. Mainly they had objections to the composition of the polio vaccine. They wanted to know that the government tells us the vaccine's formula from which laboratory they had tested the vaccine. Some of them accepted the verdict of the national religious scholars (Molana Fazal Ur Rehman and Mufti Taqi Usmani) that they have recognized the polio vaccine safe and legal, so we are following them. They have seen the laboratory test of vaccine, and they do not spoil their hereafter for us. But Imam of the village have different opinions, and all are followers of him. He is not in the rights of those scholars who have given the verdict of the polio vaccine, and he says that I am not the obedience of their discussion what they say I will do that, no I will not never like this. He was not in favor of the polio vaccine and kept himself away from the polio vaccine, and he is not doing help with people in polio matters. But the problem was that those scholars who are accepting polio vaccine legal would not tell people to get the polio vaccine and neither that to stay away from it. When someone was asking about polio, they were making excuses from them. One respondent says

*"According to my religious knowledge on those things when you have doubt, you may be rejected the decision, Islam is also permitting rejection. So, there is too much negotiation about polio vaccine composition, which is under discussion. On polio vaccine, we have doubt, so we are rejecting vaccine drops".*

Secondly, they have clashed with the medical world and medical treatment of the polio disease. Religious scholars had the belief that polio disease happens to humans from the reaction of jinn on their bodies. Jinn is the creature of Allah who gets control of the body of humans; then a lot of things have happened from that sometime a person can die from the react of jinn. In different ways, jinn reacts to humans from different types of disease take shape in the body of human beings. To which sometimes, medical treatment becomes very dangerous; a person may be met with a religious expert, they will do the cure of disease. Polio is also the work of jinn, which attacks a



person to make him paralyze or damage his brain. In this situation, people should give religious cures first; after that, give the medical treatment to be suitable for the patient.

*"This disease occurs for different reasons when we look at it from a religious sight, and many diseases come from the hazardous effect of demons. A demon gets control of a human's body, from which a person's brain or other parts of the body affects for a long time. Allah has told the treatment of disease in the Quran from which we can get health; this demon's problem was present from the prophet's time".*

Some religious scholars were directly interfering in polio eradication work, and they are giving the verdict on the polio vaccine that it is illegal. Most scholars were relating polio with games of the west against Islam and the follower of Islam. They were saying that it is a simple way of bringing obscenity in Islamic societies. And they are telling people to save their children from the polio dissension and keep away their families from this agony. Some scholars are not doing direct disagreement against polio, but quietly they are arousing people against polio. Those people were a massive barrier to polio eradication because they were giving bad advice to their followers. They do not want any problem with him from the government's side and take some action against them. That is why those scholars become a strong influence in the way of eradication. Some type of scholar was also present who are giving the vaccine to their children and creating the problem in the way of polio work. They are keeping the point on the composition of the polio vaccine that what kind of things have mixed inside the vaccine. Some scholars have said against the polio vaccine in big gatherings that the nun Muslims were mixed the blood of pig or the urine of hours inside the vaccine. From which too many people are not accepting the vaccine for children.

Some scholars were using their religious status for the achieve benefit from the government or society. Some religious scholars have the demands for completing that they are giving the wrong information to people about the polio vaccine. They know when is speak against polio so that the government will come for the correction, and that will be the chance to get the benefit. But they are not things that how many people have heard the wrong concept about the polio vaccine, which will be the problem in the eradication.

### 6.3. Highly Religious Followers

In society, there were different mindsets people were present, in which some people were a little bit flexible, and some people were whole rigid in their rules. In the locale, most people are accepting medical treatment for polio disease. But those people who had a link with the Tablighi movement or those who had old traditional thoughts are fully following the religious way in every matter of life. They were accepting polio as an examination from the side of Allah to check the tolerance of Muslims. Every disease is a blessing from them which they say Allah brings the illness on Muslims to forgive their sin. In every illness or disease, they are given religious treatment, not medical treatment. They did not go to the doctor for the checkup until the religious scholars were permitted to go to a doctor. They were not accepting the presence of polio in the region they made from their side. In the mind of people, the vaccine will not protect us from the disease unless Allah wants to give us health. They thought when we start spending life on the order of Allah, Islamic rules, and the sunnah of the Holy prophet (PBUH), we will never be affected by any kind of disease and always remain healthy. There would not be any requirement of any medicine or vaccine to take for health and never disease will to humans.

They were not accepting the polio vaccine because some religious scholars have told them that it is illegal you people may not give to children. The vaccine was a useless thing in front of them because those which do not clarify by their scholars that things do not have value. They had a strong belief in the religious scholars, and they said whenever our scholar tells us not to give them anything to children, we would not give that. Because he has the religious knowledge Allah has given him high status, we are always following them in every matter. If their children become ill, they first visit the religious scholars, not the doctors.

*"I think about polio disease from a different point of view. When talk comes about religion and Muslim status, then my mindset has been changed for polio. Then I only give importance to my religious scholar's decision that what they are thinking about polio and what kind of advice they are giving me. In spiritual matters, then we will not make any compromise with someone in acceptance of that thing".*

So, religious scholars had a very important role in the lives of those who extremely follow the religion. They were only the obedient of the religious scholar. That may be his personal or societal

problem; he was always giving importance to his religion. Whenever the religious expert plays a vital role in solving the matter of polio disease, the follower will never be avoiding the polio vaccines. When the master accepts the problem, then the follower will never interrupt in the solving of the problem. But in the polio problem, most religious scholars were using their followers as sources to achieve the purpose. Because in religious societies, religious people were superior, they could do anything with the support of followers. They have a fear of sin what has been told by a religious scholar about polio. The religious scholars have told followers to accept those things purchased from non-Muslim because they had never become the friend of Muslims to give benefits from their side. According to them, this polio was used as a source to make Islam weak in the world and make the societies liberal to stand against religious scholars. To oppose the Islamic laws, the prophet's advice, and to neglect the respect of religion in the society. Some of the older adults said that those generations have got polio drops. They are not following religion well and the decrease the number of religious people. At present, people are not respecting religious scholars because of the polio vaccination, which made people shameless, and obscenity spared in the society.

### **case study**

my respondent said once time we were sitting in the office for the management of the campaign policy. One of our team was doing vaccination in the village and called me that the villagers are not giving the vaccine to their children. This vaccination was once a huge problem that all the villagers are refusing the polio vaccine. Then we called the deputy commissioner to give us the security to talk about the problem with villagers. We reached there, and the village elders came and started the discussion that we are not accepting the polio vaccine for our children. We asked the reason why you people are refusing the vaccine what is the issue in polio. So, they said it is illegal in Islam because it is coming from non-Muslim's countries. They will destroy our communities with the polio vaccine. We asked those who had told this to you because you accept polio before now what happened to you. Then they said the imam had told us in the prayer of Jumma. It will kick out the children from the circle of Islam, and they become obscene in future this sin will depend on parents, so we are not giving the vaccine to our children.

Then we invite the deputy commissioner to talk about the problem with the imam. We went to the masjid and discussed the issue with the imam. First, he said yes, it is illegal in Islam we are not

allowed to give polio vaccines to children. Because it is the production of the west, and our government is giving us the non-Muslims made things. After some time, imam said, you people are giving the jobs to those who do not have the rights of that job. I did this for some reason, and I knew that you people would come to for the discussion if I do this. So, the big cause of this action is the job of my brother. He adds the documents for the job in polio. They have rejected him, and that job has gone to another one. That is why I used the power of my followers to accept my demand.

Further, he said if the government gives my brother the job, I will start supporting the polio vaccine and make my follower agree on the vaccination. Then the deputy commissioner makes sure his brother's job and takes back is an objection to the immunisation and told his followers to vaccinate their children against poliovirus. On the next Jumma prayer, he said that polio vaccine is clear and tested in the lab in supervising religious scholars. And then we vaccinate the village in the next campaign. So, he has used his highly followers for the demand, and the followers have blind believed in their religious leader. The high followers play a vital role in the achievement of the imam and provide a job for his brother. It is a very big problem in the region for the vaccination.

## **Chapter 7**

### **Government Policies and people's Reactions**

Government policies are one of the essential things in every bad situation under the country. For polio eradication, the government has introduced a very solid policy all over Pakistan to eliminate polio disease from the country. The government has changed the policy for the first time and brought improvement in some points. They gave full attention to the eradication in every sensitive and normal area. They make strong the main point of the policy by which the government successfully eradicates polio disease. The government is now focusing on that matter, which is creating bother in the way of eradicating polio because administration of all provinces has guided by the federal to stress the vaccination of polio in every backward and reachable area of the country.

The government has kept different policies under the country, those highly risky areas and those less in the disperse of poliovirus in the country. Pakistan now globally pressures in the eradication of polio disease to save the world from the bloody virus. Now Pakistan government is applying full force on the elimination of polio disease. That is the way they have to introduce the heterogeneous policy in a different part of the country. In those areas with too many resistances toward the polio vaccination, the government has kept the rigid policy in those areas. Especially the highly populated city of Pakistan Karachi in Sind province, FATA in KPK, Quetta, Pishin district and the border area with Afghanistan is highly risky and infected by the polio virus. The government has strict rules in these areas in every part of the vaccination; they kept the campaign policy, refusal covering, and cases control different from those areas that are not highly targeted. But sometimes, this difference has also existed the influence in toward the vaccination program. Most people have become against polio from the governmental policy they are accepting for themselves that government is responsible for the rejection of polio vaccination. And which has become the challenge for the success of polio elimination to the Pakistan government.

#### **7.1. Campaign policy**

Campaign policy was the first important thing for the government to eradicate polio disease from the country. The policy became very strong in the region before and made a mature system for the

campaign. Over time the government improves the campaign in the high-risk areas in the district pishin. My locale Is one of the sensitive points for the polio campaign and most of the barrier are present toward polio in killli Mandan Haiderzai. Before in Killi Mandan was three days campaign for the vaccination, which is very little time for the worker to cover the area with many factors. Now the government kept seven days campaign in a month for the vaccination, making work easy for the worker. In these seven days, five days for vaccination, the workers gave the vaccine to children and the other two days to cover the refusal. The government has divided the area insensitive and routine, those areas which sensitive for work in that area they are doing seven days with complete security and those areas which were normal there is steel three days campaign was going on. In the campaign, they are trying to avoid the compromise in the vaccination, and they have generated the specific codes for everything in the campaign on which the local people cannot cheat with workers. They are trying to bring the local people in the vaccination campaign to whom the villager cannot resist. And with the local workers, the people were doing help in the vaccination of the children and a worker have all the data of their village from that no one can miss in the vaccination.

Now the government has taken the experts in the vaccination campaign from them work has gone very fast and proceeded toward success. Before vaccinators compromised with people in the vaccination, the worker used to waste the vaccine drops and wrote in the data that drops have given to children. But now they were very struck with this kind of act, and they have kept the morgen by a single vaccine to complete with that. So, the workers were not cheating in the vaccination data because they were reporting to their officers and officers every day then proceeded the data to the main office of polio. Government people are doing any time the inspection of the area to check the work of the polio worker. Now they have modified the team's structure in the campaign where different people work in one place. In the campaign, they added the religious scholar to communicate with people on religious perceptive and make people agree to vaccination. Local pairs are also present in the campaign to make work very easy for the government in the vaccination. They go inside the houses to vaccinate the children and make sure the vaccination of children. Because the government has taken the local pairs for this reason, they know every movement in the village. They also have the information of the new births in the village, and then in the vaccination campaign, a parent cannot hide their new baby from the drops of polio vaccine.

*“The need girls came in the campaign for this many people, and they start objection on a man that we are not allowing them to our houses for the vaccination of children. And many people hide their children at home from the man workers and they are not allowed to go inside the house for vaccination, so girls are going inside the house for immunization”.*

From 2016 the structure of the polio campaign has entirely changed and developed in the high-risk areas in which my research locale is also present. Before 2016 the campaign policy was very weak and unstructured, and a lot of problems were current, but now the government is aware of the sequence of the polio vaccination campaign. They have made separate team members for the different parts of the polio campaign, making it very easy to cover the target population in the area. This improvement policy brings very softness in the work of polio vaccination in which every part of the campaign goes on very well, and no one can cheat with polio workers. Before the new policy of the polio campaign, a single team was responsible for covering all parts of the campaign. They were doing vaccination, communication with refusal, and checkup back the work. That was very difficult for the team to maintain all parts of the campaign at once in the short period from which many deficiencies were present in the work of polio eradication. The new policy government has separately made the team for all the parts of the campaign, which they are controlling very well. They have made three different teams in the polio campaign period to work individually in the different parts of the campaign. One team is properly vaccinating the children against polio disease, the second is communicating with people for the vaccination, and the third is the surveillance team, which checks the polio patient. They are also taking the simple environment for the poliovirus presence. This method makes the polio work very mature and perfect in which their effort will bring success against polio disease. But the people are worried about the procedure of the polio work that how too many people are doing work on the same thing, and then they doubted polio campaign that something is going wrong. Because people were not accepting the over level of everything in the community that is way, they started resistance against the polio campaign.

Secondly, the government has made a very proper phase system for the polio campaign to carry on the vaccination of children against the polio virus. That phases have been divided into three-part to maintain the work and avoid the disturbance in the polio campaign. Those parts are free, intra campaign, and post-campaign, on which they are now giving force to make the surety of

eradication. The free movement is only one time in a month in which workers are getting the data about the population in the area for vaccination. Intra campaign is only for the vaccination; all the workers are vaccinating the children against polio disease. And in the post-campaign, they are doing the market serves to check the vaccination data of all areas. This system brought very softness in the work of polio eradication, and in this system of work, Pakistan will soon become a polio-free country. Because in the distribution of the work can be possible to reach the target and achieve the purpose of work. And the government has increased the campaign period in those places, which is highly risky for the polio disease. Before 2016, a mobile team was present all over the country, which is doing vaccination four days a month. But now, in the high-risk areas, community-based teams were working seven days a month because they keep the targets to cover that in a single day. From that, works are vaccinating children properly, and no one can miss during the vaccination time.

Because they are only vaccinating fifteen to twenty houses in the whole day, all local people in the campaign were very beneficial for the government to take vaccination work from local people because everyone is compromising with them in vaccination. The especially government wanted a local female worker in the high-risk areas because they are making the vaccination very easy. The local people were respecting those workers, and every new movement of the community awards them. But somewhere, local workers became a challenge for the government because some of them compromised the vaccination and gave incorrect data to management. In these kinds of situations, the government has taken a very strict stance against them, and they will terminate from work and never work in polio vaccination.





*Figure 3. Discussion with district polio officers about polio campaign.*

## **7.2. Refusal covering**

Refusal covering was the central part of the vaccination campaign in which the government was very serious about making sure the covering of refusal in every campaign worked. These refusals were a challenge for the government, specifically in the rural areas, to cover them or agree on the polio vaccine. Refusals had a lot of motives to reject the vaccine for their children; that was more than seven to eight reasons for the government to face in the vaccination and cover them. Most of the refusal have the religious reason for the rejection of the polio vaccine, some of them have heard from the scholar that it is illegal because filthy things are mixed in the vaccine, which does not allow in Islam to eat. These kinds of refusals were coming in the (Syed) cast because they have a religious status in the region. Some refusal has demanded not to accept the vaccine for the children; they want other health facilities for themselves from the government to make sure the production of free treatment of those diseases also for people. Some refusals are direct refusal; they do not have any reason for the rejection of the vaccine, and they do not speak about the polio vaccine. They do not want to show the matter of the refuse only they say that we do not want to give the vaccine for children, and we never wish to give. These refusals are the big challenge to the vaccinator to cover him because he is not showing the reason.

The government has made a very strong strategy for covering refusals and vaccinating them against the polio disease. For every refusal, they have the people to communicate with him according to

their reason. In the team, there was a communication officer who was doing the discussion on the matter first. If they did not agree, then a special person was present in the campaign to argue on polio. When a refusal has a religious reason, a religious scholar communicated with him and agreed to the vaccination. Some of the refusals demanded to provide other medicine free for the treatment be like polio vaccine. On which government pressures the first-time free giving injection organization for other diseases to provide the injection of the disease to the people first. A lot of refusals have been covered from the providing of first stage cure injection for other diseases. They are using force against the direct refusal to cover them, but a lot of people have objections which were not a good strategy for covering. Because they have not changed the mindset of the refusal, only they cover him for a single time. Next time they make a strong excuse for the rejection of the vaccine.

*"We use a strategy for covering the refusal according to the reason on which he becomes a refusal. Our religious scholar, who is the program member, communicates with those who have a religious belief on the religious verdict to cover them. Those who have their demand about other health facilities to convince them to accept polio vaccine from providing medicine of that health issue with government hospitals' help. Those who are direct refusals are complicated to cover for the worker on which we use force for the covering of refusal".*

As I wrote above, there is a different type of people who are refusing the polio vaccine, and for the workers that have become very problematic to cover them. Because these refusals break the chain of work in the area and create a problem, those people who had a religious protest about polio vaccine for him, the government have religious support people (RSP) who arguing with refusal on polio vaccine by the help of religious verdict about the polio vaccine. But the problem was that when they saw everything about the polio vaccine in the last, they said my heart does not believe that I gave polio drops to my children or they are not accepting some scholarly arguments about the polio vaccine. Secondly, high-level scholars were not supporting the government in the polio situation, and they did not want help on the community level for the polio vaccination. Those scholars are leading the madrassas if they give their students a good impression of the polio vaccine so, we will cover too many refusals in every area. But some scholars had demanded from the government that they were speaking against polio in big gatherings, and a lot of people have started the resistance toward polio vaccination.

Some people have rejected the polio vaccine because they demand the government to complete that before the vaccination. I have told above some demands, but some people are demanding other kind of things except medical treatment. They kept that demands that cannot be complete from the side polio worker like some people ask to make the electricity or give other facilities. But some people were using the rejection of the polio vaccine for some sold purposes like they want a job from the polio organization for their family members. These kinds of demands that cannot be completed soon from the government's side make a barrier in the vaccination, and we were compelled to use force against them, but sometimes that gone wrong. Because when we use force, that goes positive in the rights of polio vaccination those people who present near to them, they were accepting the vaccine without any problem, but sometimes it goes very negative. Some people take it personally, then they start threading to workers after the vaccination campaign, and too many workers left the job from this kind of situation. Most people were more strongly refusing the use of force because they did not like security forces to come to their houses for some heles. And around them, slot of parents become refusal to abandon the help of vaccination in their areas. Polio workers were trying to keep away the use of force against people, and they were handling the situation by very careful communication. And bring those persons toward them for the accepting vaccine on which refusal have most trust and obey his order for the vaccination.

In Pakistan, vaccine coverage is estimated to be 88 per cent. However, several difficulties impact this figure, such as missing vaccination cards, the legitimacy of verbal recalls, and the lack of an online record of the immunization registry. Other affecting variables include socioeconomic differences, making access to services difficult; there is less demand in the population because fundamental requirements are never satisfied. Thus immunization is more important than food. In the country's suburbs, polio vaccine security is also a significant concern. A major stumbling block is a lack of knowledge and misinformation concerning polio, which leads to impotence (Owais, Khowaja, Ali, & Zaidi, 2013).

Another big challenge for the polio workers in the refusals list was educated people, and they were not supporting them in vaccination campaigns in their villages. But some people are coming in refusal, which was rejecting the polio vaccine for their children. So, they are arguing on vaccination with workers that we accept once-time vaccination for our children. They the objection that vaccine one time is necessary against disease which makes the immune system power of the

children. But the government was sustainably giving the vaccine to children, which proves harmful for their health, and other types of the disease started existence in the body. More than twenty uneducated refusals come out in the area with one educated refusal, which makes it very hard for the polio worker to vaccinate them against the polio virus. Then they have pressured from the government side for the vaccination, but sometimes it takes the wrong direction and becomes a big barrier in polio vaccination. Then they stop the work's success because when we covered them in this period we go back and those achievements which we got before that cannot show the result. So, these kinds of refusals influence the eradication of polio from the country and globally have a very negative image in the health situation.



*Figure 4. with polio team a social mobilizer is talking with vaccine refusals.*



*Figure 5. with polio team an area officer talking with strongly vaccine refusal.*

## Case study

My respondent said that once, we were working on a polio campaign in the village. The team was administering polio drops to all the children in the village under my supervision. Then a member of the group. Aya and I were told that the Imam of the mosque was not vaccinating his children. I was the supervisor. As the head of the team, I went to talk to the Imam to find out why he was refusing the vaccine. When I reached the Imam, he said, "I do not want to talk to you." I want to talk to the head of my program here. I tried very hard to solve this problem, but he was beyond my efforts. Then the Imam's children left him on the first day of the campaign. The next day, when we went for vaccination, the mosque's Imam started abusing us and said that I had told him that I wanted to talk to your officers.

We forced our officers to report the problem when he came to talk to the Imam about this issue. Why are you refusing to vaccinate your children? First of all, he started discussing the problem with our officers. It is not permissible in Islam to give polio to children. Shortly afterward, the Imam said, "I have always supported polio vaccination." I ran a campaign about it and asked people to vaccinate their children. "District officers know about my efforts to work on polio," he said. But they are ignoring me. I have always supported polio vaccination, but now my children are sick. The doctor has given him very expensive medicine. If you give me a free treatment, I will vaccinate my children. So our officers told him that it is not in our control to provide free medicine and we cannot give you free medicine. This is the job of other government agencies, not ours. But the Imam said if you can do it. Well then. Otherwise, if the government does not provide me with free medicine, I will start working against the polio vaccine in the mosque and tell the people that it is illegal in Islam. In the end, our officers promised to provide medicine for their children. So when we brought him medicine, he vaccinated his children and said. If I did not do so, the district government would not take this demand seriously. If I did not do so, the district government would not take this demand seriously. Has used the polio vaccine as a means to meet the demand for free from the district government.

### 7.3. Case's control

Government has controlled the cases a lot then before and they were trying to get full control on the polio cases which were emerging from the last time. Because the government has made one of the suitable systems for the vaccination to control the cases. Recently which cases have appeared that was not the fault of the polio work. Because government have completed all the spaces of the polio vaccination and make the weak points strong then before. In the district of Pishin for last four years there is no case of the polio but in the recent year two cases have appeared. That is the mistake of their parent who have hide the children from the vaccination. and give the wrong data to polio team to which case came there. In the initial time the polio system was not mature there was a lot of mistakes present in the polio work. Before the management was not able to give the proper temperature to vaccine on which it is working for the disease. Now they have completed that space in the proper cold chain vaccine is present from the start to the last stage. And at proper method the vaccine drop is giving to child on which method it is doing work well. To the worker the experts are giving the training before the vaccination campaign to keep the care everything under the woke. They are getting every month the test of the environment for the checking of polio virus presence. From which they recognize the polio virus and the origin of the patient.

Some matters are present from which the cases are not controlled that is steel become the reason of the polio cases. That became a challenge for the polio eradication, and which must be controlled by the government specially, like the movement of the people across the border toward Afghanistan. A lot of people who are going to outside the country in the during of vaccination campaign, whose children do not complete the doses of polio. Seven doses are necessary for the children to save them from the attack of polio virus. Unfortunately, they do not complete the doses in Pakistan neither in Afghanistan, all the cases are emerging in refugees. Second reason for the cases that is the initial stage treatment which is giving the injection after the birth in hospital. Parents or the doctors have not given that injection to the children from which he will save from the virus. Third problem is the mobilization of people from one place to another place from which the cases have not come under the control of the government.

*“There is a very advanced system to maintain the vaccine's temperature on which it is working about the cold vaccine chain. But recently, in Pishin district, two cases of polio appear, which have other reasons. The first case reason was mobilization from one place to another when the*

*Pakistan campaign started, and they went to Afghanistan for more than two months in Afghanistan. The second case appears in the pishin district that does not give the complete doses of vaccine to the child”.*

In the rural areas the cases are controlled then the urban areas because rural areas have clean environment, and they are keeping the care of diet for the children. But urban people also taking very good diet from the rural people, but they do not have clean environment where the virus exist a lot then open area. And in the vaccination the rural areas are very easy to cover then urban because in the urban we are not that much comfortable like in the rural. Secondly workers are not doing hard work in urban as they are doing in the rural areas. Recently all the cases came in the urban region where is high population live at small place or those people whose belong from the different caste. That is become very hard to the polio worker to give the proper doses of vaccine to children. Often those cases came who does not get seven doses of polio vaccine and missed by different reason from the vaccination. But sometime worker did mistake to not give the real data to the officers and compromise with people in vaccination. That compromise become the reason of case from which virus expand in the environment and target the week immunize children.

Secondly big problem is fake finger marking which always became the reason of the polio cases in Pakistan. For this like situation the polio workers are responsible to mark the finger of children and waste the vaccine. Which is economically and health deficit for Pakistan and the chances of virus infection increase. This kind of compromise create the problem because the wastage of vaccine brings the negative thought against polio. Because the local people see the kindness of worker in this shape then they start criticism on the vaccine that something is present inside the vaccine. Then they use every type of excuse to save their children from the vaccination and hide their children from the vaccination. mostly people are trying to not bring their newborn babies for the vaccination and give the wrong data to campaign worker. Those children are on high risk to effected by polio virus and in district pishin both cases have come from the hidden of vaccination.

Other reason of the cases which cannot controlled that is mobilization inside or outside the country. Government does hard work to clear the areas from the virus but out sider came as carrier of virus and spread the disease in the clear areas. The big problem is for the new cases that is the comer inside the country from Afghanistan which highly effected then Pakistan. and the worker are doing all age vaccination on the inter point and a lot of people bring new cases. That make the eradication

very hard and impossible to take the polio free certificate from world health organization. Now government introduce the national emergency plan for the vaccination after the world pandemic which is fully disturb the work of polio eradication. Now in every entering point between two district, province and countries government is do 24 hours vaccination campaign to vaccinate the children against polio virus. And taking every month the environmental test to check the presence of virus and find the highly risky areas.



## Chapter 8

### Summary, conclusion, and suggestion

#### 8.1. Summary

The focused of this research was to identify the problems which influence in the way of poliovirus eradication. Similarly, to now sociocultural and religious perspective of people about polio disease and vaccine. The improvement Governmental policies for polio eradication and reaction toward policies application in one village of district pishin Baluchistan.

The research has divided in several chapters and every chapter have own importance. According to research conducting method, researcher used research methodology like qualitative research method for analysis and conducting of field data and researcher lived six months for fieldwork. The data has been conducted from the educated people, uneducated people, religious scholars, Tablighi people, common people, polio workers in society, and government people as policy maker for the polio campaign also interviewed in the research.

Study analyzed, factors influencing poliomyelitis eradication became the initial problem at the level of local communities. No one know at low level about the polio disorder and there is not conducted a single awareness seminar to give information about polio disease. Most people in the society are not accepting polio as crucial disease and some of them do not have any idea of polio disorder. Majority of people are not visiting governmental hospital is case of polio infection, they do not have trust on examination of government doctors. Because the relation between local societies and the government authorities is not trustful, that is why without any awareness arguments they refuse the treatment against polio disease. And giving force on the traditional treatment and superstition methods.

Furthermore, not only local communities' people are responsible for the influencing in the way of eradication of poliomyelitis. The eradication circumstance is going against the pride and dignity of the society and culture. Because society and culture play vert vital rule in the solving of problem. Polio is a disease which has not accepted by local society and traditional people. Therefore, the responsible policy makers of polio eradication have not studied the ground level of society and

culture of the people. However, program of eradication goes against the society roles and culture from which the barriers take existence in the way of eradication on the low level of the country.

Similarly, the perception of the people towards poliomyelitis was very different. Some of them were understanding that polio is one of the simplest diseases which has present from decade of years in the area. They were calling polio by different names in their area, and they thought they have the treatment of the polio disease. Theirs perception about the going procedure of treatment towards polio disease is useless and expensive. According to them it was imperfect, and this vaccine were not having the power to vanish the dieses from the body of human being. They were trying in the traditional method for the treatment of affect man. Because they have not accepted the polio as deathful disease. Some other kinds of perceptions were also surrounding in area that polio did not happen from the tiny organism. Perception about the happening of disabled diseases were amazing, they thought when a person gone over the garbagiest palace at night, so it affects the person. When ever some one affected by this, so they were keeping him for forty days inside the room to keep him away from the human. And the patient will get health and became health.

As well as the perception of the specific ethnic group were amazing, they thought the polio is one of the planed games for him to keep them less in population. They were not accepting the vaccination for their children. Because they thought the vaccine will bringing the infertility in the children or it reduced the intelligent ability of the children to bring the adult sings soon. And their perception about the polio for girls was very negative because they thought it is sterilizing girls or reduced the ability of giving birth. They thought that before in the village one or two pairs did not have children now more then six pairs do not have children. It is all the polio vaccine's problem to bring infertility in girls and made the men's sexual ability week. Their perceptions were very negative according to going situation. They were strictly avoided polio vaccine for their children.

Moreover, religion is the fundamental unit of the society, and religious scholars are the leaders of society. whenever something is going against the religion that will face most of the problems in religious societies. And religious scholars are main source for the solution and existence of problems inside society. Unfortunately, polio eradication program had not passed by the religious scholar in the society. Because the government does not own the trust of local religious scholars to become in the favor polio eradication program. On the other hand, polio vaccine was doubtful in the eyes of local religious scholars and society people. Polio vaccines advertise legal by those

religious scholars who have ties with political activities and local people of the society have not believability on them. The local society people were only confident in the decision of their imam of village and strong follower of him. And polio work was not accepted by religious scholar inside society and became a factor to influence the eradication of polio myelitis.

Similarly, government effort was well performed but also has affected the eradication of poliomyelitis in Pakistan. The policies toward polio program at local level was very opposite of people mindset. Majority of people were forced to accept polio vaccine for the children. From which the doubt of people was increased toward polio vaccine, and they show resistance against vaccination. As well as the implement of polio campaign in society and the extended days of polio campaign were also doubtful for people. Two gender mix polio worker teams were problematic for the local society people that was verses the culture. In last the recovery of the refusals was well organized, but the locals were disappointed by procedures.

Very importantly, study observed that here the poliomyelitis eradication challenged by majority of people in the society. People were not serious with their health issue, and they did treatment of the disease at last time. They were attention toward doctor in disease very less for the treatment. Some time they were not trust on doctor and they are not going for diagnosis of disease. For instance, in polio disease situation, they were giving the importance to the superstitious treatment not medical, and they were not giving vaccine to their children to save them from polio disease. The government give force to vaccinate every child against polio disease. No one can miss the vaccination, and it's become necessary for very one to vaccinate.

## **8.2. Conclusion**

This study has examined and conducted the important issues social determination of poliomyelitis, on the perspective of local community. Focus of the study is factors influencing the eradication of poliomyelitis. poliomyelitis is still becoming a huge problem in our society to survive with virus. People of the community are not taking serious poliomyelitis as health effected issue. In the research qualitative method is used. Researcher has conducted interviews from the educated and uneducated people, religious scholar and Tablighi people of the society, and polio workers and district polio officers. Poliovirus presence is become the future problem for the new generation if not eradicated. Because socially and culturally people are affected the eradication of polio

eradication on low level. The awareness of local community about polio disease was not well, they are constructed as common and everyday disease. On the other hand, local people were made rumors about people to create problems toward polio program of eradication. Moreover, society is given the importance to the treatment of poliomyelitis by using of traditional or superstitious methods not by medical methods.

Similarly, religious scholars had played very vital role for creating problems in the way of poliomyelitis eradication on local level. They were created wrong information about polio disease that it is happen from genies and the highly followers of the religious scholars using their superstitious treatment. Furthermore, religious scholars were powerful in religious and uneducated society to implicate the decisions. Because people were religious and unaware by medical issues and religion has used medium for the creating barriers in the way of poliomyelitis eradication in society.

As well as the governmental policies toward the eradication of poliomyelitis were improved and well organized. But people of the society were not good reaction toward that. Government planed well structure of campaign for the vaccinating children against poliomyelitis. And presentation of both gender as worker in polio campaign. Government increased the days of campaign, but local people were reacted worst and critic on it. Secondly, cases were controlled in huge number by good campaign. The strategy of refusal recovering was strong to vaccinate the remaining children against poliomyelitis. sometime force was also used against refusal to vaccinate children and local people were critic on force using and resist against the force using.

### **8.3. Suggestions**

- First the awareness should be spread at low level communities. every person should know the effect of poliovirus.
- Government sector should learn about the social and culture importance of people and then make policy toward the problem.
- Social marketing should organize from the side of government in every village by traditional support.

- The importance of polio vaccine should advertise by local religious scholars or imam of the village to vaccinate the children.
- Take help from the village imam for the vaccination in campaign. At the local level campaign should organize by help of local people not by help of political figures because they have not trust on them.
- Government should give the certificate of the vaccination in hospital like the vaccination measles, small fox extra.
- Organize the awareness programs in every school and madrasas of the village.
- Start the vaccination process in very private hospitals.

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## **Annexure**

### **Interview guide**

#### **Sociocultural portion.**

- . What do you know about polio?
- . What do you think about polio?
- . Do you know the reasons for polio?
- . Do you know what happens from polio?
- . What is the name of polio in a local context?
- . Did someone tell about the symptoms of polio?
- . What do you think that polio exists here?
- . From how much time it exists, do you know?
- . Why is it not finish till now?
- . What do you think about the polio campaign?
- . How many days are a campaign going on?
- . What is giving in a campaign?
- . What do you think about the polio vaccine?
- . Do you ask some think about a vaccine?
- . Why are they giving the vaccine only to children?
- . How many children do you have?
- . Are you giving the vaccine to all your children? If not, then why?
- . Are you giving the vaccine to girls?

- . If you refuse the vaccine, then what is the reaction of the polio worker?
- . Do you allow polio workers to home for vaccination?

### **Religious portion**

- . living in a Muslim society, what do you think about polio?
- . How is it for Muslims?
- . As a Muslim, you believe in polio disease?
- . If your children become ill, where you go first?
- . What do you think (Molvi) religious scholars will do the cure polio?
- . If (Molvi) says that you may not give the vaccine to your children, what will you do?
- . If you know that it is not dangerous, but (Molvi) you may not give what you will do?
- . As a religious scholar, what you think about polio?
- . Is polio disease existing?
- . If you see on religion preceptive from which thing it happens?
- . What is the name of polio in a religious context?
- . What is the cure for it?
- . What is necessary for polio treatment?
- . As a religious scholar, what do you think about the medical cure?
- . As a religious scholar, what do you think about the polio vaccine?
- . How is the vaccine for children parents should give or not?
- . Is it legal or illegal in Islam? If it is illegal, then why?
- . What do you think about those who say that it is legal and safe?
- . Why it only exists in the Muslim world?

## **Governmental portion**

- . Why polio still exists?
- . What was the policy of government before, and what is it now?
- . Are you people doing social awareness campaign about polio disease?
- . Are there local people or elders supporting in polio eradication campaign?
- . How many days were the campaign in a month before?
- . How many days now in a month?
- . What is the reason for increasing campaign days?
- . What do people think about increasing the days of the campaign?
- . What kind of things can affect the campaign?
- . At a time, how many people are working on the campaign?
- . All are men working or girls also present?
- . Why is there a need for girls come in a campaign?
- . What is the reaction of people to girls' works?
- . Is there any security present in the campaign?
- . At the time, how many security guards are present?
- . Why people refuse vaccines?
- . What are the reasons for refusals?
- . Then what is the strategy to cover refusal?
- . Are you using the force for the covering?
- . Why is there a need for force using for refusal covering?

- . If you people use the force, then what is the reaction of people?
- . Why are cases still present here?
- . What is the big reason for cases?
- . How much control the government have on cases?
- . How many cases are present recently?
- . What is the reason for a recent case?
- . Which type of cases is present?