Bankole, (2024)
Biological and Environmental Sciences Journal for the Tropics 21(1) April, 2024
ISSN 0794 – 9057; eISSN 2645 - 3142
**BEST JOURNAL 21(1): 166 - 177**
Date received: 24/01/2024
Date accepted: 23/04/2024
https://dx.doi.org/10.4314/bestj.v21i1.14

# An Ethnobotanical Survey on the Use of Traditional Medicine among Students in the University of Lagos, Nigeria

**Bankole, A. E.**
Department of Botany, Faculty of Science, University of Lagos, P.M.B. 1029 UNILAG Post Office, Akoka, Lagos State, Nigeria
Correspondence: gbolabim@yahoo.com

## ABSTRACT
Traditional medicine encompasses the skill and knowledge that is derived from the beliefs, and experiences peculiar to various cultures which can be employed in the preservation and management of health. This study is an ethnobotanical survey on the use of traditional medicine among students in various faculties at the University of Lagos, Nigeria. A well-structured questionnaire was administered between March – June 2019 to about 986 respondents from all the faculties of the University. Parameters such as reasons for using traditional medicine, frequency of use of traditional medicine, source of information etc were taken to ascertain the reasons and evaluate the experiences of using traditional medicine among these students. It was analyzed statistically using predictive Analytics software (PASW) Version 17.0 and a non-parametric chi-square test analysis was used to show the relationship between the study variables as well as the level of significance of some pertinent variables at $p<0.05$. The study shows that family, friends, traditional healers, pharmacy shops, and the open market were the main sources of traditional medicines used by students. Among all the parameters studied in students' behavior towards medicinal plants, there was no significant difference ($p<0.05$). However, there were significant differences in all parameters studied in the student characteristics in the use and source of traditional medicine in comparison to the range of income. It was revealed that 65.7% of the sampled population uses traditional medicine for various reasons such as treatment, prevention, maintenance, and improvement of health. In comparison, 34.3% of students do not use traditional medicine, and this was attributed to a lack of awareness on potency, efficiency, safety and lack of dosage. There is a need to create avenues for extensive study more on efficacy of traditional medicine and awareness campaigns to address these concerns. Also, validation of the safety of these medicines through clinical trials will help ensure the safety of traditional medicine.

**Keywords**: Traditional medicine; University students; Faculty; Ethnobotanical survey; Lagos

## INTRODUCTION
Ethnobotany is the scientific study that interfaces indigenous people and their wild exploitation of plants in their environment. This contributes to an important aspect of biological diversity conservation (Adebayo-Tayo *et al*., 2010). Indigenous herbal medicines have been popular since time immemorial and recently have also commanded major attention worldwide due to their potential nutraceutical values (Bhat *et al*., 2013). The general populace in Nigeria use traditional medicine remarkably at both rural and urban cities (Oreagba *et al.*, 2011; Ogbole *et al.*, 2010). Studies have shown a progressive acceptance of traditional medicine among healthcare professionals and students for effective care delivery (Wada *et al*., 2019). According to the World Health Organization, well above 80% of the world population in developing countries depends majorly on plant-based medicines that cater to their primary healthcare (Jain *et al*., 2011). Herbal medicines have become more popular in treating many diseases due to the popular belief that green medicine is safe, easily available, and with fewer side effects (Savithramma *et al*., 2011).

Plants have been principally utilized as a source of drugs for the prevention and treatment of disease and also for the production of some drugs currently used in modern medicine. According to the World Health Organization (2011), the term "traditional medicine" is to be understood as the total of the knowledge, skills, and practices based on theories, beliefs, and experiences indigenous to different cultures that are used to maintain and improve health, as well as to prevent, diagnose, and treat physical and mental illnesses.

Herbs are generally valued for virtues as food as well as medicine. Through a tedious and cumbersome process of trial and error, our forefathers could select hundreds of wild plants in their various localities for a specific use. The information on the economic front of plant use was handed down from one generation to another orally with or without published records (Sofowora, 1993). Increase in Western lifestyle among communities and the lack of interest of the younger generation to carry on the tradition, also leads to a reduction in the number of traditional healers (Bussmann *et al*., 2006).

During the last few decades, there has been an increasing interest in the study of medicinal plants and their traditional use in different parts of the world including Nigeria. However, the disposition of students to knowledge of medicinal plants had not been remarkable. In recent years, reports on self-treatment with prescribed herbal drugs or supplements have gained much attention among students (Burak and Damico, 2000; Showande and Amokeodo, 2014).

Few researchers have conducted various plant-based surveys on the treatment of ailments such as diarrhea; reproductive system diseases; mental illness; respiratory infections; skin ailments; and ear, nose, and throat (ENT) infections (Madikizela *et al*., 2012; Otang *et al*., 2012). However, it is expedient to collect more data from people who know the use of these plants in the treatment and management of various diseases. Traditional medicines are sold in a variety of places, including public buses, vendors, traditional healers, and even pharmacy shops.

Considering the diversity of sources of these medicines, it is important to know which of these sources are most commonly used by students. This study will contribute to knowledge on the use of traditional medical therapies and provide more insights into the sources of traditional medicaltherapies among students at the University of Lagos, Nigeria.

## MATERIALS AND METHODS

### *Study location*

The University of Lagos was founded in the year 1962 with an average population of about 45,000 students. It presently has two campuses in Yaba and Surulere which are the study locations. The main campus of the University of Lagos (6°30'59.99" N 3°23'5.99" E) is located at Akoka, Yaba which is largely surrounded by the scenic view of the Lagos lagoon on 802 acres of land and the other campus is the Lagos University of Teaching Hospital (6° 51'19.5238" N 3° 25'4.1811" E) which is located in Idi-Araba, Surulere, all in Lagos State, Nigeria. It is situated within the tropical lowland region with two distinct seasons – the shortest, dry season and the longest, wet season. It has a mean annual rainfall of 1250mm – 2500mm and an average monthly temperature varying between 25.7ºC in July and 30.2ºC. The University of Lagos has twelve faculties where the ethnobotanical survey was carried out.

***Sample population***

The sample population of the study was the undergraduates and postgraduate students in the faculty of Science, Arts, Education, Social sciences, Environmental sciences, Basic medical sciences, Pharmacy, Clinical sciences, Law and Engineering using random sampling techniques. The population is cut across all ages, gender, religion, Department, Marital status, level, and economic status.

***Survey Methodology***

A well-structured questionnaire was administered between March -June 2019 to over 1200 students but about 986 respondents were collected from all the faculties of the University at the end of the survey.

***Ethical Approval***

This study underwent an ethical review process and received approval from the University of Lagos review board committee. Participants were provided with information about the study, including the purpose, methods, and, potential benefits. The questionnaires were distributed to students during lecture periods and for a better understanding of the respondents. The respondents participated in this research voluntarily and were emphatically assured that the information provided is treated under strict confidentiality. The questionnaires were collected from students immediately after it was filled.

***Statistical analysis***

Non-parametric chi-square test was also used to establish the differences and relationships between the study variables such as the use and sources of traditional medicine, accessibility, flexibility, effectiveness as well and safety of traditional medicine by students in the faculties. The data obtained were analyzed using descriptive and inferential statistics with the Predictive Analysis Software (PASW) for the Windows application of version 17.0. The level of significance was set at $p<0.05$.

**RESULTS**

Overall, 986 had filled out of 1200 questionnaire forms that were distributed. The demography study of the respondents is shown in Table 1. The entire percentage of respondents was 82.1%. comprise of non-science students and the Science students respectively 89.1% and 69.6%. The highest age brackets of respondents were between 20 - 25 (526, 53.3%) and the respondents were mostly female (549, 55.67%). Since respondents are predominantly students, they are mostly singles with very few percentages of married students. A noticeable number of the respondents practiced Christianity as their religion. The highest range of student income per month (Table 1) is at ₦5000 - ₦10000 (24%), followed by ₦16 000 – ₦20000 (14 %).

**Table 1.** Demography study of the respondents

| | | Gender | | |
|---|---|---|---|---|
| | | Male n (%) | Female n (%) | Total N (%) |
| Age | < 20 | 134 (30.7) | 246 (44.8) | 380 (38.5) |
| | 20-25 | 257 (58.8) | 269 (49.0) | 526 (53.3) |
| | 26-30 | 39 (8.9) | 26 (4.7) | 65 (6.6) |
| | 31-35 | 5 (1.1) | 5 (0.9) | 10 (1.0) |
| | 36-40 | 1 (0.2) | 2 (0.4) | 3 (0.3) |
| | > 40 | 1 (0.2) | 1 (0.2) | 2 (0.2) |
| Marital status | Single | 408 (93.6) | 513 (93.6) | 921 (93.7) |
| | Married | 18 (4.1) | 30 (6.8) | 48 (4.8) |
| | Others | 10 (2.3) | 7(2.3) | 17 (2.3) |
| Level of student | 100L | 56 (12.4) | 80 (14.5) | 136 (13.8) |
| | 200L | 100 (22.6) | 152 (27.6) | 262 (26.6) |
| | 300L | 89 (20.1) | 150 (27.3) | 239 (24.2) |
| | 400L | 151 (34.1) | 131(23.8) | 280 (28.4) |
| | 500L | 27 (6.1) | 30 (5.5) | 55 (5.8) |
| | PGD | 6 (1.4) | 3 (0.7) | 9 (1.0) |
| Religion | Christianity | 315 (72.1) | 421(76.7) | 736 (74.6) |
| | Islam | 113 (25.9) | 120(21.9) | 233 (23.6) |
| | Others | 9 (2.1) | 8 (1.5) | 17 (1.7) |
| Range of income/ month | < #5,000 | 64 (14.5) | 106(19.5) | 170 (17.2) |
| | #5,000-#10,000 | 98 (22.2) | 140(25.7) | 238 (24.1) |
| | #11,000-#15,000 | 53 (12.0) | 74 (13.6) | 127 (12.9) |
| | #16,000-#20,000 | 76 (17.2) | 63 (11.6) | 139 (14.1) |
| | #21,000-#25,000 | 66 (14.9) | 61 (11.2) | 127 (12.9) |
| | #26,000-#30,000 | 42 (9.5) | 45 (8.3) | 87 (8.8) |
| | > #30,000 | 43 (9.7) | 55 (10.1) | 98 () |

**Table 2:** Frequency of the respondents on the use of traditional medicine.

| | | How frequently do you use traditional medicine | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Daily | Weekly | Monthly | Annually | Occasionally | Rarely | Not at all |
| | | n (%) | n (%) | n (%) | n (%) | n (%) | n (%) | n (%) |
| Age | < 20 | 28(2.8) | 50(5.1) | 36 (3.65) | 19 (1.9) | 115 (11.7) | 84 (8.5) | 41 (4.2) |
| | 20-25 | 29(2.9) | 42 (4.3) | 81 (8.2) | 30 (3.0) | 162 (16.4) | 88 (8.9) | 52 (5.2) |
| | 26-30 | 15 (1.3) | 22 (2.0) | 31 (2.7) | 4 (0.2) | 12 (1.1) | 8 (0.8) | 9 (0.9) |
| | 31-35 | 0 (0.0) | 3 (0.3) | 5 (30.0) | 4 (0.4) | 0 (0.0) | 4 (0.4) | 4 (0.4) |
| | 36-40 | 0 (0.0) | 7(66.7) | 0 (0.7) | 0 (0.0) | 0 (0.0) | 6 (0.6) | 0 (0.0) |
| | > 40 | 1(50.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1 (50.0) | 0 (0.0) |
| Gender | Male | 22 (5.8) | 41 (10.8) | 70 (18.4) | 20 (5.3) | 100 (26.3) | 69 (18.2) | 58 (15.3) |
| | Female | 19 (4.0) | 55 (11.7) | 60 (12.7) | 24 (5.1) | 148 (31.4) | 118 (25.1) | 47 (10.0) |
| Religion | Christianity | 32 (5.0) | 55 (8.6) | 90 (14.1) | 27 (4.2) | 194 (30.4) | 152 (23.8) | 88 (13.8) |
| | Islam | 6 (3.2) | 34 (18.0) | 34 (18.0) | 16 (8.5) | 51 (27.0) | 33 (17.5) | 15 (7.9) |
| | Others | 3 (18.8) | 5 (31.3) | 4 (25.0) | 2 (12.5) | 0 (0.0) | 2 (12.5) | 0 (0.0) |
| Faculty | Arts | 2 (2.1) | 11 (11.7) | 8 (8.5) | 10 (10.6) | 28 (29.8) | 16 (17.0) | 19 (20.2) |
| | BMS | 2 (2.4) | 6 (7.1) | 3 (3.6) | 1 (1.2) | 29 (34.5) | 27 (32.1) | 16 (19.0) |
| | Education | 6 (6.6) | 16 (17.6) | 42 (46.2) | 4 (4.4) | 16 (17.6) | 3 (3.3) | 4 (4.4) |
| | Engineering | 2 (3.2) | 4 (6.3) | 13 (20.6) | 2 (3.2) | 22 (34.9) | 14 (22.2) | 6 (9.5) |
| | Environmental Sciences | 5 (5.1) | 12 (12.2) | 8 (8.2) | 4 (4.1) | 28 (28.6) | 26 (26.5) | 15 (15.3) |
| | Law | 7 (6.9) | 11 (10.8) | 8 (7.8) | 6 (5.9) | 28 (27.5) | 20 (19.6) | 22 (21.6) |
| | Management Science | 6 (6.2) | 13 (13.4) | 8 (8.2) | 5 (5.2) | 31 (32.0) | 25 (25.8) | 9 (9.3) |
| | Pharmacy | 4 (5.3) | 8 (10.7) | 18 (24.0) | 3 (4.0) | 23 (30.7) | 16 (21.3) | 3 (4.0) |
| | Science | 8 (9.6) | 10 (12.0) | 6 (7.2) | 6 (7.2) | 24 (28.9) | 19 (22.9) | 10 (12.0) |
| | Social Science | 0 (0.0) | 6 (8.7) | 16 (23.2) | 4 (5.8) | 20 (29.0) | 22 (31.9) | 1 (1.4) |

**Table 3:** Student characteristics in the use and source of traditional medicine in comparison to range of income

| **Range of income** | | >₦5,000 | ₦5,000 - ₦10,000 | ₦11,000 - ₦15,000 | ₦16,000 - ₦20,000 | ₦21,000 - ₦25,000 | ₦26,000- ₦30,000 | ₦30,000 & above | Total | p-value |
|---|---|---|---|---|---|---|---|---|---|---|
| | | n (%) | n (%) | n (%) | n (%) | n (%) | n (%) | n (%) | n (%) | |
| Do you use trad med | Yes | 154(65.7) | 214 (73.9) | 109 (75.7) | 140 (37.9) | 104 (68.3) | 79 (67.3) | 95 (67.5) | 895(90.7) | 0.119 |
| | No | 20 (34.3) | 13 (26.1) | 11 (24.3) | 7 (62.1) | 20 (31.7) | 11 (32.7) | 9 (32.5) | 91 (9.2) | |
| Source of trad. med | Friends | 68(44.2) | 59 (27.6) | 46(42.2) | 45(32.1) | 33(31.7) | 26(32.9) | 34 (35.8) | 328 (33.3) | <0.001 |
| | Traditional Healer | 24 (15.6) | 39 (18.2) | 11(10.1) | 23(16.4) | 36(34.6) | 12 (15.2) | 24 (25.3) | 188 (19.1) | |
| | Pharmacy shop | 9 (5.8) | 22(10.3) | 20(18.3) | 13(9.3) | 7(6.7) | 15 (19.0) | 12 (12.6) | 122 (12.4) | |
| | Open market | 53(34.4) | 94(43.9) | 32(29.4) | 59(42.1) | 28(26.9) | 26 (32.9) | 25 (26.3) | 348 (35.3) | |
| Reasons for using medicinal. plants | Prevention | 27 (17.5) | 49(22.9) | 19(17.4) | 36(25.7) | 20(19.2) | 14 (17.7) | 17 (17.9) | 182 (18.5) | 0.041 |
| | Treatment | 79 (51.3) | 78 (36.6) | 47 (43.1) | 44 (31.4) | 41 (39.4) | 30 (38.0) | 41 (43.2) | 360 (36.5) | |
| | Improvement of health | 13 (8.4) | 27 (12.6) | 18 (16.5) | 24 (17.1) | 11 (10.6) | 10 (12.7) | 12 (12.6) | 115 (11.7) | |
| | Maintenance of health | 17 (11.0) | 44 (20.6) | 18 (16.5) | 26 (18.6) | 23 (22.1) | 19 (24.1) | 15 (15.8) | 162 (16.4) | |
| | Others | 18 (11.7) | 16 (7.3) | 7(6.4) | 10 (7.1) | 9 (8.7) | 6 (7.6) | 10 (10.5) | 79 (8.0) | |
| Source of information | Friends | 13 (8.4) | 30 (14.0) | 19 (17.4) | 33 (23.6) | 23 (22.1) | 17 (21.5) | 20 (21.1) | 155 (15.7) | 0.033 |
| | Family | 74 (48.1) | 108 (50.1) | 56 (51.4) | 69 (49.3) | 52 (50.0) | 44 (55.7) | 52 (54.7) | 455 (46.1) | |
| | Public | 25 (16.2) | 26 (12.1) | 17 (15.6) | 19 (13.6) | 21 (20.2) | 14 (17.7) | 9 (9.5) | 131 (13.3) | |
| | Literature | 5 (3.2) | 8 (3.7) | 1 (1.0) | 8 (5.7) | 1 (1.0) | 0 (0.0) | 2 (2.1) | 25 (2.5) | |
| | Media | 18 (11.7) | 20 (9.3) | 9 (8.2) | 1 (0.7) | 3 (2.9) | 2 (2.5) | 4 (4.2) | 57 (5.8) | |
| | Health compounders | 13 (8.4) | 16 (7.5) | 5 (4.6) | 9 (6.4) | 2 (1.9) | 2 (2.5) | 3 (3.2) | 50 (5.1) | |
| | Others | 1 (0.6) | 6 (2.8) | 2 (1.8) | 1 (0.7) | 2 (1.9) | 0 (0.0) | 5 (5.3) | 17 (1.7) | |
| How frequently do you use trad med | Daily | 14 (9.1) | 8 (3.7) | 3 (2.8) | 6 (4.3) | 6 (5.8) | 0 (0.0) | 7 (7.4) | 44(4.5) | 0.001 |
| | Weekly | 23 (14.9) | 24 (11.2) | 12 (11.0) | 10 (7.1) | 15 (14.4) | 10 (12.7) | 6 (6.3) | 100 (10.1) | |
| | Monthly | 13 (8.4) | 23 (10.7) | 20 (18.3) | 36 (25.7) | 31 (29.8) | 16 (20.3) | 13 (13.7) | 152 (15.4) | |
| | Annually | 10 (6.5) | 9 (4.2) | 6 (5.5) | 15 (10.7) | 3 (2.9) | 3 (3.8) | 3 (3.2) | 49 (5.0) | |
| | Occasionally | 45 (29.3) | 66 (30.8) | 29 (26.6) | 30 (21.4) | 23 (22.1) | 32 (40.5) | 37 (38.9) | 262(26.6) | |
| | Rarely | 34 (22.1) | 56 (26.2) | 24 (22.0) | 32 (22.9) | 15 (14.4) | 12 (15.2) | 13 (13.7) | 174 (17.6) | |
| | Not at all | 15 (19.7) | 28 (13.2) | 15 (13.8) | 11 (7.9) | 11 (10.6) | 6 (7.6) | 16 (16.8) | 102 (10.3) | |
| times of Trad Med in the last three sickness | Not at all | 72 (46.8) | 90 (42.1) | 45 (41.3) | 60 (42.9) | 38 (36.5) | 26 (32.9) | 36 (37.9) | 367 (37.2) | 0.693 |
| | Once | 43 (27.9) | 54 (25.2) | 28 (25.7) | 45 (32.1) | 36 (34.6) | 21 (26.6) | 20 (21.1) | 247 (25.1) | |
| | Twice | 20 (13.0) | 40 (18.7) | 20 (18.3) | 18 (12.9) | 17 (16.3) | 13 (16.5) | 20 (21.1) | 148 (15.0) | |
| | Thrice | 13 (8.4) | 18 (8.4) | 12 (11.0) | 10 (7.1) | 8 (7.7) | 14 (17.7) | 14 (14.7) | 89 (9.0) | |
| | Four times | 5 (3.2) | 9 (4.2) | 2 (1.8) | 4 (2.9) | 3 (2.9) | 3 (3.8) | 3 (3.2) | 29 (2.9) | |
| | Others | 1 (0.7) | 3 (1.4) | 2 (1.8) | 3 (2.1) | 2 (1.9) | 2 (2.5) | 2 (2.1) | 15 (1.5) | |

Also, students who combined the use of traditional medicine and orthodox medicine reported no side effects. The age bracket 20-25 (444, 45%) indicated higher frequency (Table 2) in use of traditional medicine. Faculty of Education had the highest on the frequency on the use of traditional medicine on a monthly basis (46.2%) as compared to other variables.

Table 3 describes student characteristics in the use and source of traditional medicine in comparison to range of income. The highest percentage of students with low income (> ₦5000) source for traditional medicine from friends followed by the open market. The majority of the students reported the use of traditional medicine as a form of treatment rather than prevention (360, 36.5%), improvement, or maintenance of diseases. The frequency of use of traditional medicine by the students depends largely on the strength of their income. The result further show that students use traditional medicine occasionally.

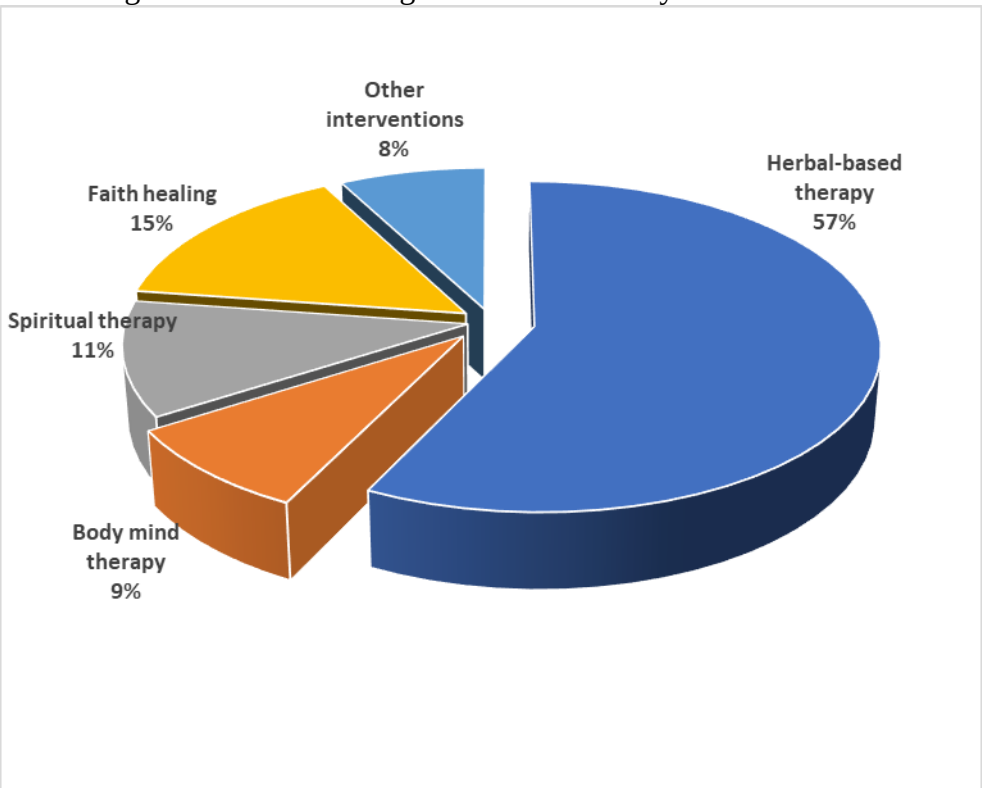


**Figure 1:** Different therapies utilized by students

Figure 1 indicates the different therapies utilized by students. The herbal-based therapy (57%) showed a statistically significant difference ($p<0.0001$) as it takes more than half of the percentages compared to other therapies such as faith healing (15%) and spiritual therapies (11%) which students adopt in coping with their health challenges as it reflects on the student's income.

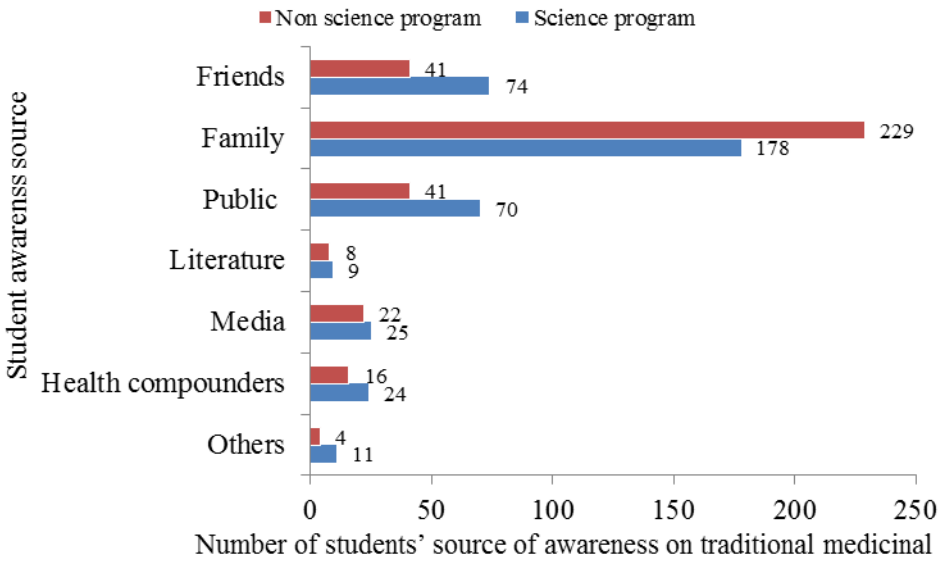


**Figure 2**: Students' awareness of medicinal plants

The students' awareness of medicinal plants as shown in Figure 2 primarily revealed that information obtained from family member is higher (407, 42%) followed by friends (115, 12%) while the least was recorded in the literature (17, 1.7%).

Table 4 show no significance difference in the student behaviour towards the use of medicinal plants as it revealed majorly satisfactory or average acceptance, flexibility and safety on the use of medicinal plants. Also, students showed negative perception towards the combination of traditional medicine and orthodox drugs. Also, as student progress in the level of their studies, there is a decline in the usage and acceptance of the effectiveness of traditional medicine. Additionally, report also reflects the postgraduate students, whose acceptability and flexibility on the usage of traditional medicine is remarkably low.

**Table 4:** Students behavior towards medicinal plants

| | | Level of students | | | | | | | p-value |
|---|---|---|---|---|---|---|---|---|---|
| | | 100 L n (%) | 200 L n (%) | 300 L n (%) | 400 L n (%) | 500 L n (%) | PGD n (%) | Total N (%) | |
| How would you rate the effectiveness of traditional medicine | Very poor | 10 (7.9) | 16 (6.7) | 8 (3.9) | 20 (7.6) | 5 (9.3) | 2 (22.2) | 61 (6.8) | 0.462 |
| | Poor | 8 (6.3) | 12 (5.0) | 18 (8.8) | 22 (8.4) | 4 (7.4) | 0 (0.0) | 64 (7.2) | |
| | Satisfactory | 51 (40.2) | 73 (30.7) | 69 (33.7) | 86 (32.8) | 15 (27.8) | 3 (33.3) | 297 (33.2) | |
| | Good | 35 (27.6) | 93 (39.1) | 72 (35.1) | 80 (30.5) | 19 (35.2) | 4 (44.4) | 303 (33.9) | |
| | Very good | 23 (18.1) | 44 (18.5) | 38 (!8.5) | 54 (20.6) | 11 (20.4) | 0 (0.0) | 170 (19.0) | |
| What do you think of the safety | Very poor | 13 (9.8) | 17 (7.1) | 7 (3.3) | 21 (8.0) | 5 (9.3) | 2 (22.2) | 65 (7.1) | 0.384 |
| | Poor | 30 (22.7) | 38 (15.8) | 48 (22.6) | 46 (17.4) | 12 (22.2) | 2 (22.2) | 176 (19.3) | |
| | Satisfactory | 41 (31.1) | 94 (39.2) | 74 (34.9) | 79 (29.9) | 17 (31.5) | 3 (33.3) | 308 (33.8) | |
| | Good | 35 (26.5) | 66 (27.5) | 56 (26.4) | 83 (31.4) | 15 (27.8) | 1 (11.1) | 256 (28.1) | |
| | Very good | 13 (9.8) | 25 (10.4) | 27 (12.7) | 35 (13.3) | 5 (9.3) | 1 (11.1) | 106 (11.6) | |
| How would you rate the flexibility | Very poor | 6 (4.6) | 9 (3.8) | 3 (1.4) | 14 (5.3) | 2 (3.8) | 0 (0.0) | 34 (3.7) | 0.557 |
| | Poor | 19 (14.5) | 23 (9.6) | 22 (10.5) | 30 (11.3) | 9 (17.0) | 1 (11.1) | 104 (11.5) | |
| | Satisfactory | 58 (44.3) | 84 (35.1) | 91 (43.3) | 97 (36.5) | 18 (34.0) | 5 (55.6) | 353 (38.9) | |
| | Good | 38 (29.0) | 97 (40.6) | 72 (34.3) | 95 (35.7) | 17 (32.1) | 2 (22.2) | 321 (35.4) | |
| | Very good | 10 (7.6) | 26 (10.9) | 22 (10.5) | 30 (11.3) | 7 (13.2) | 1 (11.1) | 96 (10.6) | |
| Do you combine both trad med and orthodox drug? | Yes | 42 (31.6) | 90 (37.3) | 80 (38.1) | 98 (36.7) | 17 (30.9) | 1 (10.0) | 328 (35.8) | 0.377 |
| | No | 91 (68.4) | 151 (62.7) | 130 (61.9) | 169 (63.3) | 38 (69.1) | 9 (90.0) | 588 (64.2) | |
| Any side effect | Yes | 20 (15.9) | 23 (10.1) | 20 (10.2) | 31 (13.2) | 8 (16.0) | 2 (28.6) | 104 (12.3) | 0.318 |
| | No | 106 (84.1) | 205 (89.9) | 177 (89.8) | 204 (86.8) | 42 (84.0) | 5 (71.4) | 739 (87.7) | |

## DISCUSSION

The cultural and family influence on the use of traditional medicine in Nigeria is evident, with a strong tradition of using plants for treatment, prevention, and health maintenance. The reliance on traditional medicine is deeply rooted in the cultural practices of the population. This study emphasizes the relationship between students' understanding of traditional medicine and their family dynamics. Respondents revealed that their families, particularly parents, greatly influence their knowledge by sharing information about traditional medicine. This finding aligns with the broader cultural transmission of knowledge within families, where traditional remedies are passed down through generations.

Gyasi et al. (2017) and Showande and Amokeodo (2014) revealed that medicinal plants are commonly recommended to students by family members or relatives, emphasizing the familial nature of traditional medicine practices. This reinforces the importance of family as a primary source of information and influence regarding the use of traditional medicines. Apart from family roles, other factors such as friends, media, and the general public, also contribute to shaping the students' perceptions and practices related to traditional medicine. These external influences reflect the broader societal context in which individuals make decisions about their health care.

The preference for traditional medicine over orthodox medicine among respondents is attributed to factors such as low income and family influence and are mostly used as preventive and maintenance measures. Nworu et al., (2015) corroborates that the presence of traditional medicines in homes is noted as a common remedy for prevention and health maintenance. This highlights the practice and accessibility of traditional medicine, especially where economic constraints may limit access to conventional healthcare.

Consequently, the environment and family exposure can play a major role in the accessibility and use of traditional medicine as observed in the study.

Respondents were able to know medicinal plants which were advertised on electronic devices**.** The response of students to the knowledge of side effects and combination of traditional medicine and orthodox drugs was remarkably positive as it shows significant difference. Furthermore, a study by Damien (2020), investigated social influences on health-seeking behavior-, and found that family members and friends were important influences on people's approach to health and illness and once diagnosed, patients source information from people around them to make decisions.

The study reflects the economic status of the respondents, as the category of students with an income range between N5,000 to N10,000 per month (476, 48%) was found to be the highest. This income range aligns with the typical monthly base allowance often allocated to students, indicating that a significant portion of the student population relies on a limited income for their living expenses. The high variation in monthly income among the students is attributed to differences in their family backgrounds. This variability suggests that students come from diverse economic situations, and their financial constraints can influence their choices, especially in matters related to health care. The correlation between family background and response on the usage of traditional medicine among students is highlighted, emphasizing the consideration of accessibility and cost-effectiveness. Traditional medicine may be perceived as more accessible and affordable, aligning with the economic realities of students with lower income levels.

Afolabi (2009), reported that traditional medicine, unlike orthodox medicine, is readily available and accessible, and self-medication is mostly practiced among students. Most of the respondents in our study used traditional medicine to treat minor ailments such as headache, fever, malaria, stomach ache, hemorrhoids, ulcers, skin rashes, and Diarrhea. The self-treatment which was mostly indicated by respondents (360, 36.5%), may also be largely due to ease of treatment. Similar findings were reported by Afolabi (2009) which stated that the use of herbs could relieve minor ailments that do not require prescriptions.

However, the study observed that the majority of respondents did not use traditional medicine for the treatment of any form of disease in the last three illnesses. The two main reasons highlighted in the study are fear of side effects and lack of knowledge on appropriate drug administration and drug combinations. The fear of side effects associated with traditional medicine is a significant barrier to its regular use. Gyasi et al. (2017) and Gryzlak (2007) described a feasible phobia of drug side effects can pose a threat to the consistent use of traditional medicine. This fear may be attributed to the safety and potential adverse reactions of traditional medicine.

Additionally, the lack of knowledge regarding suitable doses of traditional medicine and proper drug combinations may contribute to the reluctance of respondents to use traditional medicine for treating illnesses. Insufficient knowledge of dosage and potential interactions could lead to concerns about the effectiveness and safety of traditional medicine. There is a need to provide information on the safety, efficacy, and proper usage of traditional medicine which may help bridge the knowledge gap and alleviate fears, encouraging more informed and confident use of these remedies.

## CONCLUSION

The study highlights that despite the cultural and economic factors influencing the preference for traditional medicine, concerns about side effects and lack of knowledge on dosage and drug combinations present barriers to its regular use for treating diseases.

There is a need to address these concerns through education and awareness initiatives as it could contribute to a more informed and acceptable approach to traditional medicine among the student population. Modernization and globalization can often lead to a shift in preferences, with younger generations seeking healthcare solutions. The desire for standardized and optimized treatments may contribute to a preference for more conventional healthcare approaches.

Overall, the reluctance of young people to be associated with traditional medicine could be a complex interplay of cultural, religious, family, and awareness-related factors. To address these concerns would require comprehensive efforts, education campaigns to enhance awareness about the benefits and safety of traditional medicine, as well as initiatives to standardize and optimize traditional medicine to meet modern healthcare standards.

**Acknowledgement**

Bankole A.E is grateful to the Department of Botany, Faculty of Science, University of Lagos, Nigeria for the technical assistance for the study

**Funding:** This work is self-funded.

**Conflict of interest**: The author declares that there is no conflict of interest

**Author contribution**: Bankole A.E conceived, designed, wrote, administered, and investigated the project, and analyzed statistics of this project. Bankole A.E and some individuals in the Department of Botany carried out the ethnobotanical survey of this research .

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