

COMPARATIVE ANALYSIS OF TRADITIONAL MEDICINAL KNOWLEDGE AMONG INDIGENOUS COMMUNITIES IN JHARGRAM AND PASCHIM MIDNAPUR DISTRICTS

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Abstract

People from the Indian states of West Bengal (Jhargram and Paschim Midnapur) use traditional medicine, which is the subject of this study. The research looks at how cultural and environmental factors impact old ways of mending. It finds that areas are both different and the same. The plants that are chosen are affected by ecological factors, while rituals and the sharing of information are affected by cultural factors. Threats include habitat loss and the loss of culture, and Opportunities include protecting biodiversity and making healthcare more officially part of the community. Community-led documentation, partnerships for protecting biodiversity, projects to bring back cultures, integration into healthcare systems, ethical bio-prospecting, and policy lobbying are all thought to play a big part. Modern medicine and traditional medicine should be able to live together peacefully with these plans. They are also meant to protect and promote traditional medicine.

Keywords: Traditional medicine, Indigenous knowledge, Ecological diversity, Cultural practices, Biodiversity conservation

1. Introduction

Many native groups rely on the complicated web of traditional medical knowledge. It is very important to keep this knowledge alive in order to protect biodiversity and cultural history. People from India's Jhargram and Paschim Midnapur areas have traditional medical knowledge that is being looked into in this study. Many of the treatments these people get are from traditional medicine, which is based on ideas from hundreds of years ago. People, the world, and health are all linked by it. These two cities are popular because they have a lot of

different types of scenery. There are many kinds of plants and animals that live here. There is a unique set of traditional medical knowledge in each of these places because of the beautiful scenery and the way the people there live their lives. The past of medicine shows that people and the natural world around them can help each other. Traditions, the surroundings, and the way people get medical care are all part of this past. Read this and write it down to help you set long-term goals for your health care, your ethnicity, and the environment. We want to learn more about how the weather, racial inequality, and old medical practices are all linked in the Paschim Midnapur and Jhargram areas through this project.

1.1 Aim and Objectives of the study

Folks in West Bengal's Jhargram and Paschim Midnapur have known about traditional medicine for a long time. The study's goal is to look at and compare that knowledge. They want to show people how to use common forms of treatment in a way that works for them. After that, it will be easy to include this helpful data in bigger health care plans.

1.2 Objectives

O₁ : Make a list of traditional medical practices: Specifically, list the main traditional medical practices used in the Paschim Midnapur and Jhargram areas, along with all the other ways that people there get better.

O₂ : Look around for things that can help you: The plants in the study area are used in traditional medicine. Find them all and write down their names. You can talk about how they grow, how they are made, and how they are used in health.

O₃ : Look at how different places are: See if there are any changes in how people in the Paschim Midnapur and Jhargram districts use herbs, heal themselves, and are affected by society by looking at how much they know about traditional medicine.

O₄ : Figure out how it fits into everyday life: To do this, talk about the customs, social roles, and beliefs that come from the places where traditional medicine originated to see how it fits into society.

O₅ : Think about how the world makes health worse: For instance, think about how the weather changes the kinds of therapeutic plants that grow and how long they last. Next, think of ways to keep different kinds of life safe.

O₆ : Point out the things that are the same: find out which local groups in both places know about traditional medicine in the same way. This can help show how people from different countries usually act and where they might be able to meet and talk.

O₇ : Talk about threats and opportunities: Think about the issues that traditional medicine faces, such as land loss and changes in culture. Then, come up with long-term solutions to make sure that this knowledge stays alive and can be used.

In order to meet these goals, the project hopes to teach us important new things about how environmental, cultural, and medical factors interact over time. This will make it possible to use old medical information in modern healthcare settings and keep it alive.

2. Literature Review

2.1 Overview of Traditional Medicinal Knowledge

Indigenous healing methods that connect culture, nature, and health are kept alive through traditional medical knowledge (TMK). In many cultures, healing methods have been based on native plants, animals, and ways of life (Ozioma and Chinwe 2019). Physical, mental, spiritual, and social health are all looked at in traditional treatments. Traditional medicine has helped people for a long time in places that don't have access to modern treatment. The WHO encourages national health care systems to use TMK. TMK encourages the use of local resources, techniques based on community needs, and sharing of information (Xia 2023).

Cultural variety and a lot of plants and animals are needed for traditional medicine to work. Many civilizations' healing practices have been changed by the environment. The environment offers medicinal plants and animals, which has an effect on the culture of medicine and health care.

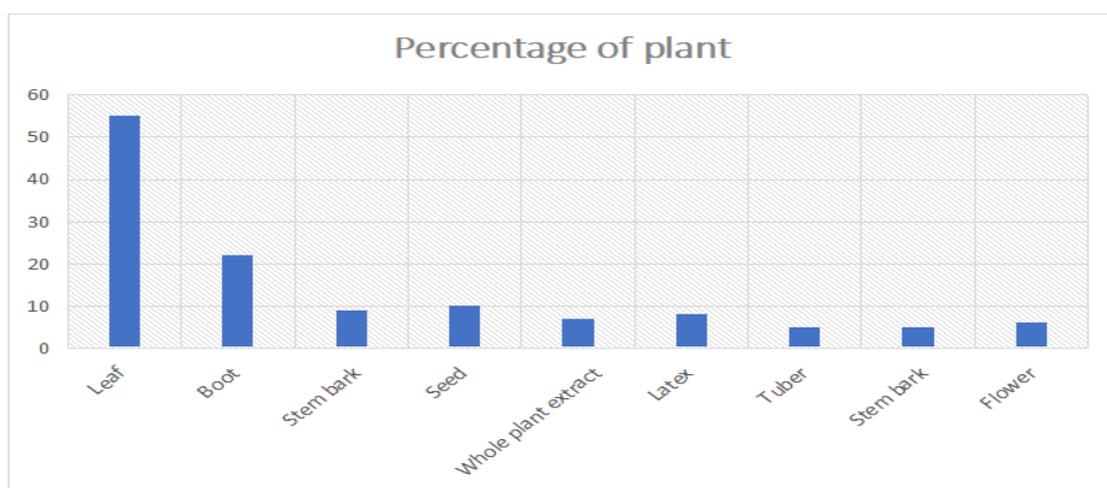


Figure1: Percentage of plant parts used for the preparation of medicine by tribal people of Coochbehar district, India. (Source: Hall 2020)

2.2 Previous Studies on Traditional Medicine in India, with a Focus on West Bengal

Traditional medicine has been used in India for a long time because of its unique society and environment. Indigenous, Siddha, Unani, and Ayurvedic medical practices all work together with old methods. A lot of people in India use traditional doctors and medicines. Because of the different cultures and ecosystems in West Bengal, there is a unique mix of traditional medicines. Studies show that the traditional ways of healing in West Bengal are different for each group. Herbs are used in West Bengali healing (Jana et al. 2021). Because there are so many plants in the state, traditional healers use local herbs to treat illnesses. The ethnomedical understanding of different societies shows the variety of plant-based medicines that can be used to treat illness. West Bengal is also the place where most research into traditional medicine in the area of professional medicine is done. People are working to close the gap because traditional medicine can provide cheap health care that fits with a person's culture. The National Medical Plants Board (NMPB) has started projects to protect medical plants and make sure they can be used for a long time. These projects are meant to help the community and protect wildlife. Even with these improvements, urbanization, changes in living, and damage to the environment are all undermining traditional knowledge (Bobiec et al. 2021). More study needs to be done, especially with the native people of Jhargram and Paschim Midnapur, to keep track of traditional medical practices.

3. Methodology

Area Studied: This research is mostly about the areas of Jhargram and Paschim Midnapur in India's southwest. People all over the world love the area around Jhargram because it has so much wildlife, beautiful scenery, and nice tribal people. It is a great spot to learn about traditional healing. People from the area live there, and it is right next to Jhargram (Mondal et al. 2022). It also feels and looks a lot like Jhargram. These places are great for learning about how native people have used medicine for a long time because they have a lot of different kinds of plants and people who live there. A lot of the people who live in and around Jhargram are from different groups. As an example, the Santhal, the Munda, and the Lodha all live in different cultures and heal in different ways. Indian and non-Indian people who have lived in Paschim Midnapur for a long time have used indigenous medicine. There are many types of ecosystems in the study area, including farms and thick forests. Everywhere these things have become more normal for doctors (Hynes et al. 2020).

Samples: Folks who are local to the area should be chosen if you want to learn as much as possible about the traditional medicine of that area. Looking for places to live with other people? Look for groups that have a strong cultural connection to traditional healing methods. Many first-language groups have kept a lot of their original information and can easily communicate themselves (Hosen et al. 2020). Planned samples will be used to make sure that places with a long history of traditional medicine are included. When people from outside their community are upset, it will be easy to pick people from those groups that stick to their customs and traditional ways of fixing things. The sample size will be decided by looking at people from distinct social groups who live in Jhargram and Paschim Midnapur. Numerous tribes and groups are working together to create a list of all the possible uses for information about traditional medicines (AZ-Zahra et al. 2021). The project wants to talk to many native healers, community leaders, and other people who know a lot about the plants that can be used for medicine in the area.

Finding out things: To get a full picture of what is known about traditional medicine, we will use more than one method. There are both quantitative and qualitative methods used in this plan to collect data. They are getting more information from different places for the project (Blake and Gallimore 2021).

Things to think about that are moral: Every study of tribal cultures needs to follow certain moral rules, and this one is no different. Everyone who wants to take part will be told they don't have to, but they will be asked to! People who take part in the study will be told in simple, easy-to-understand terms about its goals, methods, and possible outcomes. A method based on giving and getting help will also be used by the study team. This method will take cultural differences into account. Leaders and experts in the field will be asked what they think, and that information will be used to make the study. The study's findings will be shown to everyone who needs to see them. Everyone can learn new things and keep track of what they already know (Hall 2020). These moral rules must be followed if you want to get along with the neighborhood groups that are taking part in the study.

4. Traditional Medicinal Practices

Indigenous Healing Systems: The people who live in Jhargram and Paschim Midnapur have a very advanced way of healing that comes from their traditions and the way their world is

linked. We have taught and learned about these methods for many years, and they are good for your health in many ways.

4.1 Tribal Healing Traditions

(I) **Santhal Healing Practices:** The well-known Santhal tribe in the area uses a method of healing called "holistic therapy." "Ojhas" or "Baidyas" use chanting, spiritual exercises, and herbs in traditional Santhal healing. They think there are links between being healthy physically, spiritually, and socially. In Santhal treatment, certain medicines, amulets, and practices are used to get rid of evil spirits and make the bodywork again.

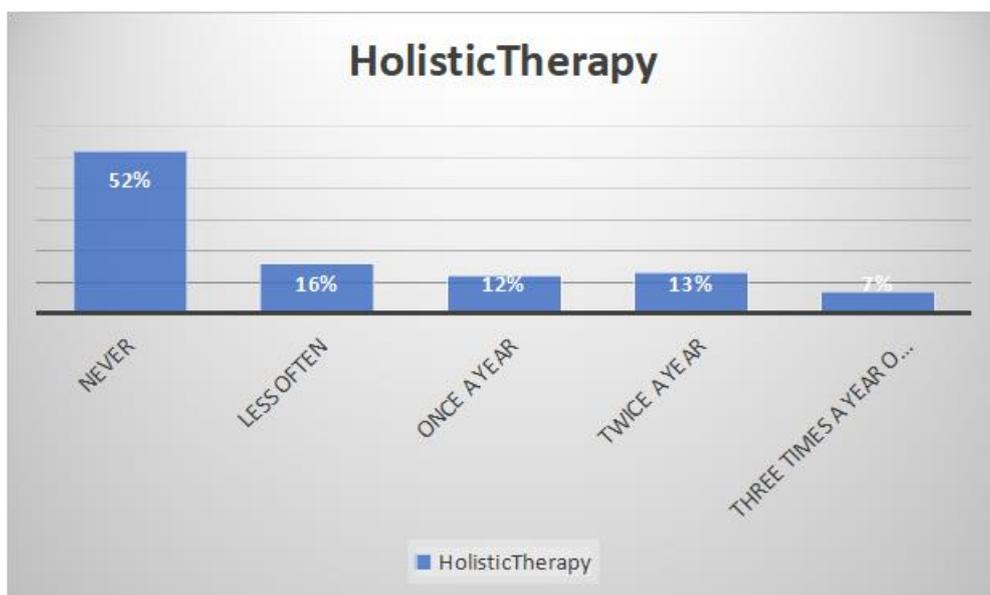


Figure 2: HolisticTherapy (Source: Hall 2020)

(II) **Recovery traditions from the Munda civilization:** The harmony of the "Pancha Mahabhutas" (five elements) is very important to the Munda for recovery. Traditional healers, called Munda "Dais," use traditions and plants that are good for you to help people get better. Herbal cures made from local plants, chants, and prayers to the gods may help with healing (Dey et al. 2022).

(III) **Lodha Traditional Healing:** In Lodha Traditional Healing, spiritual factors and plant-based remedies are important parts of traditional healing. The native plants of Lodha, which are called "Bhagats," are known to have healing properties. As part of Lodha healing practices, people ask the gods to protect them and use certain herbs to treat illnesses (Sarkar and Modak 2022).

4.2 Non-Tribal Healing Traditions

Along with tribal healing practices, non-tribal groups in the research area add to the rich tapestry of traditional medicine.

(I) **Ayurvedic Practices:** Ayurveda is important for people who are not tribal because it is based on ancient Indian writings. "Vaidyas," or neighborhood Ayurvedic doctors, use Ayurveda to treat illnesses and keep people healthy. To keep the three doshas (Pitta, Kapha, and Vata) in balance, they use minerals, plants, and animal products.

(II) **Syncretic Healing Methods:** The study area also shows syncretism, which is when traditional healing methods from different cultures are mixed together. Some people go to both tribal and non-tribal healers, which is a peaceful mixing of different healing practices (Bordoloi et al. 2023).

Medicinal Plants: In Jhargram and Paschim Midnapur, ancient ways of healing use medicinal herbs that are easy to find in the area. What makes up the traditional pharmacopoeia are the plants that grow in the area's many landscapes.

4.3 Identification and Documentation of Medicinal Plants

Table 2: Identification and Documentation of Medicinal Plants and its Use (Source: Rowkith and Bhagwan 2020)

Medicinal Plant	Scientific Name	Traditional Uses	References
Neem	<i>Azadirachta indica</i>	Used in traditional medicine for its antimicrobial properties. Neem leaves treat skin problems, while neem tea is used for oral hygiene.	Venugopalan Nair et al. 2019
Turmeric	<i>Curcuma longa</i>	Widely employed for its anti-inflammatory and antioxidant properties. Used by tribes like the Mundas to heal scars.	Kumar et al. 2023

Ashwagandha	Withaniasomnifera	Known for helping the body adapt to changes, relieving nerve pain, boosting energy, and reducing stress.	Chen et al. 2021
Bael	Aegle marmelos	Lodhas use bael leaves to alleviate stomach pain. Ayurvedic doctors use various parts for treating different health issues.	-

4.4 Preparation Methods and Applications of Herbal Remedies

Table 2: Preparation Methods and Applications of Herbal Remedies (Source: Soveri et al. 2021)

Preparation Methods	Description	Applications	References
Decoctions and Infusions	Brewing plant parts in water to create a medicinal drink. Commonly used by tribes.	Aid in various illnesses, such as stomach problems and shortness of breath.	Kawarty et al. 2020
Paste Formulations	Mixing pieces of plants with water or other liquids to form medicinal pastes applied to the skin.	Effective in healing cuts, alleviating joint pain, and treating various skin issues.	-
Oil Infusions	Blending plant parts with base oils to create medicinal oils applied topically on the skin.	Used in Ayurvedic treatments to address skin problems and relieve joint pain.	Ahuja et al. 2021

Formulations with Powder	Using ground-up dried plant parts as a powder applied to the face or affected areas.	Suitable for diverse applications, including addressing stomach problems and wound healing.	Heinrich et al. 2020
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(a) Decoctions and infusions: People make these kinds of drinks all the time. Tribes make these by heating up bark, roots, leaves, and other parts of plants in water. Decoctions are often drunk because they can help with a lot of different illnesses, from stomach problems to shortness of breath (Kawarty et al. 2020).

(b) Paste Formulations: Put pieces of plants together with water or other liquids to make medicine pastes that are then put on the skin. A lot of people use these pastes to heal cuts, joint pain, and skin issues. One use for turmeric paste is to clean and heal cuts since it kills germs.

(c) Oil infusions: Different parts of plants are mixed with base oils to make medicine oils. People rub with these oils and put them on their skin. Oils with medicine are often used to treat skin problems and joint pain in Ayurvedic treatment (Ahuja et al. 2021).

(d) Formulations made of powder: Ground-up dried plant parts can be put on the face or the bottom. They're easy to store and can be used for many things, like getting rid of stomach problems and cuts.

One might be able to understand the difficult information that is part of traditional medicine better if they know how to make and use plant medicines (Heinrich et al. 2020). In the study area, traditional medicine is all-encompassing because it uses a variety of plants, preparation methods, and cultural beliefs.

5. Comparative Analysis

This side-by-side study shows how Jhargram and Paschim Midnapur residents' healing traditions are subtle and complicated. The study compares traditional medicines depending on location, taking into account cultural and biological variables that make them unique.

5.1 Regional Variations

In Jhargram and Paschim Midnapur, traditional medicine is affected by changes in the natural environment. Herbs used for medicine grow well on the hills and in the dense woods of Jhargram. The Santhals and Mundas love woods and use many things from them to heal. Along with many other types of plants, this place has many types of plants that can heal. Many of the same living things can be found in Paschim Midnapur, even though its landscape is more varied with fields and farms. Herbs, both tamed and wild, are used for ancient medicine in this part of the world (Zaman 2022). Plants that heal must be easy to find and use for traditional medicine to work.

Traditional medicine used in Jhargram and Paschim Midnapur is changed by the cultures of the people who live there. Some groups in Jhargram, like the Mundas and the Santhals, use traditional ways to treat their patients. Rituals, prayer, and spirituality are all big parts of how they heal. In these places, people learn most about traditional healing by listening to stories and doing it themselves. The fact that people from different tribes and non-tribes live together in Paschim Midnapur changes the way traditional healing is done. Because of how things are done in other cultures, Ayurveda or other writing methods can be used in healing practices that are not tribal (Rowkith and Bhagwan 2020). Different traditional methods and group dynamics are used to heal people in this area.

5.2 Difference Analysis

The differences in the traditional medicine districts of Jhargram and Paschim Midnapur give us different thoughts. People from the Jhargram tribe, especially the Mundas and Santhals, like to gather medicinal herbs in deep woods and hills. These groups only use plants that have grown well in the area's ecosystem. The different landscapes in Paschim Midnapur have an effect on healing practices. Traditional doctors can use plants from both gardens and the wild as medicines. The medicinal plants that are available affect the choices of chemicals that are used in formulations. The complicated spiritual rites that are used in Jhargram's healing practices show how spiritually and culturally connected the tribal people are to their land (Sahoo et al. 2023). Jhargram's old healing methods put a lot of weight on rituals, invocations, and chanting that are symbolic. In Paschim Midnapur, you can see examples of synesthetic treatment practices. Rituals may lose their meaning when they are mixed with routines from other cultures, but spiritual aspects are still important. People who are not from

a tribal group in Paschim Midnapur are more likely to use Ayurveda in their regular medical care. Formal and traditional healthcare may be mixed in this integration, depending on regional factors. The tribal groups in Jhargram have kept their cultural identity strong, so official institutions may not be as well integrated and traditional ways of treating people may be more common (Ghosh and Sinha 2021).

5.3 Commonalities

Traditional treatment in Jhargram and Paschim Midnapur is similar, even though they are in different parts of India. Both places depend on healing plants for health. Traditional medicine uses the healing properties of the plants in the area. Turmeric, ashwagandha, bael, and neem are used in different ways as therapy in each area. In every area, traditional medicine takes care of physical, mental, spiritual, and social health. Our holistic method and traditional medicine both support the idea that health is linked around the world (Soveri et al. 2021). A lot of people know how important traditional healing is to their society. Native American groups live in both areas and use traditional medicine. Keeping cultural heritage alive can be done through community participation, storytelling, and healing practices. In both places, information is shared through speech. By training, traditional healers keep medicine alive. Native American culture is kept alive through oral custom. Traditional medical practices in Jhargram and Paschim Midnapur show how regional differences and similarities interact in a dynamic way. Different kinds of traditional medicine are influenced by cultural and environmental factors. These places have long-standing medical traditions that can be seen in things like oral history, cultural importance, holistic health, and the use of medicinal plants (Bussa and Belayneh 2020). When healthcare workers know about comparative awareness, they can better keep, use, and value traditional therapeutic knowledge.

6. Challenges and Opportunities

6.1 Challenges

In Jhargram and Paschim Midnapur, it is hard to keep traditional medical knowledge living because ecosystem loss and damage are getting worse. Medicinal plants are losing their natural habitats because more trees are being cut down, more farms are being built, and more cities are being built. This is called species loss. In turn, this means that traditional ways of healing are in danger because it's getting harder to find certain plant types (Kassa et al. 2020).

It is hard to pass on traditional medical information because cultures are changing so quickly and becoming more modern. These days, young people may not be as interested in learning and using standard therapy methods because of changes in their lives and schools. Traditional ways of healing are in danger because language, national identity, and the ability to talk about what you know are all getting worse. A problem that keeps coming up is that common medical information is not standardized or written down in an organized way. There are still a lot of native healing methods that haven't been written down but are heard in communities. Traditional medical knowledge is harder to share and adopt into larger healthcare systems because there aren't any clear rules about how to collect, prepare, and use herbal medicines. A lot of the time, the official health care system makes it hard for alternative treatments to be accepted. Modern doctors and traditional healers can't work together because traditional healers aren't accepted or part of standard healthcare systems. Being alone could make it harder for a whole-person approach to healing to work, and it might also make people less interested in traditional health (Bolton et al. 2023). People may not be as interested in traditional treatment methods if they are having trouble with money or can't keep up with their traditional way of life in tribal communities. There are jobs in towns, so young people can find other ways to make money. This would make standard medical care even less necessary. People may lose knowledge because traditional healers are having a hard time making ends meet.

6.2 Opportunities

Protecting the earth and different kinds of life can help keep traditional medicine alive. Protecting medicinal plants, planting trees, and harvesting in a way that doesn't harm the environment can help keep the ecological roots of traditional medicine alive. Community-led recording projects keep indigenous medical knowledge alive. Digital databases and multimedia tools help people learn about other cultures and keep their historical records safe (Amir Latif et al. 2020). Traditional medicine can be backed by official health care systems so that traditional and modern doctors can work together more. Traditional and allopathic medicine can work together to provide holistic care that is sensitive to different cultures by sharing information, training each other, and doing study. Native languages, customs, and oral information that are being used again can help stop cultural decline. By teaching teens about their culture, having them do community service, and running projects to raise awareness, traditional medicine is brought back to life. Ethical bioprospecting and fair trade

can help keep medical information alive. Putting indigenous benefit sharing at the top of partnerships can help traditional doctors make more money and protect medicinal plants (Friso et al. 2020). It is very important to back rules and government programs that protect traditional medicine. Indigenous peoples should be able to use and get their traditional information. This can help keep traditional healing techniques alive and used.

7. Conclusion

The way native people have always treated illness shows how closely society, nature, and health are linked. Jhargram and Paschim Midnapur areas have a lot of different kinds of people who do these things. The comparison study shed light on the complicated ways that healing practices from different places are alike and different. The healing landscapes are unique because they have strong oral histories, cultural impacts, and a wide range of plants and animals.

People in Jhargram and Paschim Midnapur still use traditional medicine, even though they are losing their homes, their traditions, and their skills, and they are not getting credit for them. Protecting biodiversity, community-led documentation projects, integrating them with formal healthcare systems, culture revitalization efforts, and ethical bioprospecting are all good ways to keep these important practices alive and spread them to more people.

8. Recommendations

It is important to back and encourage efforts led by communities to record and preserve oral medical information. As part of this, huge books, multimedia files, and easy-to-find storage spaces should be built up. These will be very helpful for people in the future. Environmental groups, the government, and native people should all work together on projects to protect biodiversity. To make sure that there are always plants that can be used as medicine, these projects should focus on saving natural areas, planting trees, and using sustainable harvesting methods. Help keep local languages, customs, and knowledge alive by giving money to educational programs that do these things. Young people can get involved through cultural events, workshops, and campaigns to raise understanding. These things can also make them proud of their culture and get them interested in old ways of healing. It is suggested that standard medical procedures be added to healthcare systems that are already in place. In order to do this, researchers from both modern and traditional medicine need to work together,

teach traditional doctors, and find ways for them to share what they know. It is important to push for bioprospecting and fair-trade laws that recognize the role that indigenous people play in traditional healing. Allow traditional doctors and their communities to work together in an open and fair way so that everyone can gain, both financially and culturally. Help to make and follow laws and rules that protect the rights of native groups to their traditional medical knowledge. To do this, we need to protect intellectual property rights, stop biopiracy, and support the ideas of free, prior, and informed consent. People in the Jhargram and Paschim Midnapur areas can remember and use old medical knowledge in a good way if they do these things. All in all, these projects are good for the community because they protect the important part of native people and allow old and new healthcare systems to work together without any problems.

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