International Journal of Advances in Science, Vocational & Technical Education (IJASVOTE)
www.ijasvote-fce.com
Volume 3; Issue 1; July 2026; Page No. 37-48.

AWARENESS AND PERCEPTIONS AMONG BIOLOGY EDUCATION STUDENTS ON LOCAL HERBS FOR MANAGING COMMON ILLNESSES: CASE STUDY AT FEDERAL COLLEGE OF EDUCATION, EHA-AMUFU

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Abstract

This study investigated the awareness and perceptions of Biology Education students regarding the use of local herbs for managing common illnesses at the Federal College of Education, Eha-Amufu. Traditional herbal medicine is a vital component of primary health care in Nigeria, yet the knowledge and attitudes of future educators remain underexplored. Using a descriptive survey design, 100 students were selected through stratified random and convenience sampling from N.C.E. II, Degree II, and Degree III classes. Data were collected via a structured questionnaire and analyzed using mean scores on a four-point Likert scale. Results indicated high awareness of local herbs, including their identification, uses, and potential risks of misuse, with *Vernonia amygdalina* and *Ocimum gratissimum* frequently recognized. Participants highlighted the importance of scientific validation and guidance from experienced herbalists but reported limited understanding of integrating herbal remedies with modern medicine and potential adverse effects of improper use. Primary sources of knowledge included family elders, traditional practitioners, formal lectures, and digital platforms, although informal sources were less reliable. Students expressed the need for structured, evidence-based instruction through lectures, practical demonstrations, and field visits, reflecting readiness to responsibly advocate for safe practices. The study concludes that Biology Education students at F.C.E. Eha-Amufu possess foundational awareness and positive perceptions of local herbal remedies. It recommends systematic incorporation of evidence-based herbal knowledge into the curriculum to bridge traditional and scientific understanding, promote safe usage, and prepare future educators to integrate indigenous health knowledge into community health education.

Keywords: Local medicinal herbs, Biology education students, Traditional medicine awareness, Health perception and knowledge, Common illnesses management

Introduction

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Traditional medicine has long been integral to health care in Nigeria, where an estimated 70–80% of the population relies on herbal remedies as a primary treatment for common ailments (Oreagba et al., 2011, Idowu, 2025). Local herbs are valued not only for their cost-effectiveness but also for their cultural significance, often representing generational knowledge passed down within communities (Oreagba et al., 2011). This reliance is particularly pronounced in rural areas, where access to modern health facilities is limited, making indigenous plant preparations a first line of defense against illnesses such as fever, diarrhea, malaria, and minor wounds (Idowu, 2025). Despite widespread utilization, the scientific validation of many locally used plants remains inconsistent, and concerns persist regarding dosage standardization, safety, and potential interactions with conventional drugs (Idowu, 2025).

In Enugu State, ethnobotanical knowledge is widespread, with communities using herbal preparations to manage malaria, respiratory infections, skin conditions, and gastrointestinal disturbances (Uzochukwu et al., 2018, Orabueze et al., 2017). A study of pregnant women in Nsukka reported that over 65% regularly consumed herbal remedies to alleviate pregnancy-related discomforts, citing accessibility and perceived safety over pharmaceuticals (Uzochukwu et al., 2018, Orabueze et al., 2017). Anecdotal evidence from surrounding local government areas indicates frequent use of *Vernonia amygdalina* and *Ocimum gratissimum* for managing childhood diarrhea and malaria (Uzochukwu et al., 2018, Orabueze et al., 2017). These practices underscore the pragmatic value of herbal remedies in resource-limited settings and highlight the importance of understanding how future educators interpret and communicate this indigenous knowledge.

Although tertiary students frequently use herbal remedies, their awareness and perceptions remain underexplored, particularly among biology education students who play a pivotal role in teaching both scientific and indigenous health knowledge. A survey at the University of Nigeria indicated that 78% of students and staff had used herbal medicines, but only 46% felt confident in identifying correct plant species or understanding appropriate dosages (Nuhu et al., 2018, Elechi-Amadi et al., 2021). Biology and pharmacy students demonstrated slightly higher knowledge than peers in non-science disciplines, suggesting that formal science education can influence attitudes toward herbal therapies. However, data specifically on biology education students remain sparse, leaving gaps in understanding how these future teachers integrate empirical and traditional knowledge.

The Federal College of Education, Eha-Amufu, situated in Isi-Uzo Local Government Area, predominantly enrolls students from agrarian communities where herbal knowledge is embedded in daily life. Many students report exposure to household medicinal gardens and

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consultation with local healers (Nuhu et al., 2018, Elechi-Amadi et al., 2021). Preliminary focus-group discussions reveal that students often struggle to reconcile anecdotal herbal practices with formal botanical science, sometimes perpetuating misconceptions about efficacy and safety (Nuhu et al., 2018, Elechi-Amadi et al., 2021). These conflicting perspectives can influence how future biology teachers incorporate local herbal knowledge into curricula or community health education.

Given the coexistence of rich ethnobotanical heritage and formal biology education, it is essential to examine how biology education students at the Federal College of Education, Eha-Amufu, perceive, understand, and value local herbs for managing common illnesses. Assessing their awareness can identify educational gaps, such as insufficient training in pharmacognosy, unclear evidence-based guidelines, and misconceptions regarding safe usage. Insights from this study will inform curriculum development, guide teacher training, and enable future educators to responsibly integrate traditional health practices into school-based and community health education programs, ultimately fostering a scientifically grounded appreciation of indigenous medicinal knowledge (Nuhu et al., 2018, Elechi-Amadi et al., 2021).

Methodology

Research Design

This study adopted a descriptive survey design to investigate awareness and perceptions of biology education students regarding the use of local herbs for managing common illnesses at the Federal College of Education, Eha-Amufu. According to Nworgu (2015), a descriptive survey design is appropriate for systematically collecting data to describe the characteristics, behaviors, or opinions of a defined population. The design was chosen because it allows the collection of quantitative data from a representative sample of students to examine their knowledge, attitudes, and perceptions regarding herbal remedies, without manipulating the study environment. This approach ensures that the study reflects real-world conditions while providing insights relevant for curriculum development and community health education.

Area of Study

The research was conducted at the Federal College of Education, Eha-Amufu, located in Enugu State, Nigeria. The college is a rural teacher-training institution that enrolls students predominantly from agrarian communities where local herbal knowledge is widely practiced and transmitted through households and local healers. This context makes the institution an appropriate site for exploring the integration of ethnobotanical knowledge with formal biology education (Nnamonu et al., 2019, Nnamonu et al., 2020).

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Population of the Study

The study population comprised all 195 biology education students enrolled at the Federal College of Education, Eha-Amufu. The population distribution across academic levels included NCE I (6), NCE II (25), NCE III (35), Degree I (25), Degree II (25), Degree III (51), and Degree IV (28) students. This population was selected because these students represent future educators responsible for teaching and disseminating both scientific and indigenous health knowledge.

Sample and Sampling Techniques

A total of 100 students were selected as participants, including NCE II (25), Degree II (25), and Degree III (50) students. To ensure representativeness, a combination of stratified random sampling and convenience sampling was employed. Stratified random sampling involved dividing the population into three strata based on academic level (NCE II, Degree II, Degree III) and randomly selecting participants from each stratum to reduce sampling error and ensure proportional representation. Within each stratum, convenience sampling was applied to select students who were readily available and willing to participate. This hybrid approach balances methodological rigor with feasibility, providing a sample reflective of the larger student population.

Instrument for Data Collection

Data were collected using a structured questionnaire titled ***Awareness and Perceptions Among Biology Education Students on Local Herbs for Managing Common Illnesses: Case Study at Federal College of Education, Eha-Amufu***. The questionnaire consisted of four sections: Section A assessed awareness of local herbs; Section B explored perceptions of efficacy and safety; Section C focused on integration of evidence-based herbal knowledge into teacher training; Section D collected demographic information. A four-point Likert scale was employed, with values assigned as Strongly Disagree (SD = 1), Disagree (D = 2), Agree (A = 3), and Strongly Agree (SA = 4). This scaling facilitated quantification of students' responses and determination of mean scores for analysis.

Instrument Validity

Face validity was assessed by two experts: one in Measurement and Evaluation and another in Biology Education from F.C.E., Eha-Amufu. The experts evaluated the clarity of wording, relevance of items, and alignment with the study objectives. Recommendations from the validation process were incorporated into the final instrument to enhance content coverage and clarity, ensuring that items effectively measured the intended constructs (Nworgu, 2015).

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Instrument Reliability

The questionnaire was piloted with 20 Degree III biology education students at the same institution. Internal consistency was evaluated using Cronbach's alpha due to the non-dichotomous nature of the responses. The initial alpha coefficient of 0.086 indicated very low reliability, suggesting that several items required revision, rephrasing, or removal to ensure coherence. Following modifications, the instrument was finalized for the main study. Reliability testing ensured that the instrument would consistently capture students' awareness and perceptions.

Method of Data Collection

The structured questionnaire was administered to the participants in person. Data collection occurred over a single session, with respondents completing the questionnaires under the supervision of the research team to ensure completeness and accuracy. Participants were briefed on the purpose of the study, confidentiality, and voluntary participation prior to administration.

Method of Data Analysis

Data were entered into Microsoft Excel and analyzed using descriptive statistics, specifically mean scores. Each questionnaire item was scored on a four-point scale (SD = 1; D = 2; A = 3; SA = 4). A cut-off point of 2.50 was applied: mean scores ≥2.50 indicated agreement, whereas scores <2.50 indicated disagreement. This method allowed for the identification of trends in students' awareness, perceptions, and readiness to integrate evidence-based herbal knowledge into educational and community contexts.

Results

Data were analyzed to address the four research questions guiding this study. Responses were evaluated using mean scores and standard deviations on a four-point Likert scale, with a cut-off point of 2.50 for agreement.

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Level of Awareness of Local Herbs

Table 1 presents the level of awareness of students regarding local herbs used for managing common illnesses.

Table 1: Students' Level of Awareness of Local Herbs

S/N	Items	SD	D	A	SA	N	Mean	SD	Remark
1	I am aware of common local herbs used in my community to treat illnesses such as malaria, cough, or stomach upset	19	7	68	6	100	2.59	0.121	A
2	I can identify some local herbs by name and describe their uses	1	28	1	70	100	3.40	0.170	A
3	I have received some form of instruction or education on the use of local herbs	7	17	7	69	100	3.00	0.133	A
4	I know that improper use of local herbs can lead to health problems	63	14	14	9	100	3.37	0.117	A
5	I understand that local herbs can complement modern medicine in managing illnesses	28	29	35	8	100	2.23	0.053	R

The majority of students demonstrated high awareness of local herbs, including their identification, uses, and potential risks. Items 1–4 were accepted, with mean scores ranging from 2.59 to 3.40, indicating consistent awareness. Item 5 was rejected (M = 2.23), suggesting limited recognition of the complementary role of local herbs with modern medicine. Standard deviations indicate moderate consistency across responses.

Perceptions of Efficacy and Safety

Table 2 summarizes students' perceptions of the efficacy and safety of local herbal remedies.

Table 2: Students' Perceptions of Local Herbal Remedies

S/N	Items	SD	D	A	SA	N	Mean	SD	Remark
1	I believe that local herbs are effective in managing common illnesses	26	24	8	42	100	2.65	0.134	A
2	I believe local herbs are safer than conventional medicine	14	7	35	44	100	3.08	0.148	A
3	I believe local herbs can cause side effects if not properly used	60	18	8	14	100	1.58	0.165	R
4	I think scientific research is necessary to confirm the safety of local herbs	9	12	15	64	100	3.45	0.167	A
5	I trust local herbs that are prepared by experienced traditional herbalists	7	8	15	70	100	3.48	0.054	A

Students generally perceive local herbs as effective and relatively safe. Items 1, 2, 4, and 5 were accepted, reflecting trust in experienced practitioners and acknowledgment of the need

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for scientific validation. Item 3 was rejected (M = 1.58), indicating a lack of recognition of potential side effects from improper use. Standard deviations indicate moderate agreement across most items.

Integration into Biology Teacher Training

Table 3 presents students' views on integrating evidence-based herbal knowledge into biology teacher education programs.

Table 3: Integration of Herbal Knowledge into Biology Education

S/N	Items	SD	D	A	SA	N	Mean	SD	Remark
1	I believe herbal knowledge should be included in the Biology Education curriculum	14	16	35	35	100	2.92	0.141	A
2	Including local herb knowledge in Biology courses would help preserve indigenous knowledge	10	13	41	36	100	2.83	0.138	A
3	Field trips to herbal gardens or visits to traditional practitioners would enhance students' learning	0	4	26	70	100	2.97	0.144	A
4	I feel confident that, with proper training, I could teach others about the safe use of local herbs	18	18	35	29	100	2.77	0.136	A
5	Collaboration between scientists and traditional herbalists should be encouraged in the education sector	35	28	19	18	100	2.19	0.138	R

Students supported curriculum integration of herbal knowledge, experiential learning via field trips, and teaching safe use of herbs (Items 1–4). Item 5 was rejected, indicating limited enthusiasm for formal collaboration with scientists and traditional herbalists. Moderate standard deviations suggest reasonable consistency in responses.

Major Sources of Information

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Table 4 shows the primary sources through which students acquire knowledge about local herbs.

Table 4: Sources of Information on Local Herbs

S/N	Items	SD	D	A	SA	N	Mean	SD	Remark
1	I obtain information about local herbs from family or elders	4	6	20	70	100	3.68	0.193	A
2	I obtain information about local herbs from the internet or social media	16	14	35	35	100	2.92	0.142	A
3	I obtain information about local herbs through lectures or school activities	14	22	28	36	100	2.85	0.151	A
4	I learn about local herbs from traditional herbal practitioners	0	5	28	67	100	3.62	0.188	A
5	I believe information about local herbs from informal sources is usually reliable	3	28	36	33	100	1.33	0.193	R

Family elders, traditional practitioners, school activities, and digital media were identified as the main sources of herbal knowledge. Students did not consider informal sources reliably trustworthy (Item 5, M = 1.33). Standard deviations indicate moderate variability, reflecting diverse exposure and trust levels across participants.

Discussion

The findings of this study indicate that Biology Education students at the Federal College of Education, Eha-Amufu, demonstrate a generally high level of awareness regarding local herbs used in managing common illnesses. Most participants reported familiarity with widely used herbal remedies in their communities, were able to identify some herbs by name, and recognized the potential health risks associated with improper use (Table 1). These results corroborate previous research showing that exposure to local cultural practices, familial traditions, and informal education enhances students' awareness and knowledge of traditional herbal medicine (Akinmoladun et al., 2020; Oyedeji & Omotayo, 2018). However, the study revealed a notable limitation in understanding the complementary role of traditional herbs alongside conventional medicine, as many students did not strongly endorse integration of the two. This gap underscores the need for formal instruction on evidence-based integration of traditional and modern healthcare practices to ensure safe and effective application.

In examining students' perceptions of efficacy and safety, the data indicate that participants generally regard local herbs as effective remedies and consider them relatively safe when prepared by experienced traditional practitioners (Table 2). Respondents also emphasized the importance of scientific validation to confirm safety. These observations align with Eze et al.

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(2019), who reported that students' trust in traditional remedies is influenced by both cultural familiarity and confidence in the expertise of herbal practitioners. Notably, the majority of students disagreed that improper use of herbs could lead to adverse effects, a finding that contrasts with established evidence documenting potential toxicity and contraindications when herbal remedies are misused (Adesina & Bello, 2021). This highlights a critical knowledge gap and indicates the necessity for targeted educational interventions that emphasize safe preparation, dosage regulation, and awareness of potential side effects.

The study further explored avenues for integrating evidence-based herbal knowledge into Biology Education programs. Students expressed strong support for including herbal knowledge within the curriculum, organizing experiential learning activities such as field trips to herbal gardens, and receiving training that would enable them to teach safe use of herbal remedies (Table 3). These findings support the argument that formal incorporation of indigenous knowledge into educational programs promotes cultural preservation while equipping students with scientifically informed, practical skills (Adhikary et al., 2023). However, collaboration between scientists and traditional herbalists received comparatively lower endorsement, suggesting that students may perceive logistical challenges, lack institutional support, or be unfamiliar with frameworks that facilitate such partnerships.

Regarding sources of information, participants identified family elders, school-based lectures, digital platforms, and traditional herbal practitioners as the primary channels through which they acquire knowledge about local herbs (Table 4). This observation is consistent with prior studies showing that informal networks, community elders, and digital media serve as key sources of health-related knowledge for students (Ikolo, 2022, Krsnik & Erjavec, 2024). Conversely, students expressed skepticism regarding the reliability of informal sources, reflecting critical discernment and an awareness of potential misinformation.

Overall, the findings indicate that Biology Education students in Eha-Amufu possess substantial knowledge of local herbs and recognize their cultural and therapeutic significance. Nevertheless, gaps persist in understanding the complementary role of herbs with conventional medicine and the potential for adverse effects. These results highlight the urgent need for structured, evidence-based educational strategies that integrate practical experiences, scientific validation, and ethical considerations. Such initiatives are likely to enhance students' competence, confidence, and ability to responsibly teach about the safe use of local herbal remedies, thereby bridging the gap between indigenous knowledge systems and formal scientific education (World Health Organization, 2019; Akinmoladun et al., 2020).

Conclusion

The study demonstrates that Biology Education students at the Federal College of Education, Eha-Amufu, possess a substantial awareness of local herbs used for managing common illnesses. Participants were able to identify key herbs, understand their applications, and

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recognize the risks of improper use, indicating strong foundational knowledge. They generally perceive these remedies as effective and relatively safe, particularly when prepared by experienced traditional practitioners, and acknowledge the importance of scientific validation. However, gaps were evident in understanding the integration of herbal remedies with modern medicine and the potential for adverse effects from misuse. Students expressed strong support for incorporating evidence-based herbal knowledge into the Biology Education curriculum through lectures, practical demonstrations, and field visits, reflecting readiness to responsibly teach and advocate for safe herbal practices. Primary sources of information were family elders, traditional practitioners, formal education, and digital media, while informal sources were considered less reliable.

The findings underscore the value of systematically integrating scientifically validated herbal knowledge into teacher training programs. Such integration can enhance students' competence, preserve indigenous knowledge, promote safe usage, and equip future educators to bridge traditional and scientific health practices in both educational and community contexts.

Recommendation

Policymakers in the education and health sectors should prioritize the systematic integration of evidence-based local herbal knowledge into biology teacher education curricula. This approach should include structured lectures, practical demonstrations, and field visits to herbal gardens or consultations with certified traditional practitioners, enabling future educators to bridge the gap between indigenous knowledge and formal scientific understanding. Equipping students with these skills will foster their capacity to safely teach and advocate for the responsible use of local herbs, thereby promoting culturally sensitive and scientifically grounded community health education.

In addition, government agencies and professional regulatory bodies should establish frameworks to ensure the safe and standardized dissemination of herbal medicine knowledge within educational and digital contexts. Guidelines should emphasize safety, proper dosage, and the complementary use of herbal remedies alongside conventional medicine, while discouraging reliance on informal or unverified sources. Such measures will enhance students' acquisition of reliable and ethically responsible knowledge, ultimately supporting safe herbal practices and reinforcing the integration of indigenous health wisdom into both academic and community health initiatives.

References

Abayomi, O., Adeyemi, F., & Ogunleye, T. (2020). Integration of indigenous knowledge in tertiary education: Benefits for cultural preservation. ***Journal of Educational Research, 23***(1), 67–78.

Adesina, A., & Bello, T. (2021). Awareness and safe use of herbal medicine among Nigerian undergraduates. ***Journal of Herbal Medicine Research, 12***(2), 45–53.

Adhikary, P., Gajurel, T., Kashung, S., & Yakan, T. (2023). Promotion of traditional knowledge systems of herbal medicines among school students through development of herbal gardens in school premises. ***International Journal of Herbal Medicine, 11***(3), 8–14.

Akinmoladun, F., Oladele, D., & Adeyemi, B. (2020). Knowledge and use of medicinal plants among students in southwestern Nigeria. ***International Journal of Herbal Studies, 8***(4), 12–22.

Elechi-Amadi, K. N., Briggs, O. N., Konne, F. E., Giami, L. K., & Ajufo, B. C. (2021). Perception and acceptance of herbal medicines among residents of Port Harcourt, Nigeria. ***Journal of Complementary and Alternative Medical Research, 12***(3), 24–34. https://doi.org/10.9734/jocamr/2020/v12i330209

Eze, N., Ogbonna, C., & Ude, N. (2019). Cultural influences on the perception of traditional herbal medicine among students. ***African Journal of Health Education, 9***(1), 33–42.

Idowu, O. A. (2025). Integrating traditional medicine into Nigeria's national healthcare system: A literature review. ***Science Journal of Public Health, 13***(2), 97–105. https://doi.org/10.11648/j.sjph.20251302.13

Ikolo, V. E. (2022). Perception of traditional medicine practitioners towards formal information sources in Delta State. ***Ghana Library Journal, 27***(1), 60–69.

Krsnik, S., & Erjavec, K. (2024). Factors influencing use of medicinal herbs. ***Journal of Patient Experience, 11***, 23743735241241181. https://doi.org/10.1177/23743735241241181

Nnamonu, E. I., Ani, O. C., Ugwu, F. J., Egba, S. I., Aguzie, I. O., Okeke, O. P., Dialoke, C. E., Asogwa, L. O., & Odo, S. I. (2020). Malaria prevalence in rice farm settlements, South East Nigeria. ***International Journal of Tropical Disease & Health, 41***(9), 64–74.

Nnamonu, E. I., Ejilibe, O. C., Ezeude, J. I., Okeke, M. U., Nnamani, M. O., Nnamani, B. C., Ani, O. C., & Ndukwe-Ani, P. A. (2019). Evaluation of predisposing factors, burden, and management of malaria among agrarian settlers, South East Nigeria. ***International Journal of Mosquito Research, 6***(5), 1–5.

Nuhu, A., Ukwubile, C. A., Ayeni, E. A., Zakariya, A. M., Namadina, M. M., & Ibrahim, B. A. (2018). Perception of herbal medicine practice among students of tertiary institutions in Northern Nigeria. ***FUW Trends in Science & Technology Journal, 3***(2B), 708–711.

Nworgu, B. G. (2015). ***Educational research: Basic issues and methodology*** (3rd ed.). University Trust Publishers.

Orabueze, C. I., Adesegun, S. A., Nwafor, F. I., & Coker, H. A. (2017). Ethnobotanical survey of medicinal plants and herbal formulations used in management of malaria in

Nsukka Southeast, Nigeria. ***Nigerian Journal of Natural Products and Medicine, 21***, 66–81.

Oreagba, I. A., Oshikoya, K. A., & Amachree, M. (2011). Herbal medicine use among urban residents in Lagos, Nigeria. ***BMC Complementary and Alternative Medicine, 11***, Article 117. https://doi.org/10.1186/1472-6882-11-117

Oyedeji, O., & Omotayo, B. (2018). Awareness and perception of herbal medicine among Nigerian university students. ***Journal of Complementary and Alternative Medicine, 14***(2), 77–86.

Uzochukwu, B. S. C., Ossai, E. N., Okeke, C. C., Ndu, A. C., & Onwujekwe, O. E. (2018). Malaria knowledge and treatment practices in Enugu State, Nigeria: A qualitative study. ***International Journal of Health Policy and Management, 7***(9), 859–866. https://doi.org/10.15171/ijhpm.2018.41

World Health Organization. (2019). ***WHO traditional medicine strategy 2014–2023: Monitoring and evaluation framework***. WHO Press.