

# **Traditional Uses of Herbs as medicines in Hunza Gilgit-Baltistan**

**(A Case study of Gilgit -Baltistan Hunza )**



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**Quaid-I-Azam University,**

**Islamabad Pakistan**

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## **Formal declaration**

I hereby declare that I conducted this study by myself under the direct supervision of my supervisor and without any outside help other than that specified in the acknowledgment. The ideas that were taken directly or indirectly from the work of a third party have been scheduled in the following sources at the beginning and end of the study.

I also informed and reassured that this study work had not been printed, published, or submitted for degree purposes in Pakistan or worldwide to any other educational institute, office concern, or examine on board.

Finally, I am solely accountable for the content of my research paper, which is based on both primary and secondary sources.

**Najeeba shaheen**

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## ABSTRACT

This study has been undertaken to enumerate the medicinal plants in district Hunza find out the conservation status, and record the folk knowledge from the inhabitants of Hunza valley. The valley is located in the north Gilgit-Baltistan. For the many years, ethno-botanical and therapeutic method is consider as safe treatment method in different countries. This study conducted in Hunza valley which northern of the Pakistan and Gilgit-Baltistan where researcher focus the usage of herbs and the ethno-botanical knowledge. The 40 respondents were selected for interviews and different traditional healers and shopkeepers are interviewed. The data was collected from respondents through semi-structured questionnaire. The total 15 medical herbs are recoded with the help of local people that how these are practicing herbs in recent time ranging from cough to highly complex diseases. Villagers perceiving different about different diseases and the treat of that disease. The data about the local flora regarding medicinal uses was collected from the local herbal healers as well as from the knowledgeable people the district. Locally used herbs of the area prevent and cure the people from various diseases such as joint pains, bronchitis, flu and fever, lowering blood pressure, constipation, liver disorders, stomach and abdominal problems, etc.

The study explored that the traditional medical knowledge is gradually disappearing to abrupt mobility of people towards different areas of country. This study aimed to explore the ethno-botanical variations occurs in hunza district and the factors involved in those changes .however the study figure out that in new generation there is gradual decline in indigenous knowledge regarding local herbs. It is immense need to promote awareness in communities and there sustainable usage of herbs.

# Chapter 1

## 1.1 Introduction

Herbal plants have been used as medication and therapies for the treatment of many disorders in every culture around the world for decades. The therapies are performed by healers and local Hakims based on the nature of the herbs as well as ailment, but they evolve from generation to generation and with the passage of time. Natural medical paradigms have not been altered by scientific or cultural revolutions. Despite the fact that modern medicine does not support the cultural healing method. Despite the fact that numerous beliefs regarding local medicinal exist, such as the Chinese system, Allopathic, Ayurvedic, and Homeopathic (Curib-Fakim, 2006).

This domain is now known as complementary and alternative medicine (CAM). The therapeutic and diagnostic disciplines known as complementary and alternative medicine (CAM) exist primarily outside of regular healthcare organisations (Zollman, 1999). Globally, there has been a tremendous growth in interest in these treatment systems ( Bodeker,2002). According to one estimate, more than 80% of the population in developing countries still uses natural and alternative medicine, whereas around half of the population in affluent countries does (Penson,2002). It has always been a "invisible mainstream" inside the health-care delivery system. For example, the Alma-Ata Declaration of 1978 stated that mobilising conventional medical systems is a critical step toward achieving health for all (Balasubramaniam, 2002). There are numerous reasons for incorporating CAM healers into primary health care: the healers are familiar with people's socio-cultural backgrounds; they are highly command and experienced in their work; economic considerations; the distance to be covered in some countries; the strength of traditional beliefs; the scarcity of modern health professionals, and so on (WHO 2001). Evidence-based complementary and alternative medicine (CAM) therapies have proven to be extremely effective in the treatment of both acute and chronic disorders. It is believed that various complementary and alternative therapies work and heal by influencing the human immune system (Tada, 2004).

Health-seeking behaviour influences health-care utilisation, which is influenced by a range of factors such as physical, economical, cultural, and political concerns

(Kroeger, 1983). Cultural beliefs and practises in rural areas may lead to self-care or home remedies, as well as consultation with traditional or complementary and alternative healers (Nyamongo, 2007). These factors can lead to a delay in seeking treatment, which is more common not just for their own health but also for disorders affecting children (Nakagawa, 2001). To treat gynaecological diseases in women, all cultures employ complementary and alternative medicine (CAM) (Beal, 1998). These cultural practises and beliefs have remained independent of age (Geissler, 2002), social status of the family, or educational level (Stuyft,1996). These beliefs can occasionally have an impact on disease awareness and recognition, as well as the acceptability of the service (Perez,1996). Furthermore, when compared to modern allopathic practitioners, traditional healers attract more consumers due to their cooperation, empathetic approach, and active listening (Stekelenburg, 2005).

More than half of Pakistan's population (66 percent) lives in rural areas (Population Reference Bureau, 2003). Poverty has had a substantial impact on health indicators, which has been exacerbated by illiteracy, low women's status, and a lack of water and sanitation services (World Bank, 2002). The main obstacles have been a lack of information about health and disease, cultural and household remedies, misconceptions about a health service and provider, social hurdles, and the cost of delivering an effective health care (Hunte,1992). Pakistan's health-care system is separated into two basic sectors: public and private. Due to flaws such as a lack of focus on the health care system, excessive centralization of management, political interference, lack of openness, weak human resource development, and lack of integration, the public sector, which is regulated and recognised but primarily composed of an allopathic health care system, is severely underutilised (Karim, 1987). In the private sector, there are few licenced outlets and hospitals, but there are many unregulated hospitals, medical general practitioners, homoeopaths, hakeems, traditional/spiritual healers, Unani (Greco–Arab) healers, herbalists, bonesetters, and quacks (Renckens, 2002).

The length of sickness and the type of symptoms encountered are major indicators of health-seeking behaviour and provider selection. When a single symptom, such as a fever, is mild, people favour home remedies or folk medicines; yet, when multiple symptoms and a protracted duration of illness are present, people prefer biomedical health professionals. Alternative cures have been utilised by people who believe in

spiritual healers, clergymen, hakeems, homoeopaths, and even numerous quacks. They are initially used to treat infertility, epilepsy, psychosomatic problems, depression, and other disorders (Gilani, 2002).

Other reasons for calling a complementary and alternative medicine healer include proximity, a fair fee, the provider's availability, family pressure, and the healer's strong viewpoint. Other reasons for calling a complementary and alternative medicine healer include proximity, a reasonable fee, the provider's availability, family pressure, and the community's strong opinion. According to the study, individuals who use both allopathic and complementary medications are hesitant to inform their allopathic physician that they are also using complementary medicines (Dunn, 1997). This communication barrier increases the risk of complications from the combination of allopathic and alternative therapy.

Herbal remedies are widely utilised over the world, with 30–50% of the population in China, 40–50% in Germany, 48 percent in Australia, 42 percent in the United States, and 49 percent in France utilising herbal medication as a supplement to their primary health care. Plants or synthetic counterparts of various substances taken from medicinal plants account for around 25% of allopathic commercial medicines. Plant-based medications are more effective and have fewer adverse effects. To understand this, compare the crucial medicinal plant *Salix alba* (white willow) extract bark to the synthetic medication aspirin, which has more well-known negative effects. The improvement of the global health-care system, increased urbanisation, and inadequate links between the younger and older generations pose a significant risk of information loss. To aid in the identification of innovative pharmaceuticals, orthodox ethno medicinal data should be documented. This can also aid in the preservation of indigenous cultures and the management of natural resources. Due to its unique geography, ecology, and soil types, Pakistan boasts a great number of medicinal and aromatic plants, with over 6000 wild plant species. For medical purposes, 400–600 organisms are used. Only the northwest and Azad Kashmir in Pakistan have 80 percent of this medicinal flora.

Herbal medicine, often known as 'Unani' or Greco–Arab medicine, is a thriving industry worldwide. Annual sales of herbal products currently exceed US\$40 billion (Gilani, 2002). Pakistan has a long history of employing medicinal plants to treat a

wide range of maladies, primarily through the Unani medical system, which dates back to the Indus Valley civilization (WHO, 2001). Traditional medicine has gained in prominence as a source of health care, particularly in rural and indigenous populations around the country (Hussain, 2001). The bulk of medicinal plants are found in the temperate climates and subtropical woods of northern Pakistan (Rahman, 2003). Complementary and alternative medicine is used by around 70–80 percent of the population, particularly in rural areas (Hussain, 2002). The Unani system, along with other complementary and alternative medicine (CAM) systems such as Ayurvedic and homoeopathy, has been adopted and integrated into the national health system. Pakistan is the only country in the eastern Mediterranean region having a regular Unani teaching institute (Rahman, 2003). There has been a lot of policy activity in terms of CAM regulation. The government of Pakistan has a number of institutions and programmes in place to strengthen and coordinate various sectors of the industry, which are backed by non-government and private sector initiatives. However, improved sector coordination at the national level is essential as part of a strategic plan, which will result in research and development (Williams, 2002). In the United States, there are 45 000 traditional healers, with almost three-quarters of them operating in rural regions (Gilani, 1992). These practitioners' presence in rural areas could be considered as a source of health care for Pakistan's rural population. There are around 52 600 recognised Unani medical practitioners working in the public and private sectors in urban and rural areas. Under the supervision of provincial health officials, around 360 tbb dispensaries and clinics provide free medication to the general public (Rahman, 2003). There is a strong need for training and capacity-building programmes for CAM practitioners who require such continual education, bringing them into the social position and increasing their status in the country.

Pakistan is one of the world's top eight exporters of medicinal herbs (Hussain, 2004). Partnerships must be developed at multiple levels. A coalition based on common primary interests could be developed on a regional and global scale. Community involvement, for example, can aid in resource conservation and sustainable use. Non-governmental organisations must be involved in bio-prospecting and benefit sharing (Gilani, 1992). A significant partnership would be useful in achieving the goals of environmental and biodiversity protection, as well as a larger share of global trade in medicinal plant raw materials. This would entail the implementation of government

programmes and incentives for exporters (Fink, 2002). Close collaboration would benefit allopathic practitioners, traditional medicine practitioners, ethnobotanists, phytochemists, pharmacologists, agricultural experts, and others in connected sectors. Geographically, Hunza is located in the midst of mountains and deserts; in the ancients' days, it was difficult to access the market since road connections to other towns in Pakistan were limited; as a result, the people of Hunza discovered several herbs to use as remedies and even as food.

Pakistan's northern highlands are known for their biodiversity due to their location at the crossroads of two main mountain ranges, the Karakorum, Himalaya, and Hindu Kush (Shinwari et al.2000). In Hunza, over 3000 plant species have been identified, with at least 124 of them having medicinal use (UNDP/IUCN, 1999). These three mountain ranges, on the other hand, include around 25,000 plant species (about 10% of all plant species on the earth), with over 10,000 of them being economically or medicinally useful (Pei, 1992).

The Himalayans have a wide range of cultures, dialects, and traditions. Plants are used for a variety of purposes in Pakistan's mountains, including medicine, timber, firewood, food, and fodder (Hussain & Khaliq 1996). The environment in which a person lives meets all of their needs. Cutting firewood, lumber for construction, and other utilities has produced a significant threat to the region's valuable plant species as forests have been reduced. Overuse of local resources can result in flooding, mud flows, and landslides. Every year, flooding and landslides incur enormous economic losses. A disastrous flood swept through the entire area in June and July of 2005 (Delcourt et al. 1986).

## **1.2 Objectives of the Study**

1. To explore the ethno-botanical importance of local herbs
2. To figure out the myths and realities related to the herbs.
3. To examine the ethno-botanical therapies.

## **1.3 Gap of the study**

The current research will explore the cultural importance of herbs (tumuro, mountain tea) using in Hunza valley, there are myths and realities related to the local herbs in

the field of medicines and local therapies are famous for curing different illnesses by using different herbs.

Hunza is a remote area of Pakistan, which is rich and diversified in important medicinal plants. Modernization and introduction to modern drugs have had a profound impact on the area's traditional practices. The ethnic medicinal knowledge in the study region is on the verge of extinction because the elderly community members who are the primary carriers of this knowledge are dying off and the new generation is uninterested in acquiring it. Herbal practitioners in the area have extensive traditional knowledge, but they are often hesitant to share it with other members of the community. As a result, the current study was designed with the goals of documenting traditional knowledge in the study region, preserving it in the form of published literature, and sharing it with other communities throughout the world.

#### **1.4 Significance of the study**

The current study was conducted to highlight the consumption of traditional medicines and scientific medicines. This study has an importance and even first to document the practices of herbal medicinal plants in Hunza valley. Present research was aimed to document the previous ethno-botanical usage and cultural practices of the medicinal plants. There is little knowledge about the historical usage of ethno-botanical practices however in this modern era of rapid development society is facing environmental and technological changes. So it is important to record those practices and preserve them for the new generation. Present study also contributes to the literature for the both anthropologists and botanists through which they can study the process of evolution. Current study provides varieties of local herbs and their traditional terminologies. This study also will help into the conservation of rare herbs and to encourage the ethno-botanical practices by considering the importance in current scenario.

## Chapter 2

### 2.1 Literature Reviewed

This chapter comprise of extensive previous knowledge regarding current study.

Pakistan's traditional medicinal techniques have a lengthy history and are mostly based on the Unani Tibb, or Greco-Arab medical system. The Unani system is based on the concept of humours and seeks for a harmonious coexistence between nature and people. The beginnings of Unani Tibb can be traced back to Hellenistic Greece. The Arabs then embraced it, and it spread throughout Europe and Asia. It was further supplemented by Chinese and Indian medicine. Around 1350 AD, it became popular in India under Muslim regimes (Dharmananda,2004). Unani medicine is still popular in Pakistan, particularly among tribal peoples, where it is used as a first-line treatment. (Williams ,1999).

Traditional medicine has been recognised and integrated into Pakistan's national health system (Rahman, 2003). Professional practitioners must be registered with the National Council for Unani Tibb and the National Council for Homoeopathy, respectively. There are roughly 50,000 registered Hakims/Tabibs (Unani medicine practitioners), 6000 homoeopaths, 537 Vaidis (Ayurvedic medicine practitioners), 28 recognised Tibbia colleges, and two universities in the country (Malik,2005). Approximately 457 Tibbi dispensaries and numerous private clinics provide public medication throughout the country, with 300–350 Unani and over 300 homoeopathic manufacturing enterprises making pharmaceuticals (Shaikh,2009).

Traditional medicine is popular in Pakistan because of its price, accessibility, and availability (Shinwari,, 2011). Around 63 percent of the public's out-of-pocket spending is for health-related issues, and costs are frequently cited as a key impediment to receiving appropriate health care (Stephenson,2004). The government invests roughly 2.6 percent of GDP on health (WHO, 2014), however primary health care services remain insignificant in rural areas. As a result, residents in Pakistan's remote areas rely significantly on traditional treatments.

The Pakistani government has formalised its position on TRM as part of its National Health Policy in order to provide comprehensive, universal, and equitable health care



to all Pakistanis in accordance with the WHO's goal of "Health for all by 2000." TCAM (Traditional, Complementary, and Alternative Medicines) cannot be employed to achieve this purpose (WHO, 1978). The 1997 National Health Policy recommended developing a new curriculum, changing the prerequisite for admission to Tibba/Homoeopathic Colleges from Matric (Grade 10) to FSc (Premedical i.e. Grade 12), which requires the colleges to be affiliated with universities, enacting legislation to cover traditional medicine manufacturing, strengthening the role of the National Council for Tibb and Homoeopathy, and supporting research and development. The policy pushed for the regulation of traditional medicine practise and education, the establishment of a government pharmaceutical laboratory, and the provision of medicinal plant harvesting training courses. The 2001 National Health Policy also requested that the Unani, Ayurvedic, and Homoeopathic (UAH) Act be amended to include degree and postgraduate level courses, which has subsequently been implemented (NHP, 97, 2001).

## **2.1 Tibb-e-Unani**

According to basic principles of Tibb-e-Unani (Greco-Arab) body is made up of the four basic elements, which are "earth", "air", "water" and "fire" with different "temperaments" i.e. cold, hot, wet and dry. The policy proposed regulating traditional medicine practise and education, establishing a federal pharmaceutical laboratory, and providing training courses for medicinal plant gathering. The National Health Policy of 2001 also recommended that the Unani, Ayurvedic, and Homoeopathic (UAH) Act, 1965 be amended to include degree and postgraduate level courses (NHP, 97, 2001), which have since been implemented. The origins of the Unani medical system can be traced back to Greece. Hippocrates, the famous physician and philosopher, is thought to have founded it (460-377 BC). Under the sponsorship of Islamic rulers in numerous Arabian countries, Arabian academics and physicians have played a significant part in the development of this system. They invented and perfected many fields, including chemistry and medicinal methods like as distillation, sublimation, calcinations, and fermentation. Avicenna was the most prominent historical person in the golden age of Unani medicine (980-1037 A.D). "The Canons of Medicine" Al-Qunoon was his most important medical work. He is largely responsible for the current state of Unani medicine. His book Al-qanoon or (The Canon of Medicine) was a widely praised

medical text that was taught in European countries until the 17th century. Many doctors of Arab heritage in Spain have also contributed to the system's development. Some notable names are Abul Qasim Zohravi (Abulcasus 946 – 1036 AD), author of the classic treatise "Al Tasreef" on surgery (<http://www.indianmedicine.nac.in>). In the year about, the Arabs were influential in introducing Unani medicine to the subcontinent.

## **2.2 Homeopathy**

Homoeopathy is a system of medicine that treats diseases with medicines that are prescribed in minute dosages and can produce symptoms that are similar to the disease when taken by healthy persons. It is based on the natural rule of healing known as "Similia Similibus Curantur," which translates to "likes cure likes." In the early nineteenth century, Dr. Samuel Hahnemann (1755-1843) provided it a scientific foundation. The homoeopathic system of medicine was introduced to this region of the subcontinent a little more than a century ago, and it has successfully merged with traditional notions. It has a huge following in the Islamic Republic of Pakistan. The city of Lahore in Pakistan holds the distinction of being the first city in undivided India where Dr. J. M. Honigberger, a German physician, introduced Homoeopathy. In early 1920, the Punjab's first homoeopathic college opened in Lahore. Dr. Freeburn, an American missionary, and Maj. Dr. Sadiq Ali founded it.

## **2.3 Regulation of traditional/complementary and alternative medicines**

The Unani, Ayurvedic, and Homoeopathic (UAH) Act of 1965, which has been revised to recognise the degrees Course, regulates traditional/complementary medicines performed in Pakistan. The National Council for Tibb (NCT) and the National Council for Homoeopathy (NCH) both require practitioners of these systems to be registered with their respective bodies (NCH). The National Council for Tibb (NCT) is in charge of establishing the curriculum, education, and examination for the Tibb-e-Unani and Ayurvedic systems of medicine, as well as registering Tabibs who pass the examination. 14 of the 22 council members are chosen by postal ballot, with the remaining members being nominated by the federal and provincial governments

There are approx. 45,799 Hakims / Tabibs and 537 Vaidis registered with NCT and about 28 recognized Tibbia colleges (Malik et al., 2005).

## **2.4 Increased global demand of herbal medicines and current**

There is a growing trend to shift resources from allopathic to traditional healthcare systems around the world. By 2050, the worldwide market is expected to grow by \$5 trillion. More than 300 medicinal plants are traded in Pakistan, accounting for 12% of the country's flora. In the 1990s, Pakistan's top ten Dawakhana (herbal makers) consumed more than 2 million kg of 200 medicinal plants annually, with consumption increasing by a factor of ten in the last two decades. According to estimates, 22 species of medicinal plants were traded for Rs.14.733 million in 1990, but this value increased to more than Rs.122 million in 2002, representing an eight-and-a-half-fold increase. In 1990, therapeutic plants worth Rs. 36 million were consumed, whereas in 2002, medicinal plants worth Rs. 218 million were consumed (Shinwari et al., 2002). Shinwari et al. (2006) More than 500 types of flowering plants used as medicine are listed in a "pictorial guide of medicinal plants of Pakistan." Pakistan is also home to roughly a third of the world's endangered species, with 266 species out of a total of 709 being native to the country. Ethnobotanical, pharmacological, and medicinal uses of endemic species are also possible (Shinwari, 2010).

As a result, there is a worldwide requirement to develop and protect therapeutic plants. In Russia, 50,000 tonnes of medical herbs are utilised annually, with half of them being grown. Annually, medicinal plants worth Rs.90 million are grown in Lucknow, India. Each year, the European Union (EU) consumes 3,000 kg of Glycerrhiza, which requires 400 tonnes of plant roots. In China, the pharmaceutical industry's total output value was 233 billion yuan (28 billion dollars) in 2000. Traditional Chinese medicine's share of the international herbal medicine market was expected to increase to 15% by 2010 from the current 3%. Unfortunately, in Pakistan, the cultivation of medicinal plants has received insufficient attention (Shinwari, 2010). In July 2006, the Pakistani government, through the Ministry of Food, Agriculture, and Livestock (MINFAL), launched a project called "Production of Medical Herbs in Collaboration with Private Sectors" (PMHPS) to encourage the growth of medicinal herbs and spices as a crop in Pakistan. The project has

concentrated on the commercial production of medicinal herbs using a research-based technology package that adheres to WHO guidelines for excellent agricultural, gathering, and processing methods(Aslam, 2008).

## **2.5 Causes of threats to existence of medicinal plants in Pakistan**

Pakistan's medicinal plant hotspots are scattered over 13 Natural Regions, ranging from alpine pastures to mangrove forests. More than 10% of the flora is threatened (Shinwari et al., 2000, 2002). Population pressure, poverty, and low natural resource quality, as well as the disintegration of social institutions, the lack of land use plans, and the lack of enforcement of existing norms in whatever form they exist, are all factors that contribute to endangerment. In addition to rapid infrastructural development (roads, building construction), deforestation, irrigation system spread, pollution, and, to top it all, the destructive actions of the massive flood of Afghan refugees, medicinal plants are threatened. Over-harvest

## **2.6 Safety, efficacy and quality standards of traditional medicines**

Because of the various collecting areas of origin, as well as the period of collection, storage, and drying processes, homogeneity in the content of the active elements of medicinal plants is not achievable. It indicates a lack of consistency in the quality of pharmacologically active secondary metabolites, which is undesirable. As a result, the efficacy of traditional medicines is an issue, as there is little scientific evidence to support their usage globally (WHO, 2002). Safety evaluations are divided into two categories: First, confirm that the material and methods are of good quality; second, ensure that there is no contamination, adulteration, or spiking. Steroids, heavy metals, and other allopathic components have been detected in herbal preparations, according to reports. (Keane, 1999, Saper et al., 2004). These findings are incorrectly utilised to place restrictions on the usage of TCAM. In fact, a QC failure like this should not lead to a prejudice against TCAM. Malpractice, a lack of documentation, ineffective policies, and a lack of established research methodology are all blamed for this. It is argued that modern medicine emphasises a scientific approach, but traditional medicine evolved in a different way, influenced heavily by the culture and historical setting in which it was born. Their beliefs, conceptions, and practises diverge significantly from those of Western biomedicine (Shankar et al. 2006).

Pakistan is among the world's top eight exporters of medicinal plants (Hussain, 2004). Partnerships must be developed on numerous levels. A coalition could be created on a regional and global level based on shared primary interests. Participation from the community, for example, can aid in resource conservation and long-term use. Non-governmental organisations must be involved in bio-prospecting and benefit sharing (Gilani, 1992). A strong partnership would be invaluable in achieving environmental and biodiversity goals, as well as a larger share of global medicinal plant raw material trade. This would entail the implementation of government programmes and incentives for exporters (2002). All stakeholders, including practitioners of allopathic and traditional medicine, ethnobotanists, phytochemists, pharmacologists, agricultural experts, and others, would benefit from close collaboration.

Herbal medicine, often known as 'Unani' or Greco–Arab medicine, is a burgeoning industry around the world. Herbal products now generate a staggering annual revenue of US\$40 billion. Pakistan has a long history of using medicinal plants to cure a variety of ailments, based mostly on the Unani medical system, which dates back to the Indus Valley civilization ( Gilani, 2002 ). Traditional medicine has grown in importance as a source of health treatment, particularly in the country's rural and tribal communities (Hussain, 2004 ).

The majority of medicinal plants are located in northern Pakistan's moderate climates and subtropical woodlands (Rahman, 2007). Around 70–80 percent of the population, particularly in rural regions, uses complementary and alternative medicine (Hussain, 2004). The Unani system has been adopted and integrated into the national health system, alongside other complementary and alternative medicine (CAM) systems such as Ayurvedic and homoeopathy. In the eastern Mediterranean region, Pakistan is the only country with regular Unani teaching institutes (Rahman, 2007). s

In terms of CAM regulation, there has been a lot of activity at the policy level. Pakistan's government has a variety of institutions and programmes in place to strengthen and coordinate various parts of the industry, which are supported by non-government and private sector activities. However, improved sector collaboration at the national level under a strategic plan is required, which will result in research and development offshoots (Williams, 2004). There are 45 000 traditional healers in the United States, with around three-quarters of them working in rural areas (Gilani ,

1992). The presence of these practitioners in rural areas could be viewed as a source of health care for Pakistan's rural population. In urban and rural areas, there are around 52 600 registered Unani medical practitioners working in the public and private sectors. About 360 tibt dispensaries and clinics give free medication to the general public under the supervision of provincial health authorities (Rahman, 2004). There is a clear need to develop training and capacity-building programmes for CAM practitioners who require such ongoing education, thus bringing them into the mainstream and boosting their social position.

Throughout history, plant resources have remained an important aspect of human society. According to the World Health Organization (WHO), nearly 80% of the population in underdeveloped countries uses traditional herbal remedies (Alves, 2005). Due to a lack of modern health facilities, their effectiveness, cultural priorities, and options, traditional medicines provide a cheap and alternative form of primary health care in poor nations (Bannerman and Manandhar, 1998). (Plotkin and Svarstad, 2000). Traditional herbal medicine is also becoming more popular in developed countries. Traditional herbal remedies, for example, account for 30–50 percent of total drug consumption in China. At the same time, herbal treatments are the first choice for 60 percent of children suffering from high malarial fever in countries like Nigeria, Ghana, Zambia, and Mali (Kebede and Balick, 2006). The documentation of ancestral knowledge in ethnobotanical surveys may cover the existing gap to discover effective drugs (Heinrich, 2006).

Pakistan has a diverse range of climatic zones, each with its own biodiversity. There are around 6000 plant species in Pakistan, with about 400–600 of them being medicinally valuable (Ali and Akhtar, 2013). Several research in the country have documented the medicinal applications of plant resources (Abbasi, 2013) Folk knowledge about traditional herbal treatments is frequently passed down orally from one generation to the next (Khan and Ahmad, 2014). Vertical transmission increases the risks of knowledge extinction, which is a serious problem that must be handled in order to preserve information. Due to the cultural acceptance and economic efficacy of plant-based herbal products across the country, a considerable trend in scientific and commercial interests has been noted in recent decades (Amjad and bano, 2014). The country contains a wide range of cultures and languages, with rural and distant areas speaking the majority of them. Rural residents have limited access to healthcare,

which is one of the primary reasons for the use of traditional herbal remedies in these cultures (Aziz, 2016).

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## Chapter-3

### Research Methodology

The term "research methodology" refers to a collection of methods and processes for analyzing, identifying, selecting, and processing a topic. Data collection, generation, and analysis are all covered under methodology. Research methodology is the precise procedure by which the researcher thoroughly solves his or her problem, whereas research methods are all the tools and methodologies used to perform the study. In this field, the researcher discusses the many steps that are often used to investigate a research problem. As a result, methodology refers to the scientific approach to conducting research (Alok & Mishra, 2011). Qualitative and quantitative methods are the most common. Quantitative research allows a researcher to test hypotheses systematically by collecting and analyzing data. The quantitative method is concerned with numbers and statistics, whereas the qualitative method is not concerned with numbers or statistics. Qualitative research methods provide in-depth information about people's beliefs, experiences, social functions, and other day-to-day activities (Bernard, 2006). This study was designed to be carried out using a qualitative approach. The qualitative approach is commonly employed in anthropological research, and because this study was conducted in the anthropological domain, the researcher used the qualitative method. To collect data, the researchers used a variety of anthropological methods and methodologies. Unlike laboratory science, anthropological fieldwork requires a variety of research tools in the investigator's toolkit. Anthropological fieldwork requires significant sensitivity and self-awareness on the part of the investigator (Pelto & Pelto, 1978). Because most anthropological research is done in the field, the tool kit suggested by Pelto and Pelto is essential for obtaining useful and saturated data.

Every scientific research has a set of research methodologies and procedures which must be followed for conducting effective research. Anthropology is a field that has multiple instruments to carry out the research. I used the qualitative research method to collect my data for my research and I used the following Anthropological tools and methods through which I am capable to get reliable and valid data.



## **2.7 Rapport building**

It is researcher ethics to build rapport and break the ice after being involved in the observation or population so that they can make it easy for the respondent to give information to the researcher easily. When I start my fieldwork, I focused on rapport building among my respondents. The researcher initially entered difficulties due to the respondents' unfamiliarity. To acquire useful data, the researcher worked hard to establish a rapport. Her family friend, who was looking for vocational training in the area, was extremely helpful to the researcher. She presented her topic to the responders and introduced the researcher to them. The respondents were first skeptical of the study that the researcher was supposed to do, but after several visits and requests for interviews, they welcomed her. The researcher spent two weeks establishing rapport.

After establishing rapport, the researcher found research to be simple, and after the third week of fieldwork, she knew she was on her way to her destination.

## **2.8 Access**

Before starting the research, it appeared that the researcher had a good policy in place for determining what was valid and relevant to the study. The study intended to begin by identifying appropriate subjects through social media and resource people. The researcher planned to go to sites where she may meet respondents who, in her opinion, were most suited for the study. The process and objective of the study were most likely to be explained by the researcher. The researcher intended to progress slowly from recording their daily work and financial activities, but it was as simple as he had imagined.

## **2.9 Participant observation**

In qualitative research, observation is a source of data collecting. Five senses are employed in observation to obtain information about the field and respondents. A researcher must obtain reliable and accurate data. In truth, for most people, observation is the foundation of ordinary social activity; we are keen observers of others' actions and the physical environment. Interactions and relationships are seen,

evaluated, conclusions drawn, and comments made (Ciesielska, Boström, & Ohlander, 2018).

I conducted Participant observation during my research which is the most important technique for collecting data in qualitative research. By using this technique, I try to find out the best outcomes of my research and I also try to make myself a member of that community during my fieldwork or my research.

## **2.10 Sampling**

The process of picking responses from a target group is known as sampling. The respondents chosen by sampling are presumed to be representative of the entire community. The population refers to the inhabitants of the locale from whom the researcher's sample is taken. Researchers use sampling techniques to decrease the number of cases because they don't have the time or resources to analyze the complete population (Taherdoost, 2016). Two forms of sampling were used by the researcher. The researcher began by using convenience sampling. The researcher chose those respondents who, in her opinion, were more appropriate and appropriate for her study. Due to a lack of resources and time, researchers are unable to reach the whole population. For that reason, sampling is a viable option. During the research area, the researcher can choose from a variety of nonprobability sampling methods for gating results. Sampling is also significant in anthropological research. Researchers cannot study a whole population without using a community sample, so they must use a community sample. The process of selecting and choosing the smaller group from the target population. It is difficult to interview the whole locale, so I conduct it in a smaller group to find out the data for my research.

## **2.11 In-depth interview**

During the research, in-depth interviews were done. For the goal of genuine and accurate data, the researcher considered in-depth interviews. These interviews were quite important to this researcher, and he divided them into two categories. The researcher conducted a semi-structured interview in the first phase. The researcher-led respondents and then conducted semi-structured interviews with the use of a semi-structured interview guide. In the initial portion of the interviews, the researcher asked simple questions.

## **2.12 Tool for data collection**

Every researcher should have data collection methods. These methods must be relevant and capable of collecting data that will help you reach your goals. Interviews, observation, and focus group discussions were all used in this study, which was semi-structured and completely structured. The data gathering methods have been explored in depth below.

## **2.13 Focus group discussion**

I also conduct the focus group discussion in my research where I have interviewed different groups in community center for senior citizen in hunza and which is helpful for my authentic findings in my research.

## **2.14 Audio Recording**

The researcher chose to record the interviews of respondents to preserve the data safe and free of errors. Some respondents refused to have their interviews recorded, therefore instead of recording them on tape, the researcher wrote them down in her daily diary.

## **2.15 Research technique**

It is a technique in which the researcher goes into a kind of discussion with the subjects. So, I conduct this technique during my fieldwork.

## **2.16 Key informants**

A key informant is a source of foundational knowledge about the field and community in which a researcher is conducting research. The key informant should be picked with care because he or she will be the one who will inform the researcher about the society's social values and standards. Key informants are those who have a lot of expertise about a particular society and can help the researcher investigate the responses. Local herbal healer are taken as key informant as they have bulk of knowledge regarding the botanical importance and its usage in different diseases and they have most relevant experience in this field form generations. So,

I selected my key informant who was well known in the community and have well enough information.

## Chapter 3

### Area profile

#### 3.1 Locale

#### 3.2 Introduction of Hunza

The current research has been carried out in Altit village of Hunza valley. Hunza is a mountainous valley in the Gilgit-Baltistan Pakistan. Gilgit Baltistan is disputed territory because it is considered as part of Kashmir issue. Major languages of Gilgit Baltistan are: Shina, Balti, khawaar, Brushaski, and Wakhi. Hunza is situated in the most northern part of Gilgit-Baltistan, Pakistan. And connects border with Khyber Pakhtunkhwa in the west, Azad Kashmir in the south. And internationally bordering with the province of Xinjiang of China in the north-east, Afghanistan in the North West. The Hunza valley is situated at an elevation of 2,438 meters (7,999 feet). Hunza is consists of three regions, Upper Hunza (Gojal), Central Hunza ("Hunza Valley") and Lower Hunza ("Shinaki").

The local languages spoken include Burushaski, wakhi and shina. The literacy rate of the Hunza valley is 95%. The historical area of Hunza is almost over the centuries, mass migrations, conflicts and resettling of tribes and ethnicities and the People of the region are practicing their historical traditions from the generations. The Hunza Valley is also consist of people of Wakhi too, who have been migrated there from northeastern Afghanistan in the beginning of nineteenth century onwards (Dani, 1991)

### **3.3 History**

Altit is an ancient and historical village with great cultural significance. Altit has no written history, mostly modern day researcher's quotes historical background from the books of Mr. Qudratuallah Baig, Professor Ahmed Hassan Dani, Mir Nazim Khan and some earlier western explorers. During earlier stages of Hunza when it was a princely state Altit was capital place of Hunza. Altit is the second oldest settlement of Hunza after Ganish village. The fort overlooking the Altit village beside river Hunza is open for public. The 800 years old village has been rehabilitated and renovated and you can visit the fort and walk around the village with the help of local guides. The fort is about 2 km from Karimabad and is surrounded by densely settlement and ancient and historic pool.

For more than nine hundred years Hunza was a princely and self governing state. The Britishers controlled and gained power Hunza valley and the neighboring state of Nager (between) 1889 to 1892 through military invade. Then the Mir of Hunza Mir Safdar Ali Khan runs away to Kashagar in Chaina for political asylum. Then British enthroned his brother. Hunza remained princely state till 1994 when Prime Minister Zulfiqar Ali Bhutto dissolved it.

### **3.4 Altit fort**

During 14<sup>th</sup> and 15<sup>th</sup> century, then to 1947 and then to 1974 northern Pakistan was consist of many small princely and independent states. Among them two traditionally rival states Hunza and Nager situated on opposite sides of river Hunza. Rulers of those states were known as mir,s or Thamo built number of strongholds and forts to express their power to each other.

Altit fort was one of those strongholds and was built with Altit Khun and it is said that it was first capital of the state. However later capital was shifted to Baltit fort as a result of conflict among two sons of Mir, Shah Abbas and Ali Khan.

In the early 15<sup>th</sup> century the Mir of Hunza married with princess shah khatoon of Baltistan. She brought architecture and tradesman from Kashmir and Tibet as part of dowry. At that time Baltistan state has very strong ethnical and cultural relations with Ladakh state in Northern India. Therefore the structure of Altit fort was influenced by Tibetan and Ladakhi architecture and is resemble with Potala palace of Lhasa Tibet.

Basically Altit fort was built as royal palace after some years in 1548 a huge defensive watch tower has been added, which transformed it into fort. It is said that Altit fort was built in six different phases from various difficult rocks to the top.

Altit fort was surrounded by old settlement of Altit Khun, and watch tower was used for defensive purposes from rival state of Nager, looking and defending for travelling traders and caravans along with the Silk Rout. The historic fort and the village is integral and core part of cultural of Hunza.

In aftermath due to socio political changes the fort loosed its excellence and glory of being the centre of village life and cultural festivals. With the passage of time the ruling family left it to deteriorate because they used to live in Baltit fort and secondly they loosed their power to collect huge taxes for renovation of multiple palaces.

In 1990s the prince of former ruling family Mir Ghazanfer Ali Khan donated historic Altit fort to the Aga KHAN Foundation which restore and rehabilitate both old settlement and Altit fort through Aga Khan Cultural Service. The fort was opened in 2007 as cultural centre and museum.

Altit fort is located in the village Altit, about 2 km from Karimabad and 10 km from Aliabad the current capital and district head quarter of Hunza. It is built on a sheer rock cliff which falls 300 meters into the river hunza and is older than altit fort. Whole altit settlement can be seen from the top of Altit fort. Extreme streets in the fort sharp drop off and just high above the river made this settlement highly terrible and defensible. Due to its strategic location and architectural design the historical Altit fort is centre of attraction. The fort has been constructed in six levels because the rock on which fort is constructed has many levels. Because of the fear of foreign invade the Altit fort is construction has made 1000 feet higher rock right on the edge of river hunza. Basically, it was built as palace after few years they added the watch tower and some other defensive elements transformed it into a fort. It is highly possible that the different stages of the fort were constructed during different times because the age of the fort is considered more than 800 years old. Altit fort is said to be 50 to 100 years older than Baltit fort. A 400 years old house of Mr. Ali Gohar from Ganish village has received UNESCO heritage award in 2009. Ali Gohar house is now used as community centre and providing working space to people of Ganish, it encourages women to work and is centre of arts, crafts and documentation of local culture. As that house is said to be an architectural master piece. This house was used by ambassador of Mir of Hunza to kaashgar and xinkiang.

### **3.5 Climate**

Hunza valley (Altit) undergoes harsh winters and light summers. Weather remains pleasant from April to September while winters are so harsh especially from December to February. Locals used to wear woolen and heavy cloths. Outside and daily activities became shrinking due to harshness of climate. Locals used to facilitate



themselves by using indigenous heating system (Bukhari) which maintains the temperature of house quiet effective. Locals use to burn wood as fuel for heating purposes. Harsh climate in winters completely transforms the valley from beautiful green to white and black. The blossom in late march and April brings the beauty and freshness again. Altit has many orchards, clean water channels, meadows; royal orchard (khabasi) is admirable. For agriculture purposes and cultivation locals especially women use to work in fields. Their work load increases when it comes to collection and storage of food for winters.

### **3.6 Transport**

Karakoram Highway is the only way of transportation of whole GB, which connects GB to whole country. KKH crosses from Hunza which connects Pakistan to China through Khunjarab pass, although KKH became blocked because of Atabad disaster and Atabad lack from January 2010 to 2015 but a china company built 7 km long tunnel in three years and opened for transportation in 14 August 2015.

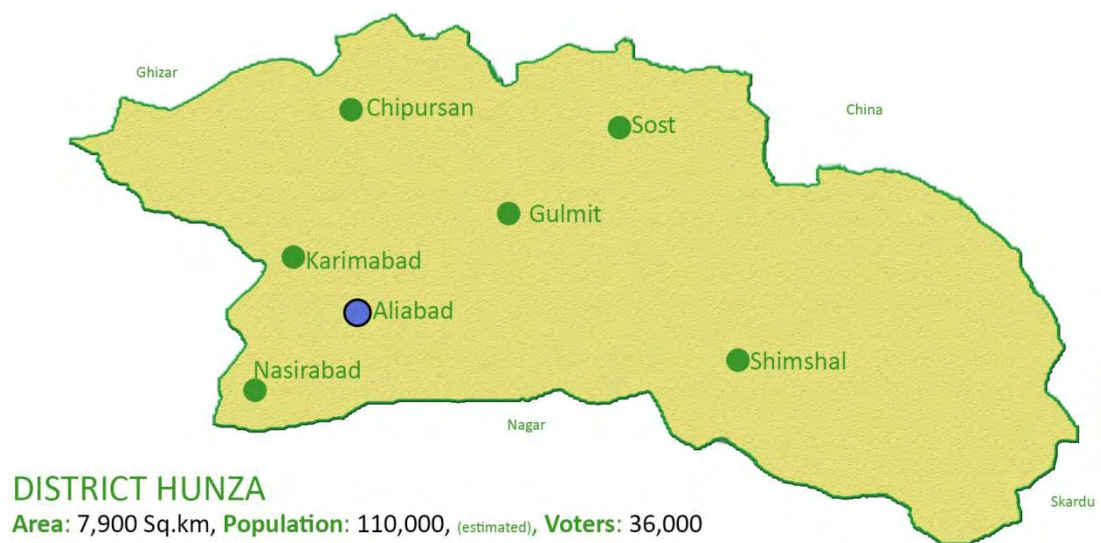
Regular van and bus service operates between Hunza and Gilgit and with in Hunza. PTDC offices at sost gojal Hunza, Gilgit and Islamabad arrange tours and transportation for tourists and visitors. Northern Areas Transport Company (NATCO) runs daily bus service from Hunza to Rawalpindi and weekly Hunza to Karachi. Some other private transport companies like Mashabrum, Skyways, Fasal movers, GB Express operates their services from different places of GB to Rawalpindi.

### **4.8 Scenery and mountains**

There are many peaks high above 6000 meters in the Hunza valley. The Altit valley provides view of number of tall peaks, including Rakaposhi 7788 meters, Ultar peak

7388 meters, Bubulimoting (ladyfinger peak) 600 meters, Deran peak 6270 meters, Darmyani peak 6090 meters. 1000 years old settlements of Ganish village and watch towers of Ganish, Baltit fort which stand on the top of Hunza are also viewable from Altit.

### 3.7 The District map of Hunza



Source : Google



### 3.8 Physical Feature

Hunza valley is said the heaven on earth, it is enveloped in two large mountainous ranges, Himalayas and the Karakoram mountain ranges. THIS place has been a biggest and great tourist attraction point for many years. Altit town is located on the west bank of the River Hunza, besides with the Karimabad which was old capital of princely state of Hunza. And the town is made up of stone walled steep sloping large terraces(Dani, 1991).

### **3.9 Recreational Activities of Hunza**

Hunza is one of the most beautiful valleys in Pakistan, and is the major attraction as a tourist point in all over the world. Hunza Valley had two main tourist attraction seasons, the autumn in which whole valley turns into red and yellow, and the cherry blossom, apricot and peach blossom welcomes the tourists and gives magical view. The valley is consist of three divisions, Upper Hunza, Central Hunza and Lower Hunza. The village Altit is situated in the Central Hunza which has remarkable history and heritage sites like Altit Fort and historical royal garden. Central Hunza is the most popular tourist point and destination because of its beautiful and stunning scenery. the famous peaks are Ladyfinger, Ultal peak and Rakaposhi and Deran peaks are also visible from Altit village which are situated in Nagar valley.

The Karakoram Highway connects Hunza valley to Chaina through Khunjab pass in the north and Gilgit city in the south. Karakoram highway is the only source of transportation and connection, not only to Gilgit city and China but also to the Pakistan. (Dani, 1991).



### **3.10 Language and Religion**

There are three main languages and in the Hunza valley which are Brushaski, wakhi and shina. And there is also a distinct and diminishing language spoken by a community which is Dumaaki. Brushiski is the only language of Altit village.

Two sects of Islam are found in this region; ismialism and Shia. The Altit village is consisting of only Ismaili Muslims. Although majority of population of Hunza valley is practicing Ismailism and some are practicing shiaism but they have almost same culture and celebrate common ceremonies and rituals.

The Burushishki speaking people are settled in central Hunza, Dumaki is also being spoken in central Hunza by a small community, wakhi speaking people are settled in upper Hunza and shina speaking population is settled in lower Hunza. Upper and lower Hunza is consisting of hundred present Ismaili muslims and Central Hunza is consist of Ismaili and Shia muslims. (Dani, 1991).

### **3.11 Agriculture of Hunza.**

Every family in Hunza and Altit village has their own house with agricultural land; traditionally almost every family is engaged in keeping livestock and farming. Almost every household in the valley grows fruits like apples, peach, walnuts, grapes, cherry, apricots, pears and some vegetables, like carrot, pumpkins, potatoes, cucumber and tomatoes.

### **3.12 Food of Hunza**

Hunza diet and food is consists of organic food, local and cultural food. Saltish tea is being enjoying with local food like *Fity*, *Aarzoq Giyal*, *khamali* etc. The diet mostly consists of raw food including nuts, dry fruits, fresh fruit and seeds added with butter, yogurt and other milk products.

As the temperature drops during harsh winters the intake of traditional food increases. Dawdoo, diramfiti and Khamulute are well known dishes for winters. Khamulute is thick bread which is consisting of meat, onion, pure seed oil and some other ingredients. Diramfiti is (Halwa) type sweet dish which is made from wheat, butter and oil. While Dawdoo is local soup.

Youshayas e chap is another specialty of the region in which meat is being let to dry and preserves for long time in winters. Even today people practicing this although its became minimum.

Locals consume organic items and dry fruits in winter seasons to keep themselves warm. Dry fruit is being served by women to family and guests. And usually dry fruit is being prepared and preserves by women. Vegetables are also stock for harsh winters.

### **3.13 Housing pattern**

Altit is second oldest settlement of Hunza and has old architecture and congested housing. However today Altit is mixture of new and old architecture. New houses are being constructing by using cement, stones and bricks. To maintain temperature during harsh winters wood panels are employed within houses. Mostly people construct compound around their houses for cultivation of vegetables and fruits. Oldest houses have been constructed down and round to Altit fort. As we move further away from Altit fort, there is new and modern housing. Old houses are constructed with indigenous architecture with wood, stone, mud and carved wooden work which is earthquake proof and saves from harsh climate. Old settlement and houses are consisting of series of interconnected wood and stones. Narrow and congested streets runs through the settlement. Aga Khan Cultural Service Pakistan (AKCSP) is working in old settlement to preserve the structure and facilitate the residents by upgrading physical structure and providing facilities like water purification system, electricity and sewerage system by support of Government of Japan.

### **3.14 Hunza Dress**

*Hunza traditional dress is consist of unique dress. It includes Tawchin which were used as shoes and made up of domesticated animal leather, shuqa a lengthy jacket like over coat which was made from wool, kupaltine (Pajamas) which was also made from sheep wool and Kurdi also made from Sheep wool. But now in my locale people used to wear shalwar kameez and pant shirt. The shalwar kameez is being wear by both men and women, but style differs by gender.. Some of the elder and senior members wear shoqa and desi topi.*

Precisely, mostly people wear were traditional dress, shalwar and kameez especially the old generation. Old men use to wear traditional woolen cap and traditional gown like overcoat. While younger generation follows the latest fashion trends.

### **3.15 Water Resources**

Central Hunza has abundant sources of water resources and glaciers Ultar glacier and Hachindar glacier are prominent sources of water but with the passage of time locale became populated and faces shortage of pure and drinking water. Some NGOs have invested in pure water schemes. For drinking purposes there are some water filtrations plants as well as pure water is being provided to homes in pipes and tapes.

### **3.16 Marriage patterns of Hunza**

Traditionally the marrying families are celebrating three days for both bride and groom. Families celebrating weeding ceremonies in their houses there is no tradition of marriage in marriage halls. There is no bride wage or groom wage there is only tradition of dowry which is provided by bride's family. Relatives are invited and they

gift different things like cash, cloths, butter, dry fruits, livestock etc which is called *Batikushi or hayans* in local language. People of universe prefer to exogamy they are against cousin marriage especially first cousin marriage because first cousins are considered as brother and sisters. Barat from groom side goes to bride house recite Nikah in Jamat Khana, traditionally meal is being served and bring bride with Barat to grooms house.

### **3.17 Health Facilities**

There is only one government dispensary in locale. Which does not functioning whole week and there is one male dispenser.

### **3.18 Educational Facilities.**

Education plays a significant role in the personality formation and development especially it helps in socialization and nurturing according to rules and values of particular society. In ALTIT valley there are two government middle schools including one school for girls and one school for boys. There is a private school (Bacon school system) which provides educational facilities to the 10<sup>th</sup> class.

And there are many technical and vocational centers for female especially. This provides vocational facilities not only to local residents but also to people of all over Hunza. *Ciqam* is one of the prominent vocational centres which provide multiple services, carpentry, playing local musical, making musical instruments, cooking etc. *Ciqam* has a restaurant (khabasi restaurant) in which all employs are women from top to bottom.

### **3.19 Family pattern**

Joint family system is popular in the region because all family members collectively perform the business and agriculture matters and there are some nuclear families as well. The region has patriarchal and patrilineal family system. Traditionally old generation of the family is the key decision maker and rest of the family members have to follow their decision although now a day's opinion and ideas of the whole family members are also considered.

### **3.20 Utilities**

Residents of Altit town have easy access to utilities such as hotels, markets, schools, religious centers, Tariqa board (religious institution). There are small markets and shops and there is a ladies market in which whole staff is female, they deals with local and traditional items such as Arzoq, Giyalin, Burus shapik, pure milk and yogurt.

### **3.21 Economic structure and occupations:**

In the past the primary occupation was agriculture and cultivation. But on the other hand new generation do not prefer to work in the fields with their elders. They focus on modern education and follow up new career opportunities. Due to better education facilities new generation including both women and men are getting specialized education. Private and government school teaching is preferred by most of the women on the contrary there are women who choose unconventional career including such as carpenter, shop keeping, banking, beauty parlors, restaurants and other relevant activities. Many women earn money by selling handicrafts and other local products. Most of the women belonging to lower class are getting more job opportunities in –sheqam product”. People of the area possess the economic assets which are houses, hotels and markets.



### **3.22 Live stock**

Mostly people having livestock including sheeps, cows, hens and goats. They are kept in the area specially made for them away from the houses.

### **3.23 Modern facilities:**

Modern facilities available to the people of the area are:

#### **3.23.1 Education:**

People of Altit area have keen interest in getting higher education. Giving higher education to women was a taboo in past but now female has access to colleges and universities.

#### **3.23.2 Electricity**

Government provides electricity to Altit. People use electric machines including computers, ovens, televisions, washing machines, cell phones, gazers etc. women manage their domestic chores in the limited availability of electricity as load shedding is common in the region. Television, radio, and internet are the source of entertainment for the people of region, although internet facilities are limited.

#### **3.23.3 Communication**

SCO (Special Communication Organization) is the only source of telecommunication in GB and it provides telecommunication facilities to the people of Hunza valley. Land lines are available in most of the houses. Different mobile companies such as SCOM, Telenor, Ufone and Zong provide mobile services to the people of region.

#### **3.23.4 Sanitation system**

In Altit region there was no any proper sanitation system before 2004. Some of the residential had proper toilet system but most of the people had traditional toilets. Aga Khan Cultural Service Pakistan (AKCSP) initiated a project of sanitation system in

2004 which made the things so easy. Now locale has proper sanitation and drainage system and they use toilets.

### **3.24 Culture, customs and traditions:**

The characteristics of people of locale include peaceful, simple minded, loving, hospitable and sincere. Traditional dance is arranged on the occasions of marriages and other traditional festivals which include Nowroz, Ginani and Salgira etc. traditional festivals are being celebrated by the people of the locale with full zeal and enthusiasm. In these traditional events main gatherings centers are Altit, Baltit and Aliabad. With music and dance these events are celebrated.

### **3.25 Role of women in society:**

Women were bound to their houses in the past but now trend has totally changed. Women are playing the dynamic role in every field of society. They are performing their roles inside and outside of the home. Literacy rate of women has being raised and is rising continuously. In previous times only male were allowed to gain education while female were only allowed to learn domestic chores and religious education. Now the situation has changed quite sharply and women have right to make their own decisions.

Women Social Enterprise (WSE) now change its name to Ciqam project, a project of AKRSP for women empowerment has helped women to empower and autonomous. Ciqam project has made women independent from men and now they do not rely on the men. They themselves made homes, furniture and other relevant activities. In fact women themselves are building their career independently. The project was not according to the gender base criteria and due to this reason firstly this project was opposed and was the point of criticism by so many people when it was started. But

gradually with the passage of time people accepted the change and accepted the participation of women in the various working fields as the result women are now working as painters, masons and carpenters in Hunza Valley.

### **3.26 Mobility and knowledge about medicinal plants**

Hunza people used to go to the highlands for 3 to 4 months in the summer and then return in the winter. They transport an entire family as well as livestock. Women are in charge of children, while males are in charge of animals and other necessities. Women have a great time singing songs on this voyage. It used to take them seven hours to travel there. These folks gather herbs and woodlands at this period, then dry and preserve them. The climate in posture is highly tropical, thus the herbs have plenty of resources. However, there were numerous modifications following the earthquake. There are now only a few houses that go there. People are now well-educated, and their sources of income are plentiful. Everyone seeks therapy from a doctor. People appear to be working hard on the hill to pick herbs, dry them, and store them for later use. These individuals believe it is a very long process, which is why they avoid it; they believe allopathic treatment is easier because it has an immediate effect. Herbs are misunderstood by the general public.

### **3.27 Source of Income**

Hunza was a fully traditional agricultural village two decades ago. Its economy was barely surviving. Economic interdependence between ethnic groups, based primarily on mutual needs and a lack of economic alternatives. Every ethnic group used to give other ethnic groups with its traditional and ancestral services. This community now exhibits an evident shift in economic activities as well as a significant shift in occupations. The food economy transforms into a money economy focused on cash

transactions. The availability of economic alternatives, such as better work prospects both inside and outside of the county, simple access to education, and the chance to start a business, is the primary cause for this rapid shift in occupation. old generations adopted agriculture as a means of income but the cultivation still remains the main source of earning livelihood. In this village one or two member are abroad from every home.

### **3.28 Role of alternative medicines**

Hunza has a sophisticated aga khan hospital, one basic health unit, one herbalist, and two to three general stores, all of which have doctors on staff. People have easy access to medicines. People believe that treating sickness with herbs would take a long time. Extracting herbs from the ground, drying them, and then grinding them to manufacture medications is a lengthy procedure. Doctors are now freely accessible. People now claim that they lack the guts to travel to Malian in search of herbs, so they use contemporary drugs instead. However, some herbs are still used for rapid therapy, such as sfaid podina for gastrointestinal problems, Katchmatch for wounds, and Katchmatch for tiny children. People claim that there were no such ailments previously, but that the number of deadly diseases has multiplied to the point where they can no longer be treated with herbs, forcing people to seek medical help. People no longer believe in herbs. People go to the doctor if they are sick, and if they do not cure it, they perform spiritual work. People in this area believe in amulets much more.

### **3.29 Cultural knowledge about sickness**

Sickness is seen as having natural (i.e. environmental cleanliness, personal hygiene, psychological and biological elements), supernatural (supernatural forces, ghosts, and spirits), and societal origins in Hunza village. There are two sorts of sickness:

physical and spiritual. On the one hand, physical sickness is visible, such as cough, fever, and malnutrition; on the other hand, spiritual sickness is not visible. Some illnesses are associated with superstitions, such as fever being caused by the evil eye or miscarriage being caused by someone writing an amulet on her name. People used to assume that sickness was caused by supernatural powers decades ago. In Hunza village, sickness is seen to have natural (environmental cleanliness, personal hygiene, psychological and biological factors), supernatural (supernatural forces, ghosts, and spirits), and societal causes. Physical and spiritual illness are the two types of illness. Physical illnesses, such as cough, fever, and hunger, are visible; spiritual illnesses, on the other hand, are not. Some ailments, such as fever induced by the evil eye or miscarriage caused by someone writing an amulet on her name, are linked to superstitions. Many years ago, people believed that sickness was caused by supernatural forces.

## Chapter 4

### Ethno-botanical uses of medical herbs

#### 4.1 Status of the traditional knowledge and medical herbs

Hunza gilgit-rural baltistan's villages have their own rural culture and beliefs. Their traditional way of life, which includes the usage of herbal treatments, brings people closer to the country's natural resources and sets them apart from other civilizations. Each community on the planet has its own philosophy, belief, attitude, culture, and economic standing, which is a natural phenomenon. These are the fundamental characteristics that account for the wide range of traditional medicine practices (anarevi, 2013). The pattern of medicinal plant use in a society is part of its cultural traditional knowledge, which is passed down from generation to generation and represents a heritage. Previously, several studies have focused on medicinal plant applications in a single culture or ethnic group, with little emphasis paid to comparative research across groups and civilizations (Heinrich, 2017). However, in recent decades, the intercultural significance of medicinal flora has been emphasised among various ethnic groups around the world. This method of comparison is useful and necessary for identifying cross-cultural differences and future medicinal plant research opportunities.

In hunza village people think that local treatment to sickness is much better than modern treatment. As they perceived local treatment as best effective to the treatment without side effect. For example in hunza people use mountain tea for the fever and cough particularly in winters they believed that this is supernatural medicine that's why this is most effective to headache similarly there are many other herbs are used to control infection. However in hunza valley they are many hakims are treating many diseases like the side ache, headache, histria and other many sickness.

## 4.2 Section I: local herbs and their uses

### Valerian

**Local name:** Halichi



Figure 1 Researcher's photography

**Family:** caprifoliace

**Parts use:** leaves

**Status:** use as antiseptic .it is yellow hard seed. This seed is one of the common medicine for wounds and accidents in hunza. The seed is graind and mixed in milk and use frequently particularly in night. According to local people this seeds has very high tendency of fiber which help wound to heal quickly and this seed also help stomach pain. This method is used from generations and still in practice in Hunza because this plant have effective to particular disease.

### 4.3 *Fragaria nubicola*

**Local name:** Tumuro



**Figure 2** Researcher's photography

**Part use:** leaves

**Status:** it is mountain plant if anyone suffer from cold cough and fever they use as tea and also for steaming and it is resistance to bacteria particularly respiratory infections. It is in practice since many decades. According to local people they leaves of tumor gather in summers and use as green tea in winter which helps them to keep warm and also used against cold and cough.



#### 4.4 *Olea ferruginea*

**Local name:** Ponn



**Figure 3** Researcher's photography

**Family:** Oleaceae

**Part use:** flower

**Status:** flower first gather in a summer season then dry them after drying them grind into powder form and used with milk, this helps to recover internal bleeding quickly. Also use for the Hepatitis and it is also use anti fulminatory for urinary system.

#### 4.5 *Jasmimum sambac*

**Family:** chamba



**Figure 4** Researcher's photography

**Local name:** shiknachi

Status: these are type of grass which grows in the beginning of spring in the month of April. And these grass is being root out with the help of a sharp tool or knife. These are being eaten in raw form with the curry. These are very bitter in taste which are used for controlling the blood pressure and sugar.

## 4.6 Papaver

**Family:** affem



**Figure 5** Google

**Local name:** Thunch

**Status:** *it's a plant* which grows once a year it gets seeds in the end. Which are being collected and getting oil from these seeds; which is used for cardiac diseases and to liquefy the blood. And its oil is used for controlling hair fall.



## 4.7 Olea Ferruginea

Family: oleaceae



Figure 6 Source Google

Local name: Human

Status: this is a crop which has being grown by the farmers in their land. This crop produce seeds which are being grind and make powder. Powder can be eaten with mixing with curry or can be eaten by spoon. It helps to recover urinary system and to strong the bones.

## 4.8 *Tussilago Farfara*

Family: asteraceae



Figure 7 sources Google

Local name: Hurray

Status: it's a crop which is being grind and its flour is helpful patients of heart and B.P.

## 4.9 *Dioscorea deltoidea*

Family: dioscoreaceae



Figure 8 source Google

Local name: Ishkeen

Status: These are root covers which are so bitter in taste; these are gathered from jungles and from pastures. These are being boiled in milk or in water and drink it. This is considered as medicine for bone diseases, fracture in bones and for relief of pain in joints. It helps in rejoining and connecting of bones.

#### 4.10 *Fragaria nubicola*



Figure 9 Sources Google

Family: Rhamnaceae

**Local name:** soopating

Status: this is a root which is use for ankle wrench and joints wrenching. And it is also used for curing of bone diseases and fracturing. It is used as external medicine and it does not be eaten.

#### 4.11 Velerian

Family: Caprifoliaceae





**Figure 10** Source google

**Local name:** Tilly Xeraans

**Status:** these are roots which are used for curing the disorders of teeth and clean the teeth.

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## Chapter 5

### 5.1 Indigenous Knowledge of medical herbs

Various studies highlight the importance of herbal therapy for indigenous and nonindigenous peoples in different parts of the world. Medicinal plants play a key role to understand other cultures. This chapter analyzes the richness [number of species] diversity of other cultures, this chapter analyzes the richness [plant identity and the number of illnesses for which it is used], illnesses treated with them and factors which affect the cultural knowledge, in order to contribute new data and insight into the importance of plant medicines to the local medical system of the people living in Hunza village.

Measuring medicinal plant knowledge can give an insight into the cultural importance of plant resources i.e. which species are recognized as effective, appreciated and reported with major frequency. Measuring this knowledge also provides information about the extent of agreement and variation in medicinal plants used by groups within the same region, as well as distant but culturally similar groups.

Current study is an important addition to the field of ethno medicines and anthropology. The study reports

The pattern of medicinal plant use in a society is part of its cultural traditional knowledge, which is passed down from generation to generation and represents a heritage. Previously, several studies have focused on medicinal plant applications in a single culture or ethnic group, with little emphasis paid to comparative research across groups and civilizations (Heinrich, 2017). However, in recent decades, the intercultural significance of medicinal flora has been emphasized among various ethnic groups around the world. This method of comparison is useful and necessary for identifying cross-cultural differences and future medicinal plant research opportunities. The pattern of medicinal plant use in a society is part of its cultural traditional knowledge, which is passed down from generation to generation and represents a heritage. Previously, several studies have focused on medicinal plant applications in a single culture or ethnic group, with little emphasis paid to comparative research across groups and civilizations (Heinrich, 2017). However, in



recent decades, the intercultural significance of medicinal flora has been emphasized among various ethnic groups around the world. This method of comparison is useful and necessary for identifying cross-cultural differences and future medicinal plant research opportunities.. In the fieldwork the researcher observed that most of the old aged people were having more experiences of using these plants since old times (especially before the construction of Karakoram Highway in the region and the start of modern development activities). We learned through the survey that local people are still dependent on plant resources for treatment of various ailments, but this dependence is decreasing. This is likely due to multiple reasons. One such reason is lack of belief of the young generation in the traditional medicine systems and increasing use of allopathic medicines due to their availability and efficacy.

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## Chapter 6

### 6.1 SUMMARY AND CONCLUSION

Ethno-botanical is term that reflects the indigenous health care system, beliefs, practices and therapeutic techniques that's evolve from local cultural evolution. With the integration of folk medicinal knowledge with contemporary health care, research activities should be intensified to raise awareness among the local people and to pass on knowledge to the future generation. Medical anthropology during its evolution period was totally attracted by modern medicine in practice and in theory too. A large number of vulnerable medicinal plants and other beneficial species can flourish in the study region due to the broad area, massive pastures, and favorable climatic conditions. Local cultivation of medicinal plants and other economic species can contribute significantly to the area's economic development, as well as Pakistan's overall economic development, by generating valuable foreign exchange and addressing domestic needs. Because a significant amount of foreign cash is spent each year on the import of pharmaceuticals and other items, the sustainable use of indigenous drug resources in local pharmaceutical and herbal industries will boost the value of these areas' plant resources. On the one hand, utilizing indigenous drug resources will raise the relevance of the local sector while reducing the amount of money spent on international drug purchases. It can also sustain a variety of herb-based companies and provide direct and indirect employment to a vast number of people, ranging from skilled collectors to local herb merchants. Given the current study of medicinal plants (as well as other commercial uses of plants), research and conservation efforts on these resources in the area should be prioritized. It is proposed that a thorough research project be established in this region to improve the production of medicinal and other valuable plants. Local people must be actively involved in the analysis, planning, implementation, and monitoring processes for the area's natural resources to be conserved in a sustainable and long-term manner, since they are the best judges of the place.

Researcher emphasis on the indigenous practices and its importance ethno-botanical transformation in peoples view about the local therapies over local herbs. In current

study research explore that the indigenous healing system is replaced by the modern medical system although old people have still knowledge regarding herbs and they even practicing herbs as medicine for different diseases. As the current research explored that the indigenous system of using herbs for different sickness are tilt towards modern medicine people rarely using herbs as medicine and they are preferring western medicine. The hunza was selected as the research locale for the ethnographic study. The village is full of basic facilities such as hospitals electricity, roads and transportation. The villages is lied at the north of Pakistan near china boarder. The total population of hunza is 52000 according to 2018 census. Burushaski is prominent language in hunza district. The villages is comprise of different mountain junctions and rich in herbs providing various medicinal plants for locals however, hunza is yet to be explored due to its wide landscape it is not explored yet. There is specific herb Tumuro. Tumuro is found on the top of the mountain and in spring and summers they grows. Different ethnic are exists in hunza like in upper hunza wakhi speaking tribes and in lower hunza shena speaking are living.

The availability Non-government and their function in hunza society leads modern's facilities and it bring socio-economic changes in the life of hunza people. They have become more vibrant to economically thus bring change in socio-cultural attitudes and changes in values of people occurs. They have much sophisticated institutions like Aga khan health system.

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## **Glossary**

**Afyoon:** local name of herb. Afyoom (opium) used for treating cold.

**Huyaltarz:** one who takes care of sheep and goats.

**Astan:** shrines of the saints.

**Chatni:** sauce made of mint, chili and walnuts

**Maltash:** local butter.

**Hoy:** local vegetable.

**Daam:** spell for curing (verses of holly Quran recited softly and then a breath is blown on the hurt limb of the ailing person).

**Akhoon:** traditional doctor.

**Lambardar:** local system of feudalism.

**Tagai:** made up of mud.

**Tumuro:** local herb.

**Ishkeen:** local herb.

**Pir:** saint or spiritual healer.

**Qismat:** fate.

**Heer:** male.

**Silaxin:** female.

**Dasin:** girl.

**Makkai a fitti:** bread of maize flour.

**Diltar:** lassi, buttered milk

**Yayin:** place where herbs are grinded.

**Doon:** veil, chaddar.

**Ulchin yara:** evil eye.

**Bahari:** spring.

**Jalawaan:** nomads.

**Dawdo:** traditional dish.

**Pakka:** made up of cement and bricks.

**Tumaar:** amulets.

**Zakat:** religious tax as a basic in function of Islam.

**Datuu:** season of autumn.

**Garru:** season of spring.

**Tilli a dal:** walnut oil which is used for controlling blood pressure.

**Shiknachi:** local herb.

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## Interview Guide

### Demographic profile

Name	
Age	
Occupation	
Residential type	

Q1. Do you ever used herbs?

Q2. herbs are mostly used by drinking or smelling?

Q3. If you used it by drinking, do you feel any abrupt changes like souring, acidity?

Q4. which kind of herbs you are usually using at home?

Q5. How do you feel after using herbs?

Q6. Do you ever asked about herbs to use whenever you feel pain in body?

Q7. How can you use herbs? By dissolving in any liquid or by any other method?

Q8. How you experienced the effect of herbs after taking herbs?

Q9. What is good do you listened about the herbs in your village?

Q10. What kind of herbs therapies you are practicing?

Q11. Do those therapies make you calm?

### Ethnobotanical survey form

Botanical Name: \_\_\_\_\_

Participants: \_\_\_\_\_

Habit: \_\_\_\_\_

Habitat: \_\_\_\_\_

Plant identified by: \_\_\_\_\_

Remarks if any: \_\_\_\_\_

Name of the person contacted for the data : \_\_\_\_\_

Gender: ----- Male / Female

Ethnic group/cast: \_\_\_\_\_

Local name of plant: \_\_\_\_\_

Name of the local language: \_\_\_\_\_

Locality: \_\_\_\_\_

District: \_\_\_\_\_

Is it familiar by this name: \_\_\_\_\_ Yes/No

In other places where it is found: \_\_\_\_\_

Flowering and Fruiting period: - \_\_\_\_\_

Traditional uses of plant:

a) Locally: \_\_\_\_\_

b) Regionally: \_\_\_\_\_

Traditional uses of plant by: \_\_\_\_\_ Hakim, Pansar,  
etc.

Side effects if any: \_\_\_\_\_

Part used: \_\_\_\_\_ Leaves, Branches, Flowers, Seeds,  
Roots

Is it sold in the market: \_\_\_\_\_ Yes/No

If sold rate per Kg: \_\_\_\_\_

Is it favorite food of livestock: \_\_\_\_\_ Yes/ No

Then name of livestock, whom it is popular: Sheep, Goat, Cow, Yak, etc.

Which part of plant is favorite: Branches, Leaves, Flowers, Seeds

Is it used for cure of human diseases: \_\_\_\_\_ Yes/No

If yes then for which disease: \_\_\_\_\_

How it is used by local community: \_\_\_\_\_

In which season it is available: Spring, Autumn, Summer, Winter

Status of the plant: Common, rare, endangered, vulnerable