P-ISSN: 2719-1842
E-ISSN: 2945-4107

The Vector: International Journal of Emerging Science, Technology and Management
Volume 34, Issue 1, January - December 2025

Health Practices and Socio-Demographic Correlates Among the Indigenous Peoples of Sitio Kinbilibil, Barangay Daligan, Sta. Cruz, Ilocos Sur

Justine Robert V. Amigo[1], Marc Jehan Anicas[2], Lennart C. Fronda[3], Maria Mariella A. Garnace[4], Maya Angelika G. Navarro[5], Darius. A. Rafanan[6], Greggie A. Talingdan[7]

[1]*San Fernando Hospital, Inc.*
[2]*Provincial Health Office-Ilocos Sur*
[4]*Ilocos Sur Provincial Hospital-Gabriela Silang*
[6]*Metro Vigan Hospital*
[357]*University of Northern Philippines*
[1]*Justine.robert.amigo@gmail.com*
[2]*marcjehananicas@gmail.com*
[3]*frondalennart08@gmail.com*
[4]*mariamariellagarnace@gmail.com*
[5]*dariusrafanan23@gmail.com*
[6]*greggie.talingdan@unp.edu.ph*

ABSTRACT

Indigenous health practices remain an essential aspect of community well-being, particularly in geographically isolated and disadvantaged areas. Understanding these practices is vital for developing culturally sensitive healthcare interventions. This study examined the health practices of Indigenous Peoples in Sitio Kinbilibil, Barangay Daligan, Sta. Cruz, Ilocos Sur, and explored the relationship between their health behaviors and socio-demographic profile. Using a descriptive-correlational research design, the study employed total enumeration, involving 49 Indigenous Peoples aged 18 years and above. Data were gathered through a modified instrument based on Yang-ed et al. (2009). Frequency and percentages were used to describe the socio-demographic profiles, mean scores assessed the extent of health practices, and simple correlational analysis was used to determine relationships between variables. Results showed that most respondents were aged 18-38 years old, female, married, high school graduates, affiliated with the Pentecostal church, and earning less than Php 5,000 monthly, with business as their primary source of income. In terms of health practices, respondents sometimes used traditional remedies, occasionally consulted professional health providers for common health conditions, and seldom sought medical care for self-care concerns. A significant finding was that religious affiliation, specifically Pentecostal, was correlated with respondents' overall health practices. The study underscores the importance of recognizing the cultural context influencing indigenous health behaviors. Documenting these practices contributes to the preservation of indigenous knowledge and supports the development of culturally grounded health programs to improve health outcomes. This study contributes empirical, community-level evidence on indigenous health practices in Ilocos Sur, addressing the limited documentation of health behaviors among geographically isolated Indigenous Peoples.

P-ISSN: 2719-1842
E-ISSN: 2945-4107

Keywords: *Health Practices, Indigenous Peoples, Socio-demographic Profile, Traditional Remedies, Pentecostal Religion, Ilocos Sur*

INTRODUCTION

Health and well-being are fundamental human rights and essential to sustainable development. The United Nations emphasizes this through Sustainable Development Goal 3 (Good Health and Well-being), which promotes equitable access to quality healthcare, and SDG 10 (Reduced Inequalities), which calls for addressing disparities affecting marginalized groups, including Indigenous Peoples (IPs). These global commitments highlight the need to understand diverse health systems and behaviors, particularly among communities that remain underserved and geographically isolated.

Globally, Indigenous communities possess rich health traditions rooted in culture, spirituality, and harmony with nature. These include herbal medicine, healing rituals, and spiritual ceremonies that reflect a holistic approach to wellness. The World Health Organization (WHO, 2023) recognizes traditional medicine as an essential system of knowledge that complements modern healthcare. Despite these strengths, Indigenous Peoples face significant health inequities. Their life expectancy is up to 20 years shorter than that of non-indigenous populations, largely due to poverty, malnutrition, and limited access to healthcare (UN, 2024; Fischer, 2022). In the Philippines, Indigenous groups experience similar challenges—poor nutrition, infectious diseases, and inadequate medical services—often exacerbated by geographical isolation (SERP, 2024). Nevertheless, traditional healing remains integral to their identity and survival. For example, in the Ilocos Region, the Yapayao or Ipayao tribes rely on plant-based remedies and ancestral healing tools (Vega et al., 2020).

Local research further supports the enduring relevance of indigenous and community knowledge. Talbo (2020) documented how Ilokano farmers and fisherfolk rely heavily on indigenous knowledge, including the use of medicinal plants for daily health and practices. Virtudes et al. (2023) explored perinatal beliefs and practices among Itneg, revealing a blend of scientific and traditional approaches in mental and infant care that are passed down through generations. Additionally, Tablante and Cadorna (2021) highlighted the role of community-based health and nutrition interventions in improving health among rural populations in Ilocos Sur, underscoring the importance of culturally grounded programs that incorporate local practices.

P-ISSN: 2719-1842
E-ISSN: 2945-4107

The Vector: International Journal of Emerging Science, Technology and Management
Volume 34, Issue 1, January - December 2025

Despite outreach initiatives by the Department of Health (DOH) and the National Commission on Indigenous Peoples (NCIP), and social protection programs like the Pantawid Pamilyang Pilipino Program (4Ps), significant gaps remain. Many indigenous communities, such as those in Sitio Kinbilibil, Barangay Daligan, Sta. Cruz, Ilocos Sur, is home to the Bago, Itneg, and Kankanaey groups, which lack consistent access to healthcare facilities, trained professionals, and culturally sensitive services. Moreover, traditional health practices in these communities are underdocumented and insufficiently integrated into formal healthcare systems, with language and cultural barriers impeding effective communication and trust between indigenous patients and providers.

Despite growing recognition of indigenous knowledge systems in health, limited empirical studies have documented the actual health practices of Indigenous Peoples in geographically isolated communities in Ilocos Sur. In particular, there is insufficient evidence examining how indigenous health practices relate to socio-demographic characteristics such as religion, education, and income. This gap limits the development of culturally responsive and evidence-based health programs for indigenous communities

Objective of the Study

This study aimed to determine the extent of health practices among the Indigenous Peoples of Sitio Kinbilibil, Sta. Cruz, Ilocos Sur, and to examine their relationship with selected socio-demographic characteristics. Specifically, it sought to: (1) Describe the socio-demographic profile of the respondents in terms of age, sex, civil status, religion, educational attainment, source of income, and family monthly income; (2) Assess the extent of the respondents' health practices in terms of health remedies, management of common health conditions, and self-care practices; and (3) Determine the significant relationship between the respondents' socio-demographic characteristics and their health practices.

METHODOLOGY

Research Design. A descriptive-correlational research design was employed in this study to examine the health practices of the Indigenous Peoples of Sitio Kinbilibil, Barangay Daligan, Sta. Cruz, Ilocos Sur. The descriptive component focused on identifying and outlining respondents' health practices, while the correlational component sought to determine the relationship between these practices and respondents' socio-demographic characteristics. Similarly, Bernardo Oliber A. Arde Jr. (2019) employed the same design in a study of intercultural sensitivity among international students at UNP.

P-ISSN: 2719-1842
E-ISSN: 2945-4107

Descriptive-correlational research is particularly suited to studies in which the researcher does not intervene or manipulate variables but instead observes them as they naturally occur, aiming to describe the nature and degree of relationships among them (Bhat, 2023). In this study, by using this design, the aim was to provide a comprehensive account of how socio-demographic factors relate to health practices within this indigenous community, without implying causation.

Participants of the study. A total of 49 respondents in this study were Indigenous Peoples of Sitio Kinbilibil, Barangay Daliga, Sta. Cruz, Ilocos Sur, belonging to various indigenous groups residing deep in the mountainous areas of the barangay, were taken in the study from ages 18 years old and above.

Research Instrument. A survey questionnaire was adapted from the health practices questionnaire developed by Yang et al. (2009), with some changes made to align with the research objectives and the local context. The adapted instrument was culturally contextualized to reflect Indegenous health beliefs and practices specific to the study area. The instrument consisted of two parts. Part 1 gathered the socio-demographic profile of the respondents, while Part 2 dealt with the health practices of the Indigenous Peoples. Cultural contextualization was achieved through the rewording, refinement, and selection of items relevant to the Indigenous health practices in Sitio Kinbilibil. Content validity was established through evaluation by the panel of experts, and the instrument was personally administered to ensure clairty and accuracy of responses.

***Data Gathering Procedure*.** Ethics approval was obtained prior to the study, and the researchers secured clearance from the National Commission on Indigenous Peoples (NCIP) Regional Office and the Tagudin Community Service Center. Permission was also requested from the Dean of UNP-College of Nursing, the NCIP Regional Director, and the Mayor of Sta. Cruz, and the Barangay Captain of Barangay Daligan. Before data collection, the purpose, procedures, and voluntary nature were explained, and written informed consent was obtained from all the respondents. Data were collected through self-administered questionnaires conducted house-to-house, allowing participants sufficient time to respond. Confidentiality was ensured by omitting identifying information, and completed questionnaires were securely stored in a locked cabinet, with electronic files password-protected.

***Data Analysis*.** The collected data were analyzed using several statistical tools. Frequency counts and percentages were used to describe the socio-demographic profile of the respondents, including age, sex, civil status, educational attainment, source of income, and family monthly income. The mean was computed to assess the extent of health practices among the respondents. Simple correlation analysis was used to determine the significant relationship between health practices and

P-ISSN: 2719-1842
E-ISSN: 2945-4107

The Vector: International Journal of Emerging Science, Technology and Management
Volume 34, Issue 1, January - December 2025

socio-demographic variables, with a significance level set at α = 0.05. These analyses provided a comprehensive understanding of the respondents' health behaviors and the potential influence of their socio-demographic characteristics.

RESULTS AND DISCUSSION

This part presents, analyzes, and interprets the study's findings on the health practices of the Indigenous Peoples in relation to their socio-demographic profile.

1. Socio-demographic profile of the respondents in terms of their age, sex, civil status, religion, educational attainment, source of income, and family monthly income

Table 1 presents the socio-demographic profile of the respondents.

Table 1
Socio-demographic Profile of the Participants

Socio-demographic factors	Frequency	%
Age		
18-38 years old	25	51.02
39-58 years old	12	24.49
59- 78 years old	12	24.49
Total	49	100.0
Sex		
Male	22	44.9
Female	27	55.1
Total	49	100.0
Civil status		
Single	18	36.7
Married	31	63.2
Total	49	100.0
Educational attainment		
College graduate	7	14.3
College level	4	8.2
High school graduate	15	30.6
High school level	2	4.1
Elementary graduate	13	26.5
Elementary level	5	10.2

P-ISSN: 2719-1842
E-ISSN: 2945-4107

No schooling	3	6.1
Total	49	100.0
Financial source		
Salary	7	14.3
Assistance from children	2	4.1
Income from business	15	30.6
Assistance from spouse	3	6.1
Assistance from parents	22	44.9
Total	49	100.0
Religion		
Roman catholic	5	10.2
Methodist	2	4.1
Pentecost	41	83.7
Iglesia ni cristo	1	2.0
Total	49	100.0
Family monthly income		
20,001-25,000	3	6.1
15,001-20,000	4	8.2
5,001-10,000	7	14.3
Less than 5.000	35	71.4
Total	49	100.0

The socio-demographic profile of the respondents revealed that most were aged 18-38 (51.02%), with a higher proportion of females (55.1%) than males (44.9%). The majority were married (61.2%) and had completed high school (4.1%). Most respondentsrelied primarily on family-based financial support, reflecting extended kinship systems within the community. (44.9%) and identified as Pentecost (83.7%). In terms of family income, a large majority (41.4%) earned less than 5,000 per month.

2. Health practices of the respondents in terms of health remedies, common health conditions, and self-care

Table 2 presents the different health practices of the participants.

The respondent's use of health remedies was generally moderate, with an overall mean of 2.92. They often used herbal remedies (3.65) and sought advice from nurses and medical professionals (3.41-3.71). This pattern reflects a stronger

P-ISSN: 2719-1842
E-ISSN: 2945-4107

The Vector: International Journal of Emerging Science, Technology and Management
Volume 34, Issue 1, January - December 2025

preference reflects a selective use of modern healthcare alongside continued reliance on herbal remedies. and herbal treatments over traditional ritual practices.

Table 2
The Health Practices of the Respondents in terms of Health Remedies

		Mean	DR
	HEALTH REMEDIES		
1.	I use herbal remedies in treating common diseases.	3.65	Often
2.	I consult folk healers like the herbolario (*albulario),* man-ilut (mangngilut), and Mannultop (mangtandok) when I experience health problems or conditions.	2.80	Sometimes
3.	I consult ritual practitioners like diagnostic specialists such as mambuyon (*mammuyon), mansip-ok, man-ila, and manbuton* in diagnosing common health problems, especially when I experience different signs and symptoms.	1.73	Never
4.	I consult ritual practitioners such as *manbaki /mumbaki, man-ated, and manbunong* when I have common health problems or conditions.	1.98	Seldom
5.	I consult a barangay health worker or nurse when I experience health problems or conditions.	3.41	Often
6.	I seek medical advice for consultation and treatment when I experience or suffer from health problems or conditions.	3.71	Often
7.	I want to be brought to the hospital when I experience or suffer from health problems or conditions.	3.14	Sometimes
	Health Remedies Overall	2.92	Moderate

These findings are consistent with the study by Panergo, dela Cruz, and Viloria (2024), which highlighted that Indigenous communities in northwestern Cagayan frequently use herbal plants to treat common ailments, underscoring the continued importance of herbal remedies alongside selective engagement with formal healthcare providers. The table on health remedies supports this interpretation, as the highest means were associated with ritual-based practices. These findings suggest a pluralistic health-seeking pattern that integrates both traditional and biomedical approaches

Table 3 presents the extent of health practices of the respondents in terms of common health conditions.

P-ISSN: 2719-1842
E-ISSN: 2945-4107

The respondents demonstrated a moderate extent of health practices in managing common health conditions, with an overall mean of 2.87. They often sought medical help for more serious conditions, such as breathing problems (3.43) and animal bites (3.55), but only occasionally consulted a doctor for minor ailments like coughs, colds, abdominal pain, and headaches (2,20-2.44).

Table 3
Extent of Health Practices of the Respondents in terms of Common Health Conditions.

COMMON HEALTH CONDITIONS	Mean	Descriptive Rating
1. I consult a doctor when I experience painful urination.	3.12	Sometimes
2. I consult a doctor when I get wounds and lacerations in any part of my body.	3.04	Sometimes
3. I consult a doctor when I feel abdominal pain	2.10	Seldom
4. I consult a doctor when I have abscesses and swelling in my body	3.00	Sometimes
5. I consult a doctor when I suffer from symptoms of arthritis.	2.80	Sometimes
6. I consult a doctor when I experience problems or difficulty in my breathing.	3.43	Often
7. I consult a doctor when I experience diarrhea.	2.41	Seldom
8. I consult a doctor when I experience coughs & colds.	2.16	Seldom
9. I consult a doctor when I have diabetes.	2.61	Sometimes
10. I consult a doctor when I experience dysmenorrhea. (For women)	2.44	Seldom
11. I consult a doctor when I have a high-grade fever.	3.33	Sometimes
12. I consult a doctor when I have constant headaches.	2.33	Seldom
13. I consult a doctor when I suffer from a headache or dizziness as a result of my current hypertension.	3.27	Sometimes
14. I consult a doctor when an animal bites me. E.g., Snake, dog, cat, etc.	3.55	Often
15. I consult a doctor when I experience a toothache or any dental problems.	3.20	Sometimes
Common Health Conditions Overall	2.87	Moderate

This findings suggest that the community tends to prioritize medical consultation for urgent or severe illnesses, while relying on self-care or traditional remedies for less serious illnesses which is consistent with the study of Odtojan and Malicay (2023, who found out that Indigenous Peoples in Surigao City, particularly in Mamanwa tribe, often rely on ethnomedicinal plants and traditional healing for minor ailments but seek professional healthcare services when conditions become more serious or life-threatening. Their findings reinforce the idea that perceived

P-ISSN: 2719-1842
E-ISSN: 2945-4107

The Vector: International Journal of Emerging Science, Technology and Management
Volume 34, Issue 1, January - December 2025

severity of illness strongly influences health-seeking behavior among Indigenous communities, reflecting a practical and experience-based approach to healthcare. Perceived severity of illness appears to be a key factor influencing the decision to seek professional healthcare services.

Table 4 presents health practices of the respondents in terms of self-care.

Table 4
Health Practices of the Respondents in terms of Self-Care

SELF CARE	Mean	Descriptive Rating
I consult a doctor about personal hygiene, including body odor, proper oral care, and handwashing.	2.10	Seldom
I consult a doctor regarding home sanitation.	1.90	Seldom
I consult a doctor regarding bathing practice	1.51	Never
I consult a doctor regarding complications of circumcision. (For men.)	2.95	Sometimes
I consult a doctor regarding complications of menstruation. (For women.)	2.15	Seldom
I consult a doctor regarding complications of pregnancy. (For women.)	3.37	Sometimes
I consult a doctor regarding the importance of seeking consultation to prevent the risk of complications during childbirth. (For women.)	3.04	sometimes
I consult a doctor about nutrition, such as food prescriptions or food restrictions (what to eat and what not to eat).	2.61	Sometimes
Self-Care Overall	**2.30**	**Low**

The table indicating limited engagement with professional consultation for routine self-care concerns with an overall mean of 2.30, indicating that they seldom sought medical consultation for personal hygiene, home sanitation, or nutrition. They were more likely to seek advice for pregnancy-related issues (3,04-3.37) but rarely consulted doctors for everyday hygiene or bathing practices (1.51-2.10). These align with the study of Calva and Batoto (2023), which found that Indigenous communities in the Southern Philippines had limited access to sanitary facilities and formal health services, thereby often relying on personal and traditional practices for hygiene and self-care rather than professional consultation. Self-care practices

P-ISSN: 2719-1842
E-ISSN: 2945-4107

were largely guided by traditional knowledge and household experience rather than formal medical advice

Table 5 presents the Summary of Composite Mean of Health Remedies, Common Health Conditions, and Self-care

Table 5
Summary of Composite Mean of Health Remedies, Common Health Conditions, and Self-care

Overall	Overall Mean	Descriptive Rating
Health Remedies	2.92	Moderate
Common Health Conditions	2.87	Moderate
Self-Care	2.30	Low
Health Practices Overall	**2.76**	Moderate

The respondents demonstrated a moderate level of overall health practices, with a composite mean of 2.76. They showed moderate engagement in remedies (2.92) and in managing common health conditions (2.87), indicating that they often used herbal remedies, sought advice from nurses or doctors for serious ailments, and relied on modern healthcare alongside traditional practices. However, their self-care practices were low (2.30), suggesting that they seldom sought professional consultation for routine personal hygiene, home sanitation, bathing, or nutrition. This indicates that most self-care behaviors were guided by traditional knowledge and personal experience rather than formal health guidance.

Previous studies support these findings. For instance, Arroyo and Marapao (2023) reported that the Talaandig tribe of Bukidnon primarily depended on traditional remedies and home-based practices, with formal healthcare sought mostly for critical conditions. In addition, Fabrigas and Maniago (2023) noted that Ayta people of the Philippines largely practiced traditional and community-based health methods, consulting formal healthcare services only when necessary. Collectively, these studies corroborate the pattern observed in this study: moderate health management for illness, but low engagement in preventive self-care among Indigenous populations.

3. Significant relationship between the respondents' Socio-Demographic Profile and their Health Practices

Table 6 presents the relationship between the socio–demographic profile of the respondents and their health practices

P-ISSN: 2719-1842
E-ISSN: 2945-4107

The Vector: International Journal of Emerging Science, Technology and Management
Volume 34, Issue 1, January - December 2025

The correlation analysis revealed that most socio-demographic profile- age, sex, civil status, educational attainment, financial source, and family income- did not have significant relationship with the respondents' health practices ($p > .05$). However, religion showed a significant negative correlation with remedies ($r=-.294$, $p=.041$), common health conditions ($r=-.306$, $p=.033$), and overall health practices ($r=-.285$, $p=0.47$).

Table 6

Relationship between the Socio–Demographic Profile of the Respondents and their Health Practices

	HEALTH REMEDIES OVERALL	COMMON HEALTH CONDITIONS OVERALL	SELFCARE OVERALL	HEALTH PRACTICES OVERALL
AGE	-.033	-.002	.010	-.005
	.819	.990	.943	.974
	49	49	49	49
SEX	.155	.008	.126	.067
	.289	.956	.388	.649
	49	49	49	49
CIVILSTATUS	.167	.036	.223	.136
	.251	.806	.124	.351
	49	49	49	49
EDUCATIONAL ATTAINMENT	-.067	.058	.061	.027
	.645	.695	.676	.852
	49	49	49	49
FINANCIAL SOURCE	-.092	.086	.009	.018
	.529	.557	.953	.902
	49	49	49	49
RELIGION	-.294*	-.306*	-.107	-.285*
	.041	.033	.463	.047
	49	49	49	49
FAMILY MONTHLY INCOME	-.153	-.081	-.209	-.150
	.292	.581	.149	.305
	49	49	49	49

This suggests that respondents' religious affiliation may influence their engagement in certain health practices, suggesting that religious affiliation may influence health-seeking preferences and decision-making patterns. Similarly, Reyes

P-ISSN: 2719-1842
E-ISSN: 2945-4107

et al (2023) found that Indigenous and underserved populations in the Philippines face multiple barriers, including cultural and religious beliefs that affect their use of formal health services. Overall, the findings indicate that cultural and religious contexts play a more salient role in shaping health practices than basic socio-demographic factors

CONCLUSIONS

The study concludes that the Indigenous Peoples of Sitio Kinbilibil demonstrate moderate engagement in health remedies and management of common health conditions, but low engagement in professional self-care consultation. Traditional herbal practices remain central for minor ailments, while professional healthcare is sought for serious conditions. Religious affiliation, particularly Pentecostal belief, is significantly associated with health-seeking patterns. These findings highlight the importance of culturally informed and context-sensitive health initiatives for indigenous communities

RECOMMENDATIONS

Based on the study results, several recommendations are made to support informed self-care and preventive health awareness among Indigenous Peoples of Sitio Kinbilibil by promoting personal hygiene, nutrition, and preventive practices. Understanding the influence of Pentecostal beliefs on health-seeking behavior is essential for designing culturally sensitive interventions. Collaborations with local church leaders can enhance community engagement and health advocacy, while expanding access to professional healthcare for minor ailments can complement the use of traditional remedies. Future studies may employ qualitative approaches to explore the lived experiences and meanings attached to indigenous health practices.

ETHICAL STATEMENT

This study was conducted with strict adherence to ethical principles. Informed consent was obtained from all respondents, ensuring their voluntary participation and understanding of the study's purpose. Confidentiality and anonymity were maintained throughout the research process, and respondents' rights and privacy were respected. The study also recognized and honored the cultural beliefs, traditions, and Indigenous knowledge of the participants, ensuring that data collection and reporting were conducted with cultural sensitivity and respect.

ACKNOWLEDGMENT

The researchers sincerely thank the Indigenous Peoples of Sitio Kinbilibil, Barangay Daligan, Sta. Cruz, for their participation and openness in sharing their

health practices. Gratitude is also extended to the University of Northern Philippines College of Nursing, the community leaders, and all those who provided guidance and support throughout this study.

REFERENCES

Arde, B. O. A., Jr. (2019). *Intercultural sensitivity of international students in a state university of the North*. The Vector: International Journal of Emerging Science, Technology and Management, 27(1). https://doi.org/10.69566/ijestm.v27i1.36

Arroyo, R., Arroyo, V. J., & Marapao, A. M. (2023). When health does not equate with wealth: The health practices and challenges of the Talaandig tribe in Bukidnon. *Proceedings of the International Conference on Future of Education*. https://doi.org/10.17501/26307413.2023.6106

Bhat, A. (2023). *Descriptive correlational: Descriptive vs. correlational research*. QuestionPro. https://www.questionpro.com/blog/descriptive-research-vs-correlational-research/

Calva, J. C., & Batoto, R. B. (2023). Health sanitation: Access to sanitary facilities of the Indigenous Peoples' communities in Southern Philippines. *International Journal of Science and Management Studies, 6*(6), 117–125. https://doi.org/10.51386/25815946/ijsms-v6i6p110

Fabrigas, Y. C., & Maniago, J. D. (2018). Ayta's Indigenous healthcare practices: A descriptive qualitative study. *European Scientific Journal, 14*(3), 408. https://doi.org/10.19044/esj.2018.v14n3p408

Odtojan, M. M., & Malicay, L. G. (2023). Health seeking behaviour of Indigenous people living in urban areas in Surigao City, Philippines. *Journal of Biodiversity & Environmental Sciences, 23*(4), 32–38.

Panergo, J. R. U., de la Cruz, A. O., & Viloria, R. D. (2024). Indigenous knowledge and ethnobotanical practices of community folks on medicinal plants in northwestern Cagayan, Philippines. *Journal of Biodiversity and Environmental Sciences, 25*(3), 185–194.

Reyes, A. T., Serafica, R., Kawi, J., Fudolig, M., Sy, F., Leyva, E. W. A., & Evangelista, L. S. (2023). Using the socioecological model to explore barriers to health care provision in underserved communities in the Philippines: A qualitative study. *Asian/Pacific Island Nursing Journal, 7*, e45669. https://doi.org/10.2196/45669

Tablante, J. C. R., & Cadorna, E. A. (2021). School-based feeding program in Ilocos Sur: Impacts on health and educational outcomes. *The Asian Journal of Education and Human Development, 2*(1). https://doi.org/10.69566/ajehd.v2i1.27

Talbo, W. R. (2020). Indigenous knowledge of Ilokano farmers and fisherfolks:

P-ISSN: 2719-1842
E-ISSN: 2945-4107

Appreciation and preservation. *The Asian Journal of Education and Human Development, 1*(1). https://doi.org/10.69566/ajehd.v1i1.8

United Nations. (2024). *State of the world's Indigenous Peoples: Health and well-being*. UN Publications. https://www.un.org/development/desa/indigenouspeoples

Vega, R. L., Ramos, E. P., & Castillo, J. M. (2020). Traditional healing practices among Indigenous groups in Northern Luzon. *Philippine Journal of Indigenous Studies, 8*(2), 67–81.

Virtudes, D. J., Labuni, A. J., Tolentino, H. K., Tenorio, J., Quitevis, L. E., Manzano, G. M., Collado, J. A., Villahermosa, N. V. A., & Abella, J. A. (2023). Itneg mother's concessions: Perinatal beliefs and practices unwrapped. *The Asian Journal of Education and Human Development, 4*(1). https://doi.org/10.69566/ajehd.v4i1.77

World Health Organization. (2023). *WHO global report on traditional and complementary medicine 2019–2023*. WHO Press. https://www.who.int/publications

Yang-ed, E. J., Samaniego, E. S., & Minger, J. G. (2009). Health practices and beliefs among some ethnic groups in Benguet. *University of the Cordilleras Research Journal, 1*(3).