

IMPACTS OF USAGE OF TECHNOLOGIES ON RURAL POPULATION.

A CASE STUDY OF ALWARA MELA, HANGU



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**Quaid-i-Azam University
Department of Anthropology
Islamabad - Pakistan
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Thesis submitted to the Department of Anthropology, Quaid-i-Azam University Islamabad, in partial fulfilment of the degree of Master of Science in Anthropology.

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Department of Anthropology
Islamabad - Pakistan
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Formal declaration

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Final Approval of Thesis

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Ayesha Khan

DEDICATION

I dedicate this thesis to my Father,

Toor Afzal Khan, who remained by my side in every decision I made.

He is very caring and supportive.

May he live long. Ameen

Contents

| | |
|--|----|
| Abstract..... | 1 |
| Chapter 1 | 2 |
| 1.1. The problem | 5 |
| 1.2. Statement of problem | 5 |
| 1.2.1. Operationalization and conceptualization | 7 |
| 1.3. Objectives | 8 |
| 1.4. Research questions..... | 9 |
| 1.5 Hypothesis..... | 10 |
| 1.6. Locale | 10 |
| 1.7. Significance of the study | 12 |
| 1.8. Theoretical framework..... | 13 |
| 1.9. Structure of thesis | 16 |
| Chapter 2 | 18 |
| Review of literature..... | 18 |
| 2.1. Globalization, technological advancement, and societies | 18 |
| 2.2. Technological advancements and change in society. | 24 |
| 2.3. Types of technologies used in Household..... | 29 |
| 2.4. Pros and cons of technologies..... | 31 |
| 3.1.1 Participant observation | 41 |
| 3.1.2 Rapport Building | 41 |
| 3.1.3 Key informants..... | 42 |
| 3.1.4 Sampling:..... | 43 |
| 3.1.5. In-depth Interviews..... | 43 |
| 3.1.6. Focus Group discussions | 44 |
| 3.1.7 Socio-economic Census..... | 45 |

| | |
|---|----|
| 3.1.8 Daily diary | 45 |
| 3.1.9. Field notes | 45 |
| 3.1.10 Photos and videos | 46 |
| 3.1.11 Audio recordings | 46 |
| 3.1.12 Ethical Considerations..... | 46 |
| 3.2. Research site..... | 47 |
| 3.2.1. Geography and climate..... | 47 |
| 3.2.2. Administrative divisions | 48 |
| 3.2.2.1. Hangu..... | 48 |
| 3.2.2.2. Thall | 48 |
| 3.2.2.3. Etymology | 49 |
| 3.2.2.4 population | 49 |
| 3.2.2.5. History of Alwara Mela | 50 |
| 3.2.2.6. Subtribes | 50 |
| 3.2.2.7. Language..... | 51 |
| 3.2.2.8. Family system | 51 |
| 3.2.2.9. Religion | 51 |
| 3.2.2.9.1. Tablighi Jamaat | 52 |
| 3.2.2.10. Education..... | 53 |
| 3.2.2.12. Transportation | 55 |
| Chapter 4 | 56 |
| Technology and alteration in daily routine..... | 56 |
| 4.1 Changes in daily life..... | 56 |
| 4.2. Changes in routine life of rural women | 56 |
| 5.2.3 Collecting water. | 60 |
| 5.2.2. Professional women and changes in their routine..... | 63 |
| 7.2.2.1 Transportation | 63 |
| 4.3 Negative changes | 64 |
| 4.3.1 Routine disturbance due to usage of technology | 65 |
| 4.3.2 Routine disturbance due to use of mobile | 65 |
| 4.3.2.1 Case study | 65 |
| 4.3.3 Spending leisure watching tele vision..... | 66 |

| | |
|--|----|
| 4.3.4 Disturbance in children care..... | 66 |
| 5.1. The impacts of technology on social life..... | 68 |
| 5.1.1 Family | 68 |
| 5.1.2 Technology as source of keeping members closer to each other..... | 68 |
| 5.1.3 Restricted interaction due to technologies | 69 |
| 5.1.4Technology as dividing factor | 69 |
| 5.2 Education | 70 |
| 5.2.1 Benefits of technologies in educational field of Alwara Mela | 70 |
| 5.2.3 Transport facility | 71 |
| 5.2.4 Mobile, television, computer, and internet facility..... | 72 |
| 5.2.4.1 Case study..... | 72 |
| 5.2.5 Drawbacks of technologies in the field of education | 73 |
| 5.2.5.1 Impacts on informal education | 73 |
| 5.2.5.2 The process of learning..... | 73 |
| 5.3 Religion | 74 |
| 5.3.1 Missing prayers and recitation of holy Quran | 75 |
| 5.4 Politics..... | 75 |
| 5.5 Impact on social activities | 75 |
| 5.5.1 Mourning | 76 |
| 5.5.2 Social behaviour and entertainment | 76 |
| Chapter 6 | 77 |
| Health and technology | 77 |
| 6.1 Health care system of Alwara Mela..... | 77 |
| 6.1.3 Koranay Nuskhay (Home remedies) | 78 |
| 6.1.5 Childbirth practices | 79 |
| 6.2 Changes in health seeking behaviour in post technological era..... | 79 |
| 6.3.1.1 Typhoid | 81 |
| 6.3.1.2 Diarrhoea | 82 |
| 6.3.1.3 Cholera..... | 83 |
| 6.3.1.4 Hepatitis..... | 83 |
| 6.3.1.5 Decrease in mortality rate during pregnancy..... | 84 |
| 6.4.1Addiction..... | 86 |

| | |
|--|------------|
| 6.4.1.1 Case study | 86 |
| 6.4.3 Depression and anxiety | 87 |
| 6.4.4 Laziness | 87 |
| 6.5 Physical impacts | 88 |
| 6.5.1 Physical inactiveness | 88 |
| 6.5.2 Obesity | 89 |
| 6.5.2.1 Case study | 89 |
| Chapter 7 | 91 |
| Technology and economic changes..... | 91 |
| 7.1 Impacts of technology on household economy. | 91 |
| 7.1.1 Sources of economy of people of Alwara Mela..... | 91 |
| 7.1.2.1 Changes in agriculture | 92 |
| 7.1.2.2 Increase in productivity..... | 93 |
| 7.1.2.3 Case study..... | 94 |
| 7.1.2.4 Impacts on household economy | 95 |
| 7.1.3 Cattle farming | 95 |
| 7.1.3.1 Increase in milk production | 96 |
| 7.1.3.2 Impacts on household income | 96 |
| 7.1.3.2.1 Case study..... | 97 |
| 7.1.4 Other sources..... | 98 |
| 7.1.4.1 Rickshaw Driving..... | 98 |
| 7.1.4.1.1 Case study..... | 98 |
| 7.1.4.2 Tailoring | 99 |
| 7.1.4.2.1 Case study..... | 99 |
| 7.2 Decrease in house income due to usage of technologies..... | 101 |
| 7.2.1 Case study..... | 101 |
| Chapter 8 | 103 |
| 8.1 Theoretical discourse | 103 |
| Chapter 9 | 106 |
| 9.1 Summary..... | 106 |
| 9.2 Conclusion | 109 |
| Bibliography..... | 112 |

| | |
|------------------|-----|
| Webography | 116 |
|------------------|-----|

List of Tables

| | |
|--------------|-----|
| Table 1..... | 94 |
| Table 2..... | 100 |
| Table 3..... | 100 |

List of Figures

| | |
|---|----|
| Figure 1. Alwara Mela | 47 |
| Figure 2. Masjid Hazrat Abu Bakar | 52 |
| Figure 3. Khushal Public School, Alwara Mela | 53 |
| Figure 4. Jirga For Dispute Resolution..... | 54 |
| Figure 5. Toka Machine | 58 |
| Figure 6. Mela Preparation | 62 |
| Figure 7. Shaheed Fareed Khan Hospital, Hangu | 85 |
| Figure 8. Maize Crops | 92 |
| Figure 9. Tube Well | 93 |
| Figure 10. Cattle Feed..... | 96 |

Abstract

This study entitled “Impact of usage of Technologies on rural population” is meant to explore the changes which have been brought by the technological advancements among rural population. This study was conducted to find out four objectives. First objective was regarding changes in daily life in rural context. Second objective was to explore the impacts of usage of technologies on social life of rural population. The impacts of technologies in health seeking behavior and health care system were explore in third objective. In the last objective the researcher explored the impacts of technologies on household economy.

This was study conducted while using anthropological qualitative paradigm. For data collection, ethnographic research model was used. Purposive sampling was used primarily during this research. Apart from purposive sampling, convenience sampling was also used. Sample size of this study was 32. This study was conducted between September of 2019 to January 2020. This research was conducted in Alwara Mela. It was village in district Hangu. It is 19 kilometers in the west of Hangu city. The population of locale was consisted of 494 inhabitants.

Exploring the impacts of usage of technological advancements, the researcher came to know that technologies have impacted every walk of life of people of Alwara Mela. The daily routines were changed due efficient uses of technologies. The social impacts of technologies were very also vital. There were both positive and negative impacts of technologies when it came to social life. Health care system and health seeking behavior were changed due to advancements in health care systems and change in perception about folk ways of treatment. Finally, usages of technological advancements were responsible for bringing changes in economy of village.

This research was conducted following the theoretical discourse of reflexive modernization. Changing cultural patterns suggested that this theory was applicable, but usage of technologies was not at intensive level so, the findings were not fully comparable to reflexive modernization theory. Technological advancements have vital role in changing patterns of socio-economic life of people and this through this study the researcher made an attempt to discover those changes.

Chapter 1

Introduction

A Great Greek Philosopher Quotes that “there is nothing permanent except change”. Humans have tried to make their lives easier ever since humans made first tool. Innovation and adaptation were made for this reason. Tool making and humans have a relationship beyond the history. Human ancestors started making tools over millions of years ago. Archaeologist and scientists have discovered tools used by human ancestors over 2.6 million years ago (Vergano, 2015). Since then, innovations have been happening in humans’ lives. Humans have made many tools to make their lives easier. In bronze age humans were able to melt down copper and they added tin into copper and thus bronze was made. It was great achievement for human beings (Willians, 2018). After that Humans came into a position to take control over natural environment. Tools become more and more complex and human life moved toward comfort and luxury.

Since then, human’s innovations are kept on evolving, they are opting for more and more technological advancement in order to sustain their lifestyle more adequately. Before common era roman empire was a great technological hub. Although technologies in that time were not efficient and complex as it is now but somehow Romans were able to make something special. Uses of concrete in houses and Palaces, roads and highways for trade and transportation, newspapers for communications, books writing for securing history, and battlefield surgeries to overcome mortalities during wars, were used in Roman Empire (Andrews, 2012). Technological advancement reached to its peak in England in Victorian age with the industrial revolution. First industrial revolution was established in Victorian age in England and then it spread across the Europe(Evans, 2011). In that era dramatic increase in production and manufacturing was reported. Technological advancements in military weaponry and other fields were very important. One main significance of those times was innovations in home appliances and other innovations, which were used in homes and these were produced in mass quantity. This was first time in history that these appliances and tools were not exclusive for imperial use rather it was adapted by the majority of Public. Slowly and steadily these advancement and innovation diffused across

the Europe (Cowan, 1976) and after few decades it reached to third world countries for example Pakistan.

In urban area of Pakistan usage of technological advancement has been used since independence but major increase was reported during Ayub's Regime. Villages on the other hand were not that exposed to these technological advancements (Zaidi, 2017). In villages these advancements came under use since past two or three decades. In rural areas of Khyber Pakhtunkhwa Province most of the technologies were adapted in 21st century. Government of Pakistan tried to provide access to technologies to everyone (Ali, 2100). Village information centres were established which enabled the rural families to adequately get access to innovations, modern information, and communications technologies. The people who were illiterate especially women were mainly provided with information regarding uses and outputs of the technologies so that they could gain awareness, and they could adequately make use of them. Various procedures such as, the distribution of information, business transactions, trade, dealing, industry in rural areas was implemented through making use of information and communications technologies (Tanoli, 2016).

Usage of technologies sometimes proves to be a complicated field which the rural masses at times do not feel comfortable with, for example, in educational institutions, a rural woman who has not been to school ever before, if she is taught how to operate a computer and she learns, then it is obvious that she may feel apprehensive while operating a computer on her own (Rehman , 2018). Therefore, it can be stated that technology can be a complicated field, but it can never prove to be unconstructive or negative in case of rural development.

Technology has played a necessary role in the development of rural areas. Technology's major function in rural development is to provide individuals with information of all kinds. The reason behind this, is that they need information because it is indispensable for development. For example, information and communication technology can help farmers in rural areas to become aware of new resources and techniques of farming and it can lead to more production and thus more income is generated (Ku, 2019). Information and communication technology can provide assistance to the individuals in consulting with doctors in urban areas thus it can plummet health problems, information and

communication technology can help in enhancing the educational opportunities of the rural people by utilizing distant learning methodologies and appropriate curriculum, and instructional techniques (Neiman, 2017).

Nothing in this world is permanent and constant in social context but change. The social and cultural life is keeps on changing. Our world has been shrunk since last century. Now this world is becoming a global village. This globalization is responsible for drastic change in world. Although change is not a recent phenomenon but nowadays change is very abrupt. Globalization has changed the food pattern, dressing codes, ways and means of transportation, sources of communication, agriculture, and other social and cultural perspectives of the people. Urbanization is happening so quickly, and cities are getting bigger and bigger (Kasarda & Crenshaw, 1991). These all changes have made life way easier. Journeys and travels which took place in months and years are now done in hours. Letters which were supposed to deliver in months are replaced by Smartphone through which people communicate within seconds. Agriculture in past was very hard working and labouring but now duo to machines agriculture is not that hard and labouring. Aside for labour efficient, per acre yield has also increased duo to chemical fertilization (Mikkelson, 2016). So modern inventions and their usage has revolutionized the world and the way of life of people has changed. But there are some shortcomings and negative aspects of this means of technologies and their usages. Humans who travelled on foot were enjoying a healthy life, but walking is seems a difficult task for most people Nowadays. In past the yield of crops was although less than that of present age, but it was pure, and no chemicals or other toxins were used in agriculture, so product were enrich with much more beneficial nutrients for health (Affeld, 2018). Medical field is dominated by allopathic medicines and the role of counter paths like homeopathic and Hakims has been almost neglected. Innovation has affected almost every walk of life which can be observed most of time. Folkways of doing something is keep on vanishing (Mokyr, 1990). This changes in life are responsible for various diseases and other negative feedback. Lack of exercise is one of the major aspects. Apart from diseases other negative aspects of technologies are seen everywhere.

There were drastic changes in rural life due usage of technological advancement and machines. It has impacted life of rural people quite much. There were both positive and

negative aspects of these modern technologies. This study is meant to explore those changes which have been brought by technological advancement in rural areas.

1.1. The problem

This study has taken the consideration of impacts of technology on rural population. The researcher has explored whether the impacts of technology on people living in rural domain were positive or it has negative sides. The researcher has checked out how the rural population were using technology, what benefits were they getting from technology, how their way of life was changing and what troubles were they facing in that particular perspective. The researcher has explored what people do in their spare time which they get due to technology. These all impacts of technology were tried to figure out by the researcher, and she also tried to ensure validity of the data.

1.2. Statement of problem

This study is meant to explore the impacts of technological advancement on rural population. Technology and innovation have revolutionized the world in recent past. We are living in the era of globalization. Humans are trying to take control of the universe through advance technologies. New and creative inventions have been used in mega cities since previous century and the usage of that technologies has been increased in villages as well. The modern means of technology has been contributing to day-to-day life of rural population. Modern means of technologies are those kinds of technologies which are used in rural sphere for daily activities, agriculture purposes, cattle farming's works, technological items used in health care, rural means of transportations and telecommunication, and other stuff used in rural areas. Works which were often conceded way more time and labour, are now done in short time and with less labour. Work can be done more accurately and consistently with modern technology and it covers almost every walk of life. As there are much more benefits of technology but it has some serious drawbacks. Men and women have quitted their daily routine works which were beneficial for them. Rural people have lots of tasks to perform. They often work from dawn till dusk.

Work in past, was usually hard in nature and lots of labour force was needed to complete. There is a widespread assumption that technology has somehow made work easy and efficient. So, through this study the researcher was aimed to explore whether technology had made work easier and efficient or not.

Hard labour and work were the only exercise which were performed by the rural people. Now due to modern machineries and technologies hard work and labouring have been minimized. Different tasks whether it was agricultural, or home tasks are completely done or assisted by these machines which has restricted their exercise. So, this study was meant to figure out what changes has been occurred in time schedule of rural population and how effective use of these technologies are, over there.

Technological advancements had also made their way to medical and health system. Now there are different techniques and medicines which have been used to cure different diseases. This study has been aimed to find the impacts of technological advancement in health system of Alwara Mela.

As it is known that excess of everything is bad and excessive uses of these technological advancements are responsible for causing certain physical and psychological disorders. There are assumptions that due to over usage of modern technologies the number of disorders especially mental disorders have also been increased. Through this study the researcher had tried explored the drawbacks of these modern technologies regards to health issues.

Apart from health issues there are some other aspects of social life which has been damaged by the technology. Some aspects of social were considered as a symbol of pride and dignity for the rural people but now they are not concern about it that much. Technology has brought some drastic social changes in people food pattern, lifestyle, and other social behaviours. The researcher had tried to address those drawbacks of the technology in social life through this study.

There are certain economic changes accrued in the life of rural population duo to usage of modern technology. For example, due to modern technologies agricultural productivity is more likely to boost up. Proper hydraulic system and other agricultural products, for

example pesticides have impacted the agricultural yield. Dried food for cattle has also increase milk productivity. So, what economic changes have been occurred through these technological advancements were meant to explore. Men and Women who were doing some sort of professional works were meant investigate regarding their economic condition because they have been using these technologies. The impacts of these technologies were aimed to explore by the researcher.

1.2.1. Operationalization and conceptualization

Some terms which are used frequently in this study, need clarification in order to make it reader friendly.

Children, young ones, and elders

Children is vast term which is used for infants, Boys, and teenager. By children, the researcher means those boys whose ages were between 5 to 15 years and girls whose ages were between 5 to 12 years. Young one has also various meanings but boys whose ages were between 16 to 30 and girls whose age were between 13 to 30 are categorized as young ones by the researcher. Elder was category which included females and males whose ages were 31 years onward.

Technological advancements

This term has very broad scope and this term is widely used for 21st century's innovative technologies like artificial intelligence, supersonic traveling planes, drones, and other stuff but here it serves different purpose. It is used for those technologies which has replaced the traditional ways of working. For example, electric Madhani (homogenizer), crop ripper, rickshaws, and smartphone etc.

Traditional ways of working

Traditional ways of working also covers various spectrums but here it is used for those techniques which were used by the people of rural population in pre-industrial era. This includes water collection from walls, wood collecting, folk remedies, and other works.

Yield and productivity

Yield is generally used for obsolete payment and productivity is used for agricultural outputs, but these two terms are used interchangeably in this study. Yield and productivity are used for material gains from agriculture and cattle farming. Paper money is not included in this term.

pre-technological era

The term pre-technological era is generally used for time before industrial revolution when people of Europe were depending on animals and man force for labouring but in this study the pre-technological era means that time when people of Alwara Mela were not using home appliances, agricultural machinery, and other types of technology. Time before 2013 A.D is conceptualized as pre-technological era.

Post-technological era

Post-technological era has been referred to the time when people of Alwara Mela adapted technological items. 2013 onwards years are referred as post-technological era.

1.3. Objectives

Every research has some aims, goals, and objective. A researcher tries to find out some basic aims and objectives through the research. Same is the case here. There are some objectives which the researcher wanted to address.

To explore impacts of technology on daily routine of the people of Alwara Mela.

To find the impact of technology on health of the people of Alwara Mela

To find the impacts of technologies on social life.

To find the impact of technologies on household economy.

1.4. Research questions

Objective number first

To explore impacts of technology on daily routine of the people of Alwara Mela.

Question

How is technology changing the daily life of rural people?

What does the new technology change the daily routine of the ruler woman?

What kind of changes have been occurred in agricultural activities due to usage of technologies.?

How is technology changing time consumption of preparation of meal and nurturing of children?

Objective number two

To find the impact of technology on health of the people of Alwara Mela

Research questions

How technological advancement is contributing to health care system of Alwara Mela.

How modern medicines and health institutions have been able to control some of the diseases in Alwara Mela.

What kind of drawback are brought by technological advancement in health of Alwara Mela?

Objective number three

To find the impacts of technologies on social life.

Research questions

How have technologies affected social life of rural population?

What are the impacts of technologies on education?

How have technologies affected religious obligations?

How technological advancements have changed economic resources of rural population?

What are the impacts of technologies on family and village politics?

Objective number four

To find the impact of technologies on household economy.

Research questions

What are is the relationship of modern technologies and economy of rural population?

How technology is responsible for changes in agricultural income of rural population?

What changes have been noticed in the income of rural population through cattle farming?

How technology have impacted the economy of other individuals.

1.5 Hypothesis

The hypothesis of the study had drawn comparison between advantages and disadvantages by Using technological innovations on the rural life while the utilization of resources was on very high side:

- Technological change has affected the way of life of rural people.
- The change has given opportunities to people to increase their economy.

1.6. Locale

This study has been conducted in Alwara Mela. The purposes of selecting Alwara Mela was due to belongingness of researcher to Alwara Mela, so it was easy for her to conduct study while observing as a participant. Participant observation was not possible in other

locales for her because the researcher belonged to Pashtun family and her family was not allowing her to stay and live in another village. So, in order to collect valid data through participant observation Alwara Mela was chosen. Second reason was that there were no language barriers. The researcher and the people of Alwara Mela shared same culture, religion, religious sect, and language. So, it was very good for the researcher to understand each word, phrase, proverb as well as contextual meaning of every words. It was indeed an ideal locale for the researcher. Lastly, Alwara Mela was little bit isolated in past so, it was not exposed to technological advancements but in recent years people of Alwara Mela opted for technological advancements. So, this topic was very relevant to Alwara Mela.

The biggest barrier which was faced by the researcher was doubts of some respondents. the female respondents never came across with such study and they were having some doubts about their interviews. For example, some of them asked me are you hired by government or NGO but after discussing the whole process of data collection and thesis the researcher cleared their doubts.

Alwara Mela was village in Hangu district. It was 19 kilometres in the west of Hangu city. Elevation of Alwara Mela was over three thousand feet above the sea level. Climate of Alwara Mela was similar to other regions nearby for example Kohat and Hangu.

Alwara Mela was located 19 kilometres away from Hangu City in Western region of Hangu District. Alwara Mela was located on the bank of Thall Hangu road. Latitude of Alwara Mela was 33.4759° or $33^{\circ} 28' 33.2''$ north. Longitude of Alwara Mela was 70.9094° or $70^{\circ} 54' 33.8''$ east. Alwara Mela was 3291 feet above sea level.

The population of Alwara Mela was consist of four hundred and ninety-four inhabitants. Birth rate was increasing rapidly since last decade. Alwara Mela was inhabited by Orakzai Tribe. There was only one Government's primary school and one private school in Alwara Mela. People of Alwara were Sunni Muslims and they followed Hanafi school of thoughts. They have their own political system which was based on Pashtun tribal code of conduct. Jirga was most important aspects of their political system.

1.7. Significance of the study

This research has significance as well as relevance in two domains. As it is known that technological invasion is on its peak. Indigenous cultures and communities are endangered due these technological invasions. This study has its importance in figuring out the impacts of these invasions. This is quite relevant to need of time. Researchers have not conducted any study in Alwara Mela and nearby, so this is an important research in that regard also.

This research provided Individual benefits for the researcher. The researcher achieved great amount of knowledge regarding these technologies in rural context as well as exploration were also made in the domain of social change.

This study turned good for the society and particular Community. People of Alwara Mela were very afraid of such interviews and research. They were highly concerned with their privacy. But through this research they got an idea about these kinds of research. So, now there are high chances of cooperation between government and villagers in order to participate in certain programs of community development.

For community, this research will provide fruitful results in future such as after successfully completing this research, further researchers especially in KPK Hangu will be facilitated. It will provide baseline data to researchers and will be helpful in further research conduction.

This research will be beneficial for other students and researchers. Students who want to conduct study on this topic can get benefit from this research. They can get a holistic idea about technological advancements and their impacts on village population. This study will also be helpful for other researchers. They can also get information through this.

This study has its significance in the fields of social changes. Technologies are responsible for rapid changes in social life. Through this study the researcher has studied various aspects of social life of rural population and drastic changes have been reported during this study. So, it will be significance in the fields of social change.

Last but not the least it that, this study is important in understanding the behaviour of different age groups when it comes to usage of technologies. Who is laggard in rural population and who are the acceptors? This study will be very significant in that regard also.

1.8. Theoretical framework

This study has been conducted while using the theoretical discourse of reflexive modernization. Pioneer of reflexive modernization was famous German sociologist Ulrich Beck but two other important European sociologists Professor Anthony Giddens, and Professor Scott Lash also contributed to reflexive modernization theory and thus this theory was proposed by these three sociologists in 1994. Beck, Giddens, and Lash collectively worked on reflexive modernization theory was they published a book in 1994 naming "Reflexive Modernization: Politics, Tradition and Aesthetics in the Modern Social Order". Ulrich Beck applied this theory in his various publications. In 1992 he published a book "Risk society: Toward new modernity" pointing the drawbacks of technological advancements and risks as an outcome of these advancements (Beck,1992). Beck further used this theory in his notable works like world at risk (Beck,2009) and cosmopolitan vision (Beck,2016). Anthony Giddens also used this theory in his several books. Anthony Giddens argued that humanity will pay a huge price in future due to mass technological production. (Giddens, 1990). Giddens analysed radical social changes applying theory of reflexive modernization (Giddens, 1984; Giddens, 1991). Another contributor of reflexive modernization theory Scott Lash viewed modernity as an outcome of technological revolution (Lash, 1999).

There is another theory by Ulrich Beck which is known as "Risk society theory". According to the risk society theory "industrialization and modernization is causing dangers and risks to human world" (Beck, 1992). According to risk society theory human beings through high modernization creating destruction for their own selves (Giddens, 1991). Destructions are also predictable due to technological invasions. In past human were facing natural calamities caused by nature, diseases, bad weather which damaged crops but nowadays these are self-induced, human are destroying their own selves through these

technological advancements. For example, by creating nuclear weapons humans are inviting their own destruction (Gray, 2019). Risk society theory was not suitable because the usage of technology was not at level which can bring natural disasters in Alwara Mela so, the researcher followed reflexive modernization theory.

Reflexive modernization theory is a form of social change driven by judgments and actions which are supposedly scientific or rational, but in practice comprised of *reflexes*, and therefore destined to engender a risk-ridden state of affairs in society. Late modern individuals, groups, and organizations do not self-consciously (and cannot) choose to be reflexive, instead of being reflective (Giddens, Lash, & Beck, 1994).

According to Reflexive modernization theory, the traditional institutions are leading toward dissolution and transnational forces are begun to rise. The usage of technological advancements leads toward cultural and economic globalization. Group solidarity are going to lose its momentum and rise of individualization is predicted (Giddens, Lash, Beck, 1994).

Reflexive modernization theory was further followed by Polish-British sociologist Zygmunt Bauman. Zygmunt Bauman argued that these technological advancements are more likely to create new divisions among people (Bauman, 1998). Political scientist Ronald Inglehart has studied changes in human values from material to post-material societies by analysing the world survey databases (Inglehart, 1990). Another political scientist Pippa Norris argued that globalization is causing digital divide among humans. She laid stress upon cultural globalization rather than economic globalization (Norris, 2001). Technology is beneficial for humanity in some respects. Humans have reduced the distances across the globe. Humans have landed on moon and they have succeeded in eliminating fatal disease like smallpox but as there are benefits of technologies harms are also its outputs. The temperature of world is kept on increasing. Different countries of the world are at arm race with one another, they are trying to surpass their rivals in armoury and nuclear weapon. This race will eventually lead toward the disaster which humans will never overcome (Mirani, 2015). These are the drawbacks of technological advancements at macro level. There are some serious shortcomings of technologies at micro level also.

Technological advancements and globalization are bringing radical changes in the political and social systems of indigenous cultures. It enforces the people of primitive culture to adapt modern means of communication (Burke, Smith, & Ward, 2000). Modernization and technological advancements are threat to cultures. With advent of technologies, cultural values norms and mores are fading away. People in order to adapt innovation neglect their cultural traits. Technology promotes individualism and materialism among human beings. National identities and heritages are forsaken for modernity (Estrada, 2017). Globalization is perpetuating the narratives of democracy, modernity, and capitalism. People are encouraged and enforced to adapt democracy as a political system. It is perpetuated as an ideal political system (Dalpino, 2001). Globalization is promoting capitalism as an ideal economic system (Hosseini, 2010). Social changes are happening across the cultures through globalization. Globalization is the root cause of modernity. Globalization is not state rather it is a process, and it will eventually be led to modernity and thus social life will be homogenized and traditional values will no longer applicable (Bilton, et al., 1996). It means that one should stop practicing its traditional economic systems instead he should follow capitalism. Traditional values, norms and ethics should be avoided for the sake of modernity and democracy should be adapted as political system if a culture need to get progress. It means that this technological invasion is causing some serious threats to indigenous cultures.

Reflexive modernization theory faced some criticism from other scholars. Vassos Argyrou claimed that reflexive modernization theory is mythical. Technological advancements are good for humanity and its consequences will not be harmful as proposed by Beck, Giddens, and Lash (Argyrou, 2003). Another scholar Raymond lee argued that modernity cannot be define just as reflexive modernization. Reflexive modernization lacks other two modernization namely liquid modernization and multiple modernization. The realization that modernity is not a project but one encompassing many possibilities of development places tradition in a unique situation of facilitating social change by readjusting cultural practices (Lee, 2006).

In a Reply to Argrou's criticism Leo Mirani argued that technology has some positive aspects like cheap and efficient travels but how someone cannot overlook its drawbacks.

Countries are bulking their nuclear arsenal and it cannot be a positive side of technology. Its consequences will surely catastrophic (Mirani, 2015). Estrada argued that Lee's classification of modernity is real, but each form of modernity has some shortcomings and social changes brought by these forms of modernity are unwanted (Estrada, 2017).

There are lots of changes experienced in rural culture due to globalization and usage of modern technologies. This study aimed to figure out the changes in rural culture to the usage of technological advancements. After conducting this study, the researcher came to know this theory was comparable to some of the findings of this study. Social and religious obligation were neglected by the people due to usage of technologies but still there were some aspects of this theory which was not addressed during this research. This theory might be fully applicable on those societies which have been experiencing technological advancement and modernity for few decades but the people of that Alwara Mela village were not fully opting for globalized ways because technology was very recent phenomenon, and it was not fully undergone yet.

1.9. Structure of thesis

This thesis is consisting of nine chapters. Each chapter is having its own themes. First chapter is about introduction of the thesis. What is statement of the problem, where did this study was conducted and what are the objectives of this research. Importance of this study and research question area also mentioned in first chapter.

Second chapter is about review of relevant literature. In second chapter all relevant literature has been reviewed. This literature includes books, articles, reports, document, and web blogs etc. Literature's review has been further divided into various categories for example what been the history of technological advancements, what kind of technologies are used in household, how technology is responsible for bringing change in society, what are the positive aspects of technology and what are the negative aspects of technology.

In third chapter research method and locale is discussed in detail. This research was based on qualitative method, apart from method what other research consideration were adopted, for example what kind of observations were made, what types of samplings were done,

how rapport was built for this study and what ethical considerations were taken into account for this research.

Locale is also discussed in detail in third chapter. This study has been conducted in Alwara Mela. What is the geography of this, what is climate of Alwara Mela, what is belief system of Alwara Mela, what are education system of Alwara, how disputes are resolved and what is the process of decision making Alwara Mela?

Chapter fourth is about first objective of the research. What kind of changes were reported in the daily lives of people of Alwara, and different activities have been affected due to technological invasion are discussed in detail?

Chapter fifth is about social changes due to usage of technological advancements. How technological advancements have changed Social institution like Family, religion, economy, education, and political system Alwara Mela. These are all discussed in chapter fifth.

Chapter sixth is about next objective of this research. Rural health and technological advancement have been discussed in detail in sixth chapter. What are the positive changes brought by technological advancement when it comes to rural health and what are the drawbacks of technological advancement regarding health of rural population?

Chapter seven is about economic changes due to usage of technologies. What kind of changes have been observed in agricultural economy. How technology has changed milk production and other sources of income in cattle farming. How villagers' income has been changed due to usage of technologies.

Chapter eight is about the theoretical discourse of this researcher. This study was conducted while using the theory of reflexive modernization. In chapter, detail discussion has been made regarding the application of reflexive modernization theory.

Chapter nine is about summery and conclusion of this thesis. In chapter eight all the process of this research has been discussed. The findings of this study have been discussed briefly. This study is concluded in chapter nine. Concluding remarks have been mentioned and thus this research has been concluded in last chapter.

Chapter 2

Review of literature

Review of relevant literature has been done chronologically. First of all, books, articles documents and reports about the history of technological advancement were studied and reviewed. How technological advancement were invented and how it changed the world were studied in a great detail. First industrial revolution which is also known as steam engine revolution has triggered all modern technological advancement. First industrial revolution was followed by second industrial revolution. Now we have third industrial revolution.

2.1. Globalization, technological advancement, and societies

Industrial revolution shares lots in common with technological advancement. In fact, industrial revolution is name of technological advancement. In the middle of 18th century, a new era of humanity started and lasted for around 70 to 90 years. England was the First country who initiated industrial revolution. First industrial revolution is linked with the invention of steam engine. An English Blacksmith Thomas Newcomen invented steam Engine in 1712. (Mohajan, 2019) Hardhan Kumar Mohanjan of Chittagong University has discussed in detail how first industrial started and which fields of life were revolutionized due to this engine.

Industrial revolution has changed the production of consumers good drastically. Development in textile industry, iron and steel industries, chemical production and transportation were its main attributes. 30 miles area of Manchester produced 40% cotton of entire world. Iron and steel production were increased from 28000 tons to 250000 tons in fifty years. Population growth was 0.1% till industrial revolution but in industrial revolution time population growth reached to 1.5% per year. Transportation was improved, canals and roads were built at mass level in England (Mohajan, 2019).

According to Kumar Mohajan first industrial revolution created a dawn of humanity. First industrial revolution is associated with Europe in general and England in Particular.

Textile, iron, and steel industries start to increase their production capacity to mass level due to the use of steam engine. Great Britain was carrying raw materials from its colonies and then it was transformed into usable stuff. Population of Britain increased drastically. Over fifteen times of population growth was recorded as compare to preindustrial era. Transport system was improved from 1750 to 1850. 4250 miles of canals were developed. In 1829, railroad was open in England, locomotive was operated between Stockton and Darlington with speed of 29 miles per hour. People did not see such fast thing before.

First industrial revolution was succeeded by second industrial revolution. Second industrial revolution is traced back to 1870. Second industrial revolution is mostly associated with ford motors, electricity, chemicals, transportations, household technology and human welfare. Israeli economic historian, and professor of economics and history at North Western University has discussed in a great detail about second industrial revolution.

Fertilizer industry was a great achievement in the field of chemistry. Electricity was a new filed and it solved most of economic problems back then. Production engineering was perhaps the most important feature of second industrial revolution. Henry Ford was prominent figure in this regard. Last but not least was the contribution of this revolution in household technologies. Heated and well-constructed houses, better clothes, access to running water and sewage systems were the fruits of second industrial revolution (Mokyr, 1990).

According to Joel Mokyr second industrial revolution is associated with Ford motors and chemical factories of Europe. Henry Ford the founder of ford motor filled American roads with cars. Eight-hour labour and 5 dollars minimum wage per day was introduced by Henry Ford. German and English revolutionized the chemical field by introducing fertilizers, dynamites and soda making. Second industrial revolution did not stand for long because in 1914 first world started. Since the starting of first war till 1950 the industrial revolution stood still. Although factories were busy in production of items, but the main production was warfare and battlefield weaponry and other tools used in battles.

German Sociologist Ulrich Beck was of the view that new radical changes will occurs near future due to increase in production and consumption of technological items. Beck has put light upon mass migration, wars, and globalization in 21st century. He argued that these

mass production and consumption of utilities and technologies are somehow responsible for bringing these radical changes in societies across the world. It is assumed in sociology, history, political science, and economics that societies are nationally structured. So, it further suggests that society shares lots of trait with nation state. It means that if a nation state has made advancements in technological field it will be followed by the society (Beck,2006).

There are lots of burdens for Families and individuals in pointing out the reality of risk. If we look at the results of these risks in economical and societal perspectives, we came to know that there are no perception among the people about artificial risks because these risks creates no difference in economic fields but great loses and catastrophes are caused by these risks in societal aspects (Beck, 2003).

Beck Argued that for a common man it is difficult to measure the negative aspects of technological invasions. Beck further argued that due to beneficial outcomes in economic fields, the societal aspects have been neglected by the people. No one will show any concerns if they get economic benefits.

In modernity, statistically grounded planning for the future has tried to interconnect an increasing number of parameters so as to avoid the linear continuation of isolated trends. Despite new forms of falsification, such statistically based prognostication continues to determine economic and social life (sales opportunities for particular products, price development, traffic density, mass trends in taste, reproductive behaviour etc.) (Beck, 2009).

Ulrich Beck in his another book “World at Risk” argued that we are leading towards consumerism. Our economic and social life is hugely dependent on consumer’s products. There are lots varieties in each particular consumer product. Manufacturers and distributors try to trap people through different tactics.

Jeremy Rafkin is a social and economic theorist. He has written over twenty books. Three of his books got much popularity namely “The Zero Marginal Cost Society”, “The Third Industrial Revolution” and “The Empathic Civilization”. He was advisor to the president

of people's Republic of China and European Union. According to Rafkin Third industrial revolution begins in twenty first century. It covers almost all technological aspects.

At the end of two industrial revolutions in the nineteenth and twentieth century here is the equation. We have to admit that half of the human race is far better than our ancestors were before we begin this industrial experiment. Also, we need to know that forty percent of the human race are making two dollars a day or less. Arguably they are worse off than their ancestors were before. In the final equation of industrial era while it benefited the half of the human race and undermined the other half of the human race. The well of the very wealthy has done quite well (Rafkin, 2011).

Rafkin argued it is an assumption that people living in twenty first century are having prosperous life than people who lived in nineteenth and twentieth century. But the inequality is also the result of these industrial revolutions.

Fifty percent people are having good life standards, but the other half earn less than two dollars per day which is worse than what was in past. Although industrial revolution brought positive changes and it made life much easier, but the shortcoming cannot be ignored, however.

John Green in his interview discussed the globalization and how rapidly it is changing the world. In past technological tools and gadgets were only available to wealthy people but it got access to every consumer.

Our world today experiences wide spread of economic interdependence, this phenomenon is not now we seen economic interdependence in past but today the scale has been changed dramatically. There are few determinates which are responsible for this changed. First the multinational corporations have global reach and increasing their power. Secondly, travel and shipment are cheap and safe. Thirdly, that governments have decreased tariffs and regulation on international trade (Green, 2012).

The world is facing an interconnectedness among people politically, socially, and economically. This interconnectedness has been emerged since the means of transportation become more and more efficient and time saving. Although it was present in past but after world war 2 this change become drastic.

Multinational companies are providing their goods and services everywhere, travel and shipment is way more easier and cost saving, and many countries have reduced taxes on items which makes a consumer able to get benefit from technological means more precisely.

Another sociol theorist Anthony Giddens argued that there are certain structures which influence the behvaoir of individuals. These structures are influence by agencies. Technology is among these agencies which influence those structures. So it means that technology is changing the behevoir of human being. This theory was called structuratuion theory (Giddens, 1984).

A senior Lecture at Northumbria University Sanjay Bhowmick published his article about the adoptation of technoliges using Giddens's theory of structuaration. Sanjay argued that Infromation system not only just accept the theory of structuration but it also noursh it.

In the wake of a technology push worldwide, however, much of the structuration explication of technology evolution seems to leave a gap in the socialized understanding of processes involved in ICT4D. This gap arises from cantering explanations for ICT4D on the technology evolution aspects while insufficiently capturing the importance of the agent or user in the technology–user engagement (Bhowmick, 2016).

Sanjay was of the view that technology was creating huge differences in the world. Structuration theory provided basic idea of individual's influence and as it was known that technology was among influences so, structuration was involved in information and communication technology for development. Socialization process was among the initial reactions to information and communication technology for development. Just like in structuration theory, agent play a pivotal role in information and communication technology because it is essential for technology-user compatibility.

Radhika Kapur in her article discussed the usage of technology in rural areas. She pointed out different areas where technology is proved useful for the development of rural communities.

Technology in today's world has become imperative in all areas whether it is healthcare, medical, education, transportation, tourism, industry, business management, administration, banking, or rural development. Technology mainly is concerned with the usage of computers and software applications. It has several meanings such as machinery, equipment, tools, skills, knowledge, and expertise (Kapur, 2018).

Kapur has described in her article about the usage of technology in different fields. She argued that nowadays technology has become very crucial and almost all walks of life are covered by technology. Computer technology is very advance, and it serves different purposes. Technology is associated with machinery, skills tools, and professional knowledge.

Dr A.S Nasir in his article shared his views about rural technology centre in Pakistan. He has discussed the various roles of these centre and these centres try to promote rural participation in these centres.

Rural technologies originate either from within the rural areas or are transferred to these areas from a number of sources of technological information. Most technology institutions operate by way of transfers, whereby the technology is first developed outside the rural areas, and then transferred to these not through the dissemination of the technological information, but simply as part of a new project. Furthermore, lack of local participation inhibits the full acceptance of the transferred technologies by the rural population. Technologies may be technically sound but not socially acceptable (Nasir, 2006).

Rural technology most of the time were made from traditional technologies. Traditional technologies were innovated to expand its use. Sometimes these technologies were transferred through information from other areas. For example, if people of one area observe the technology of other area and they begin to start their version of that piece of technology.

Technologies were mostly developed in urban areas and rural people were neglected this approach. They were unable to build something on their own rather they were dependent on those who were having these resources.

Kaitlin Drape highlight the participation of rural women in technological fields. As it is known that the participation of women especially rural women in technological fields is very low, so she tried to figure out why this participation was low and what can be done to increase the participation of rural women in technological fields.

Women and girls are underrepresented in Information Communication Technology (ICT), most of all in rural areas where women do not have phones or computers. Literacy is also an insurmountable obstacle to being part of the digital arena, and two-thirds of the 700 million adults who are illiterate are women (Drape, 2018).

Kaitlin Drape argued that rural women and girls still have not enough access to information communication technology. The concept of women having phones and computer is still quite new for rural people. People in conservative communities do not want their women and girls to have any type of gadget.

2.2. Technological advancements and change in society.

Anthony Giddens has discussed the outcomes of modernization in a great detail in his book “The Consequences of Modernity”. He has defined modernization as mode of organization or social life which emerged in Europe after first industrial revolution and slowly it spread across the globe.

Modernity was associated with a geographical location initially but now it is out of the box and it is spreading worldwide. At the end of the 20th century, we will enter into a new time and it will take us beyond modernity. There is no specific term for this transition, but we can expect that will be information society or consumer society (Giddens,1990).

Modernity and technological advancement are sometimes used as alternatives. Giddens argued that due to technological advancement in Europe modernity was traced to Europe only but now it has extended its roots all over the world. He predicted that at the end of previous century human race would enter into a new era. In that era societies will primarily focus on information technology and consumer products and Thus it would be called as information or consumer society.

Scott Lash A professor of sociology and cultural studies at Goldsmiths, University of London also contributed to reflexive modernization along with Ulrich Beck and Anthony Giddens. Lash argued that modes of conceiving cultures are called forms of life. In early modernization cultural modes were conceived on the basis of presentation but at the end of 20th century and the beginning of 21st century these modes are conceived on the basis of technologies. technological forms of life are term as “culture at a distance” (Lash, 2001).

Arnulf Grubler in his book “Technology and Global change” discuss the changes across the globe due to technology. Technology is growing rapidly even sometimes it grows exponentially. Technological growth is directly proportional to global changes. According to author the technological change is not simple nor linear rather there are some criteria which determine the rate of change.

There are many possible ways to perform certain task, but which way is the best is a complex phenomenon. It is determined by economic criteria, social criteria, and technical criteria.

Number one technology is dynamic. It is not static rather it keeps on changing. Innovation and new varieties keep on occurring which brought improvements and modifications.

Number two technological evolution has its own system. It is not separate phenomenon which can understand through one aspect. Only invention and design are not necessary, but technology needs to be produced.

Number three technological changes are the collection of different things. Most of the innovation are produced upon experience. There are very few cases where totally new thing has been invented (Grubler, 1998).

Arnulf Grubler argued that technology is not based single aspect. It is multidisciplinary approach. So, to choose any particular technological item or gadget there some ways of consideration.

First way is that although a task could perform in different ways, but a person should find the best way possible so, for this purpose compatibility and efficiency matters a lot. Second, is that technological means keeps on changing so, better, and relatively good items is suggested to use. Third, is production of technology. Not only innovations but production

is also important consideration and finally technology usually comes after its predecessor. It usually outperforms its previous version. Sometimes a totally new thing is brought into the market.

Ruth Cowan has related the social changes and industrial revolution in her article. She argued that most of the social changes are due to industrial revolution.

Family was the basic social unit before the industrial revolution. Families were preferring to live in rural areas. Family members were more in numbers than what are now and most of the families were self-sustaining. They produced for themselves what was needed but under industrialization family is not that important. Production is no more concern of a household. There are decrease in social functioning also (Cowan, 1976).

Ruth Cowan argued that technology has affected the role of family quite much. Before technological advancement there were large households containing several members, but the family sizes are kept on shrinking nowadays. People used to grow for themselves. consumption and production were on parallel side. But nowadays social obligations and production has gone beyond its need.

Rate of adaption is very important phenomenon in social change. Whenever a new technology is emerged there are always two groups, one who adapts that technology while other reject that technology. Cultural appropriateness and social compatibility are common factors for the acceptance and rejection of any particular technology. If a technology is culturally, socially, and religious compatible then the rate of adaption would be more but if it is not appropriate then it might be rejected.

Shadi Hilles of Istanbul Okan University, Mamoun Jamous of Al-Madinah International University and Aala Momani of Skyline University College have discussed technology and their acceptance in their article.

Theory of reason action, theory of planed behaviour, innovation diffusion theory and social cognitive all of these theories are meant to explore the rate of acceptance among Human against any technology. Although all these theories discussed the acceptability of technology among humans, but the lenses used in these theories are different (Hilles, Jamous, & Momani, 2017).

Theory reason action theory suggest that human behaviour can be understand through his actions. It means that a person behaves in pre-existed attitudes and behaviour. Rate of acceptance can trace through this theory by looking toward the action of individual and then determining the behaviour of that individual. Second theory is planned behaviour theory. According to this theory beliefs of an individual determines behaviour. Individual will accept or reject any particular technology based on his beliefs (Ajzen & Fishbein, 2011). Third theory is diffusion of innovation theory. This theory explains how, why and at rate technologies and ideas are diffused. There are four main elements: diffusion of a new idea or technology' the technology of innovation itself, communication channels and social system. All these elements are responsible for acceptance or rejection of a new technology (Rogers, 2003). Last theory is social cognition theory which determines the rate of acceptance of a new technology. Social cognition theory is based on human rational thinking and emotional attachment with something (LaMorte, 2019).

Eric Hyman argued that compatibility and appropriateness of technology determines the use of that technology. If technology is not compatible to the social norms, then that technology is not adopted by the people.

Accordant to Hyman there are two alternative views which defines the appropriate technology. Number one the social welfare approach, in this approach mix of technologies are chose to maximize the achievement of the objectives of the society. Second is technology specification approach. In second approach the outcomes are compared with appropriateness (Hyman, 1987).

Traditional technologies are those technologies which have been used in production or consumption for at least 25 years. Traditional technologies usually rely on human or animal power, or renewable energy sources. Upgraded traditional technologies incorporate key elements of traditional technologies but have been improved to take advantage of the potential for higher inherent efficiencies or economies of scale. They are often larger in scale than traditional technologies (Hyman, 1987).

Aasif Ali Naiko, Shashank Thakur, Tariq Guroo and Aadil lone has conducted a study to see the relationship between modern technology and science. They have mostly discussed the positive changes brought by the modern technologies to the society.

Science and technology have impacted society to a greater extent. These invasions of science and technology has brought some serious changes in social interaction. Social communications within households are affected by these invasions. New methods of communication have been brought to society through which we can interact with those who are known and those who are unknown. Science and technology are just like a bridge which uplifts the society. Due to technology human race have changed their way of living. They transform themselves from stone age to modern industrial age (Naiko, Guroo, Thakur, & Lone, 2018).

Most of the social changes are due to technological advancement. Social interaction and everyday dealings have been changed. Family members nowadays deal with each other in different way than what was used to be in past. Science and technology are bringing society toward a new dawn. The survival of humanity is dependent on technology. Transformation of human race throughout the history is a result of technology and science (Naiko, Guroo, Thakur, & Lone, 2018).

Sal Restivo has written a book on relation between science and technology, and society. He has raised question about this relationship. What issues and problems can occur due to this relationship?

Historian, philosophers, and sociologists have discussed the role of science in social changes. Science seems more prominent in social changes because it is linked with material changes. The positive side of science for example advancement in medicine has been ignored by the philosophers. Marx criticize science in his "bourgeois science" while Nietzsche defends sciences in his critique "joyous science". Wittgenstein's philosophical anthropology also shows the limitation of science (Restivo, 2005).

According to Restivo, historian, sociologist, and philosopher have highlighted the role of science in cultural and social change. Pro-technology philosophers and sociologist have a soft corner for technology, and they consider social changes (which is brought by technology) good for society, while those sociologists who are in oppose of technological changes argued that science is not complete yet. Science has although contributed too much in progress of society, but it has some limitations also which needs to be addressed (Restivo, 2005).

Setotaw Tesema was part of program which was initiated in African country Ethiopia. This program was to improve economic status of household in the country. Most of the

population depends on agriculture so improvement in agriculture sector was main motive of that program.

Large proportion of population bases on agriculture and poor unsatisfied performance of agrarian sectors are the root causes of food insecurity and poverty in poor countries. Aside from this factor there are some other causes which has led toward weak agricultural growth in last few decades. Inappropriate economic policies, lack of agricultural technology, floods, and droughts, over population, and underdeveloped rural infrastructure are some of the factors (Tesema, 2006).

Tesema argued that in those countries where a huge number of populations depends on agriculture, suffers from certain issues. Performance of agricultural sector become unsatisfactorily and thus it led to low productivity, which is one the main reason of poverty in poor countries. Aside from these problems, in poor countries usually there are unstable governments, so it effects the economic policies. Technology is far from satisfaction and flood also effect the actual yield in poor countries. Lastly over population and under-developed rural infrastructure also contributes to low performance (Tesema, 2006).

2.3. Types of technologies used in Household.

Ian Miles, Elena Chernovich and Valentina Polyaka have discussed in detail about the consumer electronic. Consumer electronics are those electronic which are used on daily basis at home. They concluded how household technology has impacted the behaviour of consumer.

The interaction between user and technologies has changes the daily routines and environmental behaviour. Pro-environmental and non-environmental way of thinking are based on sustainable and unsustainable sources of technology. Researchers are now approaching this phenomenon in socio-technical way to study the technical and social outcomes of the household technology (Miles, Chernovich, & Polyakova, 2015).

Daily routines and environmental behaviour are changed due to technological usage. Technology has made work more precise and time efficient. There are two schools of thought when it comes to technological changes. The pro-environmental thinks that technology is a threat to our environment while the non-environmental are of the view the

technology is beneficial for society and it has no ecological drawbacks. Now researchers have expanded their approach toward this phenomenon. They are looking at it now in social and technical way (Miles, Chernovich, & Polyakova, 2015).

Dr Alladi Venkatesh a professor at University of California has conducted a study on conceptualization of the household and technology interaction. He argued that traditional approach only sees the adoption of technologies, but he has examined not only the adoption but also the pattern of use as well as the impacts of these technology on household.

Several technologies have adopted by the household during last 50 years. Washing machines, dryer and refrigerators are common examples for general use. For telecommunication Televisions and for transports vehicle are used nowadays. The impacts of these technologies are huge. Manual's labour has been reduced or in some cases it has been eliminated by these technologies. Some technologies have transformed the character of household totally (Venkatesh, 1985).

Venkatesh argued that with industrial revolution the consumption of household technology has increased. In twentieth century, the number of household item has grown drastically. Now almost every household has machine and refrigerator. The sources of telecommunication have been utilized and means of transportation are seen everywhere. The biggest threat is regarding manual labour. The rate of unemployment will grow in future because machines are replacing manual labour (Venkatesh, 1985).

According to Hyman those technologies which have been used for 25 years are called traditional technologies. Its origin is sometimes those regions which are less developed rather than of native origin. These traditional technologies depend on human power and renewable resources. Traditional technologies are kept on improving. Its efficiency is increasing. Modern technology as compare to traditional technologies are in use for more than 25 years. Modern technologies are on large scale compare to traditional technologies.

Down-scaled modern technologies are versions of modern technologies that have been adapted for a smaller scale of production or consumption, or to match the available resources.

Innovative replacement technologies are generated by application of new scientific and engineering knowledge.

Each of these types may be appropriate for particular situations in LDCs, but upgrading traditional technologies is often the most cost-effective way of reaching the rural and peri-urban poor. Upgraded traditional technologies often retain the accumulated environmental knowledge of local people and are more compatible

with cultural values, local skills for operation as well as repair, and resources than are down-scaled modern technologies (Hyman, 1987).

According to Eric Hyman usually two types of technologies are used in rural locales. First one in down scaled technologies. These technologies are used for subsistence amount of production. Usually its outputs are low, and it is well suited by for smaller population.

Second types are innovative replacement technologies. As its names suggests these types of technologies bring innovation and replace pre-existing technologies. Scientific and engineering knowledge are used to generate such type of technologies. These technologies are very appropriate for least developed countries. Sometime traditional technologies are not replaced rather it is upgraded to make it efficient. In this way the socio-cultural compatibility of a particular technology is retained, and efficiency is increased (Hyman, 1987).

2.4. Pros and cons of technologies

Roberto Giacomelli is a professor at University of Bologna. He argued that technologies are meant to improve life standards of the people. The concept of technological progress without scientific research is not possible.

Economic progress is a result of technological advancement. New and effective medical application has been put to work and more people are dependent on these technological developments. Television, cellular phones, and internet has changed the world. We can look inside human beings through x-rays and ultrasound. Biotechnology is changing medicine and our lives (Giacomelli, 2004).

Technology has brought economic prosperity. In medical fields technology is bringing more effective methods to cope up with diseases. Telecommunication has changed the world, now people stay aware of any thing which they are meant to know about. X-rays and ultrasound have changed the medical field. Now doctors can perform some surgeries without cutting through body (Giacomelli, 2004).

According to Raja and Nagasubramani technology is great gift from God. They considered it as mother of civilization, arts, and science. Technology is second great blessing of God after life.

According to the latest insights as to how exactly modern students of today prefer to use technology and how does their learning get an impact if they use technology, it was revealed that the use of modern equipment technology and tools, the learning and interactivity of students increases. They also find it much more interactive, as well as full of interesting areas, when aided by technology. The transfer of knowledge becomes very easy and convenient, as well as effective (Raja & Nagasubramani, 2018).

Technology has huge impact on learning. Through the use of technology interaction among students has become more crucial. Knowledge and information are easy to access and thus learning has become easier and more convenient. Modern tools and equipment are used for the benefits of the students.

Ananth and Karthekeyan have discussed the role of role ASTRA in developing underdeveloped countries of Africa. ASTRA is project which helps people of underdeveloped area to sustain their economy through science and technology. They have conducted study in in Ethiopia a country which is located at the horn of Africa.

Developing countries face the challenge of improving living standards of rural people for their sustainable livelihood. Majority of developing nations are agrarian economics characterized by low productivity operating on smallholdings with inadequate and poor infrastructure. There are several interventions for development and one such potential instrument is the “application of science and technology in rural areas (ASTRA)” which intends to transfer rural areas towards development for sustainable and profitable livelihood (Ananth & Karthekeyan, 2013).

In developed countries the life standards of rural people are well enough to handle modern crisis but people who live in rural areas in developing countries still need improvement in their life standards.

Developing countries are facing different challenges to maintain good life and sustain their livelihood. The economy of Developing countries for example countries of third world are mostly based on agriculture. The problems they face is low productivity. Governments and non-governments organization are trying to increase the productivity. For this purpose,

several programs have been initiated in different countries. One major program is a “application of science and technology in rural areas”. This program is very good, and profitable yield is its output (Ananth & Karthekeyan, 2013).

Ahsanullah in his article discussed how information technology can eliminate poverty in rural societies and lead them toward progress.

Modern development of Technology has made information as raw material for development, power, and wealth of a country. Limited creation, storage and retrieval of information were really started from ancient times. It was then used as a strong source of power by kings, dictators, rulers etc. against their opponents. Modern Information Technology has transformed into a source of development raw materials, wealth and power of a nation and directed for the well-being of humanity (Ahsanullah, 2019).

Information technology is very crucial of development of a country. Information is like a raw material from which different items are made, which contribute to the progress of country. In ancient times emperors, kings and monarch used limited creation and storage, as power against their enemies. They also used it to keep them in power. Information were only available for nobles, wealthy and trusted people. But nowadays information technology is for everyone. Lay man can get benefit from information technology to improve his life standards.

Another concern pointed out by Ahsanullah sceptical nature of population about technologies. He argued that the rate of acceptance is not that much so, usage of technologies in rural population is still not that much as compare to urban areas.

Small scale industries have been established in rural areas, in these industries, normally there are machines and technical equipment's, which the rural individuals are trained regarding so that when they find jobs, they can effectively operate the machines and other technical equipment that is utilized in production or manufacturing. Through the development of technology, there has been improvement in rural housing, road, and other infrastructural facilities; people have learned how to effectively implement water management and make use of clean drinking water (Ahsanullah, 2019).

Problems in rural areas are way more than urban areas. Unemployment and poverty are higher in rural population. The rate of literacy is also lower than urban areas. Through

technological development rural people are encouraged to produce employment opportunities for themselves.

Pakistan is an agricultural state and agriculture is regarded as centrifugal force for the economy of Pakistan. Saudi Arabian and Pakistani students conducted a study to explore the perception of farmers regarding the information technology in Khyber Pakhtunkhwa Province of Pakistan. Government of Khyber Pakhtunkhwa launched helplines for farmers in order to guide them properly and the main concern of these researchers was whether farmers use this helpline or not.

Despite all the associated benefits, almost 19.7% farmers remained undecided on the effectiveness of mobile phones as the source of agricultural information. One major segment of respondents did not agree with the usefulness of a mobile phone as the source of agricultural information (Aldosri, Al Shunaifi, Amjad Ullah, & Muddassir, 2017).

The researchers claimed that a 15% percent of the respondents were illiterates so, they were unable to use mobile phone for intense purposes. About 34% percent of famers were in favour of using mobile phones for digging out agriculture benefits, like calling to help line for Guidance and weather forecast. Almost 20 percent of the respondents remained undecided while 29% percent respondents claimed that mobile phones have nothing to do with agriculture.

Usman Mustafa of Pakistan Institute of development economic and Umar Farooq of Pakistan Agriculture research council have conducted a study on innovation system agriculture and rural devolpemnt.as it is known that agriculture contribute one fourth in Gross domestic product and provide two third of raw materials to industry, so it is very crucial of national economic growth and it is indeed a backbone of Pakistan's industry. So, it is compulsory to ensure the usage of technological advancements and technologies for better productivity (Mustafa & Farooq, 2019).

Small scale industries help rural people to earn their livelihood. Technical and vocation programs have been initiated in different areas to maintain employment rate to normal. For this purpose, training in schools and colleges has been started. Through the development of technology in rural areas housing roads and infrastructure has been improved.

Medical centres and other healthcare facilities have been introduced in rural areas and these are making use of technical equipment which largely benefits the rural individuals. Therefore, it can be stated that usage and development of technology in rural areas have enhanced the living standards of the rural masses and led to the progress of the country (Kapur, 2018).

Technology is also playing a big role in health care. Medical centre and health care facilities have been introduced in rural areas. Through these technological advancements and its usage rural people are improving their life standards and it converts into national progress.

Schwab has conducted a study on technological fields and girl's participation in these fields. He argued that illiteracy rate among women is very high. More than four hundred and fifty million adults are illiterate, which converts to two third of total illiterate population of the world.

Worldwide, women are 21 percent less likely to own a mobile phone and access internet, a key resource in the global south where phones provide access to safety, organizing networks, early warning systems, mobile health care, and money transfers. Digital technology is an increasingly important tool for movement building, allowing organizations and networks to exchange information rapidly, and to organize across geographical locations. It also creates opportunities for a diversity of voices to be heard and shared, an important feature of strong social movements (Schwab, 2019).

International women fund is trying to address the issues of women. Access to technology and its usage is one the fundamental rights of women. Initiative has been taken by global fund for women development. Technology is very important for women for example a pregnant woman can call a midwife if she has a mobile phone in case of emergency. Women in this age of smartphone and internet have no access to these facilities in rural areas. Smartphone are nowadays essential; a girl can perform her duty more accurately with the help of smartphone for example she can plan better through early warning system. Internet banking and money transfer can also be done through mobile. Mobile provide health care facilities as well. Digital technology helps women to build movement and

organize a union or movement to secure their rights. It rapidly shares information across the globe (Schwab, 2019).

In the rural areas of Pakistan women are working side by side with men. In Pakistan, the women occupy half of the total population and their active participation is necessary for the development of the country. In fact, there is no single sphere of human life and activity left without the participation and contribution of the women, so they are as important as men.

To make the study more authentic and reliable, the researcher studied the literature on the topic produced by renowned anthropologists and social scientists around the world. Ruby Rohrlach a famous anthropologist argued that women share many things with each other cross culturally.

The modern women have an easier life and more leisure, but like all modern women in a tradition society, she lived in two worlds. While rural women are more blatantly oppressed and discriminated, against the oppression of and discrimination against urban women is subtle (Rohrlach, 1975).

Technology has affected the lives of the human beings, while in Asian countries it affects both urban and rural cultures. The technology has changed all the traditional means of communication and brought a visible change in the village life replacing the old ways of life into modern and comfortable ways of living.

Technology is changing the world quickly. People's lives have become much easier, but humans are paying a huge price in exchange. Various physical, mental, and social disorders are caused by technology nowadays. Avinash Pandey has highlight those issues in his article.

Technology causes Physiological, Psychological and Social issues. The Psychological disorders include narcissism, ADHD, addiction, depression, expectation of instant gratification and obsession while the Physiological disorders include vision problems, headache, neck strain and hearing loss. On the other hand, the Social issues are lack of skill development. While the Physiological issues are mostly temporary and non-fatal, the Psychological issues result in severe consequences. Staring a screen for a long time can result in 'Computer Vision Syndrome' which includes eye strain, blurred vision, and dry eyes (Pandey, 2012).

Mental, physical, and social problems are caused by the technology. Mental disturbance such as egocentrism, addiction, anxiety, and obsession are the results of technology.

Physical issues like blur and weak eyesight, constant headache, pain in neck area and hearing problems are among the bad results of technologies. Physical issues are not fatal but mental issues are serious. Looking for long time to a screen cause computer vision syndrome. It is a disorder in which eyes are affected, the vision become blur and eyes become dry (Pandey, 2012).

Mohemmad Bin Younes and Samer Al-Zoubi have discussed misuses of technologies in their research. Due to misuses of technologies have put social obligations to side. The negative impacts of these misuses not only disturb the life of individual but the society as whole. Economic and religious aspects of culture are also affected by these technologies.

It is the parents' role to keep good relationships with their family members and protect them from engaging on the Internet and mobile atmosphere and other modern means. Basically, there must be a constructive dialogue policy between parents and children on one hand and between couples on the other hand along with giving equal opportunities to all members of the family in terms of freedom of expression and discussion (Younes & Al-Zoubi, 2015).

Family can reduce the risk factor caused by technological techniques. Family is basic institution of education and parents can rescue the children by giving them proper education. Internet and mobile world are damaging the lives of youth, little restriction from parent's side is useful for proper grooming of children.

Usually in conservative family there are too much gap between parents and children. Children cannot properly express their view in front of their parents. So, for better understanding two-way conversation between parent and children is very useful (Younes & Al-Zoubi, 2015).

The use of Technology has become so intense that now we cannot get rid of technology. It has changed our world very drastically and now most people cannot remember what our world was before all these. Most of the people nowadays cannot imagine doing work

without the help of technology. Chelsea Greenwood has discussed how technology has changed our world and how it led toward the destruction of humanity.

All day work on computer makes person's posture hunch. Neck and back issue have been recorded more in recent years due to computer slouching. Every sight has suffered too much due to excessive use of smartphone. Sleep disturbance is common among geeks. Technology is so addictive that people although sitting next to each other have no idea of each other's situations. Lastly technology is leading humanity toward sedentary life (Greenwood, 2019).

Maria-Elena Osiceanu is a Romanian Author. She has discussed the consequence of technologies in both positive and negative ways. New technologies which are also known as modern technologies provide comfort and luxury as well as destruction at the same time. She used technophobia and technophilia as two extremes to study the relationship between technology, human and society.

Discussing technophilia she argued that term technophilia triggers strong futurist positive feelings. Those people who are in love technologies have no fear of its drawback, especially its social drawbacks. Technophiles are often egocentric. They are obsessed with technologies. Addiction is one of its major flaws (Osiceanu, 2014).

There is psychological disorder which is called internet addiction disorder. This term was first used by an American psychologist Kimberly Young. Generally, when we speak of addiction mostly people think it is associated with drugs, but addiction could be of anything. It can be of smartphone, computer, internet, and other technologies. In 2011 in diagnosis of mental disordered statics manual these psychological disorders were added.

On the other hand, technophobia is associated with fear and discomfort while using modern technologies. it is synonym to cyberphobia. Some author has regarded technophobia as pathological condition because some modern technologies emits harmful radiation so, it causes harm to body in pathological ways (Osiceanu, 2014).

So, Maria-Elena was of the view that technophilia and technophobia are legitimate responses towards technological means. Digital technologies' main drawbacks are in

psychological fields. There are lots of mental disorders which were not present before digital revolution. Technophilia and technophobia are also its outputs, these two are relatively new disorders.

Mansi Bosemia has discussed in detail the pros and cons of information and telecommunication technologies. How gadgets are useful and how its misuse can cause problems has been discussed in his report.

As human being we are always connected with lot of essential things in our everyday life. By the use of ICT gadgets in our lifestyle, many time-consuming calculation and tough tasks has become easier and social contacts has been increased. ICT has affected lives by improving timely distribution of information through the media and improved communications in homes and workplaces through social networks, emails, etc. ICT has extremely enhanced the quality of human life (Bosamia, 2013).

As it is known that human is a social animal so, he has to deal with lots of things every day. These dealing are now much easier and efficient, thanks to information and telecommunication technology. Information and knowledge spreads more precisely and accurately due to information and telecommunication technology. Social networks for example Facebook, twitter, WhatsApp, and Gmail has improved communication. In past people used to wait for week to send or receive a letter but now within a second, they can convey their messages (Bosamia, 2013).

After reviewing all those books, articles, reports, interviews, and blogs the researcher came to know that technological advancements have brought rapid changes in the world. These changes have both positive and negative aspects. Looking at positive aspects of technology it was realized that technologies has increased economy of societies and countries. Health care system and education has improved a lot as compare to pre-technological era. Technologies has proven very efficient and time saving but there are some negative aspects of technologies also. These negative aspects were mostly associated with social change. Technology was damaging family patterns and social life. Individual achievements have been encouraged more than communal goals.

Chapter 3

3.1 Research Methodology

Research methodology provides proper framework through which research is conducted. The most common methods are qualitative method and quantitative method. The method which the researcher selected for this research was qualitative method because the researcher must spend lot of time with my respondents, people whom the researcher was supposed to interview and observe. Qualitative method provides deep information so, the research opted for qualitative method.

This study has been conducted following interpretivist paradigm. In interpretivist paradigm there is no obsolete reality and objectivity rather there is subjectivity. Nature of knowledge is based on the interpretation of people. So, the researcher explored the interpretations of the people in order to collect data through interpretivist paradigm.

The researcher used anthropological lenses to look at this problem. Various anthropological tools, techniques and methods have been used in this study for the collection of required data. Some techniques were more suitable for the collection of data.

The anthropological field work therefore must have a number of research tools in his or her tool kit unlike the situation in laboratory science research tools in anthropology involve relatively litter in the way of hardware and gadgetry but require great sensitivity and self-awareness on the part of investigator (Pelto & Pelto, 1978).

For data collection different method were used which are follow.

3.1.1 Participant observation

Participant observation was done during this study. Participant observation is source of data collection in qualitative method. In participant observation the researcher joins the group from inside to collect data, to study and observe it properly. Generally participant observers are not known as researcher because they adopt the profession of respondents and of those who are being observed. For example, a researcher works with labours in order to collect data and observe the circumstances of labours.

Harvey Bernard argued that it involves getting close to people and making them comfortable enough with your presence so that you can observe and record information about live (Bernard, 2006).

Researcher interacted with the people of Alwara Mela on daily basis. Participant observation was generally used for in-depth and true information about the problem which the researcher wanted to find out. The researcher herself was an inhabitant of Alwara Mela, she was eyewitness to certain changes which have been brought by technological advancements. Participant observations were done in Alwara mela. Work in cattle house was done by the researcher. Agricultural activities were observed deeply. Time was spent with female tailors and the researcher helped her in sewing for the sake of participant observation. The researcher putted buttons on children's clothes in order to observe the process more precisely. Thus, through these ways the researcher has done her participant observation for this study.

3.1.2 Rapport Building

The main technique a researcher must use is rapport building. Rapport building was necessary part of this research. It was very important in order to get proper data and valid data. A researcher should establish good relationship with respondents and key informant. In anthropology a term is used "invisible in field" which means the actions of a researcher should not be different than that of respondents. she should eat what they eat, she should

wear what they wear, and she should do all other stuff which the respondents do. She should engage himself in their social activities.

Rapport building was relatively easy for the researcher. The researcher was an inhabitant of Alwara Mela. Most of the respondents were her relatives so, there were already familiar. Apart from relatives' other respondents were also ready to provide with an information, all the researchers did was just to ensure them that their privacy will be maintained. The researcher discussed the topic and purpose of the study but there were some people with whom the researcher was not familiar. Because researcher have spent most of life in Islamabad so, they did not recognize the researcher. Rapport was relatively difficult to build among them. The researcher visited to their home along with her aunt. The researcher's Aunt introduced the researcher to them, but they were not in favour of giving interviews. The researcher visited almost on daily basis to their homes and tried to convince them, so they should give information and allow the researcher to conduct their interviews. After two week the researcher was able to build her rapport and then they got ready to provide the researcher information. It created a friendly and corporative relationship between researcher and respondents. Then the collection of data was relatively easy.

3.1.3 Key informants

A key informant provides us a basic source of information about their culture. They must be chosen with care as they should be from the community which is being studied and are required to have a significant amount of knowledge about the community in order to help in understanding the local people's perspectives. Key informants are those individuals of the community who provide assistance in investigation with detailed knowledge and information.

The researcher's paternal Cousin Ahmad Afzal was key respondent of the researcher. He was with the researcher throughout this study. Females were interviewed without any key informant but in Pashtun society female's interaction with male was considered inappropriate so, that why Ahmad was chosen as key informant for collecting data from male member of the society. He went with the researcher whenever the researcher was supposed to conduct interview of male respondent. He was having many friends so, they

provided him with necessary information and Ahmad then passed that information to the researcher. So, he was a good key informant.

Aside from Ahmad the researcher's elder paternal Uncle also provided various information to the researcher. He was having a deep knowledge of Alwara Mela's history, how it was inhabited and how it has grown with the passage of time. So, he was also key informant of this study.

3.1.4 Sampling:

The researcher was supposed take sampling in that particular village. Sampling was used because it was almost impossible to measure and interview each and every person of village. Different methods of sampling were used in this research.

This study was conducted applying qualitative method and qualitative method is concerned with garnering in-depth study of any particular phenomenon so, sample size was small than quantitative methods. Sample size of this study was 32. These were people of various profession, age, genders, and their social roles were also various.

For this particular research, purposive sampling was used to select relevant respondents. The respondents were guided by the researcher. In this type of sampling, the researcher acted as an investigator. The researcher investigated those people who experienced changes in their life due to technology. Purposive sampling also helped the researcher to get in-depth data regarding research interests. Purposive sampling served its purpose in conducting in-depth interviews and arranging focus group discussions.

Key informants were selected by using convenience sampling technique. A convenience sample simply includes the individuals who happen to be most accessible to the researcher (McCombes, 2019). Key informants of this research were researcher's uncle and cousin who were most accessible to the researcher.

3.1.5. In-depth Interviews

In-depth interviews were conducted during this research. The main purpose of in-depth interviews was to get accurate and valid data. The researcher tried to collect proper and reliable information through in-depth interviews. In-depth interviews turned very

beneficial for this study. Interviews were further divided into two types. Semi-structured and fully structured interviews were taken for this research.

Semi-structured interviews are that type of interviews which have semi-structured interview guide. Semi interview guide was used for conducting semi-structured interview. The researcher conducted semi-structured interviews initially. Respondents were asked about simple information. Semi-structured interviews were mostly conducted to make them aware about the purpose and importance of this research.

After conducting Semi-structured interviews, the research interviewed the respondent with help of fully structured interview guide. Fully structured interviews were taken through interview guide. 32 in-depth interviews were taken during this study. Structured interviews turned beneficial in exploring every aspect of the life of people of Alwara Mela.

3.1.6. Focus Group discussions

Focus group discussions were conducted in order listen ideas of different people and to get information. Two focus group discussion were arranged during this study. First discussion was about cattle farm works and changes in daily routine. The researcher's aunt helped the researcher in arranging focus group discussion. She asked females of two households for discussion about their activities and changes in their daily lives. If they are willing to discuss and they have no objection, then her niece would like to discuss something with them. Females granted permission to the aunt of the researcher and they said that the researcher can come any time after 9 am for discussion. Three females of one household and four of another household along with researcher and researcher's aunt discussed the usage of technological advancements and routine changes in their lives. Each one of them discussed their time schedule before technological advancements and after technological advancements. Then they mentioned how technologies have saved their time in daily life.

Second focus group discussion was done in another household. Six females of two households discussed their views and ideas about technological. Two female members of one household were tailors while remaining were housewives. One of the researcher's female cousin was given them a suit for sewing so, she arranged second focus group

discussion and the focus group discussion was arranged to explore the economic changes due to technological advancements.

3.1.7 Socio-economic Census

" The field worker should try to make an enumeration of family units and their membership (or a random sample of such units) near the beginning of field work." (Pelto P. G., 1978).

Socio-economic census was used to collect quantitative facts. It was used to find out demographic, social, and economic aspects of Alwara Mela. Technique of Census survey was applied for figuring out statistical aspect of villagers. Through the help of these census forms, quantitative data was collected. Forms were filled to measure education level, names, marital status, sub-tribal group, family structure, occupation, income, and economic situation.

3.1.8 Daily diary

Daily diary was used for writing down the activities which were performed on the daily basis in the field. This technique was used to keep data safe and without errors.

In field, researcher dependence on memory can cause forgetting some important aspects that may lead to errors. The researcher noted her daily observation and activities in her daily diary. Later on, the researcher found that this activity of writing daily diary in the field turned extremely useful and helpful in maintaining, compiling, and retrieving the data record.

3.1.9. Field notes

A researcher must note down every important detail and every piece of information. Writing of field notes provide an opportunity to discuss event with respondents as well as other people that are workable in the thesis writing. The researcher used jotting for data collection.

3.1.10 Photos and videos

This technique is usually for documentaries. Researchers who want to make a documentary of his/her research use this technique. Like audio recording, the permission of the researcher is necessary for purpose. (Bernard, 2011)

The researcher used a camera for this purpose. The researcher takes snapshots throughout the research. Most of these snapshots were of agricultural activities, photos of locales and machineries. Photography was used for pictorial evidence. With the help of photography, the researcher was able to draw attention to relevant scenes.

3.1.11 Audio recordings

Audio recording was also an important technique to remember the conversation between the respondents and researcher. Through voice recorder, data was saved. The researcher recorded most of the interviews of this study. For this purpose, the consent of the respondent was necessary. Most of the respondents were having no issues regarding audio recording, but some respondents forbade the researcher to record their voices, so the researcher followed the ethics of social research and did not record interviews of those who were not ready for recording.

3.1.12 Ethical Considerations

Ethics was among the main consideration of this research. It was a responsibility of the researcher to follow the ethics of social research. Consent was first and foremost in ethical consideration. Informants and respondents were informed about the purpose of the study. All interviews were done under consensual approval. Some respondents forbade the researcher to record their interviews, so the researcher wrote down their interviews.

Privacy was also among the main ethical considerations of this research. Privacy of respondents was ensured. Their interviews and statements of the respondents were kept private.

Respondents were asked if they want to withdraw or quit an interview, whenever the researcher felt that respondents were feeling uneasy, they were given a choice to withdraw.

All information was provided to the respondents, no fake promises or deceptive statement were made during this study.

3.2. Research site

This study has been conducted in Alwara Mela. Alwara Mela is a village in Hangu district. It is located in the western side of Hangu city. It is 19 kilometre in the west of Hangu city. It is connected with Hangu city and Thall tehsil through main road called Thall Hangu Road. Latitude of Alwara Mela is 33.4759° or $33^{\circ} 28' 33.2''$ north. Longitude of Alwara Mela is 70.9094° or $70^{\circ} 54' 33.8''$ east. Alwara Mela's Elevation above sea level is 1003 meters or 3291 feet.

3.2.1. Geography and climate

Hangu is a district of Khyber Pakhtunkhwa province of Pakistan. The district takes its name from the town of Hangu, which is its administrative centre. The name Hangu is also sometimes applied to the Miranzai Valley, which is partially within the district, bordering the Samana Range.

Climate of Alwara Mela is similar to that of Hangu City. Summer is usually long. It starts from May and ends in the midst of September. temperature rises to 43°c in July. Winter is short as compare to summer. It starts in November and end in February. Temperature falls in winter and even sometimes it reaches to melting point. Spring comes in March and April.

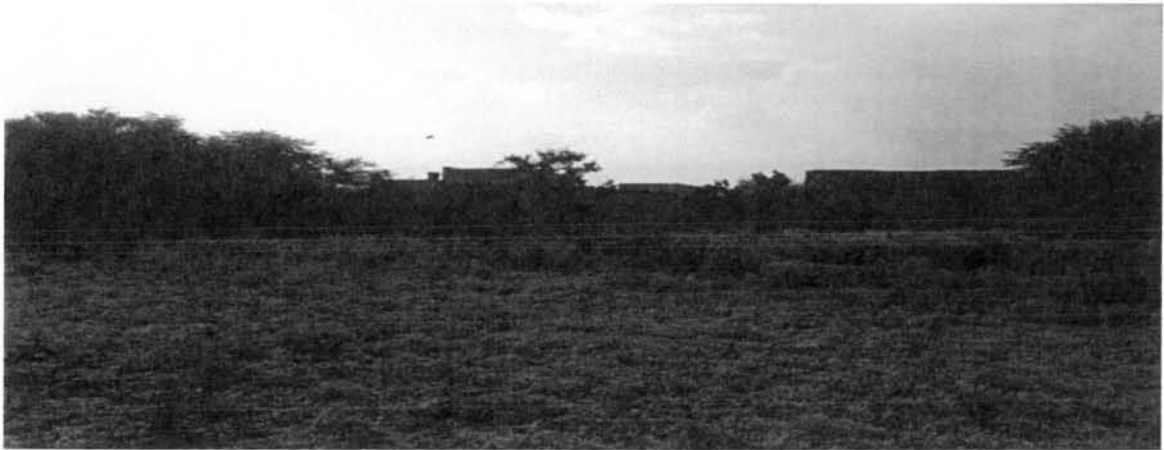


Figure 1. Alwara Mela

3.2.2. Administrative divisions

Hangu District is located in Kohat division of Khyber Pakhtunkhwa province Pakistan. Kohat division is among the seven divisions of Khyber Pakhtunkhwa. District Hangu, district Kohat, district Karak, district Kurram and district Orakzai are included in Kohat division. Hangu district is further divided into two tehsils Hangu tehsil and Thall tehsil. Tehsils Hangu is main tehsil of district Hangu. The name of Hangu district has been taken from its tehsil Hangu.

3.2.2.1. Hangu

Major town of Hangu district is Hangu. Central city of Hangu district is called Hangu Bazar. There are many villages and towns in Hangu. Kach Banda, Darsamand, Kotki and Zargari are among those towns. There is one civil hospital in Hangu.

Various public and private schools and colleges exist in Hangu district. A campus of the Agriculture University was supposed to build in Hangu, but the project is still pending, as the funds were allegedly transferred to Charsadda by the ANP provincial government. Recently the government degree college Hangu start BS Hons 4-year program under Kohat University of Science and Technology. There are two government high schools for boys and two for girls in Hangu. The first government high school was built in 1935 in British era. Two Government Degree colleges for boys and girls and number of Private institutes are serving well in promotion the education in the area.

3.2.2.2. Thall

It is administratively subdivided into two Union Councils. It is separated from the North Waziristan Agency by the Kurram River. The Peshawar-Thall and Thall-Parachinar road passes from here which is an important route of this area. It is around 4 hours' drive from Peshawar and about 3 hours from Kohat.

A major Bazaar or market of this region is located in Thall which is a hub for traders from Kurram agency, Afghanistan, and adjoining areas. The Historic Thall fort built by the British in 1909 is located here, which serves as the Head Quarter for Thall Scouts, a Paramilitary unit of Frontier Constabulary. During hot weather people visit the Wali Chena

(Wali Spring), a small spring with cold water, where they can bath. There is a small forest named Toor Koot, which is popular for outings and picnics.

3.2.2.3. Etymology

The name Hangu may have originated from Chinese travellers. Hangu is also the name of a place in China, and since many Chinese travellers have passed through the area for centuries, it is possible that travellers, like Hiuen Tsang saw some similarities with their own region and thus named it 'Hangu'. There are also two graves of Sahabas (Companions of Prophet Muhammad SAW) in the village of Darsamand Tehsil Tall, which is verified by many Islamic Scholars (Ulama) especially Sheikh UL Hadees Molana Hasan Jan Shaheed.

The selection of locale was a matter of great concern for a female researcher that involves intensive traveling, staying in an unknown community, and integration with different people talking to them by setting with them for a limited time, taking part in their social and religious activities to win their hearts and minds, and eating and drinking with them. After having deliberations with the supervisor, classmates and family members, the village Alwara Mela was selected as the local of the study. The village is the part of district Hangu in the province of Khyber Pakhtunkhwa. The local was easily accessible.

3.2.2.4 population

According to 1998 census the population Hangu district was three lakh fourteen thousand seven hundred seventy-four. Male population was 49 percent and female population was 51 percent. According to new census which are held in 2017 the population of the Hangu has increased to five lakh eighteen thousand seven hundred ninety-four. Male population is 48 percent while 52 are female.

The population of Alwara Mela was consisted of 494 inhabitants. Male population was 243 while the population of females was 251. Rabia Khel were in majority in Alwara Mela. 20 households in Alwara Mela were of Rabia Khel subtribe, 11 households were of Ali Khel, 7 were of Li Khel while 5 households were of Mali Khel subtribe. There were 43 households in Alwara Mela in total. Each household was containing more than 11 members on average. The structure of house was not uniform. 4 households were *Khachay* in Alwara

which were made of clay, 11 were *neem Kacha* in which partially bricks and partially clay was used while remaining 28 were *pakky* which were completely made of brick.

11 households of Alwara Mela were almost fully dependent on agriculture while 18 household were partially dependent on agriculture. 38 households were having cattle in their houses. 29 of these household were having cattle which only fulfilled the requirement of dairy product their own. They were not having surplus dairy products. 6 household were having flocks of cattle and their main source on income was these flocks. 3 household were having little surplus of dairy product which likely used to sell out. Family members of 27 household were in Gulf countries for the sake of livelihood.

3.2.2.5. History of Alwara Mela

There was no written history of Alwara Mela. Since there was no education back then so, exact date of its settlement was unclear. Most of the history was based on oral evidence. Old men of the village narrated the history of Alwara Mela orally.

First settling down of population in Alwara Mela was believed to started in 1928. There were few members of Rabia Khel (Subtribe of Orakzai Tribe) who were settled there. Alwara Mela's soil was fertile so, the people in order to cultivate different crops started settling down in Alwara Mela. So, after Rabia Khel some other subtribes of Orakzai tribe also started living there.

3.2.2.6. Subtribes

Alwara mela is inhabited by Orakzai Tribe. Orakzai is Pashtun tribe of Karlani tribal confederacy. Karlani is branch of Pashtun tribal system. Karlani is divided in two major tribal groups. North Karlani and South Karlani. Bangash, Afridi and Orakzai are North Karlani Pashtun tribes while Wazir, Mehsud and Dawar are of south Karlani.

There are four subtribes of Orakzai tribe living in Alwara Mela. Rabia Khel the first inhabitants of Alwara are in Majority. Apart from Rabia other subtribes Orakzai also live over there. Ali Khel, Li Khel, and Mali Khel are among those subtribes.

3.2.2.7. Language

Pashto is spoken by the whole population of Alwara Mela. Pashto has many dialects which are spoken in each different region. As it is known that Orakzai belong to North Karlani tribal confederacy so, the dialect of residents of Alwara Mela is north Karlani Dialect. This dialect is identical to dialect of Afridi and Bangash tribes because these are also belonging North Karlani confederacy.

One common feature of this dialects is the use “o” quite frequently. In other Pashto accents whenever, sound “a” is used in North Karlani dialects it is replaced with “o” sound. For example, there is word Kha which is used for ok in other dialects but in Orakzai Dialects it is pronounced as Kho.

3.2.2.8. Family system

People of Alwara Mela has very strong kinship system. Relationships are considered very important aspect of social life of people over there. There are strong kinship ties among all subtribes. Villagers are very respectful to their elders.

Most of the family are of extended nature. There are usually ten to fifteen members in an average family. There some families whose members are more than twenty. Now some people are adapting nuclear family system, so the members are those families are not more than six or seven.

3.2.2.9. Religion

People of Alwara Mela are Muslims. Population of Alwara Mela follows Sunni Islam. Hundred percent population of Alwara Mela is Muslim. People are practicing Muslims and they do practice every Pillar of Islam for example Shahada (Profession of Faith that there is no God, but Allah and Muhammad is last prophet of Allah), Namaz (a prayer which are offered five times daily), Roza (Fasting during the month of Ramdan), Zakat (Donation to poor people from their income) and Hajj (a Pilgrimage to Mecca).

People of Alwara Mela belongs to Hanafi School of thoughts. According to Sunni jurisprudence there are four school of thoughts namely Hanafi which was founded by Imam

Abu Hanifa, Shafi school of thoughts which was founded by Imam Shafi, Maliki school of Thoughts which was founded by Imam Malik and Hanbali school of thoughts which was founded by Imam Ahmad Bin Hanbal. People of Alwara Mela are orthodox Hanafis. Their religious obligations are according to Hanafi school of Thoughts.

In Pakistan Hanafi school of thought has two major subbranches Brelevi and Deobandi. Brelevi follow religious ideas of Madrassa e Bareli (a religious school in Indian state of Uttar Pradesh's district Bareilly) while Deobandi follows religious ideas of scholars of Dar ul Ulom Deoband (a religious school in Deoband in Uttar Pradesh). People of Alwara Mela have strong affiliation with Deobandi scholars.



Figure 2. Masjid Hazrat Abu Bakar

3.2.2.9.1. Tablighi Jamaat

People of Alwara Mela are affiliated to Tablighi Jamaat. They used to spend some time with Tablighi Jamaat Members. There are various time spans which people who are affiliated with Tablighi Jamaat are supposed to spend. There are specific terms for specific timespan in Tabligh. Three days preaching are called Sah Roza, forty days timespan is Called Chila, and there are long duration timespans also for example 4 months, seven

months, and one years. People of Alwara Mela are very committed to Dawaat E Tabligh and they often went across the country in this regard.

3.2.2.10. Education

There are few educational institutions in Alwara Mela. People of Alwara send their children to different institutions in order to get education. Children are sent to Masjid to get Islamic education and to learn the Holy Quran. For general education they are sent to schools and colleges. There is only one Government school which provide education up to matric in another village. People of Alwara enrolled their children int that school.

There is only one primary school “Government Primary school Alwara Mela” in Alwara Mela. Aside from Government school There is also a middle school named Khushal Public school which provide education to students of Alwara Mela. For further studies, the students of Alwara Mela are supposed to go Hangu city.



Figure 3.Khushal Public School, Alwara Mela

Literacy rate of Alwara is below average especial when it to girl’s education. 60% male are educated. The literacy rate among elders of the village is less than 10% percent. Young ones are relatively more educated, and their literacy rate is almost 35%. Literacy rate of

Children comparable to standards of Pakistan. More than 80% percent of children are enrolled in educational institutions in Alwara Mela.

Literacy rate of females are almost negligible, very few elder females are having basic education while female children have around 40% of literacy rate. Most of the parents of those female children argued that they will allow female children only for primary or middle standard of education.

3.2.2.11. Political system

People of Alwara Mela are conservative Pashtuns. They have maintained their old political system. Family politics stays within the family. Decisions are often made by the elders of the family. Grandfather, father, and uncles have the authority to make decision or implement certain roles.

Village politics and dispute resolution are done through jirga. Jirga is very important political aspects of people of Alwara Mela. Elders of the village gathers in a ground and discussion are made in order to resolve issues. Jirga is symbol of pride and dignity for the people of Alwara mela.



Figure 4. Jirga For Dispute Resolution

Apart from local and traditional politics the people of Alwara Mela also participated in politics at provincial and national level. People of Alwara Mela casted their votes to various

parties in 2018 general election. Political affiliation of people of Alwara Mela were with Pakistan-Tehreek-e Insaaf, Jamiat-Ulema-E-Islam and Awami National Party. Majority of people voted to Pakistan-Tehreek-e-Insaaf. Member of national assembly and member of provincial assembly both from PTI. Shah Faisal Khan is MPA of constituency PK-42 and Khial Muhammad Orakzai is MNA of constituency NA-33. Alwara Mela falls in these constituencies.

3.2.2.12. Transportation

Transport system of Alwara Mela has been developed in recent years. There is one main road which leads towards Hangu city and another road to Tehsil Thall. There was a stop nearby Alwara Mela which is called Alwara Mela stop which is used by the people for the sake of transportation. Alwara Mela stop is used for local transportations. This stop provides routes to both sides Hangu City and Thall Tehsil. There is no rail track nearby Alwara Mela, not even in Hangu city.

There are various means of transportation used by the people of Alwara Mela. Those people who were not having any mean of transportation were more likely to travel in local transport as mentioned earlier. Datsuns and Sazgar Rickshaws were main means of local transports. Apart from local transport mostly people were having Motorcycles and Qing Qis in their homes. These were most commonly used means of transportation in Alwara Mela. Aside from motorcycles and Qing Qis, cars and pickups were used for transportations. All those means which have been mentioned above were solely used for carrying people. For logistics, vegetables, fruits, luggage, and other items Datsuns and tractors were used. Datsun were used for carrying vegetables, fruits, and luggage to the Hangu city and other places nearby while for heavy load like construction items tractors were used.

Chapter 4

Technology and alteration in daily routine

4.1 Changes in daily life

Usage of different technologies have changed the lifestyle of the people of Alwara Mela. The usage of technologies was beneficial for example it was time saving, efficient and less labour was required than orthodox ways of doing working but there were some negative aspects of these technologies also which effected the lifestyle of people of Alwara Mela much. Here all the consequences of technology have been discussed whether it was positive sides of technologies or harmful aspects regarding daily routine.

Due to technological advancements the life standard of rural people was changed. In urban and suburban areas, the standard of life was changed way back but in Alwara Mela the situations was changed in recent years, so the people of rural areas were much expose to this change in day-to-day life.

As discussed earlier technological advancements have shown its impact on change in the daily routine of the people of Alwara Mela.

Usage of technologies had positive aspect which were reported by the villagers. Easy access to many things which seemed hard in past was a positive side of technology. Technologies were time efficient, those tasks and works which were supposed to take weeks were done within hours. Technologies were labour efficient also, in past before the emergence of technological advancements much more labour was required whether it was in agricultural work or work at home, but in post-technological era due to machinery the labour was much less, and yield of agricultural land of Alwara Mela was increased.

4.2. Changes in routine life of rural women

Technological advancements and its usage improved the life standard quite a lot and yet there were more to be desired. The changes in routine life of rural women were noticed during the interviews and data collection. The attitude toward these changes were

somewhat mix up. Some women argued that these advancements have made their lives much easier while others were of the view that due to these technological advancements, they have some serious concerns about their future.

Assistance of technological advancement in household task was time saving. Tasks which used to take hours, were done in minutes with the help of modern technologies. In Alwara Mela Household tasks like cattle house activities, agricultural activities, water collection, food preparation and processing, visiting, and traveling, nurturing infants and children, looking after ill and elderly people were those kinds of tasks which were performed almost on the daily bases. Most of these works were quite burdensome and most of their time were consumed while performing these tasks but in post-technological era drastic change was reported in performing those activities which have been mentioned above.

4.2.1. Cattle house activities

In Alwara Mela people were supposed to wake up early in the morning because there was some sort of works which were needed to be done in morning time. Women of Alwara Mela were to look after their cattle house. After cleaning Ghojal (cattle house), and collecting the dung of the cattle, they were to collect milk of those cattle which yielded milk but due to the usage of technology these works were done much quicker than previous time. Milk machine was used for that purpose. This trend was not common among all the villagers but those who were having more than five cattle (including both cows and buffalos) were using this machine. Asking about the benefits of milking machine, one respondent said that they were supposed to keep three or four cattle in households because they were supposed to do agricultural activities and other work too. Whenever the number of cattle were increased, they were bound to sold out those extra ones because it was very difficult for them to keep more than four cattle in cattle house due the burdensome works of cattle house. So, the economy was at subsistent level. Then they bought milking machine and Toka machine (chaff cutter machine) for cattle house. Now they milk more cows at the same time. Previously one woman was supposed to collect milk from cows. She would like to milk cows one by one. It usually consumed few hours of her time. Grass and chaff cutting were also burdensome and time-consuming works but with the help of Toka machine, grass was cut down within few minutes. So, it has saved our time quite much.

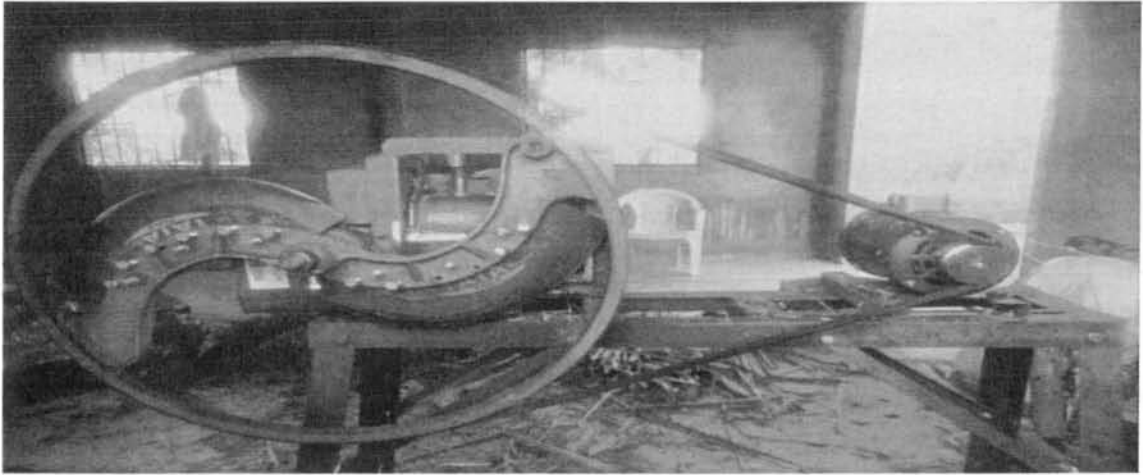


Figure 5. Toka Machine

Then after collecting milk, the processing of storing milk and converting it into other stuff for example yogurt, cheese, butter, and Shomlay (butter milk) were also impacted by electric machines. Asking about butter process one respondent argued that few years back they used a wooden Madhani (Homogenizer) which was driven through hands. First they were to put Yogurt into a pit then water was poured in the pit and then hand Madhani was supposed to be driven for an hour almost. Sometimes it took more than hour depending on the thickness and quantity of the yogurt. It was much time-consuming exercise. Two years back they bought electric Madhani. They reported that now it converts yogurt into butter and shomlay (Butter Milk) within 15 minutes. They switched it on and then it operates on its own. They were free to do other works after 15 minutes someone stitched it off and then they collected butter from it while shomlay remained in the pit. Electric Madhani which was used for converting yogurt into butter and shomlay (butter milk) revolutionized the time management of women of Alwara Mela. Before electric Madhani women were supposed to rotate those hand driven Madhanis for hours so, indeed it has saved their time so much.

5.2.2 Routine Activities in the fields

Work in fields also been turned time saving due to usage of technologies. The productivity and yielding per acre have been increased but it also brought changes in the daily routine of people who lived in village and were doing work in fields.

In the village both genders spent their times in fields. The time which was spent in fields was drastically reduced due to technological advancement. During harvesting season men and women were supposed to harvest crops with sickles. Asking about field works in fields, one man told “that usually they would like to go to fields after offering Fajar and then they would have to work in the field till lunch time, usually 10 to 11 am. At 11 o clock they returned to home and eat our lunch. They got some rest and then they offered Dhuhar prayer and take some tea. After that they were again supposed to work in the fields and harvest the crops. 5 five members were barely able to harvest kanal¹ of area in a day but last year they harvested their crops with crop ripper. It took one hour in harvesting more than one acre of their crops. After that they bonded those wheat and it was ready for tractor Thrissur for further processing. It took two days whereas before utilization of crops ripper it took more than week. They again planned to hire ripper for next time because it has reduced labouring, and it was a time saving machine”.

Herbicides have also reduced the field activities of people of Alwara Mela. For example, few respondents argued that five, six years ago in case of other herbs in the fields we were busy whole day in removing harmful herbs from the fields. For example, during wheat season whenever herbs grown in the field which were responsible for the decreasing the growth of wheat, they were working whole day in field and it would continue for week or sometimes more than week, but now a chemical spray is done in the whole in just few hours. Almost one week of their time was saved by those herbicide chemical sprays.

¹ Kanal is equal to 505.857 square meter.

5.2.3 Collecting water.

Water is a great blessing of Allah Almighty. Water was used for many purposes in Alwara Mela. The main purpose of water was for drinking. Apart from drinking, water was used for cleaning, washing, preparing, and processing food. Water was also used for livestock care in Alwara Mela. In Alwara Mela there were huge underground water resources. Usage of technologies restricted time consumption in water collection in Alwara Mela.

In pre-technological era there were few wells of fresh water in Alwara Mela. Women used to go to those wells and collect water from the wells with the help of bucket and rope. Rope was attached with bucket; it went through the well's bottom and water was carried in that bucket. The bucket was then poured into Mangi². After filling those Mangis, it was carried on the heads to homes. It was very hard labouring as well as much time was consumed while doing this.

In post-technological era in Alwara Mela there were water pump in each household. Most of these water pumps were electrical pump but, in some households, there were handpumps also. Water collection which took hours in pre-technological time were done within minutes then. Hand pumps took more time in collecting water but still it was less time consuming as compare to water collection from wells. Mangis were brought only for drinking, other works for example cleaning, washing and for cattle water the process was different. Women argued that in past they carried clothes to the stream nearby, then they were supposed to wash those clothes over there. Sometimes women took whole day while washing clothes but after installing water pumps, water was available at homes and all they needed was to push the button of washing machine.

Cattles were brought to wells or stream for watering. Sometime the cattle of whole village were gathered at same time and generally it took hours then, because lots of time was time spent while getting their turns. But now there were tankis (Water tanks) in those houses which were having lots of cattle. They used to fill it up and thus water was supplied instantly to the cattle they needed it.

² A Pashto word for Pitcher.

5.2.4 Preparation of breakfast, tea, and meal etc.

In pre-technological era, in Alwara Mela like most of the villages nearby there was no gas. People of Alwara Mela were using woods as fuel. Woods were relatively hard to burn up but in post-technological era most people were having liquid petroleum gas cylinders in homes. These cylinders saved their time quite a bit because the use of wood as burning fuel consumed more time than gas fuel. Apart from time consumption the fire of woods was inconsistent. It extinguished sometimes on its own and the rate of burning was also inconsistent, sometimes its flames got higher and sometimes it got lower.

During this study, the women who were living in Alwara Mela claimed that, in past we would like to go outside the village for collecting woods and strays. We often used to go for collecting woods in early morning. We returned to homes after collecting woods and sticks. It took some of our time daily. In monsoon and rainy season those woods became wet, and we were unable to fire it up. Sometimes it took hours for burning it up. But now we use gas cylinder for instant cooking. Gas connection facility is not provided to us, but we use Liquid Petroleum Gas in cylinders. A cylinder is filled with LPG and then it is used for occasional work and breakfast preparation.

Usage of LPG was much time saving. Tea, breakfast, and other instant meals were done within few minutes. Iron stoves also contributed to time saving in Alwara Mela. Almost each household owned stove. These stoves were consistent as compare to clay and bricks fireplaces. Breakfast were done in one and half to two hours back then, but it could be done in just thirty minutes.



Figure 6. Mela Preparation

Roti maker was also used in some of the houses which reduced the time much more. Juicer and grinder were time efficient electronics which were used by the villagers. Asking about grinding one respondent told me that in past we used to grind pepper, garlic, and spices in wooden and stone bowls. It took some time now we are able to grind it within a minute. So, indeed technology has saved our time.

5.2.5 Nurturing the children.

Women reported that nurturing of children has also become easier. A feeder was prepared in few minutes and it engaged child for an hour. Women got some leisure time through feeder which was further used in some other activities.

Different gadgets and toys have also been taken into consideration to engage children in other activities and women freed themselves for some time.

5.2.5.1 Case study

Razia was a housewife. She was having two children one daughter and one son. Her daughter was two and half years old while her son was of five months. Her husband was working in Dubai for earning livelihood, she was living with her father-in-Law and mother-in-law. She was doing lots of work in home. Preparing meals, milking, and feeding cow, washing clothes and lots of other work were done by her.

She claimed that she was not having enough for her children due to heavy workload. One day she asked her father-in-law to purchase a cradle for her children. Her father-in-law brought cradle for her children. Her mother-in-law used to swing to her children when she was busy in work. A rope was attached with cradle so, her old mother-in-law swung that cradle without getting close to the child. Most of the time she swung it from her cot. So, this cradle gave Razia time for other works.

She argued that children's formulas were also saving her time. In past whenever a baby cried, she used to quit all of her work and she need to feed her/him but now lactogen and Nido (infants' formula) are prepared by her mother-in-law for her children. It was very easy to prepare. Although her mother was an illiterate but there were lines on the feeder and according to each line one tablespoon of powder were putted down in the feeder. So, she prepared it very easily and thus Razia got time for other works.

5.2.2. Professional women and changes in their routine

Few of village women were self-employed and they were having some sort of economic independence. For example, there were some women who were doing sewing works. They reported that technology has saved much of their time and labour. They were having hand machines in recent past but now they have moved toward electric machines. Electric sewing machine takes less time.

Those women were preparing one or two clothes per day back then but now due to these machines they were able sew more than five clothes per day and during the times of heavy workload for example at the occasion of wedding in the village or Eid, the time consumption was more noticeable and then they realize the need and importance of technology. Less time was spent on sewing means more time was saved and more time was available for other activities.

7.2.2.1 Transportation

Another big concern was related to transportation. In Alwara Mela transportation was not that developed as it should be, but respondents argued that now transportation has better than past. In past usually there were Datsuns only, which were used for traveling. Datsuns were used for going to Hangu city or other places. These Datsuns arrived late due to

inconvenience. It was difficult for people to travel freely but in post-technological era there were motorcycles in almost each household. These have made traveling lot easier. People travelled to Hangu and other areas whenever they wanted to go, without any difficulties. Apart from motorcycles there were chingchis (a three-wheeler rickshaw) available in the Alwara Mela. People used to hire those Chingchis in time of need. It has saved quite much time of villagers.

In Alwara Mela people of various profession lived. There were some government employees. For example, two women were teachers at primary school, and one was lady health visitor.

According to school's teachers the time consumption in reaching school and in returning, has been reduced noticeably. A brother of one teacher was picking her up and dropping at school. The school was three kilometres far and usually it took almost an hour to reach but they claimed that can reach within ten minutes. The other one argued that she, her nephew, and nieces have hired a chingchi. Chingchi picked them up in the morning and drop them when school time is over. So, this rickshaw has saved lots of our time as well as it also safe.

Another woman was a lady health visitor she claimed that her son took her on the bike to health care facility and returned her to home within few minutes. So, it has changed her routine marginally. She claimed that during polio campaign she was supposed to spent whole day in order to give polio vaccination to children, but now thanks to motorcycle she usually returned in afternoon. Which was indeed a routine changing for her.

4.3 Negative changes

Well, there were lot of positive aspects of technologies but there were some limitations of these technologies also which were mentioned by the villagers. Technologies did not cover up the whole process of work. Apart from its limitation, there were some serious shortcomings of the usage of these technological advancements.

4.3.1 Routine disturbance due to usage of technology

People in Alwara Mela cared much about their values, norms, and mores. Their reluctance about these social elements was much more than those people lived in cities. Some of the respondent argued that although technology has improved the lifestyle, but negative aspect was also there in cultural context. They were of the view that technology has messed up with their culture.

People of Alwara were very strict follower of Pashtun culture. Hujra was a place where Pashtun male used to talk and stay. People of Alwara mela also discussed their issues in Hujras, and other discussion were made over there. Hujra was also a place where guests were served. Hujra was a place where norms and values were regulated but due to usage of technology Hujras were deserted. Asking about technologies and daily routine one respondent argued that “Os kho sok po Hujra k na keni, nan saba ko tol khalaq pe khapal gham lgya dy da bal cha fikr nashta wer sara. (Nowadays people have no time to stay in hujra. They have become individualistic, and they do not care about others). People are abandoning Hujras, people who were supposed to spent some of their time in Hujra on the daily bases were having no time to stay in Hujra, due these technological advancements. They spend that time using mobile or doing work to make more money. So, usage of technologies has shown its drawbacks in time consumption in Hujras.

4.3.2 Routine disturbance due to use of mobile

Some elders claimed that nowadays people spent most of their time on a smartphone, the use to watch dramas and movies on a smartphone till late night. In village there was the concept of early to bed and early to rise. But due to mobile usage to go to sleep late and in morning they wake up late. It disturbed the life of a household badly.

4.3.2.1 Case study

Rashid Khan was 22 years old. He was doing his graduation for degree college Hangu. Her family told me that Rashid Khan Spent most of his time while watching movies and tv serials. According to his family he spent ten to twelve hours daily on a smartphone. He did not do any work. He often slept late at night. Sometimes he spent whole night while watching tv serials. He was giving no time to his education and thus they were very worried

about his future. Over the past six months he was addicted to tv serials. He became very irritable. Rashid's parents were worried, and they argued that he might face psychological disorders in future due his addiction.

Rashid himself confirmed the statement of his family that indeed he has become so lazy that he cannot perform any task. Mobile has made him an addict. He used to watch Pakistani and Turkish dramas. He also used to watch Bollywood movies. His father often scolds him for that, but he did not quit watching dramas.

4.3.3 Spending leisure watching tele vision.

Women of Alwara Mela reported that due to the usage of technology they get much time for leisure activities, but they spent this time in watching television. Technology saved quit much time of women so, they used that time while doing other activities. There were dish antennas in some households. Various Pakistani and Indian channels were available through dish antennas. Some of women of Alwara Mela spent their time watching Indian and Pakistani tv serials.

Women were becoming addicted to television content. They used to watch dramas and other programs on television. Most of them argued that they watch television only at night. Routine was changed due to dish antenna. Night was spent till sleep time while watching television. They were having no work do after Maghrib prayer so, they preferred to watch television instead.

4.3.4 Disturbance in children care

In Alwara Mela mothers were supposed to spend a specific time with their children. But due to the usage of technological stuff they somehow created a distanced relationship with their children. Routine time which was necessary for a mother to spend with her offspring were spent in idle activities back then. This complaint was heard from the mother in laws of three women. Their mother in laws argued that "*zoi mobile har wakht da dayi sara ve kho chy sok pokhtana tery woka chy lag kaar woka wo khapal bachi khayal wosata no bia worta woyai chay da kho me de zoi dy*". **Translation:** Every time they are busy in their phones but when someone schools them for being busy with phone and not caring for their infants, they often reply that it is their sons' smartphones.

This reflected the restricted as well as flexible nature of the village because having a smartphone was considered bad for a woman but using someone else's smartphone was normal. Women showed a tendency avoid the ownership of the phone. Women who were having phones argued that they use phones of their eldest sons.

Chapter 5

Technological influence on social life

5.1. The impacts of technology on social life

The technological advancements as it was known shifted the phenomenon of understanding of different things, and these advancements also have shown its impacts on social life of Alwara Mela. Due to the usage of technological advancements the values system of Alwara Mela was changed somehow.

First talking about the first part of the objective that how technology has affected the social life of the people of Alwara Mela. Technology was responsible for bringing change in family affairs, education and learning, religious obligations, and village politics. So, after observing the drawbacks of technology the researcher came to know that all these institutions were affected badly by this trend.

5.1.1 Family

Family the most important was disrupted by the technological advancement in Alwara Mela. Those traditional way of interacting with each other and making alliance with other families were somehow replaced. Alliance based on sub tribal units and clans were fading away. Personal goals were given more importance than communal goals.

5.1.2 Technology as source of keeping members closer to each other.

Technology has brought family member closer in Alwara Mela. This phenomenon was only applicable in those cases where some members of a household were far from home. A good number of People of Alwara lived in other cities and other countries in search of livelihood. Through telecommunication distances was reduced and contacts were done in minutes. So, it was indeed a positive factor because in past the contact was so difficult that even sometimes it took months to inform someone.

A good number of people of Alwara Mela were abroad. They were living in gulf countries like Saudi Arabia, United Arab Emirates, Qatar, Oman, and Kuwait. Most of them stayed for several months sometimes even for year or more. Some of the respondents argued that in past we used to send letter and audio cassettes to our loved ones who lived in abroad. Almost month was required to in order to get reply from them, but now mobile phone have minimized the distances. Last year Telenor tower near by the village was upgraded to 4g. This upgradation has revolutionized the contacts between Alwara Mela and Gulf countries. Now people has been contacted with loved one via different social media platforms. Videos call on Imo and WhatsApp has restricted the distances. Now on the daily bases call has been made. Thus, modern technologies have brought people closer to each other.

5.1.3 Restricted interaction due to technologies

Apart from positive factor, technology was having a negative factor also. Although it has minimized the distances, but it has also damaged some of the most important aspects of family. Some family members were preferring to spend time on social media than spending it with family member. They lived in their own world and their concerns about family was not that much.

Family life were torn apart due to technologies especially advancement in telecommunication field. Physical interaction was restricted by smartphones. Smartphones and social media had created a wide generation gap between the elders and younger in Alwara Mela. Most of the parents reported that their offspring prefer to spend time on smartphone instead on attending any family function. Apart from this, they also do not want to follow social obligations. Smartphone and social media have limited the interaction between father and son. According to one of the respondents “we are afraid that in future we might lose our young generation in this technological war, means that they will not follow our values and standards”.

5.1.4 Technology as dividing factor

According to few people, in Alwara Mela technology was communal dividing factor. They argued that with rapidness of innovations and its usage people has become individualistic

in Alwara Mela. They sometimes leave their values behind to achieve personal benefits. Technology has estranged people from one another and even family members were not in good terms with each other. Technology was responsible for encouraging egoism and consequent loss of compassion were more visible in dialogues of people according to the respondents.

The generation gap was more obvious. The young ones were now neglecting their cultural heritage and virsa. The elders wanted to sustain their heritage but there were bound in some way which prevents them to sustain their social order and cultural heritage.

The old generation of Alwara Mela were of the view that technology has made people materialistic and selfish which was not the case in past. The young generation were labelled as disobedient by elders. In past, in family matters the opinion of elders were considered much valuable and appreciable but now they were neglected by their own family member by saying that now time has been changed and elders do not understand the needs of this time.

5.2 Education

The impacts of technology on education was so huge in Alwara Mela that it was very difficult to cover the whole perspective. Technology and modern means of communication have profoundly the changed the culture of education in Alwara Mela. Modern means of technology were expended their access to education greatly. Technology was source of transformation of education in many ways. It was making everything easier for both the learner and teacher in Alwara Mela. There were positive and negative impacts of technology on education.

5.2.1 Benefits of technologies in educational field of Alwara Mela

The positive impacts of technological advancement on education was so vital in Alwara Mela that no one was neglecting the importance of technology in daily life. Easy access to different thing, online learning process and different other educational stuffs was so easy to access due to telecommunication technologies. In Alwara Mela there was technology in everywhere in education. Although some teachers in Alwara Mela relied on the traditional methods of teaching but when students encountered with technologies in their school and

colleges the end result was way better than traditional one. Technology was providing them wide range of options and learning style so, according to students they were not bored from lecture given on multimedia or computer screen.

Lastly technologies were demanded by the students. Most of the students were of the view that orthodox and traditional ways of teaching and learning should be banished because technology provide much more clarity in learning process. The positive impacts of technology were seen in formal education mostly.

5.2.2 Easy access

Easy access to educational tools brought some drastic changes in the education in Alwara Mela. Students of Alwara Mela argued that there were many books and articles available at affordable price and this all due to technological advancements. Notes of teachers were copied with help of photo copier and thus they were able to get any kind of notes, thanks to these technologies. Reading, informative visuals, audios related to study, newspaper and other things were so easy to access. In past one should go to book depot, or library for this kind of thing now it was available just by one click.

5.2.3 Transport facility

Easy transportation made education much easier in Alwara Mela. The elder people of the village who were educated claimed that we used to go town for education, which was more than seven kilometres away, but the transport has made life much easier. There was few school and colleges in Hangu district so, indeed education was difficult to get but technological advancements and transport facilities have made education more accessible to rural population. Most of the students were having motorcycles in Alwara Mela. Two or three brothers or cousin were supposed to go to school and college on those bikes. Aside from bikes some of the parents have hired Chingchis for their children. Chingchis were doing pick and drop service in Alwara Mela. There was almost no male child under ten years who was not admitted in a school.

Students who were doing their intermediate and graduation were enrolled in colleges in Hangu city. Hangu city was 19 kilometres away from Alwara Mela but due to technological

advancement students were able to reach within thirty minutes. Students were the among the main admirer of technologies in Alwara Mela.

5.2.4 Mobile, television, computer, and internet facility

More visible and desirable means of technology when it came to education was the usage of mobile, computer and internet. In past there was no such facilities, so people were paying much hard work in order to get education but post-technological era, the boys of school, colleges and universities were having all these facilities which have made their learning process much easier.

According to students YouTube provided a wide variety of contents. Topic related to each subject was easily available at you tube. Apart from you tube students were easily sharing reading and other helpful materials via WhatsApp in order to get better results.

5.2.4.1 Case study

Ahsan was 18-year-old inhabitant of Alwara Mela. He completed his intermediated in 2019 in pre-medical from Board of intermediate and secondary education Kohat (Hangu is part of Kohat division, and it does not have its own board of education). He argued that technology has changed his learnings and his marks have been improved quite a much with help of technologies. In first year, Ahsan only read those books and notes which were provided to the students by their teachers. Ahsan was facing difficulties in understanding chemistry, physics, and English. In first year of his intermediate he scored 363 marks out of 550. He claimed that 66.6 percentage was not satisfactory result.

In 2018 his father gave him Samsung Galaxy A5 smartphone. Ahsan started positive use of that mobile. Ahsan started improving his chemistry by watching animations of chemical reaction among atoms. Nomenclature was easily learned with help of YouTube videos and the main concepts of organic chemistry which was having an important chapter in 12th chemistry's textbook, was cleared with the help of lecture available on YouTube. The formulas and numerical of physics were also learned with the help of You Tube. Ahsan learned most part of his English course from you tube. King Lear and Merchant of Vince (Dramas of William Shakespeare which were part of 12th English coarse) were watched on You tube. So, in short Ahsan did lots of his study on his smart phone. In 2nd year of

intermediate he scored 432 marks out of 550. He jumped from 66.6 to 78.5 percent. According to Ahsan this was all due to technological advancements in Alwara Mela especially with the availability of 4g connectivity in village.

5.2.5 Drawbacks of technologies in the field of education

As there were so many positive sides of technology when came to education yet there were some shortcomings also. The technology was responsible for making people dull and idle. Technologies were wasting time and it was not used for beneficial purposes. Technologies were main source of distraction among youngsters.

The negative aspects of technology on education were mostly in informal education and the misuse of technology but apart from informal education, technology also impacted formal education in negative terms.

5.2.5.1 Impacts on informal education

Informal education was that type of education in which there was no need of any institution or any means of education, but it was learned from family in which a person was raised and groomed. For example, a son of farmer did not go to school or college to learn farming, but he learned it from his father, and the values, ethics and moral obligation which taught within family were types of informal education in Alwara Mela.

One respondent claimed that People of Alwara are careless about moral obligations, ethics, and values. Just by improving formal education technology has lifted informal education far behind. Due to materialistic approach of people the importance of values was reduced. According to the respondents, their offspring have no interest in informal education due to technologies they did not getting enough time to spend with their offspring so, their offspring were quitting slowly their values and ethics.

5.2.5.2 The process of learning

Due to use of different gadgets and other innovations, the learning of people was affected in Alwara Mela. People were becoming dull. They did not used their own cognitive abilities more, but they were now dependent on gadgets most of the time. The overuse of modern

technology was responsible for retreat of children in academic achievements which no one was denying.

Respondent reported that writing and reading abilities of students have decreased. Due to smartphones and gadgets students try to explore short cuts to get good grades without doing any hard work. Technologies were distorting students in Alwara Mela.

5.2.5.3 Other drawbacks

Other drawback of technological advancements in education was promotion of cheating, distorting interaction between teacher and student, attending lecture without consciousness.

Students of Alwara Mela argued that technologies have been turned beneficial for creating new and efficient ways of cheating during previous board exam. Micro notes were available with advance photo copier machine. It was able carry in pocket to the examination hall without getting in trouble. Mobile phone was used for cheating. Internet helped a lot in solving papers.

Other drawback also included distortion during lectures. Students claimed that they use smartphone during lectures. So, they did not pick the words of the teachers. They also claimed that when family member forced them to study they keep smartphone in their books pretending that they were study but in reality, they were busy on smartphone. So, these drawbacks cannot be denied which were caused by technological advancements.

5.3 Religion

Religion was also affected by technologies in Alwara. In this age of globalization efforts are in progress to make religion compatible to twenty first century, but this change is not acceptable among most people of Alwara Mela. Negative impact of technology according to villagers was negligence in religious obligation. They argued that we should make the life according to religion not religion according to our life.

People of older generation argued that the youth was keep on neglecting the religious duties and obligation. "*Zwanoon jamy sara lmonz qaza kawayi da mobile dy losa*" due to mobile

young ones are missing prayer. They argued that religion was most important thing in social life and keeping it aside can bring some bad effects.

5.3.1 Missing prayers and recitation of holy Quran

People argued that due to usage of mobile and internet youth often missed their prayers. They go to bed late and in morning they usually missed the Morning Prayer. Technological advancement has led the youth of Alwara Mela take less interest in religious obligations. According to some of the respondents, youth were missing prayers due to various technological factors. They used to watch cricket matches during world cup and other cricket series so, they neglected religious obligations like Namaz etc.

Recitation of Holy Quran was also reduced among young ones due to mobile and internet uses. People of Alwara Mela were devoted Muslims and recitation of Holy Quran was necessary for them but according to the elders, youth of Alwara Mela were not performing Tilawat (reciting Holy Quran) rather they like to spend time while using Facebook and you tube.

5.4 Politics

Politics has also been disturbed by modern means of innovation and its usage. In past the elders of the family were respected, and their decisions were considered valuable. Now according to youngsters of Alwara Mela, the decision and the mentality of the elders was not according to the modern world. Their decisions were irrelevant because they have gained not proper knowledge of present circumstances.

The elders of the village were those who resisted those things which according to them were not compatible with social values. They were laggard people but due the limitations of their authority, their role was not that crucial as it was in past so, innovation was adopted quickly, and it affected the family politics so much.

5.5 Impact on social activities

In Alwara Mela, technological advancement showed its presence in all aspect of human life and social activities was having no exception. The adaption of technological means

made the relation among the member of community unstable. The changes in behaviour and social activities were noticed significantly.

5.5.1 Mourning

Mourning at death of someone was very important activity in rural area. In Alwara Mela people know each other quite well because they lived in the same village since their birth, so they participated in happiness and sorrow of each other. When someone died in the village the whole village stay in mourn for some time. In past the time was usually up to forty days. During that forty- days listening to music at high volume were considered unethical. TVs were often switched off for forty days but in post-technological era due usage of technology some people of the village did not cared, so mourning was not that much in Alwara Mela. Mourning of the people of village was not more than three days. Music and movies were not as restricted as it were before.

5.5.2 Social behaviour and entertainment

Means of telecommunication were often misused by the young generation of village. For example, television was no doubt a source of telecommunication. According to the villager that television was used so widely that those children who were not yet able to speak were busy in watching television. So, according to them harmful impacts of media embolden youth to become capricious. Media was responsible for creating resilience among youth. Youth were challenging social control which were set by their parents, elders, teachers, or other social controllers.

Chapter 6

Health and technology

6.1 Health care system of Alwara Mela

Alwara Mela was having less population so, health care system of Alwara mela was not as complex as cities. Unlike cities Alwara did not have latest and modern health care system. There was one basic health care unit in Alwara. There were two lady health workers and one dispenser in that unit. The role of this unit was limited to anti polio campaign only. There were three days anti polio campaign every month in Alwara Mela.

Aside from this health care unit, there was one dispenser in Alwara Mela. People took medicine from him when they have general health problems like headache, flu, diarrhea etc.

Most of elders of Alwara Mela used traditional, orthodox, and folk medicine in the case of prolong flu or infection.

6.1.1 Health seeking behavior in pre-technological era

Health seeking behaviour of people of Alwara Mela was mostly based on traditional and orthodox ways of treatment. Elders of the village argued that few years back they were using traditional ways of treatments very frequently. Koranay Nuskhay³, folk remedies, herbals medicines and visiting shrines were used primarily as health seeking approaches.

6.1.2 Folk remedies

In pre-technological era, large number of people of Alwara mela used folk ways of treatment for curing. Laung (Clove) was used primarily in case of toothache. Green tea

³ Home remedies to cure diseases.

along with lochy (Cardamon) and lemon was used in case of flu and cough. For acidity, yogurt was used and adrak (Ginger) was used in case in-digestion.

Folk remedies were used in various ways. Toray (Kohl) was applied instantly after child and it was applied to children till age of twelve. In Alwara Mela there was a belief that Toray strengthen eyesight. Apart from strengthening eyesight, it also prevents children from the curse of nazar (evil eye).

Another important folk way of treatment was “Khaistona”. Khaistona was a process in which verse of holy Quran were written down on a paper and then this paper was placed in glass of water. When the ink of that paper was dissolved in the water then it was given to infants. This process was done by religious clergies and it was given to infants in case of excessive crying and weeping.

6.1.3 Koranay Nuskhay (Home remedies)

Koranay Nuskhay term was used for home remedies in Alwara Mela. This included various techniques which were beneficial for curing common cold, hiccups and sore throat. Half boiled egg along with green tea was given to cure common cold. There were some children who were having hiccups regularly. Elders of those children used one teaspoon of sugar. This spoon of sugar was putted in mouth of that child beneath the tongue, and it instantly stopped hiccups. Sore throat was common among the villagers during winters. Water was boiled until it became Lukewarm, and then salt was added in water. This salty water was then gargled, and it cured sore throat.

One of the most important home remedies was Tabizin. Tabizin was used for curing flu, nasal congestion, and mucus. Tabizin was process where leaves of ghaz (Tamarisk) was putted in a kettle and water was poured in it. Then it as placed at fire for boiling. After ten minutes or more the lid of kettle was slowly open and then the person was having flu, mucus, or nasal congestion took exaltation.

6.1.4 Shrines as health assistance place

There was a shrine nearby Alwara Mela which was used by the elder people of Alwara Mela in pre-technological era. People of Alwara Mela visited that shrine in seeking mental health assistance and some sort of physical health especially skin diseases.

People of Alwara Mela visited shrine in case of epilepsy mostly. Epilepsy was associated with supernatural being like Jinn. So, in order to free the person from the possession of jinn they visited to that shrine and that person who was having epilepsy was taken over there. Apart from epilepsy, other psychic problems were also associated with jinn and shrine was providing them health assistance in those cases.

There were some other diseases during which people of Alwara preferred to visited shrine. Soil of shrine along with dam wolay obo (water on which verse of Holy Quran were recited) was used in case of scabies. People argued that it was providing health assistance indeed.

6.1.5 Childbirth practices

In pre-technological childbirth practices were rarely done in hospitals. Over 90% of child deliveries were happening in homes. There were some elder women of Alwara mela who were considered as experts. They were summoned during of labour, and they would like to undertake all the process of childbirth. The mother in-law or other female member of that woman who were in labour used to assist them child's delivery.

Sometimes lady health worker was also summoned if the family thought that would be difficult for that expert women. If conditions worse became then female was taken to the hospital but it usually this happened one out of ten time.

6.2 Changes in health seeking behaviour in post technological era.

After the usage of technological advancements, the health seeking behavior of the people of Alwara Mela was leading toward change. Some of the folk and home remedies were not taken into consideration by the large number of people. Only some elders were still using those remedies.

Elders argued "*da nan saba Zwanoon kho Hakimi dowoi na pokara ve. Mong plor nek aba da shayan istemola wal. Dayi bs doctor pejoni bal sho no moni*". Young ones of our village do not believe in those medicines which were used by our ancestor they only use allopathic medicines.

There was a hospital in Hangu city which was visited by the villagers for health assistance. People Alwara Mela were preferring allopathic doctors over Hakims and home remedies in post-technological times. Asking about one respondent who was going to visit doctor for his allergy he replied “*Os za sa owkam za doctor po zoi hakim ta lor sho, doctor wol inhaler shay za istemola ko no rogh jorh sho, hakim kho gond balo godda we.* **Translation:** *How can a hakim provide treatment to my bronchial allergy? I use inahller which is prescribed by my doctor and it provides relief, I do not know what kind of toxic items hakim use to mix for curing.*

Another change in health seeking behavior in post technological era in Alwara Mela was abandonment shrine. Shrine was barely visited by few people in a month. People who came for health seeking in pre-technological era was opting for allopathic medicines. Some old female and other devotees were still visiting shrine for health assistance, but their visits were discouraged by their family member. One respondent neglected the role of shrine in health assistance by arguing that it was just to make people fool. How a place can provide someone mental healing, there was no connection between psychological wellbeing and shrine, and scabies are cured by using skin ointment tubes.

Childbirth practices has been changed due technological advancements. In pre-technological era there was no doctor and hospital nearby so, the people were bound to summon Dayis for undertaking process of childbirth but ever since the hospital has constructed nearby the childbirth practices have been changed. More than 70% percent of child delivery took place in hospital nearby. The role of those women who were considered expert of childbirth practices have been minimized. They were rarely summoned for child deliveries.

6.3 Impacts of technology on health in rural areas

The impacts of technology on health in Alwara Mela was divided into positive and negative aspects. The technological advancement has revolutionized the criteria of public health. Many diseases which were consider cureless, were cured due to technologies in health care system. Health assistance was easily available in post-technological era. But just like the English’s proverb “excess of everything is bad” and the usage of technologies have brought

some health issues also. People were having no exercise which were responsible for some health issues like, obesity.

6.3.1 Positive impacts of technology on health

The impacts of technological advancement were positive most of time. There were some common diseases which were faced by the villagers every now and then. Due to simple technological approaches these common diseases were reduced quite much. Some of these common diseases were, follow.

6.3.1.1 Typhoid

Among the people of villages typhoid was one of the common diseases. The causes of typhoid were bacteria and spread through drinking water and food. Typhoid leads to weakness, abdominal pain, and fatigue. Typhoid fever was sort of chronic illness.

People of the village replied that in past people used wells to get water for drinking in the village, most of these wells were uncovered so they were expose to different harmful objects. In that time typhoid was very common but in post-technological era everyone has water pump in their homes thank to technology. The water of pumps was good because it was not expose of harmful material, so the typhoid cases was lower than previous figures.

Alwara Mela's health system was improved with the help of technological advancement. Due to easy transport and hospital near by typhoid was cured quickly as compare to pre-technological time. If someone fall sick, he/she was carried quickly to the doctor or hospital in Hangu city. Quick assistance was available over there and thus diseases was eliminated quickly. Hangu city was 19 kilometres away from Alwara Mela and 19 kilometres were covered in 20 minutes in car so, indeed due transportation health system was improved.

Another biggest advantage in health care was of modern medicines. Typhoid was cure with in few weeks as compare to months due to modern technologies.

6.3.1.2 Diarrhoea

Diarrhoea was a most common disease in Alwara Mela which was caused by poor drainage and sanitation system. In that village there was no proper sanitation system, so people were often facing diarrhoea. There was garbage, and the use of toilet was not present there in pre-technological era, but after technological period people-built toilets in their homes. Garbage of the village was disposed in proper way. This simple technique made life much easier, and diarrhoea was reduced.

Villagers claimed that in past, usually in a month two or three cases of diarrhoea were reported but due to use toilets, consumption of water from water pumps and garbage disposal, the rate of diarrhoea was reduced. Between June 2019 to October 2019, less than 5 diarrheal cases were reported which was in fact a great improvement.

6.3.1.2.3 Case study

Bakht Zaman was 53 years old male resident of Alwara Mela. He claimed that in June, July, and August, the people of Alwara Mela were suffering from diarrhoea in previous years. Most of its victims were Infants and children. In July 2016, his four grandchildren were having diarrheal conditions. One of them was very serious. He was admitted in the hospital. He was so, dehydrated that doctor suggested to keep him in children's ward for treatment for a week in order to recover. He was in hospital for 10 days. He reported that apart from his family, others were also facing this problem. The root cause of diarrhoea was contaminated water and people used to drink water from wells back then. Sometimes frogs also lived in those wells so, definitely frogs were contaminating the water. Then in 2017 he planted a pressure pump. According to him there were no longer any serious case of diarrhoea. He also claimed that in 2018 ministry of health of Khyber Pakhtunkhwa started ORT (Oral Rehydrated Therapy) program in Alwara Mela. Oral rehydration therapy was a treatment for diarrheal patients. In sachets of salts and other essential nutrients was mixed water and then it was given to the patient. It prevented the patients form further dehydration. Health officials encouraged the villagers to use oral rehydrated therapy in case of diarrhoea. Now people have ORT sachet in their homes. They apply those technique instantly whenever someone has diarrhoea. Since then, not a single serious case of diarrhoea has been reported in his home. So, these modern means of curing diarrhoea and

technological advancements like water pumps have reduced the diarrheal case in Alwara Mela.

6.3.1.3 Cholera

Cholera was also common in pre-technological era. Contaminated water and foods were among the common cause factors of cholera. Cholera further led toward dehydration. Villagers sometime ate the remaining food on next day. Sometimes that food got contaminated due to flies and other insects, and thus it was causing cholera among them. Due to the use refrigerators for preserving food and water pump for freshwater, cholera was also reduced quite much. Villagers claimed that ever since they have installed water pumps and refrigerators, very few cases of cholera have been reported. The rate of Cholera was also reduced to a favourable number.

6.3.1.4 Hepatitis

Hepatitis A an infectious viral disease caused by hepatovirus A. It is contagious disease, and it spreads by contacting with infectious person. Its symptoms are belly pain, dark urine, and vomiting. It was common in Alwara Mela during Summer.

Hepatitis A was known as Zerh Zerhai (Yellow hepatitis) in Alwara Mela. Due to technological advancements and other necessary actions, this was almost fully controlled. There was a team of health professionals under the program of ministry of Khyber Pakhtunkhwa Government which organized a vaccination camp in the village. The vaccine against hepatitis were provided to the villagers. Vaccination minimized the rate of hepatitis in village. Thus, health technology reduced this risk factor.

Tor Zerhai (Hepatitis B) was present among three people of Alwara Mela. There was no diagnose system of hepatitis in Alwara Mela and people were having no knowledge of its diagnoses but when some males applied for visa and passport, in order to go abroad (UAE, Saudi Arabia, Oman etc.) they were tested for hepatitis. Three males were diagnosed with hepatitis during medical procedure for entering in other countries and since then villagers have took hepatitis seriously. Most of the male villagers were tested for hepatitis.

Vaccination of Hepatitis B was also provided to the people of Alwara Mela along with Hepatitis A.

6.3.1.5 Decrease in mortality rate during pregnancy

Mortality during pregnancy was present among in the village because the concept of health assistance from a health professionals or doctors were not present. Villager claimed that several girls have died during child delivery and labour pain in pre-technological era but with the help of medical assistance and proper consultation with a doctor the mortality rates during childbirth was decreased.

In past people were bound to their cultural determinants and most common among these determinant one was that a woman cannot get treatment from a male doctor. Lady Doctors were not present over there back then. Childbirth practices were handled by Dayis only and they were lacking knowledge of critical cases. So, this caused maternal mortalities in Alwara Mela because sometimes a woman needed to be operated by a general surgeon in order to prevent mortality and Dayi was unable to perform duty of surgeon so, in those cases women often faced mortalities.

Lack of transport of transportation was another factor responsible for maternal mortalities in Alwara Mela. In past almost 90% of deliveries were happening at homes. The concept of hospital during childbirth was not existed. Road conditions were very bad and there was no vehicle to carry women to a hospital in case of emergency as soon as possible. Delay in reaching to the hospital led to toward the maternal death but in post-technological era there were cars in Alwara Mela and most of the women were taken to the hospitals in case of child delivery. People preferred to carry their women to a hospital or to health profession in such cases. Improvement in transportation decreased maternal mortalities in Alwara Mela. In recent years there was not a single death recorded during childbirth.

There were lady health workers, lady health visitors and lady doctors who visited each and every home of Alwara Mela during polio vaccination campaign and other health programs arranged by government. They also given medical advices to the women of Alwara Mela. Maternal health was improved, and maternal mortality was declined, and these were all due to technological usage.

6.3.1.6 Role of hospital

A hospital was nearly eight kilometres far from the village. The significance of hospital was so much according to villager. Hospital was very economical, and healing response was also quicker. Now due to better transportation people of Alwara mela were among the main beneficiaries of hospital.

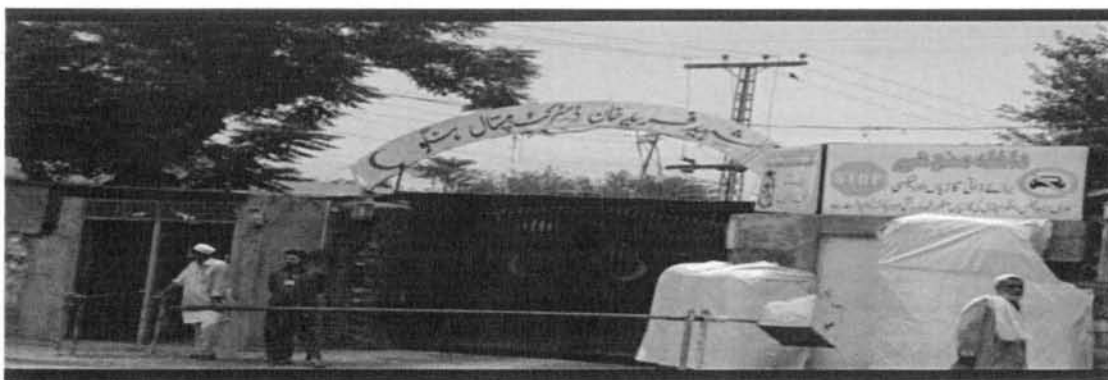


Figure 7. Shaheed Fareed Khan Hospital, Hangu

People signified the role of hospital so much. One person claimed that few month ago there was a case of burning. The daughter of that person was partially burned when the gas cylinder exploded while she was making meal. The explosion was so big, that his daughter's hands and face were burnt, and her neck was also affected. She was brought to hospital immediately where she was admitted in emergency ward. Proper care and medicine were providing to her on time and after several days she became normal, and she was discharged from hospital.

6.4 Psychological impacts of technology

Although the technological advancement has improved health quite much in Alwara Mela but there were some concerns of people, which they think were due to technological advancements. The impact of technology on rural population were visible in both psychological health as well physical health. Impacts of technology on psychological health were follow.

6.4.1 Addiction

Addiction is a psychological disorder in which a use something more than appropriate level. Technological advancements' big assault on human cognition is addiction to technology.

People especially youth were addicted to social media, movies, and smartphone in Alwara Mela. They used to spend most of their time on smartphone. People of the village claimed that youngsters of the village spent eight to ten hours daily on a smartphone. They were being addicted to smartphone.

Apart from addiction smartphone use over certain specific time brought some further issue related to health. One respondent claimed that his nephew's eyesight was weakened due excessive use of mobile.

6.4.1.1 Case study

Imam Ullah was 16 years old boy. He was addicted to mobile games especially PUBG (Players Unknown Battle Ground). PUBG was the most addictive game of smartphone world in Alwara Mela. PUBG addiction was on its peak in Alwara Mela but Imam Ullah was so addicted that he used to spend 12 to 14 hours daily on playing PUBG. His father claimed that Imam did not like to spend time with them. He did not eat with them and the behaviour was very irritative due to excessively playing PUBG.

Imam Ullah was having good academic records previously. He was a position holder of his class but due his PUBG's addiction he grades dropped very much. He secured 70 percent marks as compare to 86 percent in previous results. His father was anxious about his future. He argued that he was afraid that in future he might got failed because he did not do any study at all.

Imam Ullah was of the view that now he cannot stop playing PUBG. It has taken over him. He stuck in same position for hours. So, he felt neck pain last week. He consulted with doctor and the doctor advised him to stop playing PUBG, but Imam Ullah was still playing it and there was no way out. His father told me that he intended to take Imam Ullah to a psychiatrist in order to get him rid of playing PUBG.

6.4.2 Aggression and violent behaviour

Due to use of smartphone and television a behavioural change was noticed among children. Children adopted those things quickly whatever they see. So, whenever they action movie with violent scenes or wrestling on watch television, they adopt those thing things for example one respondent said “*da bachon che filmona gori ya da wrestling mukably wogori no bia de zone na John Cena jor ki. Yo wraaz kho pa khokhta ye gzar waka pa bal.*” whenever children watch movie or wrestling, they became John Cena (a famous wrestler) and try to beat their opponent. Last week one child has thrown a brick at other he was nearly hit on the head.

So, it meant that technology has brought with itself some aggression and violence which were more visible among children.

6.4.3 Depression and anxiety

Older people argued that as people start neglecting religious duties due to over usage of technologies anxiety and depression has also become common. Everyone have some sort of anxiety, and it can be solved through start praying and recitation of Holy Quran.

6.4.4 Laziness

Laziness was another criterion which according to people was brought by usage of technologies. The older people claimed that nowadays due easiness of the work and availability of everything, people have become lazy. People were not opting for heavy work rather they enjoy their time in rest.

Due to transport facilities people have quitted walk. People of Alwara Mela used to walk to go the homes of their relatives. Other works for example, going to Friday prayers, funerals and purchasing something from the shop in other village people used to walk for that purpose but now they were not going anywhere without motorcycle. Aside from walk, Agricultural works were also done with help of technologies. Use of social media were making people to stay in their cots in Alwara Mela. Technology has made their mind lazy. This was negative side of technology when it came to health issues.

6.5 Physical impacts

The impacts of technology in physical health were also quite obvious. People argued that due to laziness and relax approach, people were becoming physically inactive. They did not used their body energy. Works was good for health. Before the invasion of technology, the health of the rural people was better than that of urban people but now the ratio was keep on minimizing. Although the people of villages were still some sort of healthier than people who lived in cities, but the health quality of rural people was not that good as it was back then.

6.5.1 Physical inactiveness

Due to at mercy of technology, people were inactive, they were losing their activeness. In pre-technological times villagers were doing works in fields from dawn till dusk. It was hard labouring work. People were hard worker regarding physical work. The use of technology was not that drastic as it was in post-technological time.

Coming to the downside people claim that villagers were getting weak. They were preferring comfort over work. According the one of respondent youth cannot perform those tasks which were performed by their ancestors and this all was due to technologies. Digital technology has desolated the playgrounds of Alwara Mela. The ratio of playing any kind of sport has decreased due to digital technology which was reason of physical inactiveness among the people of Alwara mela.

6.5.2 Obesity

Another common negative impact of technology was obesity among people of village. Some People were growing fat. The main reason of fatness was lack of exercise. People in past used to walk for miles to reach to their workplace. But after usage of technologies People were quitting physical exercise, people were somehow sustaining their body weight due to workload in past, but the situation was going out of control after adapting technologies. There were much obese people in Alwara Mela than past. Obesity was a source of other diseases among them.

6.5.2.1 Case study

Inayat Ullah was a government schoolteacher. He gained lots of weight during last year. According to him technological advancements have made him fat. He argued that he used to go to school on feet. School was three kilometres away from his home. It usually took him 30 minutes on foot to go to school and 30 minutes again in returning home. His daily walk was of 60 minutes which was very good for him. He claimed that he was 78 kilograms back then.

But last year he bought motorcycle since then he has quitted walk and goes to school on bike. He claimed that after 4g connectivity he has also quitted other exercise for example in past sometimes he played cricket but now he cannot manage time for playing.

His daily exercise has reduced from 60 minutes to five minutes. Now he has 96 kilograms of weight. He reported that doctor advised him to lose weight because sometimes he has difficulties in breathing. Apart from breathing difficulties doctor also told him that if did not lose weight he might face cardiovascular disorders (Heart diseases) and diabetes. He blamed technological advancements for his increase in weight.

6.5.3 Other diseases

Fitness level of people was affected by technological advancement. Due to lack of physical fitness people were suffering from other diseases also. People argued that there is diabetes, heart diseases and high blood pressure.

People claimed that in past there was no one in the village who was having a problem of diabetes but there are four people who have diabetes. Diabetes was due to lack of physical exercise and other works.

Heart problems was also emerging in the village. One respondent who was having heart problems argued that doctor recommend that has to walk for two hours in order to keep his heart active. If they were keeping exercise daily and go on a walk or any type of work, then these problems might never come. So, these were all because of laziness which were brought by technology.

High blood pressure was common the elders of Alwara Mela. Elders claimed that ever since they have quitted exercise, so they were facing high blood pressure. Apart from this, excessive usage of spices and broilers chickens have increased their blood pressures which again was the products of technological advancements.

Chapter 7

Technology and economic changes

7.1 Impacts of technology on household economy.

The impacts of technology in household economy were too much to measure in Alwara Mela. During the last few years, the household economy of the people of village was increased quite much. This social institution was getting benefits from the domain of technology. Technology was providing opportunities to almost all sectors of economy in the village. Technologies, which helped the villagers in increasing their economy were mostly likely to use. The rate of adoption of these technologies was higher than other types of technology.

7.1.1 Sources of economy of people of Alwara Mela

People of villages were having limited means of income. There were no industries, manufacturing units or any other type of factories nearby. The economy was based on natural resources. People of Alwara Mela relied on Agriculture and cattle farming, also a large number of people were in Gulf countries especially in United Arab Emirates for livelihood. Apart from these people were also serving in government and private sectors. People of Alwara Mela were engaged in individual professions as well. Some were mechanics, some females were related with a profession of sewing clothes for their livelihood. Barber, plumber, and mansions were also over there.

7.1.2 Agriculture

Like most of the rural population of Pakistan, people of Alwara Mela were also related to agriculture. In past the almost everyone was related at some extent to agriculture but in post-technological time people were opting for other professions also. Still more than half

of the population were agriculturalist. Mostly there were farmers, and they grow crops for their living.

There were two types of agriculturalists in Alwara Mela. Number one there were families who were having no other business aside from agriculture. They were fully dependent on agriculture. They were relying completely on their crops.

Secondly there were families who were having other businesses or professions aside from agriculture. They were not completely relying on agriculture.



Figure 8. Maize Crops

7.1.2.1 Changes in agriculture

Modern tools and items were brought into use by the people of Alwara Mela. Half of the total arable land were having no water sources in past. It was only rain which were providing water to that land. But due to technological means and modern hydraulic systems, water supply was available to all arable land. Tube well pumps were installed by some of the villagers for their land. They also provided water to the land of other villagers also.

Chemical fertilizers were common among the people of Alwara Mela. In past they were only relying on organic fertilizers like cattle dung but in post-technological time there were increase in the usage of urea, diammonium phosphate and Calcium ammonium nitrate. Usage of these chemical fertilizers were among the main factors which were causing increase in agricultural production.

Pesticides were also used by the people of Alwara Mela. There were some harmful insects which caused the decrease in agricultural yield, pesticide was used in order to kill harmful insects to secure the production capacity of land.



Figure 9. Tube Well

Apart from pesticide people of Alwara Mela also used herbicides. In some crops especially maize crops small herbs were grown. These herbs caused difficulties in the growth of maize and corns were small in those crops where herb was grown so, these were resulting in decrease in productivity. These herbicides secured the maize crops of Alwara Mela and it was game changers in agriculture of Alwara Mela.

7.1.2.2 Increase in productivity

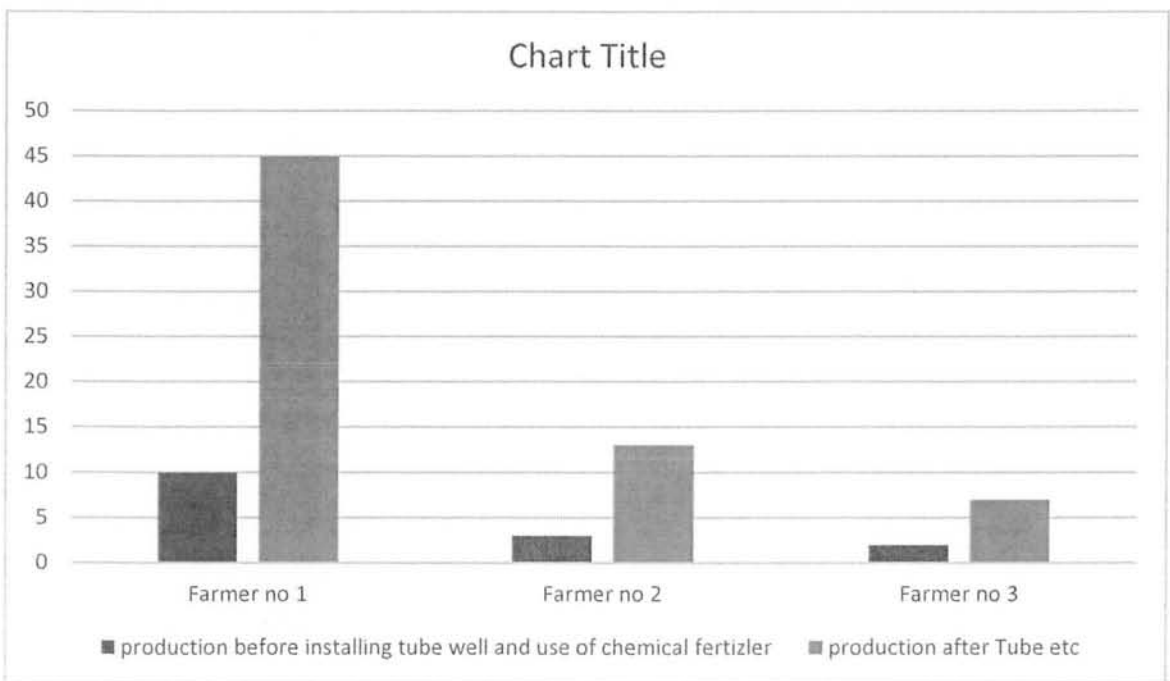
The productivity was increased drastically since last few years. Usage of technological advancement especially tube well pumps and pesticide played a key role in increasing yield.

Ten acres of land were producing two and half to three tons of wheat on average. If there was no rain the productivity was likely to decrease further. Sometimes insects like Aphids and Locusts also attacked wheat crops, so the actual productivity was far less than that. Apart from these insectile attacks villagers claimed that Ghongta (Lesser Grain Pest)

attacks were also faced on stored grains which sometimes destroyed quarter of total stored grains but thanks to pesticide these attacks were managed properly.

Due to hydraulic system and pesticide grains productivity was increased four to five times. Ten acres of land were producing more than ten tons of wheat then. Grains were prevented from insects also. So, by far productivity was increased.

Table 1



This chart shows the increase in production of wheat of three respondents due to tube wells for watering the field. Fertilizers and pesticides for further increase in production.

7.1.2.3 Case study

Zeenatullah was an inhabitant of Alwara. He owned 15 Acres of land. He was cultivating different types of crops on that land for few decades. There was no proper hydraulic system. So, he was only able to cultivate wheat and mustard. 13 acres of land was used for wheat while remaining two acres was used for mustard. He was mostly dependent on rain for crops. Although there was stream flowing nearby his field but in dry season there was no water in that stream. Despite of having 15 acres of land total yield of that particular land

was not satisfactorily according to him. He claimed that actual yield of field was not more than 10 tons of wheat and quarter to half ton of mustard.

Zeenatullah installed tube well in 2017. Tube well enabled him to grow various crops and vegetables in his field. He cultivated wheat on 10 acres of land and on other 5 acres of land vegetables were grown. These vegetables included tomato, reddish, carrot and turnip. In summer lady fingers, brinjals and chilis were grown by him. He claimed that productivity has been increased drastically due to installation of tube well. In past, 12 acres of land was producing 10 tons now ten acres produces more than 45 tons of wheat.

Growing Vegetables has also increased his income. After that he earned hundreds of thousand rupees by selling vegetable. In 2019 he installed a solar power plant for his tube well. He has saved lots of money which he was spending on diesel to run tube well. He was planning to buy a tractor which indicated that further economic changes were yet to explore. Thus, his economy grown drastically.

7.1.2.4 Impacts on household economy

People of Alwara Mela were not self-sufficient in grains in pre-technological times. So, they had to buy grains but due to increase in production, they were no longer buying grains rather they were selling extra grains which increased the income of households. Money which they were supposed to spent on grains were saved, yet extra money was collected by selling those extra amounts of grains.

Villagers who owned tube well were growing vegetables. They were growing vegetables, which were not only enough for their own consumption, but also, they used to sell it out. A large amount of money was saved, and income was increased by selling those vegetables. So, the impacts of technological means were huge on household economy.

7.1.3 Cattle farming

Second biggest source of household's income was cattle farming. Quarter of population of Alwara Mela were having livestock. Dairy cattle were most common among these. Cows, buffalos, Goats, and sheep were kept in those farms and these cattle were their source of income. Labour was divided on the basis of gender. Men were supposed to feed the cattle while women's duty was to milk the cattle. Cleaning and gathering of dung were also a

responsibility of women. Most of these works were done by all adult members of the family.

7.1.3.1 Increase in milk production

The people of the village were having some livestock. This livestock was their source of income. The people of villages mostly sold the milk of those cattle. A milk collector came in morning daily and he used to collect the milk from the villagers.

As per mentioned above that tube well increased agricultural productivity. Milk production was also increased due to tube wells. In Alwara Mela, usually June, July, and August were dry months. Very little amount of grass was grown in these three months. Due to less grass, the milk's yield was decreasing in those months. But in post-technological times due to water supply, there was enough grass for animals throughout the year.

Cattle feed for example Khal, Wanda, Choker, and cotton seeds were also responsible for increasing the production of milk.

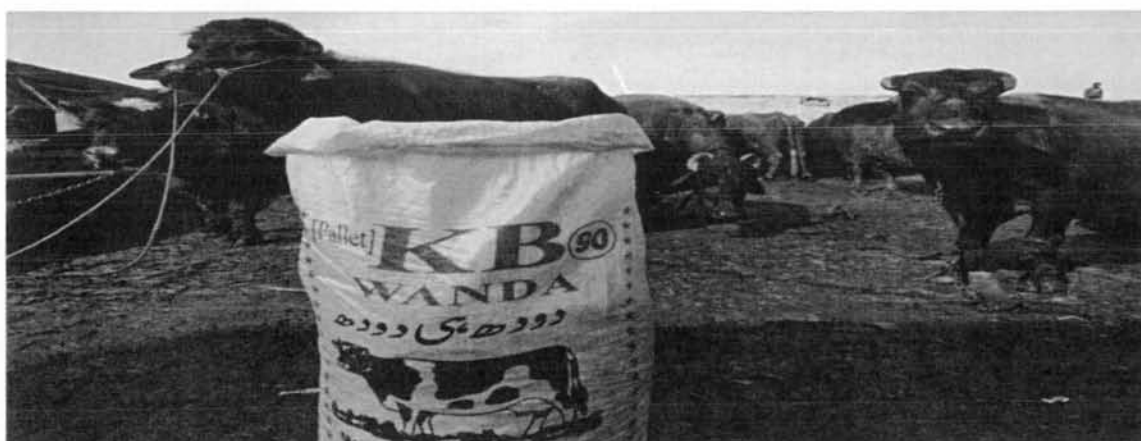


Figure 10. Cattle Feed

7.1.3.2 Impacts on household income

The income from livestock was also increased. People of Alwara Mela were opting to keep more cattle in their barns due to its easy care, and availability of feed thanks to technology. Cattles were yielding milk which were only sufficient for household needs in pre-technological times, there was no surplus back then but in post-technological times each

cattle (cow and buffalo) were yielding more milk. Owners used to sell surplus milk. Four to six hundred rupees of income on average was generated on daily basis by selling surplus milk.

Those villagers who were having dairy farms were getting more benefits from these technologies. Their income was grown exponentially. Their income was increased in thousands depending on the number of cattle.

7.1.3.2.1 Case study

Shaukat khan was 47-year-old inhabitant of Alwara Mela. He was related to cattle farming. He was having 13 cows in his cattle farm. He also owned one and half acre of land. In-pre technological times he used to have 4 or 5 cows. The land he owned was mostly barren. Around half acre of land of used for cultivation. In 2016 he installed a mini tube well on his field. It increased his economy quit much. He bought 4 more cows because it was easy to take care of cows due to utilization milking machine and availability of grass throughout the year and started to sell milk of those cows. The land he owned was enough to fulfils the food requirements of his flock. Shaukat also purchased secondary food requirement like Wanda, Khal, and Choker for his cattle.

Shaukat used to sell korani ghwari (desi ghee) which he obtained from his cows in pre-technological time. The income of level of Shaukat was at subsistent level. The quantity of korani ghwari was low because it was taking much time in preparation, and the amount of money which he was supposed to spend on his flock for fulfilling its nutritional need was high. So, that is why he barely earned extra money. After installing mini tube well and increasing the number of cows he enjoyed economic independence.

His income was increased since then. He used to sell milk of his cows instead of desi ghee. Milk was instantly sold because it did not required preparation as compare to desi ghee. Shaukat claimed that his income was increased from 15 thousand to 20 thousand rupees per month to 20 thousand per week. So, his income was increased more than four time due the usage of technologies.

7.1.4 Other sources

Technological advancements showed its impacts in all economic sources of household in Alwara Mela. Just like family's economy, individual's sources were also getting benefit from these advancements. Apart from agriculture and dairy farming people of Alwara Mela owned some sort of individual businesses also. There were some mechanics, mansions, drivers, and tailors etc.

One mechanic was earning just subsistence amount of money in pre-technological times in Alwara mela. There were very few appliances in few homes which barely needed maintenance or repairing but in post-technological times, there were much home appliances in every household. So, the role of mechanic was crucial then. Mechanic's income was increased with usage of technological advancement and he owned an electric store since then which also provided him a good amount of money.

Mansions also enjoyed the luxuries of modern technologies. Construction became easier due to usage of mixture machines and other stuffs. So, their income was also increased due to these technological advancements.

7.1.4.1 Rickshaw Driving

In pre-technological era when a boy quit education, or he failed in examination he was sent out to United Arab Emirates, Saudi Arabia, or Qatar for livelihood but in post-technological era people of Alwara Mela opting for other ways of livelihood also. For example, there were young ones who were driving Sazgar rickshaws ad Qing Qis.

7.1.4.1.1 Case study

Shakir Khan was a nineteen-year-old boy. In 2017, he got failed in her higher secondary school examination. He told his father that he did not want to continue his education. So, instead of education it would be better to go to Abu Dhabi. His father refused his proposal and he bought him a Sazgar rickshaw for sake of livelihood.

Shakir Khan started rickshaw driving as job and he used to take tours from Alwara Mela to Hangu city and back to Alwara Mela. Shakir argued that thanks to scientific technologies now we are able to earn in Alwara Mela otherwise we have only choice to go Arab

countries. *Mo der mulgari po Dubai, Sharjah, Kuwait o Qatar k di. Dy wayi chay kor k jond loy khond ko. Os nan sabo Arab k gaty nashta. To der kho wakral chy kali dy kor shoro ko.*

Shakir argued that he has lot of friends in Dubai, Sharjah, Kuwait and Qatar and they told him that nowadays there is nothing to earn in Arab countries. You have done a good job to not come to Gulf countries.

Shakir Khan narrated that that earning was highly dependable on costumers and luck. Sometimes he earned more than two thousand rupees per day while sometime his earning was under one thousand. Technological advancement provided him an opportunity to earn his livelihood without going abroad.

7.1.4.2 Tailoring

Tailors of Alwara Mela also got benefit from these advancements. Talking about economic changes, one tailors claimed that he was able to sew two or three clothes with hand driven sewing machine. It was very difficult in emergency to sew more clothes. During Eid or wedding he was overburdened with workload than he installed a UPS (Uninterpreted power supply) system in his shop and bought an electric machine for his sewing machine. Economic condition of the tailor was changed since then. He claimed that he can sew five to seven times more clothes in the same times, so he earned five to seven times more now.

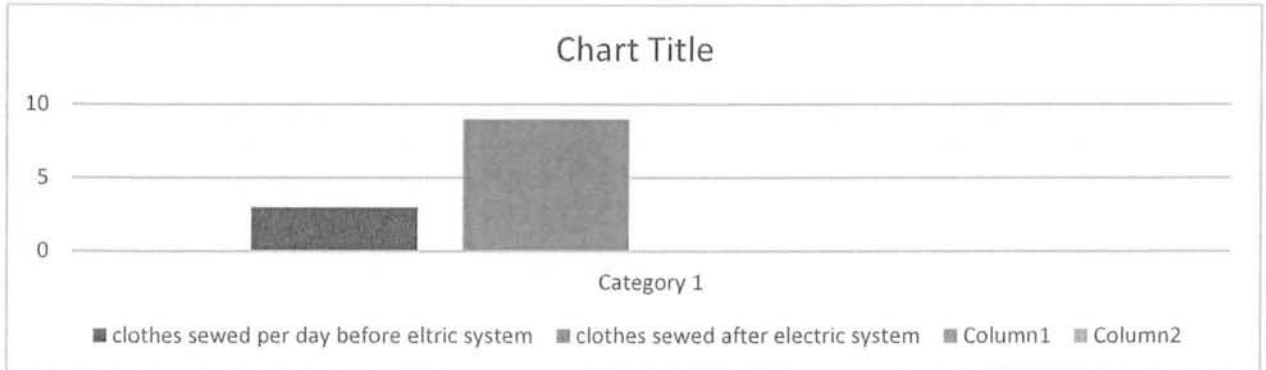
Females of Alwara Mela were mostly housewives. Very few among females doing professional work, tailoring was adopted by some females of Alwara mela. Female tailors were also getting benefits from technological advancements in economic regards.

7.1.4.2.1 Case study

Saira was a female tailor in Alwara Mela. She used to sew clothes of females and children in the village. She was barely able to sew 2 or 3 clothes per day. Seasonal clothes were of two types which people of Alwara Mela used to purchase. People purchased clothes for winter and summer differently. Apart from seasonal clothes ceremonial clothes were much more than seasonal ones, for example people of Alwara Mela especially women and children used to buy two or three clothes at wedding ceremonies. Aside from wedding, clothes different clothes were purchased at occasion of Eid also.

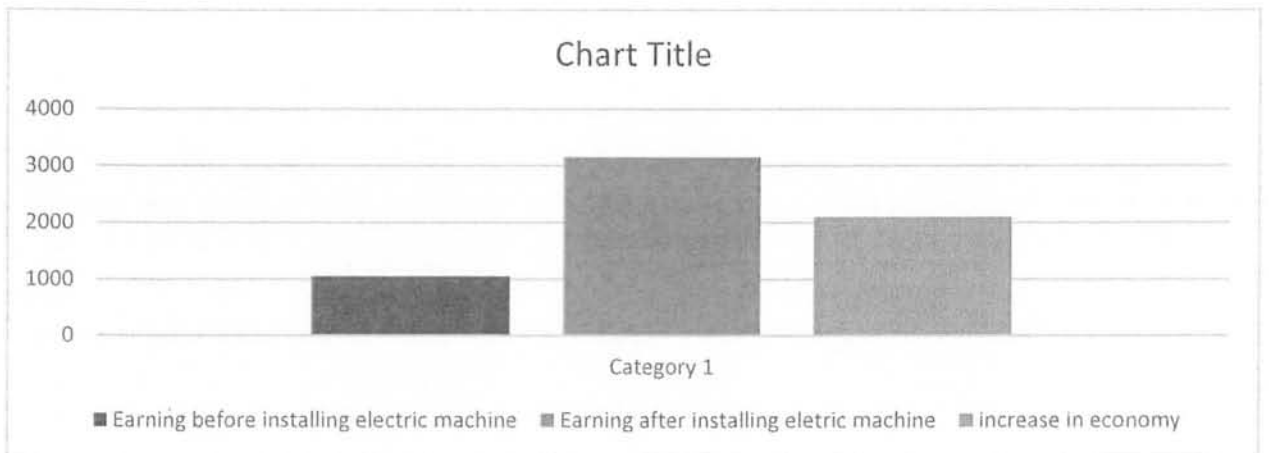
According to her on such occasions there was lots of burden. She claimed that she was able to sew three four clothes per day. Then last year she installed electric dyneema on sewing machine and then she bought UPS system and batteries for her sewing machine after implanting electric system, she was able to sew 8 or 9 clothes per day during Ramzan or at weddings.

Table 2



She charged 350 rupees per cloth. She was earning 1050 rupees per day before installing electric system but after installation of electric machine her income was more than three thousand per day. This was during special occasions like in Ramzan and days before wedding.

Table 3



This chart shows the increase in economy of her due to technological advancements.

7.2 Decrease in house income due to usage of technologies

The outcomes of technology were most of the time fruitful in economic realm but in the situation was quite different for few people. Technology created a class divided on affordability and consumption. Majority of villagers used technological items and stuffs, but a minority of people were there who were unable to afford valuable technological items rather they relied on basic stuff of technology like Electricity. Electricity provided by Government of Pakistan was not according to needs of people so most of the people opted for solar panel and batteries as reservoir, but poor villagers were not having and solar panel and battery. The impacts of technologies on their income were not on par with majority of villagers rather their income was disturbed by these technologies.

These people were daily wage earner and mostly their income was related agricultural work. During the harvest season of wheat, they were supposed to harvest the crops of others in order to get grains but ever since the crop ripper was used by most of the people their source of income was deteriorated and thus, technology for them miserable.

7.2.1 Case study

Abdur Rahman was 42-year-old, and he was daily wage earner. He worked with masons as labour in construction of houses and Hujras. Aside from construction work, he also provided his services in agricultural spheres. Abdur Rahman along with his other members used to harvest crops of villagers during harvest season. From mid of April till mid of May he and his family members worked from dawn till dusk in fields.

There was a specific ransom for harvesting depending on the area of the crop. In dense crops there was 140 kilograms of wheat per acre while in low density crops the weight of grains was 120 kilograms per acre. Abdur Rahman's family usually harvested 6 to 7 acres of crops and got twelve to fourteen Mann (600 kg to 700 kg) depending on the dense of crops but ever since villagers start to use crop ripper their sources of income was most likely to disappear.

Abud Rahman argued that in pre-technological era, they were able to manage their grain supplies but now they barely got two or three acres to harvest during harvest season which are not enough according to our requirements.

Chapter 8

8.1 Theoretical discourse

This study was conducted while applying the theoretical discourse of reflexive modernization theory to figure out the impacts of technologies on rural population. There were lots of changes in lives of rural population due the usage of technologies, as suggested by Ulrich Beck. This theory was partially applicable on the findings of this study. This research was carrying four objectives, and the researcher tried to apply this theory on each of its objective. The application of reflexive modernization theory was not constant, at some points this theory was fully applicable, some points were partially supporting this theory but there were some points where the application of this theory was almost negligible. The researcher tried discussing the application of this theory in each objective, below.

Exploring the changes in routine lives of villagers the researcher came to know that reflexive modernization theory was applicable to some extent in that regard. There were drastic changes in the routine lives of the villagers and these changes were due to usage of technologies. As the theory suggests that traditional institution will be replaced by modern institutions, same was the case with people of the locale. They were opting for modern technological approaches instead of traditional approaches. The role of traditional means of agricultural work and cattle farming were on the verge of extinction. Pashtun society have some core features, for example the Mosques and Hujras the places of social gathering. The places of social gathering, which was also known as Hujras was losing its ground to technologies. Technology was consuming that time of people which they were supposed to spent in Hujra and thus, one of the major traditional institute was on the way of replacement. So, it was observed that reflexive modernization theory was quite well applicable in this regard but there were other aspects of technological advancements where the application this theory was not possible. People were in favour of modern technologies. People were preferring modern technology over traditional one because of its usefulness, efficiency and time saving. There was great amount of efficiency noticed, in each works

weather it was of agricultural work, cattle farm work, or work at home. So, in that regard the theory of reflexive modernization was not applicable.

Exploring the second objective of this study, the researcher came to know that the theory of reflexive modernization was almost fully applicable on social impacts of technologies. Technology was showing its footprints on each social institution. Family life was disturbed due to technology. People were having distances with their family member despite of living in this same home. Next to family, was education. Education was disturbed due to modern technologies. The adaption of modern ways of learning let the researcher to realize the effectiveness of reflexive modernization. Religion and political system of village was also exposed to change, due to modern technologies. Religious obligations like Namaz and Tilawat was not on the first priority, as it was in the past. So, here the theory of reflexive modernization was quite applicable.

Exploring the third objective the researcher explores that reflexive modernization was only applicable when it came to changes in the health seeking behaviour of the people. People were considering home remedies, folk ways of treatments, spiritual remedies (Shrine as health seeking place) no more, instead they were opting for modern means of treatments. These were the places where reflexive modernization was applicable but on the contrary people also showed favours to the modern means of treatment. There were lots of improvements in the health care system. So, in this regard, the reflexive modernization was not applicable.

Finally, there was no role of reflexive modernization theory while exploring the impacts of technologies on household income. There were very few drawbacks of technology as per mentioned by the people in economic regards, the income was increased drastically due to technological advancements so, the finding of this study when it came to explore the income of household were contrasting with reflexive modernization theory.

Applying the theory of reflexive modernization to the findings of this study, the researcher agreed with the proposal of Ulrich Beck, Anthony Giddens, and Scot Lash. The main prediction of this theory was that traditional institutes will be replaced by the modern institutes. The traditional institutes of the village were putted on the back foot for example, the minimization of the role of Hujras, the neglection of religious and social obligations,

quitting of traditional health seeking behaviours and consumption of machineries in work. This showed that reflexive modernization theory was agreeable in the realm of social changes.

Chapter 9

9.1 Summary

This study has been carried out to find the impacts of technological advancements in village called Alwara Mela in Hangu district. Life standards of people have been changed due to usage of technologies. Urban people have experienced these changes two or three decades earlier but most of the rural population are experiencing these changes in recent years. This research was meant to explore the changes in daily routine of that particular village. Aside from changes in time schedule other important aspects of technological change was also studied, what were the impacts of technological advancements in rural areas, what were the impacts of modern technologies in rural health and how technologies was changing the economy of villagers, were meant to explored.

This study was conducted through qualitative methods. The researcher spent more than three and half months over there in order to study in-depth, every aspects of their lives. Participant observation was very important technique of this study. The researcher observed the values, norms, mores, rituals, and ceremonies of the people as an active participant. In-depth interviews were conducted during the study. Purposive, and convenience sampling ware used in order to secure the purpose of this study. All ethical standards of social research were followed during this study.

This study was carried out in Alwara Mela. Alwara Mela was village in Hangu district. It was 19 kilometre in the west of Hangu city. Alwara Mela was having population of 494 inhabitants. People of Alwara Mela were practicing Islam as a religion. They were affiliated with Tablighi Jamaat. Main sources of economy were agriculture and cattle farming. A large of inhabitants were living in gulf countries for sake of livelihood. In recent years, the people of Alwara Mela started to adapt modern technologies in order to satisfy their goals and to reduced hard labour.

Technologies changed the daily routine of people quite much over there. Most of the work were done quickly than what it was used to be done in pre-technological times. Agricultural

work time was reduced much, compare to previous times. Due to modern machines and technological items cattle house works were also done more accurately and efficiently. Apart from efficiency, much of the time of women was saved due to the use of milking machines and electric Madhani. Aside from agriculture and cattle house works, time consumption of other tasks was also reduced. Technology was showing its efficiency in children nurturing also. Mother of infants were getting free times due children's formulas, toys, and cradles etc. Preparation of meal and tea making which were supposed to take hours in pre-technological era, were done within minutes in post-technological times. Water collection was become lot easier, and much time was saved during water collecting thanks to electric and hand pumps. People of Alwara Mela got extra time through the usage of technologies but the utilization of that extra time was still under debate.

Exploring the impacts of technological advancement on social life the researcher came across various factors. Rural life was changed drastically due to the usage of technological advancements. People were getting easy access to various things. Informational and other stuff related to education were easily available to the students of the village due to technological advancements. Transport of village was changed, there were lots of improvements in transportation system due to technological advancements. Smartphone, computer, and internet facilities revolutionized their world. They were connected to world social media platforms back then.

Where lots of improvement was seen in the lives of rural people, there were some serious shortcomings of these technological advancement also. Informal education was affected badly over there. The learning process was heavily impacted due to usage of mobile and gadget. Youth of Alwara Mela was unable to solve their problem on their own. They were highly dependent on technological gadgets. Religious obligations were also left behind. Religion was very important perhaps the most important aspect of the life of people of Alwara Mela. Prayers were missed due to the excessive usage of technologies. Anxiety and depression were reported by some of the respondents. Village politics were changing over there, although it was still maintained according to Pashtun culture but somehow changes were observed. Elders' authority was neglected by the youngers a little bit. Other social events like mourning at death of villagers or relatives was not that much as it used to be

past. Lastly entertainment and social media were the factors responsible for change in social behaviour of people of Alwara Mela, especially youth.

Exploring the impacts of technological advancements on rural health the researcher came across with both positive and negative impacts. First of all, there was noticed a change regarding health seeking behaviour of the people. People in pre-technological times used orthodox and traditional remedies for curing various diseases. For example, they used to go to shrine for seeking mental health, they used home remedies in order to cure cold, cough, flu, and indigestion. Childbirth practices were attended by the old women of the village. But in post-technological time there was a shift in health patterns of the village. People were opting for allopathic medicines and child deliveries took place in hospitals instead of home. So, there was a change in health seeking behaviour of the people.

Apart from changes in health seeking behaviour rural health was improved also in some regards. Typhoid was very frequent in pre-technological era but due to proper medication and improved health care system it was not that frequent. Diarrhoea was also common among villagers especially among children but with the help of improved medicine diarrhoea was treated in time. There was clear and visible decrease in mortality during childbirth because of availability of menstrual facilities in hospital nearby but there were some serious drawbacks of these technologies also. Psychological disorders were very prominent among these drawbacks. Young boys of the village were addicted to mobile games and tv serials. Laziness was also quite frequent among some of the villagers due to excessive use of smartphone. Physical inactiveness and obesity were the main consequence of technological advancements in physical health in Alwara Mela.

Exploring the impacts of technological advancements in economy the researcher came to know that the economy of Alwara Mela was increased drastically with the usage of technologies. Agriculture production was increased four to six times. Due to use of tube wells for the sake of water supply, improved seeds, pesticides and of chemical fertilizers, the total output of agricultural field was improved by a good margin. Dairy production was also increased, due to improved and full of nutrient fodders, as well as clover and other type of grass were available for cattle at mass level. Income of those individuals who were

related to some sort of profession was also improved. Tailors were earning five times more due to electric sewing machines and other technologies, than pre-technological era.

Summing it up researcher must say that there were aspects of life of rural population which were improved but some areas were disturbed due to these technological advancements. There were pros and cons of technological advancement and both were clear and visible in Alwara Mela.

9.2 Conclusion

The ongoing usage of technological advancements have revolutionized the world we live in. Technology affects every walk of life of society as well as, of individuals. Technology affects the way of communications individuals tend to do with each other, learnings, and thinking. It determines the social interaction and social behaviour of people. Technology is now playing a very vital role in social life than ever before. Nowadays the usages of technologies are very common. Smartphone, laptops, and internet are available to most people. Technological advancements, like airplanes, cars, computer, internet, and other items have proved efficient since previous few decades. We can see the advantages of technologies in our every step.

One important aspect of technology that has impacted the society, is time and labour-saving use of technologies. In past the people used to walk on feet, carts, horse, or other animal in case of travel, these kinds of travels were consuming time very much but now with the help of modern means of transportation people can reach very quickly to another place, as compare to past. Aside from transportation, day to day work was also very time consuming, and hard labour was required in past but now it can be done with help of technological items in less time, and hard labouring has almost finished. Technologies impact the ways of learning too. Mobile, laptops, computer and internet have provided access to people of the village in finding useful stuffs. Electricity is also available to a big portion of population. Humans have been able somehow to control the severity of weather for example heater is used in winters to for bearing cold, air conditioners are used to cool down the temperature of the rooms in which they live during hot summers. Human being is experiencing a luxurious way of life nowadays. Those facilities which were exclusive to

king and emperors, are now in the reach of common man. For example, ice in hot summer, warm water in cold winter, sugar, and other luxurious stuff are available to a lay man.

Technology comes in handy in various other stuffs. One of the major benefits technological advancements is in medical and health care. There are various kinds of new medicine which cures many types of disease. There are vaccines available for various types of disorders. Vaccines have reduced the spread of tuberculosis, smallpox, chicken pox, polio, measles, hepatitis, and influenza. Infant mortality is reduced to some extent across the world due to advancements in medical field.

The biggest advantage of modern technology and its usage is in economic regards. The economy of world has been changing drastically since last few decades. Technology is creating new jobs which benefits the wide portion of world population. It provides opportunities to the people for enhancing their economic resources. There is no need of physical presence and services in many jobs today. Trade and business have become so easy, that many types of business do not need physical buildings to operate. For example, people do trade with others through internet.

Technology has made human life much easier nowadays. The fruits of technologies are clear and visible in every walk of life. It has shaken the foundations of orthodox and traditional approaches of work but as there are lots of positive impacts of technology, it is not without its harms. The harms of technology are also clear and visible, and it is properly observable in our daily lives.

The biggest con of technology is regarding social changes. Social changes are one of key topics of concern among sociologists and anthropologists. When we look into the invasions of technology, we can observe the radical changes in societies due to this technology. Anthropology is mostly associated with indigenous and rural communities, and technology has created disturbance among indigenous communities and rural societies.

Each society has values, norms and mores which are considered as foundation of social control. Due to technological advancement the values, norms and mores of societies are keep on changing. People are opting for global trends and values. In Pakistan especially,

nowadays people tend to follow western culture which has been brought by technological advancements because most of the technologies are west oriented.

Another con of technology is that although it has minimized distance through internet and smartphones but face to face interactions have been decreased ever since mobile network in Pakistan became capable of 4g connectivity. There is less personal time for friends, family, relatives, and other members of society.

Technology is associated with new learning methods, but same technology is also responsible for distracting people from their goals. Most of the people use technologies not for learning but for entertainment.

Economic prosperity is considered as major advantage of technological advancements but looking it through the lenses of anthropology we can say that it is disturbing production, consumption, and distribution. There is serious economic inequality around the globe. Technology has nourished the way of life of rich people. Poor people especially rural and indigenous people are facing its consequences.

Technology has although contributed to health care system and medicines, but it is also responsible for bringing various diseases. Technology has polluted the atmosphere. The levels of soil pollution, water pollution and noise pollution have been increased which brought different diseases. Psychological disorders are on the peak. Half of population of world are facing some sort of anxiety and depression nowadays. So, it is indeed a difficult situation for humans.

So, let us wrap this up. Where it leaves us with technological advancement. The advantages of technological advancements are very much but it is not without its disadvantages. Looking technology advancements through anthropological perspective we can say that the disadvantages of technologies outweighs its advantages.

Bibliography

- Ajzen, I., & Fishbein, M. (2011). *Predicting and Changing Behavior: The Reasoned Action Approach*. New York: Psychology press Taylor and Francis Group.
- Aldosri, F., Al Shunaifi, M. S., Amjad Ullah, M., & Muddassir, M. (2017). Farmers' perceptions regarding the use of Information and Communication Technology (ICT) in Khyber Pakhtunkhwa-Northern Pakistan. *Journal of the Saudi Society of Agricultural Sciences*, 18(2), 11-17.
- Ananth, P. N., & Karthekeyan, M. (2013). Application of science and technology in rural areas ASTRA: An Ethiopian context. *Journal of Academics* , 4, 11-12.
- Argyrou, V. (2003). Reflexive modernization' and other mythical realities. *Sage Journals*, 3 (1), 27-41.
- Bauman, Z. (1998). *Globalization: The Human Consequences*. Cambridge: polity press.
- Beck, U. (1992). *Risk Society: towards new Modernity*. Thousand Oaks: Sage Publications.
- Beck, U. (2003, October 13). Interview with Ulrich Beck On Fear and Risk Society. (J. J. Yates , Interviewer)
- Beck, U. (2009). *World at Risk*. Cambridge: Polity Press.
- Beck, U. (2016). *Cosmopolitan Vision*. Cambridge Press: Polity Press.
- Bhowmick, S. (2016, August 20). Structural Explication of Technology Adoption in ICT4D: A Throwback to Giddens. *The editors*, pp. 4 (2), 25-26.
- Bilton, T., Bonnett, K., Jones, P., Skinner, D., Stanworth, M., & Webster, A. (1996). *Globalisation and Modernity*. London: Palgrave Publishers.
- Bosamia, M. P. (2013, December 7). Positive and Negative Impacts of Information and Communication Technology in our Everyday Life. Bhavanagar, Gujrat, India.

- Burke, H., Smith, C., & Ward, G. K. (2000). *Indigenous Cultures in an Interconnected World*. Crows Nest: Allen & Urwin Publishers.
- Cowan, R. S. (1976). The "Industrial Revolution" in the Home Household Technology and Social changes in the 20th Century, 17(1). *Journal of Technology and Culture*, 1-23.
- Giacomelli, R. (2004, August 6). Science, technology and society. Bologna, Emilia-Romagna, Italy.
- Giddens, A. (1984). *The constitution of society: Outline of the theory of structuration*. Cambridge: Polity Press.
- Giddens, A. (1990). *The Consequences of Modernity*. Stanford: Stanford University Press.
- Giddens, A. (1991). *Modernity and Self-identity: Self and Society in the Late Modern Age*. Stanford: Stanford University Press.
- Giddens, A., Lash, S., & Beck, U. (1994). *Reflexive Modernization: Politics, Tradition and Aesthetics in the Modern Social Order*. Stanford: Stanford University Press.
- Green, J. (2012, November 2). Globalization I- The Upside:. (M. Danku, Interviewer)
- Grubler, A. (1998). *Technology and Global change*. Cambridge: Cambridge University Press.
- Hilles, S. M., Jamous, M., & Momani, A. M. (2017). Technology acceptance theories: Review and classification, 7(2). *International Journal of Cyber Behavior*, 1-4.
- Hyman, E. L. (1987). The Identification of Appropriate Technologies for Rural Development, 5. *Impact Assessment*, 34-55.
- Inglehart, R. (1990). *Culture Shift in Advanced Industrial Society*. Princeton: Princeton University Press.

- Kapur, R. (2018). Usage of Technology in Rural Development. *ISABB Journal of Food and Agriculture Science*, 4(1), 12-13.
- Kasarda, J. D., & Crenshaw, E. M. (1991). Third World Urbanization: Dimensions, theories and determinants. *Journal of annual review social sciences*, (17) 467-497.
- Lash, S. (1999). *Another Modernity: A Different Rationality*. Hoboken: Wiley-Blackwell Publishers.
- Lash, S. (2001, February 1). Theory, Culture & Society: Technological Forms of Life. *Sage Journals*, 18 (1), 105-120.
- Lee, R. (2006). Reinventing Modernity: Reflexive Modernization vs Liquid. *European Journal of Social Theory* 9(3), 355–368.
- Miles, I., Chernovich, E., & Polyakova, V. (2015). Household Technology and the Sustainability of Consumer Behavior in Moscow. *Journal of Records*, 8(1), 32-36.
- Mohajan, H. K. (2019). The first Industrial Revolution: The Creation of a New Global Human Era, 5. *Journal of Social Sciences*, 377-387.
- Mokyr, J. (1990). *The Lever of Riches*. New York: Oxford University Press.
- Mustafa, U., & Farooq, U. (2019). Pakistan National Innovation System for Agriculture and Rural Development: Challenges and Opportunities. *Journal of Agriculture Innovation Systems in Asia*, 3(4), 230-252.
- Naiko, A. A., Guroo, T., Thakur, S. S., & Lone, A. A. (2018). Development of Society under the Modern Technology - A Review. *Scholedge International Journal of Business Policy and Governance*, 5, 1-9.
- Nasir, D. A. (2006). Rural Technology Centres In Pakistan and Their Role In Technological Upgradation, 1(4). *Journal of Market Forces*, 5-7.
- Norris, P. (2001). *Digital Divide: Civic Engagement, Information Poverty, and the Internet*. Cambridge: Cambridge University Press.

- Osiceanu, M. E. (2014). Psychological Implication of Modern Technologies. "Technofobia" Versus "Technophilia". *Procedia-Social and Behavioral Sciences, 180*, 1137-1144.
- Pandey, A. (2012). Negative Effect of Technology on Human Health. *Journal of Department of Computer Engineering, 7(4)*, 26-28.
- Pelto, P. G. (1978). *The Structure Inquiry*. Cambridge: Cambridge University Press.
- Pelto, P. J., & Pelto, G. H. (1978). *Anthropological research*. Cambridge: Cambridge University Press.
- Rafkin, J. (2011). *The Third Industrial Revolution: A Radical New Sharing Economy*. New York: St. Martin's Publishing Group.
- Raja, R., & Nagasubramani, P. C. (2018). Impacts of modern technology in education. *Journal of Applied and Advanced Research, 3*, 33-35.
- Restivo, S. (2005). *Science, Technology and Society: An Encyclopedia*. New York: Oxford University Press.
- Rogers, E. M. (2003). *Diffusion of Innovations, 5th Edition*. London: Free press.
- Rohrlich, R. L. (1975). *Women Cross-Culturally: Change and Challenge*. The Hague: Mouton Publishers.
- Tesema, S. F. (2006). *Impacts of technological changes on household production and food security in smallholders agriculture*. Gottingen: Cuvillier Verlag publishers.
- Venkatesh, A. (1985). A Conceptualization of the Household/Technology Interaction. *Journal of Advances in Consumer Research, 7*, 189-194.
- Younes, M. B., & Al-Zoubi, S. (2015). The Impacts of Technologies on Society : A review. *Journal of Humanities and Social Sciences, 1*, 82-86.

Webography

- Ali, S. (2100, October 9). *50 Reason Pakistan Needs Musharraf*. Retrieved from Www. tribure.com.pk: <https://tribune.com.pk/article/2092/50-reasons-pakistan-needs-musharraf>
- Andrews, E. (2012, November 20). *10 Innovation that build ancient Rome*. Retrieved from Www.History.com: <https://www.history.com/news/10-innovations-that-built-ancient-rome>
- Dalpino, C. E. (2001, September 1). *Does Globalization Promote Democracy?: An early assessment*. Retrieved from www.brookings.edu: <https://www.brookings.edu/articles/does-globalization-promote-democracy-an-early-assessment/>
- Drape, K. (2018, 04 18). *Rural Women and Technology*. Retrieved 10 05, 2019, from dianova: <https://www.dianova.org/news/rural-women-and-technology/>
- Estrada, V. (2017, October 7). *Globalization as a threat to cultural identity*. Retrieved from www.diggitmagazine.com: <https://www.diggitmagazine.com/blog/globalization-threat-cultural-identity>
- Evans, E. (2011, March 29). *Overview Victorian Britain 1837-1901*. Retrieved from Www. Bbc.co.uk: http://www.bbc.co.uk/history/british/victorians/overview_victorians_01.shtml
- Gray, R. (2019, July 26). *The true toll of the Chernobyl disaster*. Retrieved from www.bbc.com: <https://www.bbc.com/future/article/20190725-will-we-ever-know-chernobyls-true-death-toll>
- Greenwood, C. (2019, August 23). *9 subtle ways technology is making humanity worse*. Retrieved from Www. Businessinsider.com: <https://www.businessinsider.com/technology-negative-bad-effects-society-2019-8>

- Hosseini, S. H. (2010, March 10). *Globalization and Capitalism*. Retrieved from Www.globalalternatives.wordpress.com:
<https://globalalternatives.wordpress.com/2010/03/27/globalization-and-capitalism/>
- Ku, L. (2019, June 12). *New Agriculture Technology in Modern Farming*. Retrieved from www.plugandplaytechcenter.com:
<https://www.plugandplaytechcenter.com/resources/new-agriculture-technology-modern-farming/>
- LaMorte, W. (2019, September 9). *The social cognition theory*. Retrieved from Www.sphweb.bumc.bu.edu: <https://sphweb.bumc.bu.edu/otlt/MPH-Modules/SB/BehavioralChangeTheories/BehavioralChangeTheories5.html>
- McCombes, S. (2019, September 19). *An introduction to sampling methods*. Retrieved from Www.scribbr.com: <https://www.scribbr.com/methodology/sampling-methods/>
- Mikkelson, R. (2016, December 19). *Understaing Fertilizer And I Essential Role In High-Yielding Crops*. Retrieved from www.cropnutrition.com:
<https://www.cropnutrition.com/resource-library/understanding-fertilizer-and-its-essential-role-in-high-yielding-crops>
- Mirani, L. (2015, January 15). *Humanity keeps discovering brilliant new ways to destroy itself*. Retrieved from Www.qz.com: <https://qz.com/326517/humanity-keeps-discovering-brilliant-new-ways-to-destroy-itself/>
- Neiman, J. (2017, July 6). *The Importance of Health Information Technology in Developing Areas*. Retrieved from Www.openmrs.org:
<https://openmrs.org/2017/07/the-importance-of-health-information-technology-in-developing-areas/>
- Rehman , A. (2018, March 7). *Www.Itunews.int*. Retrieved from How Pakistan is promoting women and girls in ICT: <https://news.itu.int/how-pakistan-is-promoting-women-and-girls-in-ict/>

- Schwab, K. (2019, 10 05). *Technology Initiative; Closing The Global Gender Gap In Technology*. Retrieved 10 05, 2019, from Global Fund for Women:
<https://www.globalfundforwomen.org/our-approach/initiatives/technologyinitiative/>
- Tanoli, J. R. (2016, August 19). *Comparison of Economic Growth under Democracy and Dictatorship*. Retrieved from Www.CScr.pk:
https://cscr.pk/pdf/rb/RB%20_Economy.pdf
- Vergano, D. (2015, Januaray 22). *Human Ancestors May Have Used Tools Half-Million Years Earlier Than Thought*. Retrieved from Www. Nationalgeographic.com:
<http://api.nationalgeographic.com/news/2015/1/140122/-humans-tools-hands-ancient-science/>
- Willians, Y. (2018, January 2). *Bronze Age*. Retrieved from Www.HISTORY.com:
<https://www.history.com/topics/pre-history/bronze-age>
- Zaidi, S. A. (2017, Spetember 6). *A Reformer on Horseback*. Retrieved from Www.Dawn.com: <https://www.dawn.com/news/1355171>