Healthcare Delivery in Nigeria: Traditional Medicine Practitioners Perspectives to Universal Health Coverage and Traditional Medicine Integration with Conventional Medicine

Jemilat Aliyu Ibrahim [a++], Omolola Temitope Fatokun [a#*], Ibikunle Adeola Jegede [a†], Henry Omoregie Egharevba [a++], Omotayo Tirimidhi Hamzat [b‡] and Obi Peter Adigwe [a^]

[a] *National Institute for Pharmaceutical Research and Development (NIPRD), Abuja, Nigeria.*
[b] *World Health Organization, Abuja, Nigeria.*

Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

Original Research Article

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++ *Associate Research Professor;*
# *Research Fellow;*
† *Head Planning, Monitoring and Evaluation;*
‡ *WHO Nigeria Country Office;*
^ *Head of NIPRD Laboratories;*
Corresponding author: E-mail: omololafatokun@gmail.com, lolatemmy@gmail.com;

ABSTRACT

Introduction: The knowledge, attitude, and practice of Traditional Medicine Practitioners (TMPs) are key to achieving effective and sustainable integration of all forms of Traditional, Complementary and Alternative Medicine (TCAM) and health services towards Universal Health Coverage (UHC). In this study, the operational and psychological readiness of Traditional Medicine Practitioners towards integration with the conventional health system was examined by critically considering the various factors central to traditional medicine integration as recommended by the World Health Organisation (WHO) Traditional Medicine strategy (2014–2023).

Methods: Paper based questionnaires were administered to Traditional medicine practitioners from three geo-political zones in Nigeria along with Key Informant Interviews. Qualitative – thematic and content analysis using both iterative and interpretative processes, and quantitative –descriptive and inferential analysis were done using statistical package for social sciences version 25.

Results: A total of 337 respondents participated in the study ranging from 21-61 years of age. More than half (61.7%) were males. Most respondents 310 (92%) had one form of formal education out of which those with secondary education constitute over one-thirds, 121 (35.9%). Over three-quarter of the respondents, 290 (86.1%) were into general practice and over half of the respondents had between 11 – 20 years of experience as traditional medicine practitioners. About two-thirds, 216 (64.1%) of study participants had no knowledge of what integration nor Universal Health Coverage 256, (76%) meant. However, many of the respondents (76.3%) had a good attitude towards integration. More than two-thirds of respondents, 241 (71.5%) claimed to keep patient records but only 157 (46.6%) kept written records.

Conclusion: Traditional Medicine Practitioners in Nigeria have a positive outlook towards integration. Salient knowledge and practice gaps among them have been revealed. The study shows that regulatory and policy actions should be centred around the support, capacity building through trainings and conferences to disseminate information on scientific/technological advancements to improve their practice, and also to improve on existing policies and government activities.

ABBREVIATIONS

TMPs	*: Traditional Medicine Practitioners*
FCT	*: Federal Capital Territory*
TM	*: Traditional Medicine /*
CAM	*: Complementary and Alternative Medicine*
WHO	*: World Health Organization*
NAFDAC	*: National Agency for Food, Drug, Administration and Control.*

1. INTRODUCTION

Every healthcare delivery system including the indigenous mode of healthcare known as Traditional Medicine (TM) aims at providing safe, quality and affordable services to its recipients. The merger or systematic inclusion and coordination of all the forms and types of health care delivery, to meet the demands of essential and affordable health care ranging from promotion of good health, social, mental and physical/material wellbeing, to prevention, management and treatment of diseases along with rehabilitative and palliative care is most often termed Integration [1]. The delivery of such health services to all and sundry when and where it is needed in an affordable way, underlies the principles of Universal Health Coverage. The call for integration of TM has transcended several decades since the 1970s by the World Health Organization (WHO) Alma Ata Declaration of 1978. The declaration highlighted some indicators that will precede integration of African traditional medicine (ATM) with the current health care system of African countries [2,3]. Examples of such indicators were legal framework for the practice of TM, registration system for TM and inclusion of TM in national medicines list.

The COVID-19 Pandemic era has seen greater use of traditional medicines all over the world either as treatment or preventive measures for many of the populace, especially in developing nations [4]. Hence there is the need to reappraise the entire concept of integration as it applies to countries such as Nigeria and close the gaps surrounding the integration process to improve health care of

those at the grass roots and increase accessibility and affordability of quality health care. It is estimated that over 80% of Nigerians still rely on TM, which is the closest source of healthcare to the majority who live in the rural enclaves. Urban settlers are also known to patronize TMPs especially when in doubt as to the safety and effectiveness of orthodox medicine for some ailments. Hence, embracing and properly harnessed the usefulness of traditional medicines could be the means for readily attaining Universal Health Coverage (UHC) in Nigeria, as seen in countries like Ghana, China and India [3].

The knowledge, attitude, and perception of Traditional Medicine Practitioners (TMPs) in Nigeria towards the entire concept of including their practice in the national health care delivery system is necessary in accessing their understanding, ideology, notion towards the possibility, level of awareness, acceptance, readiness to achieving the feat. Assessing their knowledge on primary health care, health insurance scheme and universal health coverage will reveal salient gaps associated with their response and preparedness to integrating traditional medicine to conventional medicine. The assessment and study are important for the determination of their degree of readiness towards integration of traditional medicine to conventional medicine and the possibility of UHC. Specific objectives of this study were to determine TMPs' knowledge on integration of TM into National health care, perception and attitude towards integration, knowledge of UHC, and the status of practice and facility readiness, the level of compliance to government regulations on products/recipes, and level of record keeping by the TMPS, area of competence and practice, and interaction with other health care givers in the system particularly the medical doctors and medical laboratory scientists. Summarily, the study is important towards the assessment of both operational and psychological readiness for integration with a view towards identifying salient gaps for intervention by government and development partners.

2. METHODOLOGY

2.1 Sampling and Study Design

A cross-sectional design using a single-stage sampling technique was used during this study. The study was carried out among TMPs in Nigeria between May and July 2022. A paper and interview-based questionnaire was developed and administered on 30 randomly selected TMPs for pilot analysis to ensure reliability and validity of questions. A simple, unrestricted method of randomization was used. The feedback retrieved necessitated some slight modifications in the standardized questionnaire. Respondents were selected by random sampling across the geopolitical zones in Nigeria from various practice settings across 4 areas (Federal Capital Territory and bordering States- Niger/Nassarawa, Oyo, Bayelsa and Kano states). A sample size of 384 was computed for an unknown TMP population size at 95% confidence level, 5% margin of error, and 50% response distribution using the formula $n=z^2*[(p*q)/d^2]$. TMPs in targeted locations such as herb markets, traditional medicine clinics, motor parks, general marketplaces in both rural and urban areas were included for data collection. Ethical approval was obtained from NIPRD Health Research Ethics Committee (Approval number- NIPRD-HREC NHREC/039 /21A-11). No biological sample was collected, and confidentiality and anonymity of respondents were strictly adhered to. Participation was voluntary throughout the data collection process.

2.2 Data Analysis

All data collected were entered into Statistical Package for Social Sciences (SPSS) version 25. Both qualitative, for open ended questions, and quantitative analysis was carried out to determine the knowledge, attitude and practice of respondents.

For qualitative analysis, transcripts were generated from collated questionnaires and reviewed for relevant codes and themes, upon which content analysis was carried out using both iterative and interpretative processes. The first level coding involved identification, sorting and differentiation of the data that were unique to the study. Respondents' statements considered important were labeled with codes and eventually clustered into themes. Subsequently, the generated themes were synthesized into composite categories. Each category was eventually structured to major groups to address dominant areas of interest in a manner considerable enough to explain the essence of the phenomenon. The audit trail validation strategy was carried out to ensure and maintain the quality of data analysis. An independent reviewer confirmed the reliability

of analyzed data. Verbatim transcripts and other data relevant to the study were reviewed by the reviewer who asserted and confirmed reliability of the processes of data collation and interpretations through each phase of the study.

For quantitative analysis, descriptive analysis was used for categorical variables and represented as frequencies (n) and percentages (%). Attitude towards integration was assessed by their response to 5 questions. The calculation of a total cumulative attitude score was carried out for each participant. Questions were assigned one (1) point for positive attitude towards integration, and zero (0) was assigned for unanswered or negative feedback. The maximum score each participant can accumulate was 5 and the minimum was 0. Bloom cut off was used to separate attitude towards embracing integration. Scores ≥ 80% was considered positive attitude, 60% -79% Moderate attitude, while scores ≤59% were considered a negative attitude. Inferential statistics, association between demographic variables that predicted attitude towards integration in the study was tested using chi square test (x^2). A p-value of 0.05 or less represented the threshold for statistical significance.

3. RESULTS AND DISCUSSION

3.1 Sociodemographic Characteristics of Respondents

A total of 400 respondents were interviewed with a response rate of 91.8%. 30 questionnaires were considered invalid due to incomplete data entry and/or respondents practicing in areas other than the states under surveillance. A total of 337 responses were analysed. Among them, (38.3%) were female and 61.7% were male. The age range of respondents was 21 – 61 years with nearly half of them, 137 (40.7%), within 41 – 50 years, 94 (27.9%) within 31 – 40 years, 65 (19.3%) between 51 – 60 years, 13 (3.9%) were 61 years and above and only 1 (0.3%) participant less than 21 years. During the survey, it was observed that some people who were not literate, conceded interaction to their younger apprentices who were literate, A larger number of respondents 310 (92%) had one form of

formal education or the other while 27 (8%) had no formal education. Over one-thirds of the educated respondents had secondary education, 121 (35.9%), while 72 (21.4%) were graduates, 60 (17.8%) had National Diploma certificates and 43 (12.8%) had primary education. Many of the respondents were Muslims, 262 (77.7%) while 75 (22.3%) were Christians. Over three-quarter of the respondents, 290 (86.1%) were into general practice as TMPs, while about 10 and 11 (~3%) people were Traditional Birth Attendants (TBAs) and Bone setters respectively. Over half of the respondents have between 11 – 20 years of experience as traditional medicine practitioners (Table 1).

3.2 Awareness and Knowledge of Respondents Towards Integration, Primary Health Care and Universal Health Coverage

A. Quantitative Analysis

On quantitative analysis of data, two-thirds of respondents, 224 (66.5%) were not aware of the concept of integrating traditional medicine practice into the national health care delivery system. The current means of disseminating information/ creating awareness on need for integration of TM in the nation's health care system is through the Federal Ministry of Health (FMOH) and most information and activities are usually hinged on herbal product registration by NAFDAC, annual celebration of the African Traditional Medicine Day, and training of TMPs through workshops and seminars by interested partners. These means might not necessarily reach out to TMPs at all levels. Many of the respondents, 239 (70.9%), were not aware of the health insurance scheme of National Health Insurance Authority (NHIA) and many more, 256 (76%) were not aware of the principles and desire for Universal Health Coverage (UHC). Majority of respondents, 305 (90.5%), stated that they were not aware of any traditional medicine or cultural practices like the health care insurance scheme in the country. More respondents, 216 (64.1%) stated that they did not understand what it meant to integrate their practice into the Nigerian health care system (Table 2).

Table 1. Sociodemographic characteristics of respondents

Variable	Frequency (n)	Percentage (%)
Sex		
Male	208	61.7
Female	129	38.3
Age		
< 21	1	0.3
21 - 30	27	8
31 - 40	94	27.9
41 - 50	137	40.7
51 - 60	65	19.3
61 and above	13	3.9
Level of Education		
Doctorate	7	2.1
Masters	7	2.1
Graduate	72	21.4
National Diploma	60	17.8
Secondary	121	35.9
Primary	43	12.8
No formal Education	27	8.0
Religion		
Christian	75	22.3
Muslim	262	77.7
Area of Practice		
Mental illness	5	1.5
Bone setters	10	3
Traditional Birth Attendants	11	3.3
Others	21	6.2
General practice	290	86.1
Working Experience		
1years - 5years	41	12.2
6years - 10years	57	16.9
11years - 15years	117	34.7
16years - 20years	77	22.8
21years - Above	45	13.4

Table 2. Awareness and knowledge of integration of tm into the national health care delivery system, Primary health care and Universal Health Coverage in Nigeria

Variable as regards the Nigerian Health Sector	Response	Frequency (n)	Percentage (%)
I have heard of Integration of TM practice	Yes	113	33.5
	No	224	66.5
I know what it means to integrate TM into Health Care System	Yes	121	35.9
	No	216	64.1
I am aware of what universal health coverage is, in the Nigerian Health Sector	Yes	81	24.0
	No	256	76.0
I am aware of Health Care Insurance	Yes	98	29.1
	No	239	70.9
I know some TM cultural practices close to HealthCare Insurance	Yes	32	9.5
	No	305	90.5

B. Thematic qualitative analysis of the knowledge of TMPs on Integration

Question 1: What do you understand by integration?

On thematic analysis of responses given by the TMP's on what they understand by integration, two [2] major themes were obtained and documented along with the number of people who expressed such opinions and demographics of respondents that represent the views as stated below (see supplementary file for other examples):

1. Inclusion, Collaboration and Synergy (84)

"To include Traditional Medicine Practitioners to Nigeria primary health delivery system" (Respondent 2, male, aged within 41-50years, master's degree holder, in general practice with 16-20years experience).

"To bring TMPs under same umbrella with conventional health practitioners for holistic health coverage in Nigeria" (Respondent 5, male, aged within 31-40years, graduate, in general practice with 16-20years experience)

"To carry along TMP system into health care mainstream" Respondent 30, male, aged within 31-40years, graduate, traditional birth attendant, with 6-10years experience)

"Employing TMPs in hospital as a doctor or nurse" (Respondent 31, male, aged within 21-30 years, National diploma holder, bone setter with 6-10years experience)

"Merging of TM with hospitals" (Respondent 41, male, aged within 41-50years, primary education, in general practice with 16-20years experience)

"Application of convention and non-conventional modalities to effect wellness" (Respondent 63, Female, aged within 31-40years, Doctorate, in general practice with 16-20years experience)

"It is a system by which traditional medicine practitioners will be involved in solving health issues within the country working hand in hand with conventional doctors. Moreover, to uplift the standard of TMP in terms of medical service to meet a global Standard."

(Respondent 80, male, aged within 31-40years, National diploma holder, in general practice with 11-15years experience)

2. Recognition and improvement of Traditional Medical Practice in Nigeria (22)

"Recognize TMPs" (Respondent 27, male, aged within 21-30years, secondary education, bone setter with 1-5years experience)
"Upgrading traditional medicine" (Respondent 85, male, aged within 41-50years, primary education, in general practice with over 21years of experience)

"Government should accept TM just like Orthodox" (Respondent 111, Male, aged within 31-40years, National diploma holder, in general practice with 6-10years experience)

"It means to uplift or upgrade the traditional medicine whereby the patient has two options to choose in-terms of health care services, He may go for orthodox or traditional medicine in any hospital. The choice is yours." (Respondent 119, Male, aged within 41-50years, graduate, in other areas with above 21years experience)

"incorporation as equals into society" (Respondent 161, female, aged within 21-30years, National diploma holder, in general practice with 1-5years experience)

"To recognize alternative medicine by the government in Nigeria and the masses." (Respondent 196, male, aged within 41-50years, primary education, mental illness practice with 16-20years experience)

Summarily one group saw Integration as a means of inclusion and collaboration, whilst the other group understood integration as a means recognizing and improving the practice of traditional medicine. These notions are somewhat enshrined in the definition of integration (see supplementary file for other examples).

Question 2: What do you understand by primary health care in Nigeria?

On thematic analysis of responses given by the TMP's on what they understood by Primary Health Care in Nigeria, of the data collated, 4 major themes showcasing their opinions were documented. The mostly expressed theme was Health care for all (64 views) where in respondents described primary health care as: a) easy and affordable basic healthcare for immediate health needs; b) health care for emergencies and childbirth; c) small health

facilities in rural communities; d) first health contact for the public; and e) healthcare for information and check-ups (see supplementary file for details). Three (3) other themes expressed by TMPs were: A government owned health care facility (11 views), Traditional health care (4 views), a science of preventing diseases and promoting health (4 views).

WHO estimates that some people in Africa rely on TM to cater for their primary health care needs though there is yet enough objective evidence on the degree of TM use in the continent [5]. TMPs in Nigeria did not seem to acknowledge this as majority of respondents were not aware of what the Primary Health Care system meant in Nigeria and from qualitative assessment, only few respondents saw their traditional practice as a form of primary health care. Example, four (4) TMPs described primary health care as traditional health care as seen in these responses:

"It means grassroots participation of traditional health care practitioners to cover communities in the country" (Respondent 66, male, aged within 41-50years, graduate, bone setter with over 21 years' experience).

"New section to apply traditional health" (Respondent 86, male, aged within 51-60years, no formal education, in general practice with 11-15years experience).

"Applying TMP" (Respondent 94, male, aged within 51-60years, secondary education, in general practice with 6-10years experience).

"An indigenous/a traditional practice which is not known" (Respondent 121, male, aged within 4`-50years, National diploma holder, in general practice with 6-10years experience)

Some other views expressed Primary Health Care as "a science of preventing diseases and promoting health" as seen in the following responses (see supplementary file for other examples):

"Is the science or act of preventing disease, prolonging life and physical health "(Respondent 59, female, aged within 41-50years, National diploma holder, traditional birth attendant with over 21years experience).

"Is the act of preventing disease, prolonging life and promoting mental and physical health

through organized community effort" (Respondent 60, female, aged within 41-50years, National diploma holder, traditional birth attendant with 11-15years experience).

Question 3: What do you understand by Health Care Insurance in Nigeria?

On thematic analysis of responses given by the TMP's on what they understood by health care insurance in Nigeria, 3 major themes showcasing the opinions of 76 respondents were documented.

The mostly expressed view was "Health Care for the public" (34 views). In this view respondents described Health Care Insurance as health coverage at a subsidized rate and health care coverage for emergency, surgical or medical purposes (see supplementary file for details).

Another theme was government assistance for health coverage (6 views) with the following examples.

"Government gives money to support health care" (Respondent 19, Male, aged within 41-50years, secondary education, in general practice with 16-20years experience)

"It is an institution created by government to specifically provide health facilities at subsidized rate" (Respondent 30, male, aged within 31-40years, graduate, traditional birth attendant, with 6-10years experience)

"It is the supplementation of health care provision by the government" (Respondent 55, female, aged within 51-60years, doctorate degree holder, in general practice with over 21years experience)

The theme "Individual contribution towards health care coverage" was expressed by 19 views. Examples are *"It is a health insurance scheme where every worker contribute to carter for health of all"* (Respondent 79, female, aged within 41-50years, graduate, in general practice with 11-15years experience)

"A system which enables the citizen to save small amount out of what they earn to give them multiple chances of getting a cover to stick persons without sourcing for what to settle their bills while fallen sick." Respondent 80, male, aged within 31-40years, National diploma holder, in general practice with 11-15years experience)
"Register into a conventional hospital and when sick you will be attended to while payment is

gradual in a year" (Respondent 81, Male, aged within 51-60years, graduate, in general practice, with 6-10years experience)

"Were an individual will be paying some token amount into government account and will be receiving treatment in the hospital at any time even he doesn't have money." (Respondent 125, Female, aged within 21-30years, graduate, in general practice with 1-5years experience)

Majority (76%) of the respondents were not aware of Universal Health Coverage as earlier stated. However, from the 70 responses obtained from those who chose to share their understanding, 4 major themes, enshrined in the WHO definition of UHC were collated.

a) World Health Scheme (28 views)
b) Health care for practitioners (3 views)
c) Access to health care services and insurance for all (36 views)
d) statistical record of health care implementation (3 views). WHO describes

UHC as how everyone gains access to health services at the barest minimal cost. UHC considers promotion of health, prevention, treatment, rehabilitation and palliative care and requires adequate and competent providers in well equipped, widely and evenly distributed facilities as UHC can be measured primarily by the proportion of population that have access to quality health care at the least amount possible [6].

3. Attitude of Respondents towards Integration, Primary health care and Universal Health Coverage

The attitude of the respondents towards integration was surveyed. More respondents stated that they have a role to play (92.3%), they were ready to contribute (94.7%) to its actualization, and Integration was feasible in Nigeria (88.4%) and were willing to work with medical doctors in the Country (85.8%).

Table 3. Attitude towards Integration of TM practice into National Health care delivery

Variable		Frequency (n)	Percentage (%)
Roles and Contribution towards integration			
I have a role to play	Yes	311	92.3
	No	26	7.7
I am ready to contribute	Yes	319	94.7
	No	18	5.3
Integration is feasible in Nigeria	Yes	298	88.4
	No	39	11.6
Willingness to work with doctors	Yes	289	85.8
	No	48	14.2
Roles and Contribution towards universal health coverage			
Any role for TMPs to play	Yes	138	40.9
	No	199	59.1

Using Bloom cut off to separate Attitude, over three-quarters of respondents, 257 (76.3%) had a good attitude towards Integration.
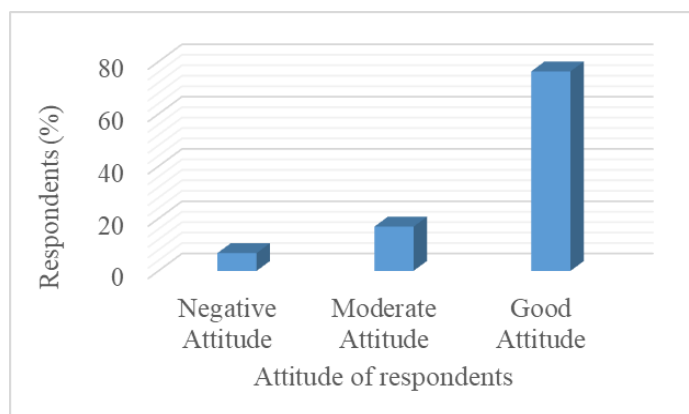

Fig. 1. Attitude of respondents towards integration

TMPs responses on what the government and stakeholders could do, to achieve integration and improve their contributions to integration and Primary Healthcare in Nigeria were documented and grouped. Content analysis of their responses showed 6 major themes along with sub-themes which include:

a) Policy and conceptual development (7 respondents)
b) Standardization (104 respondents) – education and Institutionalization; documentation and standardization experience and products
c) Legalization, licensing, and regulation (26 respondents) – Product licensing, monitoring and regulation, legalization experience
d) Collaboration and synergy (23 respondents) – collaboration with orthodox medical practitioners, collaboration amongst traditional medical practitioners, collaboration with government and researchers
e) Funding and Infrastructure (67 respondents) – Infrastructure, finance, and loans
f) Inclusion, promotion, and support (55 respondents) – promoting awareness, sales promotion, recognition and inclusion in the health care system, government support and commitment (See supplementary file for details).

Whilst showing a good disposition towards integration, these respondents expressed the need for extensive and improved collaboration amongst themselves as Traditional Medicine Practitioners, orthodox medicine practitioners, regulatory councils, and government as a contributor to the success of integration in the country. Example was stated by Respondent 2, male, aged within 41-50 years, master's degree holder, in general practice with 16-20years experience - **"***Effective collaboration and synergy with all the health care practitioners, Regulatory council for traditional practitioners to control and fish out quackeries and others for effective service, and it will enhance active referral in case if one service fails.* "

To enhance integration, 129 respondents expressed the importance of inclusion, promotion, and support. It was generally noted that having a greater sense of belonging will emanate from government ensuring promotion of awareness; provision of an enabling environment for the development, production and sales of herbal medicine products globally; governments' commitment to giving equal rights and privileges to both traditional and orthodox medicine practitioners especially by establishing hospitals for complementary and alternative forms of medicines; and governments duty to providing infrastructure/ structural facilitates such as forestry's, reserves, clinics, hospitals, equipment for herbal medicine production along with funding in forms of financial loans and grants. All of these were also central to what respondents believed to be the role of the government in achieving integration (see supplementary file). Some respondents (52 respondents) revealed the need for education, increased periodic training and conferences on how to use technology and modern equipment, the inclusion of traditional medicine as a subject in the curriculum of higher institutions of learning to fast-track standardization. This shows that they are aware of the role they need to play to meet up with higher standards in practice. A few respondents (26 respondents) expressed the importance of ease of registration and licensing of products by agencies such as NAFDAC, proper monitoring and regulation of TMP activities, registration and licensure of practitioners by established councils and boards [7,8].

On cross tabulation and chi square analysis, significant demographic factors that affect TMPs attitude towards integration include age ($p = 0.001$), as expected educational background ($p < 0.001$) and years of experience ($p < 0.05$). Factors affecting TMP's attitude documented in literature include gap in capacity, knowledge, beliefs and practices among the TMPs and between the TMPs and other health care providers, availability of funding for capacity building and infrastructure, equitable benefit sharing, government support, regulatory and policy centred factors, education and institutionalization [3,9].

4. Status of readiness (Practice) of Respondents towards Integration, Primary health care and Universal Health Coverage

The survey took into consideration various factors/ conditions that could determine their status of readiness towards integration with the view to knowing the currents gaps in practices that would need to be filled for integration to take place. Some of the elements considered were space and staff, forms of patient records in terms

of case report forms, relationship with orthodox medicine practice.

A. Space and Staff

Owumi, Kolo [10] (2018), stated that the promoters of herbal medicine have often portrayed a high level of accessibility to the community than orthodox health care providers and accessibility can be rated based on the infrastructure and number of staff available to a patient i.e., the health care provider to patient ratio. This study shows a lack in basic infrastructure as, 152 (45.1%) had space to accommodate less than 5 patients at once, about one-fifth, 80 (23.7%) of respondents had no space to attend to patients, 90 (28.6%) respondents could accommodate between 6 - 20 patients and only 8 persons had the capacity to accommodate above 20 patients (Fig. 2). Only 50 (14.8%) had facility to admit patients with

space for observation. Majority of respondents, 212 (62.9%) have a staff strength of 2 and below while 99, (29.4%) of respondents have a staff strength of 2-5 people (Fig. 2). Adequate room and staffing are central to quality health care delivery and can be a function of the number of patients being attended to, availability of resources and might depict how much importance TMPs attach to division of labour and teamwork in the health sector and could depict a knowledge gaps. Over crowdedness and shortage in personnel are also current problems with mainstream health care providers. Adequate staffing can be hindered by poor training, motivation, inadequate remuneration. Membership of one association or the other might be a step in the direction of having a framework for uniting the traditional medicine profession. Two-thirds, 204 (60.5%) of the respondents were members of one association or the other.
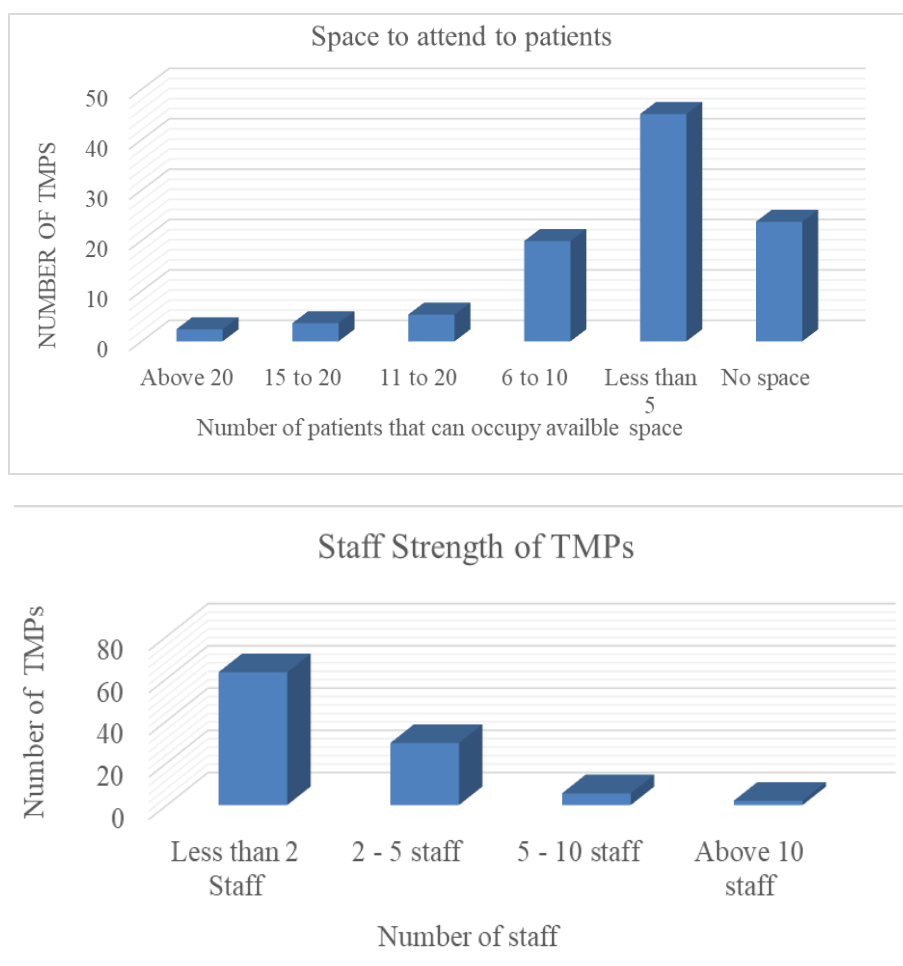

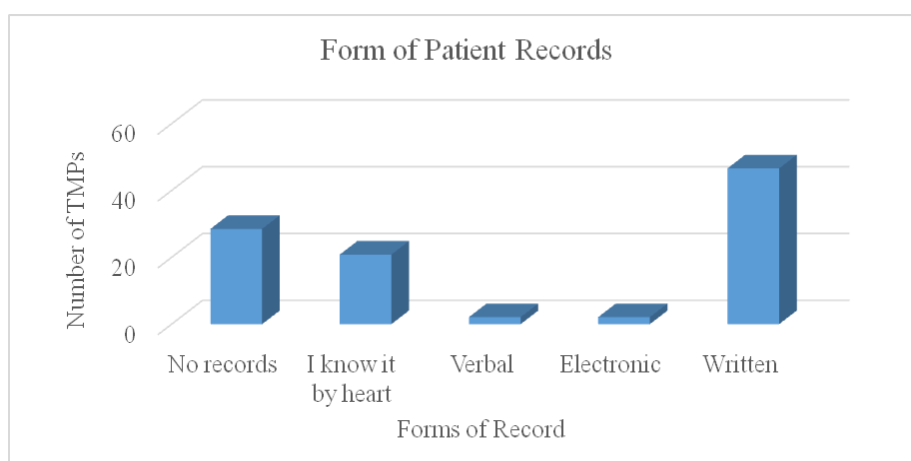**Fig. 2. Space and Staff strength of TMPs**

Fig. 3. Forms of record keeping by TMPs

Table 4. Relationship with orthodox medicine practice

Variable		Frequency (n)	Percentage (%)
Referrals			
To other TMPs	Yes	285	84.6
	No	52	15.4
To hospitals	Yes	260	77.2
	No	77	22.8
For laboratory investigations	Yes	237	70.3
	No	100	29.7
Preferences			
For government-based hospital or laboratories		152	45.1
For privately owned hospitals or laboratories		85	25.2
No Laboratory investigations		100	29.7

B. Patient Records (Medical records/Case Report Form)

More than two-thirds of respondents 241, 71.5% claimed to keep patient records. It was observed that none of the TMPs had or followed any case report nor medical report format and just randomly recorded their patient data. Of all respondents, only 157 (46.6%) kept written records while 7 (2.1%) kept electronic records. Some respondents, 77, (22.9%) saw memorising patient information and transferring the information verbally as a means of keeping patient information. Medical records are documents that give details about a patient's history, symptoms, diagnosis, and treatment plan along with outcomes. A patient record system is an information system that collects and stores clinical data either in written, printed or electronic forms [11]. From these definitions, more than half of the respondents can be said to have had no patient records. Respondents 160, (47.5%) stated that they attended to an average of 11-50 patients, 136 (40.4%) stated that they treated an average of 1-10 patients, while 12.2% treated

over 51 patients every month. With the absence of patients records, it was difficult to track the number of patients that visited each practitioner every month. None of the practitioners were able to provide a structured report format for record keeping. The lack of patient records could also be associated with the secrecy attached to patients visits. Not all patients might want their personal information and details stored by a TMP [12]. The absence of documentation as mirrored in this study was reported as one of the difficulties associated with the use of traditional and complementary medicine and shows a major gap in knowledge among TMPs. This has direct ties with secrecy of modes of operations, inefficient diagnosis and treatment plans and a non-formal organization, all of which are issues associated with the use of TM [13].

C. Relationship with Orthodox Medicine

The ability of TMPs to work with doctors and other practitioners, refer patients to the hospital, use results from laboratory tests in diagnosis is central to the effectiveness of integration and its

feasibility in Nigeria. The notion that the Doctors do not understand nor believe in the efficacy of traditional medicines might affect the working relationship between both TMPs and Doctors and in turn hinder integration [14,15]. As expected, more respondents, 285, (84.6%) referred patients to other TMPs than hospitals (77.2%). Over 70% of respondents had no direct working relationship with medical doctors, however 260, (77.2%) stated that they had at one point or the other, referred patients to the hospital. It was noteworthy that 237, (70.3%) had sent patients to the laboratory for tests depicting that the TMPs embraced the need for laboratory investigations to aid diagnosis and management. Of these 237, (70.3%) TMPs, 152 (45.1%) preferred Government hospitals/laboratories while 85, (25.2%) preferred privately owned hospitals or laboratories (Table 4). The question thus arises, do the TMPs in Nigeria have capacity to interpret laboratory results, to what extent is this capacity, do they depend on the interpretation and/or given by the laboratory scientists/doctors or the diagnosis as claimed by the patient? Diagnosis in African Traditional Medicine still relies on the interpretation of symptoms as described by the patient, assessing patient's health and spiritual history, inquiry, and confirmation by divination. With the advent of diplomas and other degrees in herbal medicine practice and the proliferation of associations of herbal medicine practitioners, there might be an addition of more scientific and conventional means of diagnosis [16,17]. Though it has been reported that there is a low usage of an integrated system across Africa as only a few orthodox practitioners are willing to refer patients to TMPs, in this study, a high usage of collaboration was observed among the TMPs as majority of them were willing to refer patients to hospitals and laboratories. This high notion by Nigerian TMPs differ with that of TMPs in Eritrea where only one in four TMPs stated that they had any collaboration with modern medical practitioners [18]. A Zambian study reported a moderate level of usage of an integrated system as TMPs made use of the orthodox health system by advising patients to make use of laboratory services prior to treatment by TMP. Interactions with some TMPs in Nigeria showed that patients who complained of diabetes, hypertension, were often requested to present results from diagnostic tests such as blood sugar tests, results of urinalysis, blood tests, details of measured blood pressure and results after treatment.

A huge burden has been put on the government as majority of the opinions in form of responsibilities laid out by the TMPs rest on the shoulders of the government. Ampomah, Malau-Aduli [19], in a systematic review of 93 articles documented the effectiveness of integrated health systems in Africa where in it was stated that integration of TM was essentially initiated by and large by governments involvement via the proposal and implementation of health policies along with other measures that can facilitate and improve the process and success of integration. In this same study by Ampomah, Malau-Aduli [19] awareness about possibility of integration as exemplified in the existence of integration in other climes such as China, India and some parts of Africa such as Botswana, knowledge of TM policies, usage of an integrated system wherein TMPs refer patients to Orthodox medicine practitioners and vice versa are central to an effective integrated system. Other factors besides knowledge, awareness, views, practice of TMPs that would determine the effectiveness and success of integration include acceptance and satisfaction of practitioners and patients [19,20]. TMPs across Africa has shown different levels of acceptance of a formally integrated health system based on their own roles and the roles given to other players in the system. A high level of acceptance of a form of TM integration the National Health Care Scheme among TMPs in Lagos was reported by Awodele, Agbaje [21]. Though TM is central to developing the capacity of national health systems, challenges facing its integration are enormous with the biggest issue centred around filling knowledge, education and scientific gaps in its practice to abate ethical issues, allow for documentation of TM practice, improve packaging and promotion of TM, improve attitude of orthodox practitioners [22]. Achieving or making progress towards UHC is one of the visions and targets world nations set when adopting the Sustainable Development Goals (SDGs) in 2015, will involve harnessing the inputs all forms of health care systems have to offer. Co-opting TMPs into this vision, will require improving their knowledge on the roles they play and strengthening of their practice to meet up with expectations of users and other health care providers. The traditional practices covering diagnosis and preparation of medicinal products have to be replaced with more justifiable and reproducible methods [13]. This is important as it has been reported that majority of TM users in sub Saharan Africa fail to disclose their TM use to their health care providers because of the fear of receiving improper care

and negative attitude of other practitioners towards TM use [23].

4. CONCLUSION

Traditional Medicine Practitioners are aware of the roles they need government to play to achieve integration and they have a positive attitude towards integration. Majority of Traditional Medicine Practitioners that participated in this study do not know what Universal Health Coverage means nor fully understand the roles they can play in achieving this in the country. They equally have limited knowledge of any health insurance scheme in the traditional parlance that mimics the National Health Insurance scheme. It is expected that these findings will be relevant to review of existing policies documents or initiation of new ones. Gaps to be filled to improve their readiness for integration include knowledge gaps in Health Insurance, record keeping / case report forms and their role in the areas of personal development and capacity building. These gaps can be reduced through intensive nationwide awareness creation and capacity building for the TMPs. Closing these gaps will help provide the critical mass of knowledgeable practitioners that will pioneer an integration that is based on standardized TM practice in Nigeria.

SUPPLEMENTARY MATERIALS

Supplementary materials available in this below link:

https://journaljamps.com/index.php/JAMPS/library Files/downloadPublic/20

CONSENT

As per international standard or university standard, Participants' written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

Ethical approval was obtained from NIPRD Health Research Ethics Committee (Approval number- NIPRD-HREC NHREC/039/21A-11)

AVAILABILITY OF DATA AND MATERIALS

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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