Educational Journal
December, 2025, Volume-4, Issue-II
DOI: https://doi.org/10.3126/ej.v4i2.88483
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Plants, Rituals, and Cultural Heritage: Indigenous Knowledge Systems of the Jirel Community in Dolakha District

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Abstract

Nepalese indigenous communities have long integrated plant in ritual and ceremonial purposes reflecting deep-rooted traditions and belief systems. Hence, this study was conducted to explore the plants use in cultural and religious performs of the Jirel tribe of Dolakha district, Bagmati province, Nepal. This study employed ethnographic case study method under qualitative research design. The study employed purposive sampling strategy and identified five key informants possessing in-depth ethnobiological knowledge. Data collection was conducted using semi-structured and open-ended questionnaires and field observation. The data was analyzed by using qualitative thematic approach. The findings indicate that twelve species were identified used by the Jirels in their birth rites and five species in wedding rites. Jirel worships showed strong bonding with the plants resource utilization, have socio-ecological value, symbolic meanings and spiritual values. The research has triggered the need for conservation of such indigenous knowledge by establishing knowledge transfer systems in the offsprings.

Keywords: *Culture, Dolakha, indigenous knowledge, Jirel, plant resources*

Introduction

Nepal is characterized by a rich cultural heritage, comprising various ethnic groups, languages, and traditions. Nepal is home to a multi-ethnic, multi-cultural, and multi-lingual society. According to the National Population and Housing Census (NPHC), (2021), Nepal recognizes 142 castes, (Central Bureau of Statistics: CBS, 2021). Additionally, the National Foundation for Development of Indigenous Nationalities (NFDIN) classifies 59 indigenous groups, among which the Jirel community is recognized as a disadvantaged indigenous group (NFDIN, 2019). Nepalese communities have long integrated plant species into their daily lives for medicinal, spiritual, and ceremonial purposes. Various rites and rituals rely on specific plants, reflecting deep-rooted traditions and belief systems.

According to Martin (2010), knowledge contributes to cultural-ecological systems, fostering local pride and reinforcing community-environment relationships essential for conservation. Moreover, traditional plant use not only reflects cultural values. Documenting such knowledge is vital for preserving indigenous cultures and ensuring the sustainable use of plants which hold immense cultural and ritualistic importance. Various ethnic communities in Nepal use specific plants or plant parts in religious and social contexts, sometimes venerating them as sacred entities. The selection and use of plants vary among communities, influenced by religious, ethnic, and cultural differences (Kunwar et al., 2021). However, much of this knowledge remains undocumented, posing a risk of its gradual loss. Conducting detailed studies on Nepal's indigenous communities is, therefore, essential for preserving their traditional wisdom and understanding their unique plant-based practices.

The Jirel population in Nepal was 5,774 (CBS, 2011) but by 2021, this number had increased to 6,031 (CBS, 2021). The majority of Jirels reside in Dolakha, Of the total Jirel population, 4,494 individuals reside in Dolakha (CBS, 2021). Historically, the Jirels are indigenous to the Dolakha district (Sidky, 2002). Jirels have their own language known as Jirel Bhasa which belongs to Tibetan language family, specifically within the Tibeto-Burman group. (Hamill et al., 2000). They possess unique traditions, cultural practices, and belief systems, which are deeply connected with their use of plant species for various purposes. However, this traditional knowledge is under threat due to lack of proper documentation, conservation efforts (Kunwar et al., 2021). The gradual loss of this knowledge poses a significant challenge to cultural preservation and biodiversity conservation.

Very few studies have focused on the Jirel community (eg. Lohani, 2011; Karki et al., 2023) but there is seen the gap in researches of uses of plant species in cultutre and religion. This gap in research raises concerns about the potential loss of knowledge, which remains undocumented and at risk of extinction. Historically, the Jirels are indigenous to the Dolakha district (Sidky, 2002). They possess unique traditions, cultural practices, and belief systems, which are deeply intertwined with their use of plant species for various purposes. However, this traditional knowledge is under threat due to lack of proper documentation, conservation efforts (Kunwar et al., 2021). These cultural heritages promote sustainable use of medicinal plants for future generations. Therefore, this study aims to explore, document, and analyze the traditional practices of using plant resources in their culture and religious practices.

Methodology

This study employs ethnographic case study method under qualitative research design to explore the knowledge of the Jirel community of Dolakha district, Nepal on the use of plant resources in their religious and cultural rituals. This study adopts a qualitative research design, which is well-suited for investigating indigenous knowledge systems, cultural beliefs, and traditional practices (Creswell & Poth, 2018). Data collection was conducted using semi-structured and open-ended questionnaires and field observation. This study employed purposive sampling strategy (Patton, 2015), identifying five key informants possessing in-depth ethnobiological knowledge including Dhami and Lama practitioners, respected elders, and recognized experts. Initial contact was established with two Jirel community journalists who served as local liaisons. These key informants provided essential demographic information about the municipality's administrative wards, educational institutions, and traditional knowledge holders. Their assistance proved invaluable in identifying potential participants, including Dhami and Laama. The study was conducted in Jiri Municipality, where the Jirel (call themselves Jiripa)

population is concentrated, use their own language and performed their customs, rituals and are the aboriginal inhabitants of Jiri and Jugu area (Joshua Project, 2024).

Data were collected through semi-structured interview using open-ended questionnaires and direct observations were conducted to document real-time application of plants and rituals (Angrosino, 2007). Field notes were maintained to record observations. Field visit was made during Falgun of 2080 to Magh (2081). The data was analyzed by using qualitative thematic approach. This research adhered to ethical guidelines for conducting studies with indigenous communities (Smith, 2012). Participants were informed about the study's objectives, and informed consent was obtained before interviews and recordings. Anonymity and confidentiality were maintained throughout the study, ensuring cultural sensitivity and respect for indigenous knowledge systems. There was not any kind of physical or mental or emotional harm to the participants. There was no threat to their environment, culture, tradition, knowledge and practice.

Findings and Discussion

The Jirel community exhibits a distinctive synthesis of religious traditions, incorporating elements of both Buddhism and Hinduism. While Buddhism serves as a foundational belief system, Hindu rites and rituals are also widely practiced. Rituals and ceremonies in the Jirel community are conducted by Dhamis (traditional ritual specialist found in various Indigenous and ethnic communities of Nepal), Lamas (Buddhist ritual priest or religious practitioner found among Himalayan communities in Nepal), and Brahmins (members of a traditional priestly group historically associated with Hindu religious learning and ritual responsibilities), each playing a specific role in spiritual and ceremonial practices. The Jirel Dhamis are also known as Phombos, hold a significant position in the community. Lama and Phombo used to conduct rituals and rites together in the past, but now they work separately; Phombos are responsible for healing the living, while Lamas oversee rites for the deceased. Throughout various stages of life, the Jirel people observe numerous rites and rituals. This study focuses on three major rites: birth rites, marriage rites, and death rites. Other ceremonial practices are beyond the scope of this research. The detailed descriptions of these rites are categorized into the following three themes:

Birth Rites

Birth marks the beginning of an individual's life cycle, and in the Jirel community, it is accompanied by distinct customs. According to them, a rooster is sacrificed upon the birth of a son, whereas a hen is sacrificed for a daughter though they claim they do not discriminate between a son and a daughter. They celebrate the birth of both equally. After seven days, the naming ceremony, known as Nwaran, is performed. During this ritual, seven different types of plants, collectively referred to as Sahsing are burned. Burning these plants purifies and protects the baby. In certain regions, twelve different plants may be used instead.

Artemisia dubia is a commonly used plant that is used for making something holy or pure. It is used to sprinkle water and is burned. Other species such as *Eurya acuminata* (Jhigane), *Juniperus indica* (Dhupi), *Pinus roxburghii* (Sallo), *Rhus succedanea* (Bhalayo), *Santalum album* (Chandan), *Inula cappa* (Gaitihare), etc. are used in the preparation of Sahsing (a bundle of selected plants burned during rituals). These species produce a sweet aroma when burned, which is believed to purify the atmosphere and repel the negative energies. The Chhyang (a fermented beverage made from grains) and alcohol prepared by fermentation of Kodo *(Eleusine corcana)* was found to be compulsory for almost all rituals and rites that takes place in Jirel tribes. Collectively, twelve species were identified used by the Jirels in their birth rites.

Wedding Rites

Marriage is a significant institution in Jirel society, establishing a bond between two individuals and their families. The wedding ceremony is primarily conducted under the guidance of Phombo. Under Phombo's guidance, they complete the wedding in four stages: Sauni (maternal aunt performs segments of the ceremony that involve nurturing or welcoming transitions), Theki-Chardaam [ceremonial system in which ritual offerings (ritual drink) are prepared in the Theki (wooden vessel) and presented to ancestors, household deities, or community elders], Soli Dalo (ritual gift basket traditionally made of bamboo or local materials, used in Jirel ceremonies to carry items offered during rituals), and Kanyadaan (gifting of daughter: bride's parents formally give their daughter to the groom during the marriage ceremony). For every stage, fermented millet (*Eleusine coracana*) drink (Kodoko Jaand) is mandatory. Mustard (*Brassica campestris*) oil is an essential element in the Theki-Chardaam and Soli Dalo ceremonies. Additionally, the cultural significance of Nigalo (*Himalayacalamus asper*), use Tokari (baskets made from *Himalayacalamus asper)* to carry all the essential materials for each of the four stages. They used crafted bamboo baskets to carry food items, mustard oil, alcohol made from millet, etc. Jirel Phombo sprinkle water with the leaves and shoot of pati (*Artemisia dubia).* The result revealed *Oroxylum indicum* as a holy flower that is believed to bring blessings. Their culture is tied closely to nature. Collectively, five species were identified to be used during wedding rites.

Death Rites

Death rites are conducted by Lamas and hold profound significance in ensuring a peaceful transition for the deceased. Within the Jirel community, improper funeral procedures are believed to result in the wandering of the deceased's spirit. According to a Lama, while burning the dead body, they must use Sahsing. It is important for purification. Following cremation, the ashes are buried at the same location, and a grave is constructed using stones. Upon completing the funeral, participants consume Chhyang, a traditional rice or millet-based alcoholic beverage. Additionally, water is sprinkled using Pati (*Artemisia dubia*) for purification, and Sahsing is burned in the deceased's home to cleanse the environment.

A significant post-funeral ceremony, known as Ghewa, is conducted within 45 days of death. During this ritual, the Jirel Lama summons the spirit of the deceased to possess a relative and relay message a process called Sensingq. A special structure called Chhorten (Stupa) or Mane (prayer wheel wall) is constructed on the grave, containing a Jong of Srikhand (*Santalum album*). Chhorten and Mane are central landmarks in Jirel villages, representing faith, identity, and community cohesion. Three days before the conclusion of Ghewa, a specialized ritual known as Charmane (ritual place or small shrine associated with ancestral spirits and protective deities) takes place, during which Charmana of newly harvested grains are fermented to prepare Chhyang. Another ritual, Chhyang Pidharnu (gently pouring or flicking droplets of Chhyang toward the sacred direction, altar, or ritual site), is performed using *Artemisia dubia*.

The study revealed nine different plant species are used mostly in death rites. They place thorns at a two-way junction and at the homes of mourners to keep the spirit away. They believe that the thorns must be placed in this manner; otherwise, those who attended the funeral may fall ill. Similar to birth rites and wedding rites, *Artemisia dubia* is used for purification and to ward off negative energies. It is used to sprinkle water and is burned along with *Juniperus indica, Pinus roxburghi, Santalum album,* etc. as incense. *Oryza sativa* is another species with great ritual significance. Rice flour and roasted wheat flour (Satu) is used to prepare Tormas. After Sensing,

one Pathi (a unit of local measurement), one Mana and one Muthi of rice is offered as an essential part of death rites. Not only millet but other plants like wheat, corn, rice, etc. are used to prepare Chhyang and alcoholic beverages.

Jirel Worships

The traditional customs of the Jirel community differ from those of other Buddhist groups. Jirel people worship their Kul Devta (ancestral deities) and venerate the spirits of their ancestors. Different subgroups within the Jirel community have distinct Kul Devtas. Various religious ceremonies, such as Lha Puja, Chen Puja, Chyomu Puja, Nangy Laha Puja, and Cheramjo Puja, were observed (but not described here in detail). While most of these rituals are conducted by Phombos, Lha Puja is exclusively performed by a group of worshippers known as Naksung (worshippers who are believed to call the spirits during Lha Puja). Aesthetically, red flowers, particularly Rhododendrons (*Rhododendron* spp.), are used to decorate the walls during these ceremonies. A unique ritual practice involves the creation of intricate structures from cooked rice, known as Torma. They used to use Tatela (*Oroxylum indicum*) flowers in Chyomu Puja because they believe it is the purest flower. Additionally, Chhyang Pidharnu is performed using fermented millet (*Eleusine coracana*) or rice (*Oryza sativa*), along with Titepati (*Artemisia dubia*).

Chhyomu Puja is one of the most important ceremonies that occurs in Jirel community. It is worshipping of their Kul Devta. During the puja, they use different plant species for different purposes such as *Artemisia dubia* for sprinkling water for purification, *Oroxylum indicum* for decoration and offering etc. The observation of videos showed use of rice to make Torma. Tormas are special structures made from cooked rice which is cut into pieces and distributed to everyone as Prasad (table 1).

Table 1

Plant Species Used in Chhyomu Puja

S.N.	Scientific Name	Local Name	Family	Use
1	*Artemisia dubia* Wall. ex Besser	Titepati	Asteraceae	Sprinkling water for purification.
2	*Gaultheria fragrantissima* Wall.	Machhino	Ericaceae	Burning.
3	*Himalayacalamus asper* Stapleton	Nigalo	Poaceae	Making a special structure or a stand on which worshipping is done, and boundary.
4	*Juniperus indica* Bertol.	Dhupi	Cupressaceae	Burning
5	*Musa paradisciaca* L.	Kera	Musaceae	Keeping the offerings on it. Making stands on four corners.
6	*Oroxylum indicum* (L.) Kurz	Champaka/ Tatelo	Bignoniaceae	Decoration and offering.
7	*Oryza sativa* L.	Chamal	Poaceae	Making Tormas, offering.
8	*Eleusine corcana* (L.) Gaertn.	Kodo	Poaceae	Preparing fermented alcohol.
9	*Pinus roxburghii* Sarg.	Sallo	Pinaceae	Making a special structure on which worshipping is done.
10	*Rhododendron arboreum* Sm.	Lali Gurans	Ericaceae	Offering.

11	*Inula cappa* (Buch.-Ham. ex D. Don) DC.	Gaitihare	Asteraceae	Burning

Lha Puja is also a type of Kul Puja that takes place in another caste group of Jirels. The interviews, FGDs and observation of videos show a variety of plant species are actively used in this ceremony. The use of these plants shows deep connection of the community and plant species. The varieties of plants species used during this occasion are listed in table 2.

Table 2

Plant Species Used in Lha Puja

S.N.	Scientific Name	Local Name	Family	Use
1	*Artemisia dubia* Wall. ex Besser	Titepati	Asteraceae	Sprinkling water for purification.
2	*Gaultheria fragrantissima* Wall.	Machhino	Ericaceae	Burning.
3	*Himalayacalamus asper* Stapleton	Nigalo	Poaceae	Making basketlike structure on the wall on which rhododendron is decorated.
4	*Juniperus indica* Bertol.	Dhupi	Cupressaceae	Burning.
5	*Musa spps* L.	Kera	Musaceae	Keeping in four corners of the boundary.
6	*Oroxylum indicum* (L.) Kurz	Champaka/ Tatelo	Bignoniaceae	Decoration and offering.
7	*Oryza sativa* L.	Chamal	Poaceae	Making *Tormas.*
8	*Eleusine corcana* (L.) Gaertn.	Kodo	Poaceae	Preparing fermented alcohol.
9	*Pinus roxburghii* Sarg.	Sallo	Pinaceae	Making a special structure on which worshipping is done.
10	*Rhododendron arboreum*	Lali Gurans	Ericaceae	Decoration of walls.

During this ceremony, *Artemisia dubia*, as in other ceremonies, is used to sprinkle water on people and houses for purification. *Himalayacalamus asper* is used to make basketlike frames on the wall on which red flowers such as rhododendron is kept as decoration. Burning the sticks of *Juniperus indica, Gaultheria fragrantissima, etc.* to produce aromatic smoke for purification is one of the recurring features of Jirel rituals. Similarly, Torma, Chhyang, alcoholic beverages, etc. are also an essential part of Kul Puja.

Bhoot Manchaune is a special ritual in which Phombos pronounce chants to make the spirits believed to cause illness or disturbance go away. Plants play a significant role in this ritual also. The plants used for Bhoot Manchhaune ritual are Nigalo (*Himalayacalamus asper* Stapleton) for making boundaries, Kera (*Musa paradisciaca* L.) keeping in four corners of the boundary, and Ukhu (*Saccharum officinarum* Lindl.) keeping in four corners of the boundary.

Poldak khane, Poldak is an item that is made from flour of roasted wheat (*Triticum aestivum* L.), mixed with Chhyang. This item is served while planting millets. The Chhyang and

alcohol prepared by fermentation of Kodo *(Eleusine corcana)* was found to be compulsory for almost all rituals and rites. People often get tired because of working continuously for too long. Drinking these products might have been made compulsory to reduce the aches and pain as both of these products act as mild sedative.

Discussion

Plants hold significant cultural and religious importance within the community. The Jirel people have a long-standing tradition of incorporating plant species into religious ceremonies reflecting their deep ecological knowledge and cultural heritage. The Jirel community uses plants for various purposes based on their belief system. Plants are used in rituals that are conducted throughout the lifecycle of a person, i.e. from birth to funeral. They have used plants for various purposes such as purification, protection, decoration, etc. Some plants were found to be used in a single ceremony while some were used for multiple rites and rituals. The plants used in different rites are written in this section under different themes. The practices of the Jirel community offer deep insight into the intersection of culture, spirituality, and environmental knowledge. The usage of various plant species in ceremonial contexts reflects both functional and symbolic roles that plants play in indigenous religious systems. This can be theoretically framed through ethnoecology, symbolic interactionism, and functionalism, while empirical studies on the Jirel and similar Himalayan communities offer comparative support.

From a symbolic interactionist perspective (Blumer, 1969), the Jirel people's use of specific plant species like *Artemisia dubia* (Titepati) or *Oroxylum indicum* reflects the symbolic meanings ascribed to flora within their cultural worldview (Devkota, 2023). These plants are not merely botanical resources but carry sacred connotations used for purification, blessing, and as conduits of spiritual interaction. The act of sprinkling *Titepati* or burning Sahsing bundles aligns with Durkheim's (1912) theory of sacred and profane, which posits that ritual objects are assigned a sacred status that elevates them from their ordinary function.

Functionalist theories in anthropology (e.g., Malinowski, 1944) also help explain the ritualistic use of plant species. These rites and associated botanical elements maintain social order, provide psychological comfort, and ensure continuity of tradition in Jirel society. For instance, the use of *Eleusine coracana* to prepare *Chhyang* in both birth and marriage rites supports the theory that rituals reinforce social cohesion through shared participation and symbolic consumption.

The use of alcohol as a ritual medium aligns well with the theory of ritual economy, which examines how economic resources (like grain or alcohol) are transformed into spiritual capital through religious ceremonies. In many Himalayan traditions, including among the Jirel people, *Chhyang* or fermented millet alcohol is not just consumed but is symbolically offered to deities, ancestors, and spirits (Devkota, 2023). Kunwar et al. (2006) emphasized that alcohol is seen as a carrier of prayers, bridging the human and spiritual realms. Its vapor is believed to transport intentions, blessings, and gratitude, making it a vital component of nearly every life-cycle ritual.

Similarly, Torma hand-crafted offerings made primarily from *Oryza sativa* (rice) serves as both an aesthetic and symbolic offering. From a structuralist perspective, food and its transformation through cooking and artistic shaping reflects the human ability to mediate nature and culture. The act of offering *Torma* is a transformation of the natural (rice) into the cultural (a sacred object), reinforcing values of generosity, community, and spiritual reciprocity.

In the Jirel tradition, as in Tibetan Buddhism and Bon rituals, *Tormas* are also seen as

materialized prayers embodiments of gratitude, meant to appease spirits or gods and ensure blessings. Shrestha and Dhillion (2003) describe the distribution of *Torma* as Prasad blessed food shared among participants to reinforce communal ties and the sacredness of the ritual event. This fits into Durkheim's (1912) idea of ritual as a means to reaffirm social cohesion and collective belief. From an ethnoecological perspective (Toledo, 2002), the Jirel's use of specific plants like *Juniperus indica*, *Santalum album*, and *Pinus roxburghii* as incense for atmospheric purification reflects a deep-rooted ecological knowledge system (Devkota, 2023). These practices illustrate the cultural encoding of ecological information, such as the aromatic properties of resins and essential oils that are effective in fumigation and sanitation, possibly also having antiseptic properties (Devkota & Acharya, 2025).

Plants are the most important part of human life. Plants are not just important for humans' basic needs but also for medicines, rites, rituals and culture. Many communities around the world use plants in religious ceremonies, purification rituals, and festivals (Bista, 1991). Jirel people use plants like *Artemisia dubia, Brassica campestris* etc. during wedding. When the plant is dipped and sprinkled on a person, the person is believed to be purified. Its ritual importance was mentioned by elders and seen during wedding preparations (Shrestha & Dhillion, 2003).

Empirical studies on the Jirel community have documented their complex ritual systems and their reliance on local biodiversity. Rai and Chaudhary (1998) detail various ritualistic uses of flora in Himalayan communities, including the Jirel, highlighting how specific plants are tied to religious and social functions. For example, *Artemisia dubia* is widely used in the Himalayas for cleansing and protection rituals due to its pungent aroma and antimicrobial properties (Manandhar, 2002; Devkota, 2023). The preparation and communal sharing of *Chhyang* a fermented beverage made from *Eleusine coracana* align with the broader Himalayan tradition where millet alcohol is a symbol of hospitality and spiritual communion (Stevens, 1993; Devkota, 2023). Similarly, the use of *Brassica campestris* oil in marriage rites aligns with practices in other Indo-Himalayan groups, where natural oils are associated with purification and beautification. The use of *Oroxylum indicum* as a "holy flower" corresponds to its documented role in spiritual offerings in Nepalese Buddhism and animism (Kunwar & Bussmann, 2008; Devkota, 2023). Its ornamental and medicinal properties reinforce its role as a plant that brings blessings and aesthetic value.

In death rites, the offering of *Oryza sativa* (rice) and *Torma* (ritual dough sculptures) reveals a shared cultural script with Tibetan Buddhist practices, where rice symbolizes sustenance and spiritual wealth (Samuel, 1993). The measurements used (Pathi, Mana, Muthi) indicate ritual precision and the embeddedness of traditional metrology in sacred acts. Kunwar et al. (2006) document that in Nepalese ethnobotany, *Chhyang* made from *Eleusine coracana* is commonly used across various indigenous communities as a libation or offering to spirits. It's deeply interwoven into cultural rituals, believed to carry the spiritual essence of participants. Shrestha and Dhillion (2003) highlight how ritual food structures like *Tormas* are not just offerings but carry symbolic messages of abundance, fertility, and gratitude. In rituals, particularly those linked to life stages and seasonal cycles, they embody the bond between the material world and spiritual domain. This rich intersection of ritual, ecology, and symbolism in the Jirel community illustrates the deep entwinement of biodiversity and cultural identity, offering an important example of how traditional ecological knowledge sustains cultural heritage.

Conclusion

The research showed that Jirel people have a tradition of using the plant species in rituals and ceremonies. They utilize different plant species in various rites and rituals such as Nwaran/naming ceremony, marriage ceremony, funeral, Ghewa, and traditional pujas such as *Lha Puja, Chen Puja, Chyomu Puja,* etc. Dhamis and Lamas are responsible for conducing these rituals. There is rich intersection of ritual, ecology and conservation of the plant in the Jirel community which illustrates the deep entwinement of biodiversity and cultural identity, offering an important example of how traditional ecological knowledge sustains cultural heritage.

References

Angrosino, M. (2007). *Doing ethnographic and observational research*. Sage Publication.

Bista, D. B. (1991). *Fatalism and Development: Nepal's Struggle for Modernization.* Orient Blackswan. https://books.google.com.np/books/about/Fatalism_and_Development.html?id=JzFROpFVYRAC

Blumer, H. (1969). *Symbolic interactionism: Perspective and method*. University of California Press.

CBS. (2011). *National Population and Housing Census 2011*. Central Bureau of Statistics, Government of Nepal.

CBS. (2021). *National Population and Housing Census 2021*. Central Bureau of Statistics, Government of Nepal.

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.

Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). SAGE.

Devkota, B. (2023). Religious and Cultural Use of Plant Resources by Baram Tribe. *Educational Journal*, *2*(2), 229–239. https://doi.org/10.3126/ej.v2i2.62129

Devkota, B., & Acharya, U. (2025). Traditional Medicinal Plant Practices of the Baram People in Gorkha, Nepal. *Journal of Indigenous Knowledge and Practice*, *1*(1), 22–52. https://doi.org/10.3126/jikap.v1i1.82472

Durkheim, É. (1912). *The Elementary Forms of Religious Life*. (Translated by Karen E. Fields, 1995). Free Press.

Joshua Project. (2024). Jirel in Nepal. https://joshuaproject.net/people_groups/12490/NP

Karki, R., Rai, S., & Shrestha, P. (2023). Ethnomedicinal knowledge of the Jirel community in Jugu, Dolakha, Nepal. *Journal of Ethnobiology and Ethnomedicine, 19*(1), 45-60.

Karki, S., Dhital, A.P., Uprety, Y., & Ghimire, S. K. (2023). *Ethnobotany Research and Applications, Medicinal Plants and Their Use by an Ethnic Minority Jirel in Dolakha District, Central Nepal.* DOI:10.32859/era.25.18.1-29

Karki, S., Rai, R., & Adhikari, D. (2023). Ethnomedicinal knowledge of the Jirel community in Jugu, Nepal: Documentation of plant species and traditional uses. *Journal of Ethnobiology and Ethnomedicine, 19*(4), 1-15.

Kunwar, R. M., & Bussmann, R. W. (2008). Ethnobotany in the Nepal Himalaya. *Journal of Ethnobiology and Ethnomedicine*, 4(24). https://doi.org/10.1186/1746-4269-4-24 https://ethnobiomed.biomedcentral.com/articles/10.1186/1746-4269-4-24

Kunwar, R. M., Mahat, L., Acharya, R. P., & Bussmann, R. W. (2021). Medicinal plants, traditional medicine, markets and management in Nepal. *Journal of Ethnobiology and Ethnomedicine, 17*(1), 1-17.

Kunwar, R. M., Nepal, B. K., Kshhetri, H. B., Rai, S. K., & Bussmann, R. W. (2006). Ethnomedicine in Himalaya: a case study from Dolpa, Humla, Jumla and Mustang districts of Nepal. *Journal of Ethnobiology and Ethnomedicine*, 2(27). https://doi.org/10.1186/1746-4269-2-27 https://ethnobiomed.biomedcentral.com/articles/10.1186/1746-4269-2-27

Kunwar, R. M., Shrestha, K. P., & Bussmann, R. W. (2010). Traditional herbal medicine in far-west Nepal. *Journal of Ethnobiology and Ethnomedicine, 6*(1), 35.

Lohani, U. (2011). Traditional use of animals among Jirels of Central Nepal. *Journal of Ethnobiology and Ethnomedicine, 7*(1), 32-47.

Malinowski, B. (1944). *A Scientific Theory of Culture and Other Essays*. University of North Carolina Press.

Manandhar, N. P. (2002). *Plants and People of Nepal*. Timber Press. https://www.timberpress.com/books/plants-people-nepal/manandhar/9780881925274

Martin, G. J. (2010). *Ethnobotany: A methods manual*. Earthscan.

NFDIN. (2019). *Indigenous nationalities of Nepal and their classification*. National Foundation for Development of Indigenous Nationalities.

NPHC. (2011). *National Report.* Vol-06 National Statistics Office, Thapathali, Kathmandu

NPHC. (2021). *National Report on Caste/ethnicity, Language and Religion.* National Statistics Office, Thapathali, Kathmandu

Patton, M. Q. (2015). *Qualitative research & evaluation methods* (4th ed.). SAGE.

Rai, N. K., & Chaudhary, R. P. (1998). Ethnobotanical study of the Jirels of Dolakha district, Nepal. *Botanica Orientalis: Journal of Plant Science*, 2, 122–131. http://himalaya.socanth.cam.ac.uk/collections/journals/botanicalor/pdf/botanica_02_06.pdf

Samuel, G. (1993). *Civilized Shamans: Buddhism in Tibetan Societies*. Smithsonian Institution Press.

Shrestha, P. M., & Dhillion, S. S. (2003). Medicinal plant diversity and use in the highlands of Dolakha district, Nepal. *Journal of Ethnopharmacology*, 86(1), 81–96. https://doi.org/10.1016/S0378-8741(03)00051-5 https://www.sciencedirect.com/science/article/abs/pii/S0378874103000515

Sidky, H. (2002). *Himalayan shamans: Ethnographic and analytical perspectives on shamanism in Himalayan Nepal*. Brill.

Smith, L. T. (2012). *Decolonizing methodologies: Research and indigenous peoples* (2nd ed.). Zed Books.

Stevens, S. F. (1993). *Claiming the High Ground: Sherpas, Subsistence, and Environmental Change in the Highest Himalaya*. University of California Press.

Toledo, V. M. (2002). Ethnoecology: A conceptual framework for the study of indigenous knowledge of nature. *Ecological Applications*, 12(5), 1335–1342. https://doi.org/10.1890/1051-0761(2002)012[1335:EACFFT]2.0.CO;2

Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). SAGE.