

Environmental Degradation and Changes in Traditional Health Practice (THP) in Bayelsa State, Nigeria

Tobin Violet Duanyo^{1*}

¹Department of Sociology and Anthropology, Faculty of Social Sciences, Niger-Delta University, Wilberforce Island Bayelsa State, Nigeria

*Corresponding Author

Tobin Violet Duanyo

Department of Sociology and Anthropology, Faculty of Social Sciences, Niger-Delta University, Wilberforce Island Bayelsa State, Nigeria

Article History

Received: 23.08.2023

Accepted: 28.09.2023

Published: 06.10.2023

Abstract: This study on environmental degradation and changes in traditional health practices in Bayelsa state has come at the right time to contribute to the move in repositioning the Nigerian health care system. The study has identified the challenges of the traditional medicine practices majorly from the impact of environmental degradation. It sought to investigate the socio-economic characteristics of traditional health practitioners (THPs) in Bayelsa state; to examine the nature and trend of traditional health practices in Bayelsa state; and to investigate the dynamics in traditional health practices due to environmental changes in Bayelsa state. This was done by using the multi stage sampling method to select 72 THPs age between 21 and 100 years in Bayelsa state. Using a semi structured interview guide, the study sourced primary data from the respondents which was analysed using the thematic method of analysis. The results from the analysis reveals that there is low level of education among the THPs; the traditional health services no longer sustain the practitioners financially, so they result to alternative sources of income; and the reason why the practices no longer sustain the practitioners is found the challenges posed on the practice by environmental degradation. The study therefore concludes that if other factors like level of education of THPs and people's orientation towards traditional medicine, is ruled out, then environmental degradation is one major challenge to the development of traditional medicine in Bayelsa state and Nigeria generally. Therefore, recommendations were made based on these findings.

Keywords: Environmental Degradation, Traditional Health Practice, Traditional medicine, Bayelsa State, Nigeria.

Copyright © 2023 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC 4.0) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

1. INTRODUCTION

Traditional Health Practices (THP) or Traditional Medicine (TM) has recently attracted attentions from researchers; not because it is a new practice, but due to new development in its practices such as the state of the environment. Primary health care generally, has been described by Kadiri *et al.*, (2010) as a primary concern for every human being, with the ultimate goal of better health for all (WHO, 2009). And to achieve this goal, the World Health

Organisation identified five key elements which include: the reduction of exclusion and social disparities in health care, the organization of health care services to cater for people's needs and expectations, integration of health care practices in all sectors, collaborative policy models that will consider healthcare matters, and increase in stakeholder participation. And traditional medicine which is gaining steady increase in popularity in

Citation: Tobin Violet Duanyo (2023). Environmental Degradation and Changes in Traditional Health Practice (THP) in Bayelsa State, Nigeria. *Glob Acad J Humanit Soc Sci*; Vol-5, Iss-5 pp- 236-246.

Nigeria and world at large, have these key elements entrenched in its practices (Kadiri *et al.*, 2010).

Health care needs remains vital in all society. Before, the advent of western civilization which brought the orthodox medicine and the medical institutions, the Nigerian communities had their ways of taking care of their health needs, which prompted the assertion in Adesina (2006) that traditional medicine is as old as the hills in Nigeria. The traditional Nigeria communities, devised means of using resources available to them in nature such as trees backs, roots, leaves, seeds, fibres, herbs, shrubs and others in taking care of their health.

But the orthodox medicine that came with civilization and colonization seemed to take away the attention of the people from their traditional health system (Aluko, 2005), until recently when even the orthodox health system could no longer hold the promises of taking care of the people's health needs (WHO, 2009). While the traditional medicine existed alongside the orthodox medicine in Nigeria, it did so from a neglected status until recently when the orthodox system could no longer cater completely to the health needs of the people.

Most of the people living in the rural areas in Nigeria do not have access to orthodox medicine. Where they do, the bureaucratic processes they face even in the face of emergency through series of tests and procedures, more and longer hospital stays, higher costs, and the exclusion of people who cannot pay, have led many Nigerians to lose hope in the orthodox medicine, leading to a renewed interest in the traditional medicine in Nigeria (Adepoju, 2005; Belonwu, 2011). Nevertheless, Belonwu (2011) notes that the present interest in traditional medicine is not only for the rural poor, but for the urban rich as well, as its efficacy in diagnosing and treating health challenges have been discovered (Kadiri *et al.*, 2010).

Interestingly, as the popularity of the traditional medicine and its practices increases, so also does their challenge. Majorly, the environmental situations have attracted the attention of researchers on its effect on human health. The effects of global warming, rising sea levels, prolonged drought and other environmental issues are unequivocally evidenced in the reduction in plant's growth and yields (Tack *et al.*, 2015; Suresh, 2016). This led to the conclusion by several authors (Cavaliere 2009, Courtney 2009 and Das, 2010a) of a high risk of mass extinction of biodiversity due to the rapid climate changes beyond what the species can bear.

Environmental degradation has become a global issue especially as it affects the developing countries like Nigeria. Bayelsa state is one of the

states that make up the oil rich Niger Delta region of Nigeria where the activities of the oil multinational corporations have been severally described as environmentally degrading and economically devastating (Ibaba, 2002; Okaba, 2005; Edo, 2012). The activities that mark oil exploration and exploitation have led to gas flaring, oil spillage, pipeline explosion leading to fire disaster and many other environmentally impacting mishaps.

The sources of raw materials for traditional health practices is based completely on natural resources such as plants, shrubs, animals, mushrooms, pond water, river sands and so on which are all affected by the environmental degradation caused by oil exploration. This has introduced doubt to the sustainability of the renewed vigor in traditional health practices. It is on this background that the present study is set to looked at the place of environmental degradation in the changes in traditional health practices in Bayelsa state.

1.1 Statement of Research Problem

Before orthodox medicine came into Nigeria or Africa generally, the people had their traditional health system which was well defined. It took care of their health care needs to the level of their development, though with room for exploration, enhancement and development just like the orthodox medicine do. But the advent of the colonial masters and their medical institutions evaded the African traditional health care system and swept many practices away, leading the people to over dependence on the orthodox system (Aluko, 2005).

It is quite unfortunate that the orthodox system in Nigeria, with its promises of better healthcare has left the people unattended to and only alternative of going back to the traditional medicine. Yet, more unfortunate is the fact that some other factors of development as it were and its consequences have so dealt with the traditional health care system that there is high level of fear of how much it can still help the people.

Environmental degradation has become a global issue especially as it affects the developing countries like Nigeria. Bayelsa state is one of the states that make up the oil rich Niger Delta region of Nigeria where the activities of the oil multinational corporations have been severally described as environmentally degrading and economically devastating (Ibaba, 2002; Okaba, 2005; Edo, 2012). The activities that mark oil exploration and exploitation have led to gas flaring, oil spillage, pipeline explosion leading to fire disaster and many other environmentally impacting mishaps. The sources of raw materials for traditional health practices is based completely on natural resources

such as plants, shrubs, animals, mushrooms, pond water, river sands and so on which are all affected by the environmental degradation caused by oil exploration. The above problems have introduced doubt to the sustainability of the renewed vigor in traditional health practices.

1.2 Objectives of Study

The main objective of the study is to examine the impact of environmental degradation on the changes in traditional health practices in Bayelsa state. To do that, the following specific objectives were followed:

- i. To investigate the socio-economic characteristics of traditional health practitioners in Bayelsa state.
- ii. To examine the nature and trend of traditional health practices in Bayelsa state
- iii. To investigate the dynamics in traditional health practices due to environmental changes in Bayelsa state.

In achieving these objectives, the study reviewed literatures around the stated objectives in order to answer the research questions as follows:

1.3 Review of Related Literatures

This section is set to review related literatures in order to assess existing work on this subject. This is aimed at finding out solved problems in order to establish existing gaps that will strategize this work to add to existing knowledge.

1.4 Traditional Health Practices in Nigeria

The culturally pluralistic nature of the Nigerian society has been reflected in all of its sector including the medical sector which has been described as “a complex, pluralistic system composed of indigenous therapeutic activities, orthodox Western medicine, Islamic healing approaches, as well as practices which synthesise aspects of these various methods’ (Afonja & Pearce 1986). Many research reports abound on herbal medicine, alternative medicine, indigenous medicine, traditional medicine, herbal medical practices, traditional medical practices and other related concepts. Many of these reports have tried differentiating them while some others have lumped some of them together. But the interest of this work is on traditional health practices which have been variously described as traditional medicine, folk medicine, native healing, alternative medicine and so on (CSRC, 2005; Ogundele, 2007; Abdulahi, 2011).

The World Health Organisation (2000b) have defined traditional medicine as the sum total of the knowledge, skills and practices based on the theories, beliefs and experiences indigenous to different cultures, whether explicable or not, used in

the maintenance of health, as well as in the prevention, diagnosis, improvement or treatment of physical and mental illnesses”. And the traditional health practitioner is one who is recognized in his or her community as competent to provide health care with the use of traditional healing resources such as plant, animal and mineral substances and other methods based on socio-cultural and religious practices (WHO, 1996, 2000a). Nevertheless, Ajai (1990) argued that alternative and traditional medicines are distinct concepts. He furthered that traditional medicine is identified with a country, implying that traditional health practices talks about health practices as it is indigenously obtained in a particular country or society.

The traditional health practitioners in Nigeria have been said to derive their knowledge from God, visions and dreams, animals, signs, spirits (Akpata, 1979; Abogunrin, 2004; Sofowora, 2008). It is divided into curative, preventive and other specialized forms of health care (Temitope and Ibrahim, 2014). The curative form involves diagnosis and treatment, whereby the practitioner can use different forms of diagnosis like patients past or family health records, patients attitudes or gestures, physical examination of patients eyes, urine, skin or faeces, analysis of patients past dreams, divinations and so on (Sofowora, 1993; Olagunju, 2012). It has been identified that traditional healing can be through the administration of herbs, sacred water or saliva, incantations, rituals and sacrifices, and magical practices (Olagunju, 2012; Temitope and Ibrahim, 2014).

The preventive form has been described as a medico-magical practices with the use of herbs which are believed to be enriched with the potency of preventing some spiritually induced ailments from attacking the user. Temitope and Ibrahim (2014) identified herbs such as *Croton zambesicus* (ajeofole, ajeobale) and *Erythrophleum suaveolens* (igi obo) majorly used by the Yorubas in western Nigeria as preventive medicine to drive away witchcraft and evil spirits. There is also the use of charms that can be hung on the waste, door posts etc to ward off spiritual enemies believed to attack one with illnesses (Makinde, 1988; Olagunju, 2012; Temitope and Ibrahim, 2014)

Just like the specialist areas in orthodox medicine, the traditional medicine in Nigeria have areas of specialties such as bones setting, obstetrics and gynaecology popularly known as the traditional birth attendants (TBA), and the general practitioner commonly identified as spiritual healers (Adamo, 2004; Sofowora, 2008). The spiritual healers often combine various means in their practice which include conducting of prayers to the gods, performing

of sacrifices and cleansing rituals which is believed to appease the gods who tells the cause of the illness and the solution.

1.5 Overview of Nature and Trend of Traditional Health Practices

The assertion by Adesina (2006) that traditional medicine is as old as the hills in Nigeria tells of the ancient position of the practice. Before the advent of the Europeans in the African continent, the African societies had their ways of life, and traditional medicine being an inherent part of the African culture. The African continent and particularly Nigeria had ways of managing their health issues, which was traditional to them as they sourced their healing materials from their environment.

This was not to last as the coming of the colonial masters marked the end to much of the African traditional practices including the traditional medicine, which were termed fetish and archaic (Falodun and Imieje, 2013). Colonialism and westernization brought the orthodox medicine to Africa and Nigeria in particular, leading to the abandonment of the traditional medicine to only the poor and illiterate especially those in the rural areas who could not afford or access the orthodox medicine. Falodun and Imieje (2013) argued that the reason for the abandonment of the traditional medicine was the existence of quacks, lack of legislation and regulation which led to a situation that the traditional medicine was seen as ineffective.

But in 1993, the regulations for herbal medicine was introduced in Nigeria in Decree No. 15 as revised in 1999, which regulates herbal medicine as dietary supplements, health foods, functional foods and so on. This is evidence that most developing countries including Nigeria are going back to traditional health practices having realized the high cost of the orthodox systems (Helwig, 2010; Falodun and Imieje, 2013). The growth of interest in traditional medicine has been seen even in the integration of traditional health care systems into the nations' health care system (WHO, 2003). This is evidenced in the establishment of the Nigerian Natural Medicine Development Agency (NNMDA) (Igoli *et al.*, 2005).

Nevertheless, the medical profession is guided by regulations for practice which most time seem to conflict with traditional health practices in Nigeria, but the traditional health practices are protected by the provisions in section 17(6), which reads as follows (WHO 2001):

Where any person is acknowledged by the members generally of the community to which he belongs as having been trained in a system of

therapeutics traditionally in use in that community, nothing shall be construed as making it an offence for that person to practice that system; but the exemption conferred by this subsection shall not extend to any activity (other than circumcision) involving an incision in human tissue or to administering, supplying or recommending the use of any dangerous drug within the meaning of part IV of the Dangerous Drugs Act.

Therefore, this provision has exempted the traditional health practitioners from exemption, but still limits them from issuing certificates of death, sick, and so on.

Moreover, in establishing the rapid acceptability of the traditional health practices in Nigeria, the orthodox system have started establishing some relationship with the traditional system; a relationship that varies from state to state. But in 1992 the country established the National Primary Health Care Development Agency whose mandate included the endorsement of Traditional Birth Attendants (TBA) and in 2000, the move to develop traditional medicine by regulating its activities, was made through the proposal of the Traditional Medicine Council of Nigeria Act (WHO, 2001). These actions and policies go to show the extent of recognition enjoyed by the traditional health care system in Nigeria.

1.6 Environmental Degradation and Traditional Medicine

Millennium Ecosystem Assessment (2005) argued it hasn't been long when the society started recognizing the relationship between society and nature as well as the environmental health and human health, and this new development have led to the realization that environmental degradation can invariably affect human health.

Romulo and Ierece (2007) explained that environmental degradation will lead to an ecosystem that are less resilient but more vulnerable to shocks and less able to supply humans with the needed services. Pushpangadan and Behl (2005) showed the natural disasters in Asia and North America as evidences of impact of environmental degradation on human life. They therefore conclude in agreement with Lebel (2003) that human health is much dependent on the environment, so that a healthy environment will determine a healthy life for the people living in that environment.

Millennium Ecosystem Assessment (2005) believes that the effect of environmental degradation is more felt by the poor in the society especially as it has to do with infectious diseases. Chivian (2002) pinned it down directly to its effect on health care

system. According to him, environmental degradation diminishes the supplies of raw materials used in drug production, cause loss of medical models and affects the spread of human diseases. This goes to explain the threat of environmental degradation especially to the traditional health practitioner who depends directly on the environment for supplies.

Olivera, Rivier, Clark, Ramilo, Corpuz, Abogadie, Mena, Woodward, Hillyard, and Cruz (2007) showed an example in the peptide compounds found in the venom of cone snails. These cone snails are said to inhabit tropical coral reefs. The health advantages of these snail to humans have been analyzed with more promises as its potency is all the more explored by researchers (Valentino, Newcomb, Gadbois, Singh, Bowersox, Bitner, Justice, Yamashiro, Hoffman, Ciaranello, Miljanich, Ramachandran, 1993; Malmberg and Yaksh, 1994; Miljanich, 1997; Jones, McCormick, Srinivasan, Eagle, 2004). But Jones *et al.*, (2004) noted that coral reefs are being destroyed in many parts of the world, leading to serious threat to the existence of reef-dwelling organisms like cone snails. If such continues unabated, the health advantages of the cone snail would have been destroyed before it is discovered.

Research have gone further to show how the environmental health affects human health (Anderson and Morales, 1994; Epstein, 1997; Daszak, Cunningham, Hyatt, 2000; Ostfeld and Keesing, 2000). Daszak, Cunningham, Hyatt (2000) maintain the upsetting of the ecosystem equilibria affect some infectious diseases like malaria and leishmaniasis. Invariably, maintaining balance in the ecosystem have lots of impact on human health, so that the effect of deforestation experienced in many parts of Nigeria like the Niger Delta region and Bayelsa State in particular by the oil multinationals in their oil production activities, can be appreciated.

Moreover, Aluko (2005) asserts that climatic changes have shown negative effect on traditional health practices in Nigeria. This has been made possible through the abrupt and unpredictable changes in weather condition that have affected the growth and availability of some essential herbs. Gas flaring, oil spillage, deforestation and other human activities have been identified to lead to this change in the climatic condition.

2. RESEARCH METHODS

Research Design

The study shall use the descriptive research design which has been seen as a method used in describing characteristics of a population or phenomenon under study. It does not answer the how, when or why questions on the occurrence of the characteristics, but addresses the "what" question

(Shields and Rangarajan 2013). Therefore, this study uses the descriptive design to describe the socio-economic characteristics of traditional health practitioners in Bayelsa state, the nature and trend of traditional health practices in Bayelsa state, and the dynamics in traditional health practices due to environmental changes in Bayelsa state.

Population

The population of study is all Traditional Medicine Practitioners (TMPs) between the ages of 21 to 100 in Bayelsa state Nigeria. The choice of age bracket is based on the fact that traditional medicine practice is not age limited as it is in most cases believed to be hereditary. But for the reason of understanding as well as to cover practitioners who have stayed long in practice, the researchers decided to limit the choice of respondents age to 21 minimum and 100 maximum. Getting a comprehensive list of TMPs in Bayelsa state is at the present an unattainable endeavour, because even when the government has made it compulsory that all TMPs must be registered, many have for reason known to them ignored that directive. Therefore, to cover the real population of TMPs in Bayelsa state, the study uses both the registered and unregistered members whose population figure cannot be ascertained.

Sampling Procedure

The study used a multi-stage sampling method to arrive at the sample size. The simple random technique was used to select four (Brass, Kolokumma/Opokuma, Ogbia and Southern Ijaw) local governments out of the eight local governments of Bayelsa state. Twelve (12) communities were purposively selected from each of these local governments and then the snowball sampling technique was employed to select six (6) TMPs from each of these communities to arrive at the total of seventy-two (72) TMPs as the sample size. The selection of 12 communities and 6 TMPs from the local governments and communities respectively, was not in respect of geographical nor population size, but to ensure equal weight of data for analysis. The number (72) selected in each community is still around the range recommended in Baker and Edwards (2012).

Data Collection

The study used a semi-structured, face to face interview, administered by the researcher and research assistant, in person to explore the respondents' (1) demographic characteristics and (2) perceptions on environmental degradation and changes in traditional health practices. Personal observation of the researcher over issues of traditional health practices was also reported.

Data Analysis

The researcher was careful to adhere to ethical standards addressing issues of privacy and confidentiality and informed consent (Hay, 2010). The interview sessions were audio recorded and later transcribed into written form. Facial expressions, gesture, body languages and other visual information were not deemed important in data analysis. Though most of the respondents used Pidgin (popular local language), verbatim quotations were employed where possible. In situations of perceived difficulty in understanding the pidgin language used by respondents, paraphrases in brackets were used to explain the Pidgin. The researcher and research assistant are fluent in both the English and Pidgin languages which helped them translate without distorting meaning as Thornbury (2006) suggests. Data collected were analysed using thematic analysis (Bryman, 2015).

3. RESULTS AND DISCUSSION OF FINDINGS

3.1 Socio-Economic Characteristics of Respondents

Responding to questions on their socio-economic characteristics, the THPs' answers on their bio-data was transcribed from the audio record, decoded and presented as follows.

Most of the THPs in Bayelsa state are male as it is mostly seen as male profession with the female counterpart seen only as Traditional Birth Attendants (TBAs). Asked on why the THP is dominated by male practitioners, one of the respondents answered that it is how they learnt from their fathers.

When our father goes to the bush to look for herbs, we young males will accompany him, and by so doing we learn the herbs and their uses, so when he dies, we take over.

The TBAs who are predominantly female gave a similar account of how the young girls will help run errands for their mother in the process of attending to a woman in labour which is like an act of apprenticeship, and most of them whose mothers were TBAs end up being one themselves. As much as this reveals predominant male THPs in Bayelsa state, it also confirms WHO (1996) assertion on the means of acquiring traditional medicine knowledge.

Traditional health practices in Bayelsa state as well as other parts of Nigeria have nothing to do with age as the means of acquiring the knowledge is such that is open to all (Temitope and Ibrahim, 2014). But this study discovered that majority of the THPs in Bayelsa state are between the age bracket 41-60, with less in 21-40 age bracket. This could be as a result of civilization and education as younger people now takes to education. The study still found some THPs at the age bracket 81-100. On religion, most of the

respondents were of traditional religion, while few mostly of the TBAs were Christians. But surprisingly, about five of the respondents were of the Islamic religion. One of them commented as follows

Traditional medicine is everywhere, and every religion have something to give to it, only that we have used western religion to change a lot of things. We the Yorubas, no matter your religion still knows the herbs our fathers introduced to us, it doesn't stop you from your beliefs.

This goes to confirm the reports of Buckley (1997), Abimbola (2006), and Awojodu and Baran, (2009) on the connections between traditional medicine and religion.

The study was interested in the educational background of the THPs, as it has been reported by studies (De Smet, 1991; Aluko, 2005; Calixto, 2005) that much of the development of traditional medicine in Nigeria as well as other developing countries lie with the level of education of the practitioners. The study found the generality of the respondents' education below the tertiary level. Very few of them had the secondary education, some finished primary education, while many of them had no formal education at all. But surprisingly most of them can communicate well in the Pidgin English, which they attributed to the presence of non-indigenes and the need to communicate.

The study found that most of the THPs in Bayelsa state had large families, some of them as a result of extended families living together as one, and others due to polygamy. One of the respondents (age 45, with three wives among which the last is 25 years old), in a bid to explain how he got to have 13 children commented as follows:

I have three wives and all of them are fertile because they receive treatment from me when there is need... I married the last wife because her parents could not pay me after treating her, so they gave her to me as a wife in place of the payment.

3.2 Sources of Income of Traditional Health Practitioner

Asked on their sources of income, it was revealing that most of the THPs are not depending on the Traditional health services for their daily upkeep. While they agreed that they get paid for their services, many of them said they no longer depend on income from traditional medicine to carter for their family. In fact, a traditional birth attendant (female, age 56) answered ("...my mother when she was alive was seen as the richest woman in our village... she had no other source of income except attending to expectant women"). Many of the THPs interviewed

agreed that their parents (or what they heard about them) who were THPs themselves were among the richest in their time and they depended only on traditional health care services for their income.

Therefore, the study explored further into the major and alternative sources of income for the THPs in Bayelsa state and their responses were summarized as follows.

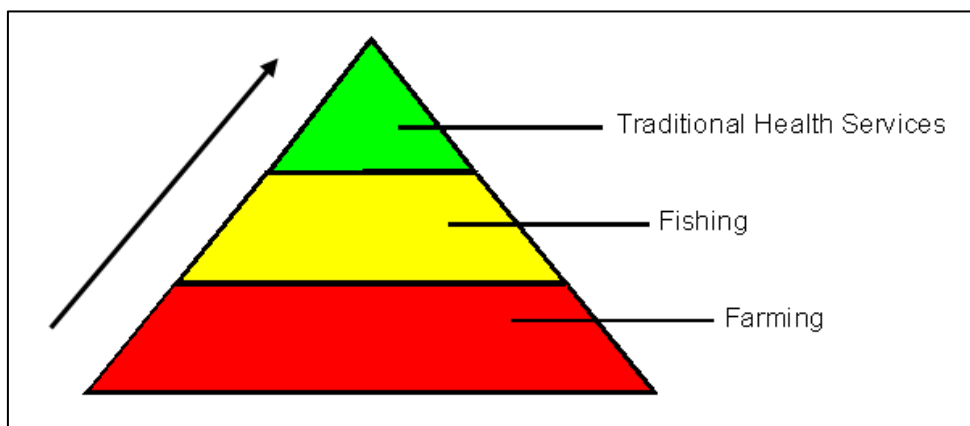


Figure 1: Major source of income for traditional health practitioners
Source: Author's analysis

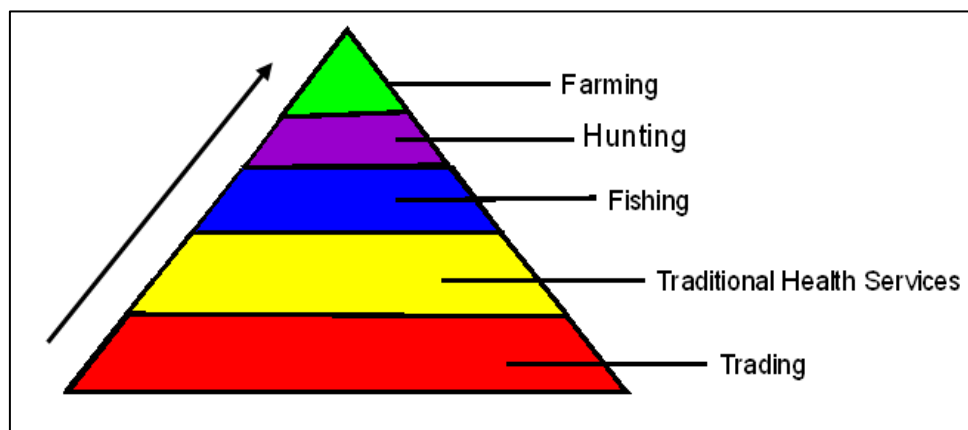


Figure 2: Alternative sources for traditional health practitioners
Source: Author's analysis

The above figures show in ascending order that the major source of income of the THPs as identified by the respondents are farming, fishing and traditional health services respectively. This indicates that some THPs no longer see it as their major source of income, as some identified, fishing as well as farming as their major sources. On the alternative source, it was discovered that some respondents recognize THP as their alternative source of income. Other alternative sources include farming, hunting, fishing, and trading. Juxtaposing both charts, it is discovered that THS, fishing and farming are found both in major and alternative sources of income. This is due to different reasons as identified by the respondents to include extinction of most plant that aid the healing process of their client, but when this materials cannot be gotten, it frustrate the efforts of healing their client. One of the respondents (Male, 32 years, bone setter) commented:

...this days, getting materials that is required to treat my client is very difficult to come by. Most a times I need to travel far into the forest without getting what i want.

Another respondent (Male, 48 years old, General Practitioner) answering on same issue, said:

...whenever I see clients I still treat them, but since I don't see them often, I now do my farm work also, ...yes, I get more money from treating people than from my farm.

3.3 Challenges of Traditional Health Practitioner

Asked on why they now depend on other sources of income for sustenance, most of the THPs pointed at challenges of practice among which the major challenge is sources of material for their medicine. It was a reiteration of opinion as from one THP to the other all they echoed is how most of the herbs, trees, mushroom and so on, are going into extinction. Some know why they no longer see the

materials they need while others don't. One of the respondents who uses hunting as an alternative source (male, 36 years old), lamented his experience in the practice.

... while we were young, we had trees and shrubs in our backyard, we only accompanied our fathers to the forest if the issue to be treated is serious and demanded various mixture of concoction. Now even when you go to the forest, you hardly see common herbs nor mushroom.

Asked on what he thinks is the cause, he answered thus:

... I can't say exactly, the only thing I know is that sometimes when you go to a bush you normally get herbs before, you see the soil become dark and oily, then in few days later the herbs and some trees will begin to die. Even our waters are no longer good for mixtures because it's now dirty. ...well many times we travel a long journey into neighbouring towns to get water, and some of our colleagues are now buying pure water (sachet water).

Another responded (male, 48 years old, specialist in stroke and high blood pressure) added:

My son who is in the university told me to look for something else to be doing, that the problem is from oil companies and that as long as they continued to produce oil, that our soil will not be the same again.

Further on the challenges of THP, others identified the patronage of orthodox medicine as the reason for decline in their patronage and consequently, they need other sources of income for sustenance.

3.4 The Nature and Trend of Traditional Health Practices in Bayelsa State

In confirmation of Adesina (2006) assertion, the respondents were positive about the link between THP and their culture. One TBA (female, 63 years old) said:

My mother told me stories of how she learnt the occupation from her mother and now she passed it on to me telling me I must pass it on to my own daughter. ...it's unfortunate that none of my daughters want to learn, the only one who seemed interested at young age, now say she want to do nursing (orthodox), am trying to raise money for her.

Another respondent (male, 78 years old, general practitioner) answering on religion and THP said:

We believe and consult our ancestors for guidance when we want to heal sick people.

This is in agreement with Temitope and Ibrahim (2014) report on traditional health practices in Yoruba. They argued that THP and religion are not far from each other as practitioners will have to consult different gods for help during their practices.

Nevertheless, the challenges of extinction of traditional healing materials and that of competition with orthodox medicine have not stopped some people to still patronize traditional medicine. The respondents agreed that in as much patronage is not as they use to know or hear about the days of their fathers, at least they still see few people to treat. But more serious among their challenges they reiterated is the decrease in the potency of their herbs which many of them agreed is due to *changes in the weather* as they identified.

3.5 Traditional Health Practices and the Environment

In response to the state of people's health, the respondents argued that people are getting more and easily ill than before. This they answered is as a result of oil related activities. According to the respondents, they are health situations that was not a cause of worry for them previously that they are now being plagued with. They pointed out situations like breathing difficulty, skin diseases, heartburn, headaches, typhoid and so on. One of the TBAs (female, 67 years old) lamented:

Our women never had issues with childbirth as I washed my mother deliver them of their babies. But now, I struggle to first heal them of typhoid before labour starts.

This agrees with the findings of Josephine, Moira, Denis, and Olalekan (2017) who studied health risks from environmental degradation in Niger Delta, Nigeria.

Moreover, the increase in health challenges calls for increase in health solution. Contrary to this, most of the respondents answered they had government established hospitals in their place. Answering on what they think is the reason, one of the respondents (male, 32 years old general practitioner) said:

We use to have one general hospital in our local government headquarters, but the doctors mostly stay in Yenegoa (the state capital), so before they arrive in emergency case, the patient is already dead. And that is how the hospital closed.

Answering on why the doctors don't stay in the communities he said:

...ehm, I think may be because they don't like the environment here, (our water no good, we no get town people them things).

Nevertheless, the study finds out that the THPs make more expenses due to the effects of environmental degradation on the healing materials. Most of them accounted on how they go on days journey into the forest of neighbouring communities where they could still locate the herbs and trees they seek. Some of them said they people younger people who can go for them. A bone setter (male, 82 years old) said:

Am no longer fit to go to the forest, so I send my son's age mate who is also a bone setter, he knows all I need, I pay him to get me the materials. These findings are in agreement with that of Nriagu (2011) and Ovuakporaye *et al.*, (2012).

4. CONCLUSION AND RECOMMENDATIONS

Traditional health practice in Bayelsa state Nigeria is suffering the same fate as in other parts of Nigeria, except in addition to the extinction of most of their healing materials due to the impact of oil exploration and exploitation on the environment. The traditional health practitioners consequently are suffering a blow on their profession, finance and life in general. They therefore, seek other means of sustenance, living the traditional health practices to the threat of total extermination.

The major challenge facing traditional health practices in Bayelsa state as discovered in this study is the impact of environmental degradation, which is a consequence of oil production activities. Therefore the study recommends as follows:

1. There is need to organize traditional health practitioners for effective collaborations in order to form synergy that will foster knowledge sharing on the available means of treatment, since the various healing materials on which they rely on for treatment has been threatened due to environmental degradation.
2. The education level of the THPs has been discovered to be low as no graduate was found among them. This could affect their understanding of trends in health system. Therefore, the government can institute a special education program targeted at the THPs. This will help them to acquire formal education as well as special and more modernized knowledge on health practices that will aid them in their practices.
3. More weight should be put behind the enforcement of the registration of THPs in Bayelsa state and Nigeria generally. This will help in the regulation of their practices. This registration will also help researchers to easily access data on THP which will help turn out research report for the

improvement of the traditional health care system.

4. Government can implement the environmental law enforcement recommendation, which will compel the oil multinationals to use standard cleaning materials against oil spills and other hazardous wastes. This will help to maintain the ecosystem and allow good vegetation for the herbal materials needed by the traditional health practitioners.

REFERENCES

- Abdullahi, A. A. (2011). Trends and challenges of traditional medicine in Africa. *Afr J Tradit Complement Altern Med*, 8(S), 115-123.
- Abimbola, K. (2006). *Yoruba culture: A philosophical account*. Iroko Academic Publishers.
- Abogunrin, S. O. (2004). Biblical healing in the African context. *Nig Assoc Bibl Stud*, 3, 2-24.
- Adamo, D. T. (2004). Decolonizing African biblical studies. *7th Inaugural Lecture*, Delta State University, Abraka.
- Adekola, J., Fischbacher-Smith, M., Fischbacher-Smith, D., & Adekola, O. (2017). Health risks from environmental degradation in the Niger Delta, Nigeria. *Environment and Planning C: Politics and Space*, 35(2), 334-354.
- Adepoju, G. K. (2005). The attitudes and perceptions of urban and rural dwellers to traditional medical practice in Nigeria: a comparative analysis. *International Journal of Gender and Health Studies*, 3(1), 190-01.
- Afonja, S., & Pearce, T. O. (1986, eds). *Social changes in Nigeria*. Harlow: Longman.
- Ajai, O. (1990). The integration of traditional medicine into the Nigerian health care delivery system: legal implications and complications. *Med Law*, 9(1), 685-99.
- Akpata, L. (1979). "The practice of herbalism in Nigeria" In: *African medicinal plants* (ed. Sofowora, E.A). Nigeria: University of Ife Press.
- Aluko, T. (2005). Trading in traditional medicine: the challenges for womanhood and the health care system in Nigeria. *International Journal of Gender and Health Studies*, 2(1), 47-54.
- Anderson, P. K., & Morales, F. J. (1994). The Emergence of New Plant Diseases: The Case of Insect-transmitted Plant Viruses. *Annals of the New York Academy of Sciences*, 740(1), 181-194.
- Assessment, M. E. (2005). *Ecosystems and human well-being* (Vol. 5, p. 563). Island Press, Washington, DC.
- Awojodu, O., & Baran, D. (2009). Traditional Yoruba medicine in Nigeria: A comparative approach. *Bull Trans Univ Brasov*, 6(51), 129-136.

- Baker, S. E., & Edwards, R. (2012). How many qualitative interviews is enough? Expert voices and early career reflections on sampling and cases in qualitative research. *National Centre for Research Methods Review Paper*. United Kingdom: National Centre for Research.
- Belonwu, M. C. (2011). Attitudes to and use of traditional medicine in the treatment and management of malaria in Nigeria: Case study of Anambra State. *Degree of Master of Science (M. sc) in Development Studies (IDS) University of Nigeria, Enugu Campus*.
- Borokini, T. I., & Lawal, I. O. (2014). Traditional medicine practices among the Yoruba people of Nigeria: A historical perspective. *Journal of Medicinal Plants Studies*, 2(6), 20-33.
- Bryman, A. (2016). *Social research methods*. Oxford university press.
- Buckley, A. D. (1997). *Yoruba Medicine*. Athelia: Henrietta PR.
- Calixto, J. B. (2005). Twenty-five years of research on medicinal plants in Latin America: a personal view. *Journal of ethnopharmacology*, 100(1-2), 131-134.
- Cavaliere, C. (2009). The effects of climate change on medicinal and aromatic plants. *Herbal Gram*, 81, 44-57.
- Cavaliere, C. (2009). The effects of climate change on medicinal and aromatic plants. *Herbal Gram*, 81, 44-57.
- Center for the Study of Religion and Culture (CSRC) (2005). Use of traditional vs. orthodox medicine in help-seeking behavior for psychiatric disorders in Nigeria. *Summer Fellowship Report 2005*.
- Chivian, E. (2002). Biodiversity: its importance to human health. *Center for Health and the Global Environment, Harvard Medical School, Cambridge, MA*, 23.
- Das, M. (2010a). Performance of *Asalio (Lepidium sativum L.)* genotypes under semi-arid condition of middle Gujarat. *Indian Journal of Plant Physiology*, 15(1), 85-9.
- Daszak, P., Cunningham, A. A., & Hyatt, A. D. (2000). Emerging infectious diseases of wildlife-threats to biodiversity and human health. *science*, 287(5452), 443-449.
- De Smet, P. A. (1991). Is there any danger in using traditional remedies? *Journal of Ethnopharmacology*, 32(1-3), 43-50.
- Epstein, P. R. (1997). Climate, ecology, and human health. *Consequences*, 3(2), 2-19.
- Falodun, A., & Imieje, V. (2013). Herbal medicine in Nigeria: Holistic overview. *Nigerian Journal of Science and Environment*, 2 (1), 1-13.
- Hay, I. (2010). *Qualitative research methods in human geography*. Canada: OUP.
- Helwig, D. (2010). Traditional African medicine. *Encyclopedia of Alternative Medicine*. Retrieved November 22nd, 2017.
- Jones, G. P., McCormick, M. I., Srinivasan, M., & Eagle, J. V. (2004). Coral decline threatens fish biodiversity in marine reserves. *Proceedings of the National Academy of Sciences*, 101(21), 8251-8253.
- Kadiri, A. (2010). An appraisal of the contributions of herbalism to primary health care delivery in South West Nigeria. *Ethnobotanical Leaflets*, 14, 435-444.
- Lebel, J. (2003). "Health: an ecosystem approach". *International Development Research Centre*.
- Makinde, M.A. (1988). African philosophy, culture, and traditional medicine. *Center for International Studies*, Ohio University.
- Malmberg, A. B., & Yaksh, T. L. (1994). Effects of continuous intrathecal infusion of omega-conopeptides on behavior and anti-nociception in the formalin and hot plate tests in rats. *Pain*, 60, 83-90.
- Miijanich, G. P. (1997). Venom peptides as human pharmaceuticals. *Science and Medicine*, 4, 6-15.
- Nriagu, J. (2011). Oil industry and the health of communities in the Niger Delta of Nigeria. In: Nriagu JO (ed.) *Encyclopedia of Environmental Health*. Burlington: Elsevier, pp. 240-250.
- Ogundele, S. O. (2007). Aspects of indigenous medicine in South Western Nigeria. *Studies on Ethno-Medicine*, 1(2), 127-133.
- Olagunju, O. S. (2012). The traditional healing systems among the Yoruba. *Archaeological Science Journal*, 1(2), 6-14.
- Olivera, B. M., Rivier, J., Clark, C., Ramilo, C. A., Corpuz, G. P., Abogadie, F. C., ... & Cruz, L. J. (1990). Diversity of Conus neuropeptides. *Science*, 249(4966), 257-263.
- Ostfeld, R. S., & Keesing, F. (2000). Biodiversity and disease risk: the case of Lyme disease. *Conservation biology*, 14(3), 722-728.
- Ovuakporaye, S. I., Aloamaka, C. P., Ojieh, A. E., Ejebe, D. E., & Mordi, J. C. (2012). Effect of gas flaring on lung function among residents in gas flaring community in Delta State, Nigeria. *Res J Environ Earth Sci*, 4(5), 525-528.
- Pushpangadan, P., Behl, H. M (2005). Environment & biodiversity: Agenda for future. *ICPEP-3 2005* available at <http://www.geocities.com/isebindia/ICPEP-3/ICPEP3-S-2.html>. Accessed on 25th November, 2017.
- Rômulo, R. N. A., & Ierecê, M. L. R. (2007). Biodiversity, traditional medicine and public health: where do they meet? *Journal of Ethnobiology and Ethnomedicine*, 3(14), 1-9.
- Sofowora, A. (1993). *Medicinal plants and traditional medicine in Africa*. Ibadan: Spectrum Books Limited.

- Sofowora, A. (2008). Medicinal plants and traditional medicine in Africa. *Edn 3*, Ibadan, Nigeria: Spectrum Books Ltd.
- Suresh, K. M., Manish, D., & VANITA, J. (2016). Impact of climate change on Medicinal and aromatic plants: Review. *Indian Journal of Agricultural Sciences*, 86(11), 1375–82.
- Tack, J., Barkley, A., & Nalley, L. L. (2015). Estimating yield gaps with limited data: An application to United States Wheat. *American Journal of Agricultural Economics*, 97(3), 42–51.
- Thornbury, S. (2006) *An AZ OF ELT*. Oxford: Macmillan.
- Valentino, K., Newcomb, R., Gadbois, T., Singh, T., Bowersox, S., Bitner, S., ... & Ciaranello, R. (1993). A selective N-type calcium channel antagonist protects against neuronal loss after global cerebral ischemia. *Proceedings of the National Academy of Sciences*, 90(16), 7894-7897.
- World Health Organisation (1996). Final report of the seminar on the use of medicinal plants in health care. Tokyo: WPRO Publication.
- World Health Organisation (2000a). Traditional and modern medicine: Harmonising the two approaches. Western Pacific Region. Geneva: World Health Organisation.
- World Health Organisation (2000b). General guidelines for methodologies on research and evaluation of traditional medicine. Geneva: World Health Organisation.
- World Health Organisation (2001) Legal status of traditional medicines and complimentary/alternative medicine: worldwide review. WHO Publications, pp.10-14.
- World Health Organisation (2009). WHO Guidelines for Assessing Quality of Herbal Medicines with Reference to Contaminants and Residues. Geneva: World Health Organisation
- World Health Organization (2003). Traditional medicine: Growing needs and potential. *WHO Policy Perspectives on Medicines 2*: 1–6.