



Current Status of Mental Health Services at the Primary Healthcare Level in Northern Nigeria

E. E. Anyebe¹ · V. O. Olisah² · S. N. Garba³ · M. Amedu⁴

Published online: 2 July 2019

© Springer Science+Business Media, LLC, part of Springer Nature 2019

Abstract

Mental health services at the primary healthcare level remain critical in most developing countries, especially in resource-poor and crisis-stricken communities. This study explored the erstwhile mental health services, with particular reference to their availability, at the 47 primary healthcare centres in three selected states in northern Nigeria, with a view to drawing for action. Qualitative data were collected from a purposive sample of 13 participants through in-depth interviews. Additional data were also collected from observations during the visits (a checklist based on *minimum standards for primary healthcare services*) and clinic records at the centres. The data were analysed using content analysis and thematic clustering to indicate the status of the mental health services at the primary healthcare centres. Despite having the mental health units on the service delivery charts of the primary healthcare centres studied, none was providing any formal mental health services. There were only few but uncoordinated services in some centres essentially provided by individual primary healthcare service providers and a non-governmental organization found in one of the 47 primary healthcare centres in one of the three states investigated. In conclusion, mental health services at all primary healthcare centres in all the Local Government Areas in all the states visited are at best scarce, poorly and haphazardly rendered in a few places or completely absent in most centres. There is an urgent need to stimulate the primary healthcare system and other levels of government and their partners, to initiate or activate policies in favour of community-based mental health services to make these important services available at the community (primary healthcare) level for the promotion of mental health and treatment of mental illnesses.

Keywords Mental health services · Community health care · Northern Nigeria · Primary health care

Electronic supplementary material The online version of this article (<https://doi.org/10.1007/s10488-019-00950-1>) contains supplementary material, which is available to authorized users.

✉ E. E. Anyebe
ejembianyebe@gmail.com; anyebe.ee@unilorin.edu.ng

¹ Department of Nursing Sciences, Faculty of Clinical Sciences, College of Health Sciences, University of Ilorin, Ilorin, Nigeria

² Department of Psychiatry, Ahmadu Bello University Teaching Hospital, Zaria, Nigeria

³ Department of Nursing Sciences, Faculty of Allied Health Sciences, College of Health Sciences, Bayero University, Kano, Nigeria

⁴ Department of Psychiatry, Federal Medical Centre, Makurdi, Benue State, Nigeria

Introduction

Nigeria, with about 180 million people, with an approximate area of 9240 thousand km² (WHO 2005, 2012), is Africa's most populous country. Most (60–70%) of the population live in rural areas. The adult literacy rate ranges from 57.9 to 59.6% between 2010 and 2015 (National Bureau of Statistics 2010; World Data Atlas 2018). The life expectancy at birth is 55.2 (55.7 years for males and 55.7 years for females) (WHO 2018). The annual per capita total expenditure on health is US\$31, and Nigeria's proportion of health budget to GDP is 3.4%.

Nigeria has a diverse ethnic grouping with over 200 languages with Hausa, Yoruba and Ibo as the major ones (spoken by 60% of the population). The language for official and educational purposes in Nigeria is English, while Pidgin English is spoken at social and informal settings as a general language. Religion is a major component of Nigerian culture, with Christianity (predominant in the South) and

Islam (in the north) constituting two main religions. African traditional religions are still commonplace, practiced either exclusively or alongside and interwoven with Christianity or Islam.

The national health policy in Nigeria dates back to the colonial period. Nigeria operates a dual private and public health care delivery system. While the private sector accounts for 72% of secondary level of health care facilities (FMOH 2007), the public sector is based on a three-tier system of government, comprising of local, state and federal (Akhtar 1991). Each level of government has specific commitment to health care, operated at these three levels: Primary (Local), Secondary (State) and Tertiary (Federal). The tertiary care is at federal government-owned institutions with focus on specialised care and services in Teaching and Specialist Hospitals (FMOH 1988, 1991). The secondary health services are undertaken by State Governments, focusing more on the early detection and adequate and prompt treatment of diseases and or referrals. The implementation of primary healthcare has been devolved to Local Governments, the third-tier of government, responsible for the provision of primary care services. Despite the several attempts at reforming comprehensive health activities over the past years, many health experts (e.g. Asuzu 2008; Adefuye 2011) argue that Nigeria still lacks a clear and coordinated approach to primary health care.

Nigeria is divided into the north and south. In the north, there are three geopolitical zones, namely, north-east, north-west and north-central while the south is made up of the south east, south west and south south. Within Nigeria, resources are unevenly distributed (rural/urban; north/south). The north where this study is situated has many negative health and demographic indices: high maternity and infant mortality rates, high level of malnutrition, low education status especially among women, and poor health care services including mental health care services (WHO-AIMS 2006; National Strategic Health Development Plan, NSHDP 2010–2015; Abegunde 2013). Given the prevailing poor health indices in this zone, with many citizens living in abject poverty, over 70% of the population cannot access health care when required (NPHCDA 2007). This study covers both rural and urban primary care centres in the north.

Mental Health Services in Primary Health Care System

The World Health Organisation, WHO (1978, 2009) recommends the promotion of mental health, and the integration of mental health services into the primary health care system, to curtail the prevailing incidences of the mental health

problems, by early detection and prompt intervention. In Nigeria, as part of its national mental health policy, it is recommended that primary health care centres provide mental health services as part of the routine services at the primary health care level (Federal Ministry of Health, FMOH-Nigeria 1988). Over two decades after that policy, in 2011, the country through her Primary Health Care Development Agency (PHCDA) also developed the *minimum standards for primary health care services* that included a section/chapter on Guidelines for Mental Health Services at primary health care centres (FMOH 2011). This requires that mental health services be provided at all levels of health care, particularly at the primary health care level, to curb the rising prevalence of mental health problems.

Psychiatric service delivery did not start in Nigeria until early 20th century when the first asylum was established in Calabar in 1904, then in Yaba Lagos in 1907, both in southern Nigeria (Ayonrinde et al. 2004). These asylums, run by medical officers because of the lack of trained psychiatrists, provided only emergency and custodial care. Psychiatric services became evident with the establishment of the Aro Mental Hospital in Abeokuta, southern Nigeria in 1954, when Dr Lambo the first trained psychiatrist returned from the United Kingdom. The Aro Mental Hospital was established by the British colonial government in response to the need for improved mental health care in Nigeria (Asuni 1967). This later came to be known as the Neuropsychiatric Hospital, Aro.

Providing mental health services at the primary health care level is an agreed key strategy to promote the mental health of the population, while addressing existing problems. Such community-based mental health services include mental health information and psycho-education, detection and treatment of mental health problems especially minor disorders, mental health referral services, and rehabilitation of those living with mental illness at the community level. However, the situation analysis of Nigeria's mental health system has shown that the primary (community-based) mental health services are not available and accessible to all the population at the primary health care system (WHO-AIMS [Nigeria] 2006; FMOH 2001; Jack-Ide and Uys 2012), just like in many other countries such as Liberia and Sierra Leone (WHO 2007). Available data indicate that mental health services in many communities in developing countries vary from total absence in many primary health care centres to rudimentary, uncoordinated, and chaotic in some others (Odejide et al. 2010) despite the global emphasis on primary mental health care.

Some available data indicate that several models of providing mental health services at the primary health care level had been previously introduced, such as the Aro Village

model in Nigeria (www.neuroaro.com 2014). As part of its community psychiatric services, the hospital established the Aro village to provide community rehabilitative services as halfway houses for mentally ill patients who were treated at the hospital. It was a World Health Organization-recognised initiative. The Aro model was even adopted by some countries as means of providing community-based mental health services; a system which has become a model of providing community-based mental health care in many countries like Nigeria, Ghana and Europe (Asuni 1966) with varying degrees of success. Before the model could be implemented across Nigeria especially in northern Nigeria, it suffered setbacks in Nigeria; now it is being replaced by the Directorate of Community Mental Health Services of the Neuro-psychiatric Hospital, Aro. Currently, there are Directorates of Community Mental Health Services in tertiary mental hospitals in Nigeria, including University College hospital, Ibadan-Nigeria and Neuro-psychiatric Hospital, Aro (www.neuroaro.com 2014). For instance in Ogun State, Southwest Nigeria, through this programme, comprehensive mental health services are being provided in at least one Primary Health Care centre in every Local Government Area of the State. Although at relatively early stages of implementation, this programme has been able to establish community-based mental health services at the primary health care level in Ogun State in the southern part of Nigeria.

Empirical investigations into the status of community-based mental health services at the primary health care level have received little attention from researchers in developing countries, particularly in Nigeria. In particular, the state of mental health services at the primary health care level in northern Nigerian communities, to our knowledge, has not attracted any extensive study to date. This study therefore set out to investigate the current status (i.e. the availability) of mental health services in 47 communities in nine Local Government Areas of three states in northern Nigeria.

Primary Health Care Agency (Administrators) at the State Level = 2

Primary Health Care Coordinator at the Local Government Level = 9

Psychiatrists (Community Psychiatric Unit, Psychiatric Hospital = 2

Total = 13

Methods and Materials

Design

This exploratory, cross-sectional study adopted the qualitative methods, using two qualitative techniques, in-depth interview and a checklist, to broadly explore the phenomenon (Creswell et al. 2011) of mental health services at primary health care settings.

Setting

From three purposively selected states in Northern Nigeria (Gombe, Kaduna and Benue), nine Local Government Areas were selected through multi-stage sampling methods (see Map 1 in Supplementary material).

Study Population

A total of 11 purposively selected health administrators were involved: two heads of State Primary Health Care Development Agencies in two states, nine Primary Health Care Departments at the Local Government Areas in the hosting communities of the three states (see Table 1). The key informants were selected based on the fact that they are the principal operators of the primary healthcare system at the third tier of health care delivery (at the Local Government) in Nigeria or directly working with that level of service delivery. Their information on mental health services, combined with observations at the centres, would sufficiently represent the true status of these services at that level.

Two psychiatrists in a tertiary mental health institution in one of the states were also purposively selected because of their roles in community psychiatry, working directly with primary and secondary levels of health care. In summary, the key informants included:

Table 1 The selected key informants per State

S/No	Key informants	Gombe	Benue	Kaduna	Total
1	State primary health care directors	0	1	1	2
2	Primary health care managers at local government headquarters	1	1	1	3
3	Coordinators at primary health care centres	2	2	2	6
4	Community psychiatrists	0	0	2	2
Total		3	4	6	13

Research Instruments and Data Collection

An In-depth Interview (IDI) Guide, and Physical Observations (checklist) of Primary Health Care centres based on *minimum standards for primary health care services* (FMoH 2007) were used to collect data. The In-depth Interview (IDI) Guide was developed and adopted by the researchers to help elicit information from coordinators of primary healthcare at the Local Government Areas (similar to the District Health Services).

The *observation checklist* based on *minimum standards for primary health care services* was used to assess the basic requirements for the provision of mental health services. The checklist focused on availability or otherwise of a section of the centre for mental health services, at least a mental health specialist (such as a mental health nurse or general duty doctor assigned for mental health) and any mental health assessment tool available for adults and children who come for routine or specialized care.

Data Collection Procedures

Following the ethical clearance from the Health Research Ethics Committee of Ahmadu Bello Teaching Hospital Zaria, and the individual permissions obtained from study participants, data collection commenced, involving the principal author, and 15 trained research assistants. Nine (9) of the 15 assistants participated in the in-depth interviews, some of whom assisted in completing the Checklist of facilities at the centre.

All the in-depth interviews were conducted in English Language using the guide by the principal investigator/first author, and assisted by nine research assistants. All the interviews were audiotaped, with each lasting between 20 and 40 min. Notes were also taken during the interview.

The *checklist on minimum standards for mental health (services)* at primary health care centres (FMoH 2011)

was used to document the status the basic requirements for mental health care at the clinics. Photographs were taken of facilities or items related to mental health care. All documentations were kept in separate files for analysis.

Data Analysis

All the data from in-depth interviews with Primary Health Care Administrators and coordinators were transcribed and interpreted (Ellen 2003). Thematic clustering was done. Analysis included quoting informants' opinions and views verbatim to determine the current status (the availability) of mental health service in the areas, under two headings: (1) the general state of mental health services at primary health care centres, and (2) mental health assessment, early detection, treatment and community rehabilitative services.

Results

General Status of Mental Health Services Available at Primary Health Care centres

During in-depth interviews, the heads and coordinators of primary health care centres reported that there are no such designated sections or rooms for mental health services at their respective primary health care facilities.

Similarly, observations at the centres by the principal author also confirmed the absence at any such Sections/Rooms, except at one centre in Otukpo Local Government Area where a non-governmental organisation, called Christofael Blind Mission, organizes primary health care attendees for mental health talk in one part of the general outpatient department. This indicates no primary healthcare centre in this study had any formal arrangement, room or section of the clinic for the provision of mental health services to any group of clients (Table 2).

Table 2 Observation check list for facilities and services at PHC centres

SN	Facility/services	Available number of centre (N=47)	Remarks
1	Any section or room at your centre used for mental health care services	1	CBM provides a space at the centre ^a
2	Number of trained mental health workers at the centre	0	
3	Record of cases of mental illness seen at centre (from daily report book)	0	
4	An area with provision for privacy for counselling	None	
5	Drugs available for treating mental health problems	None	
6	Provision of community rehabilitative services (from clinic record book)	None	
6	Mental health posters and bills at centre	1	Only one centre seen with mental health related posters 3 posters
7	Standing orders on mental illness (from operational manual available at the centre)	None	

^aChristofael Blind Mission, an NGO in Benue State

During in-depth interviews, all primary health care coordinators and Executive Secretaries at primary health-care development Agencies agreed that provision of mental health services at the primary health care is a necessary component desired at the primary health care centres. However, all their narratives distilled to the fact “mental health services at the centres limited,” decriing the total neglect of promotion of mental health, and the lack of the existence of any “official structure for mental health care.”

However, when on inspection of the service charts of the centres, the mental health component (unit) was conspicuously included as part of the operational chart of the primary health care department (see Fig. 1).

When the principal researcher drew attention to the chart in one of the primary health care departments, it became obvious that mental health services were not actually provided despite their inclusion in the organizational chart. On this, a primary health care coordinator in one of the states simply laughed, and said, while still laughing:

Yes, it (mental health) is part of the components (of primary health care) quite alright but we are not offering it. I don't know why we are doing that! But honestly, to be frank with you (sic), mental health has been in silence (sic). The services have not been available. There is no directive from the government to do such things.

By mental health being “in silence,” the informant meant that nothing was being done about its inclusion in the routine services offered at the centres.

In Benue State, a deputy primary health care coordinator at the Local Government Area lamented that:

There is nothing official happening about mental health; my brother (turning to the principal researcher/ first author). Nothing, perfectly nothing is happening about mental health. So to simply answer your question: perfect No, nothing.

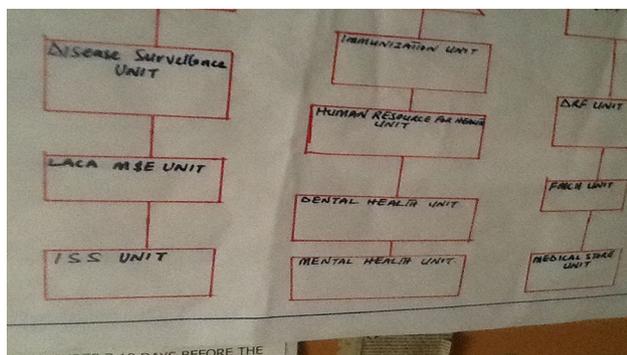


Fig. 1 Service delivery chart in one local government area’s primary health care department

Similar positions by almost all primary health care coordinators prevailed, citing lack of directive from their respective State Ministries of Health to start providing mental health services.

However, a primary health care official in Benue State while confirming the absence of any formal mental health services at the primary healthcare level narrated some non-governmental activities in the State; he said:

Nothing from the government; no specific attention directed to mental health. Government (Benue State) has no mental health services in (the) Local Government Areas. However, two years ago or so (this in-depth interview was conducted in January 2015), an Australian NGO called CBM came to train nurses in mental health for the State. They opened up five LGAs but nurses trained have not been absorbed... no specific attention was directed to mental health. Any case noted is referred.

The official identified the Christofael Blind Mission (CBM) as the only non-governmental organisation providing community mental health services. He added that a Church in Mkar in Benue State also includes mental health services in their activities at the Rehabilitation Centre, which focuses on leprosy primarily but that there is some mental health services being provided, mainly in form of rehabilitation.

A consultant psychiatrist in Kaduna during an in-depth interview seems to sum up the non-provision of the mental health services at the community level, exclaiming “...aah, the mental health services in the community is right now next to nothing.”

Despite the declaration of the non-existence of formal mental health services by primary health care coordinators, at interactions with workers during the trip for physical observations, some primary health care workers claimed providing some uncoordinated, but self-propelled mental health services for some clients at the centres. A few also reported having information on some form of mental health programmes in their states, identifying the type and the organisations running such mental health programmes (see Table 3). From the table, only Benue and Gombe states are reported to have some mental health programmes at the community level. However, unlike Gombe State where all the programmes claimed to be local government-driven, non-governmental organisations and faith-based health institutions are more involved in Benue State. Kaduna State did not appear to have any record of such programmes.

On further examination of the claims on these programmes during visits to, and in-depth interviews, at the respective communities, both the Grass Root Mental Organisation and Community Public Enlightenment on Drugs mentioned by some informants (personal conversation) as

Table 3 mental health programmes (mentioned) and their sponsors

Identified programmes	Organisation running it	Provider State
CCMHP	CBM	NGO/Benue
Health Restoration Centre Agboke	LGA	LGA/Benue
Community mental service day care Centre	NKST Church Mkar	Faith-based/Benue
Community public enlightenment on drugs	LGA	LGA/Gombe
Grass root Mental Organisation	LGA	Kaltungo/Gombe

Source PHC workers' interaction/Field data, 2015

CCMHP Comprehensive Community Mental Health programme, CBM Christofael Blind Mission, LGA Local Government Area

services in Kaltungo Local Government Area in Gombe State were found to be just ideas at a point in time; they were simply never activated. The primary health care coordinator at the Local Government confirmed this, laughing:

The Grass Root thing (sic) (referring to the Grass Root Mental Organisation) was presented at a seminar at the Secretariat (Local Government Area Secretariat) where the presenter just suggested the name. After that, I can't remember anybody ever talking about it again o. But we have things like that in mind.

He continued:

And the community public enlightenment on drugs you mentioned...yes, it is done occasionally, only when we visit schools and some communities. So we do this, but not that we have a programme on it at the local government level or any non-governmental organisation is taking it up.

Apparently, these programmes are basically adhoc public enlightenment events being undertaken at particular times, such as part of secondary school enlightenment programmes.

For the Comprehensive Community Mental Health programme reportedly being provided by Christofael Blind Mission, Health Restoration Centre Agboke (a government owned centre in Ohimini Local Government Area), and Community Mental Service Day Care Centre and Rehabilitation Centre (by NKST Mkar, a Christian hospital), were confirmed mental health activities being carried out by these institutions (based on both observations at visits and in-depth interviews) (see Fig. 2).

Early Detection (Assessment), Treatment Services and Community Rehabilitative Services

As shown in Table 2, services such as mental health assessment and early detection services, provision for the treatment of common mental health problems (using psychotropic drugs), and provision of community rehabilitative services were not found. No assessment form for detecting



Fig. 2 A visit by the principal author to CBM, Otukpo

mental health problem for any category of clients (the primary health care service users, including children, mothers or pregnant women). It was only at a health centre in Benue State that some form of mental health assessment is incorporated into their routine care for people living with HIV and AIDS. At Vandeikya in Benue State, a doctor (at the centre) said:

The only mental health service here (at the clinic) that is the one incorporated into the Assessment Form for those on HIV treatment (i.e. the psychological care assessment of people living with HIV and AIDS).

This suggests no formal mental health service has been included in the routine services of the primary health care centre.

Discussion of Findings

The findings of this study on availability of mental health services level at the primary health care have shown lack of these services, assessed by using the *Minimum Standards Primary Health Care* by the Federal Ministry of Health, Nigeria (NPHCDA 2007). According to this document,

indicators of the availability of mental health services at any primary health care facility include: a section or room at all primary health care centres designated for mental health services, a general duty doctor or a mental health specialist (a mental health nurse or psychiatrist) to provide such services, and the need to have and provide modern drugs for common mental disorders at the centres. As found by the researchers, none of such provisions exists in any of the centres investigated. Providing specialized health services—such as mental health services—at the primary health care level is one of WHO’s most fundamental health care recommendations. According to the WHO (2011, p. 4),

Governments tend to spend most of their scarce mental health resources on long-term care at psychiatric hospitals. Today, nearly 70 per cent of mental health spending goes to mental institutions. If countries spent more at the primary care level, they would be able to reach more people, and start to address problems early enough to reduce the need for expensive hospital care.

As shown in this study, official mental health services are being not provided at primary health care centres in the study areas, except a few instances where some religious and non-governmental organizations provided few uncoordinated mental health rehabilitative services. The inability of government’s health systems to organise mental health services in most countries has previously been noted elsewhere, and even in other parts of Nigeria (WHO 2008; WFMH 2009; Odejide et al. 2010).

This situation is however not new: Nigeria had been reported to lack mental health services at the community level, but has mostly concentrated more on curative psychiatric services being provided by the 12 regional psychiatric institutions in Nigeria (WHO-AIMS 2006). This indicates that several years after such findings, nothing much has changed in this regards, particularly in the northern Nigerian states. WHO’s (2011, p. 4) admonition on spending more on community-based mental health care has not been possible in these study areas, thus widening the mental health intervention gaps for community members. Many other studies (WFMH 2009; WHO 2009, 2012) pointed out wide intervention gaps (80–90%) for mental health clients in the developing countries especially in the communities. Findings by Omigbodun (2001) had reported such gaps when she found virtually no mental health services at the Primary Health Care level in the two local government areas studied in Oyo State, South West Nigeria; similar to those found in almost all centres in this study in northern Nigeria. In spite of the fact that the primary health care operational blueprint is meant to resolve these gaps, by providing interventions which are focused at reducing the incidence of mental health disorders (FMoH 2007), as enshrined in the primary health care definition, these services at this level continue to be

neglected, due largely to policy ineptitude and ill-equipped Primary Health Care workforce (Asuzu 2009; WHO-AIMS [Nigeria] 2006).

The implications of the non-existence of mental health services at primary healthcare centres are many. For example, in most Nigerian communities where modern health services are not available or inaccessible, community members usually resort to alternative pathways to health care, such as patronizing traditional healers and spiritualists (Jegade 2010; Gureje 2015). Thus, in two of the states used for this study (Gombe and Kaduna states), few community members had to resort to traditional healers for psychiatric care (Anyebe 2016) while the religious bodies also provide rehabilitative services.

Similarly, the absence of mental health section or room in the primary health care centres is a clear indication of lack of mental health services as recommended by Primary Health Care Development Agency (PHCDA) *Minimum Standards for Mental Health Services at Primary Health Care centres* in Nigeria. By the primary health care principles, mental health services should be provided alongside other primary health care services such as routine antenatal clinics, immunization services, treatment of common ailments, among others as an integrated whole. This has not been the case in the study areas. The lack of organised mental health services in any government-owned primary health care facilities in the study areas indicates a huge disparity in the whole operation of the primary health care in the three states, creating mental health service gaps in promoting mental health, preventing and managing mental health problems and disorders.

The need for incorporating mental health services as a component of primary health care at routine (day to day) service delivery is fundamental (WHO 1978; World Federation for Mental Health, WFMH 2009). This can take the forms of “pluses” during antenatal care, immunisation of children, when treating childhood and other diseases at the primary health care and health clinics, among others, thus improving the level and range of provision of mental health services and making such services more accessible. Mental health education, a quick mental status examination (for both children and adults) using short and established check lists e.g. The Child Behaviour Checklist for children (World Federation for Mental Health, WFMH 2009), Abuse Assessment Screen (AAS) for pregnant women, Psycho-social Risk Factors Checklist for pregnant women, Edinburg Postpartum Depression Scale, among others, are vital means through such integration can be achieved.

Limitations of the Study

This study adopted the qualitative research method. Therefore, generalizing these findings of this study to other areas is limited. In addition, the study could not cover the factors

that explain the non-existence of mental health services in the study areas. However, the available data were primary data from operators of the primary health care system in their respective states and thus available qualitative data from these key informants can account for the current status of mental health services in the selected states in northern Nigeria.

Conclusion

Mental health services at all primary healthcare centres in government-owned facilities in the northern Nigeria are quite scarce. The provision of fragmented services mentioned by few informants at primary healthcare centres is erratic, isolated, unorganised and uncoordinated. Using the Federal Government (of Nigeria) *minimum standards for primary healthcare services* document as a tool for assessing the availability of these services, formal and organised mental health services are non-existent in all the primary health care centres in the study states. Community members are therefore prone to explore and patronise alternative mental health interventions such as those provided by traditional medicine men and religious outfits. This has implications for the quality of mental health care for the Nigerian population who live mostly in rural settings where the primary healthcare system should be the key service outlet.

Recommendations

The need to implement and incorporate mental health services as a component of primary health care at all routine (day to day) service deliveries is paramount. Having desk offices for mental health in each State to coordinate the Local Government to ensure implementation should be made a government policy. Adequately equipped and staffed mental health service units can be piloted in at least one comprehensive primary health care centres in each Local Government Area in the study states to facilitate this integration. In terms of future research, there is need to investigate the factors likely to be responsible for the observed state of mental health services at the primary health care level in the study areas, while exploring the role of possible alternative interventions that community members are likely to explore.

Compliance with Ethical Standards

Conflict of interest None declared; there was no source of funding, grant for this study or any tie to any institutional or company interest.

Ethical Approval All procedures performed in study involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. This article does not contain any studies with animals performed by any of the authors.

Informed Consent Informed consent and assent were obtained from all respondents included in the study, in accordance with the Health Research Ethical Committee (HREC) of the Ahmadu Bello University, Ahmadu Bello University Teaching Hospital (Certificate No: ABUTH/HREC/K028/2014) and the Federal Neuro-psychiatric Hospital, Barnawa Kaduna Nigeria institutional review boards.

References

- Abegunde, D. (2013). Mental health care in Nigeria: Time for change. *The Nation Newspaper*.
- Adefuye, D. (2011). *Budgetary allocation to health, shame of a Nation*. Association of Nigerian Physicians in America Blog. Accessed March 20, 2012, from <http://www.anpa.org/blog/2011/03/30/budgetary-allocationtohealth-shame-of-a-nation>.
- Akhtar, R. (1991). *Health care patterns and planning in developing countries* (p. 264). Greenwood Press.
- Anyebe, E.E. (2016). *Mental health services at the primary health care level in three states in Northern Nigeria*; a PhD Thesis Submitted to School of Postgraduate Studies Ahmadu Bello University, Zaria. Accessed November 2, 2018, from <http://kubanni.abu.edu.ng>.
- Asuni, T. (1966). Development of mental health in Nigeria with particular reference to western Nigeria. In *Proceeding IV world congress of psychiatry*, 1067.
- Asuni, T. (1967). Aro hospital in perspective. *American Journal of Psychiatry*, 124, 71.
- Asuzu, J. (2009). The necessity for a health systems reform in Nigeria. *Journal of Community Medicine & Primary Health Care*, 16(1), 1–3.
- Asuzu, M. (2008). Nigeria still searching for right formula. *Bulletin of the World Health Organization*, 86(9), 664–666.
- Ayonrinde, O., Gureje, O., & Lawal, R. (2004). Psychiatric research in Nigeria: Bridging tradition and modernisation. *The British Journal of Psychiatry*, 184(6), 536–538.
- Creswell, J. W., Plano, V., & Clark, L. (2011). *Designing and conducting mixed methods research*. Thousand Oaks: SAGE.
- Ellen, T. (2003). *Analysing qualitative data*. Madison: University of Wisconsin.
- Federal Ministry of Health (FMOH). (1988). *National health policy*. Lagos: FG Press.
- Federal Ministry of Health (FMOH). (1991). *National mental health policy*. Lagos: FG Press.
- Federal Ministry of Health (FMOH). (2001). *DOTS implementation (FMOH)*. Abuja.
- Federal Ministry of Health (FMOH). (2007). *Integrated maternal, newborn, and child health strategy*. Abuja: Government of Nigeria.
- Federal Ministry of Health (FMOH). (2011). *Comprehensive EPI multi-year plan 2011–2015 updated*. Abuja: Government of Nigeria.
- Gureje, O. (2015). *Challenges of mental health care in Nigeria*. A webinar internet conference held on 15th December 2015.

- <http://www.neuroaro.com>. (2014). *Community mental health unit*. Accessed April 12, 2016, from www.neuroaro.com/index.php/about-us/departments/item/108-community-mentalth-health.
- Jack-Ide, I. O., & Uys, L. (2012). Barriers to mental health services utilization in Niger Delta region of Nigeria: service users' perspectives. *The Pan African Medical Journal*, 13(3), 15–19.
- Jegede, A. S. (2010). Mental health. In *African culture and health*, enlarged edition. Ibadan: Bookwright Publishers.
- National Bureau of Statistics. (2010). *Report of the Nigeria literacy survey June 2010*. Nigeriastat.gov.ng.
- National Strategic Health Development Plan (NSHDP). (2010–2015). Abuja: Federal Ministry of Health (FMOH), Government of Nigeria.
- National Primary Health Care Development Agency (NPHCDA). (2007). Minimum standards for primary health care in Nigeria. Abuja: PATHS2/Federal Ministry of Health/UKaid.
- Odejide, A. O., Morakinyo, J. J., Oshiname, F. O., Omigbodun, O., Ajuwon, A. J., & Kola, L. (2010). *Integrating mental health into primary health care in Nigeria: Management of depression in a local government (district) area as a paradigm*. <http://www.ncbi.nlm.nih.gov/pubmed/12607921>.
- Omigbodun, O. O. (2001). A cost-effective model for increasing access to mental health care at the primary care level in Nigeria. *The Journal of Mental Health Policy and Economics*, 4, 133–139.
- WHO. (1978). *Alma-Ata 1978: Primary health care*. Report of the international conference on primary health care Alma-Ata, USSR, 6–12 September 1978. Geneva: World Health Organisation.
- World Health Organisation (WHO). (2005). *Country status report 2005*. Nigeria: WHO Publications.
- WHO. (2007). Developing community mental health service. *Report of the regional workshop Bangkok, Thailand, 11–14 December 2006*: World Health Organization Regional Office for South-East Asia New Delhi, August 2007.
- WHO. (2008). *mhGAP Mental Health Gap Action Programme: Scaling up care for mental, neurological and substance use disorders*. Geneva: World Health Organization.
- WHO. (2009). *Need to address mental disorders in children: WHO calls for action on World Autism Awareness Day*. Accessed May 16, 2013, from http://www.who.int/mediacentre/news/releases/2009/autism_children_20090402.
- WHO. (2012). New WHO report: *Dementia: A public health priority*.
- WHO. (2018). *Nigeria: Life expectancy*. Accessed April 5, 2019, from <https://www.worldlifeexpectancy.com/nigeria-life-expectancy>.
- WHO-AIMS Report. (2006). Mental health system in Nigeria: A report of the assessment of the mental health system in Nigeria using the World Health Organization—Assessment Instrument for Mental Health Systems (WHO-AIMS). Ibadan, Nigeria.
- WHO Report. (2011). *WHO highlights global underinvestment in mental health care*. Accessed May 21, 2013, from http://www.who.int/mediacentre/news/notes/2011/mental_health_20111007.
- WHO/WFMH. (2009). *Integrating mental health into primary care: A global perspective*. Geneva: WHO.
- WHO/Wonca. (2007). *Integrating mental health services into primary health care: Mental health policy, planning and service development information sheet, sheet3*. Geneva: World Health Organization. Accessed June 12, 2015, from http://www.who.int/mental_health/policy/services/en/index.html.
- WHO/World Bank. (2004). The cost-effectiveness of primary care services in developing countries: A review of the international literature. Working paper no. 37. Disease Control Priorities Project.
- World Data Atlas. (2018). *Nigeria: Education-literacy*. Accessed April 5, 2019, from <https://knoema.com/atlas/Nigeria/topics/Education/Literacy/Adult-literacy-rate>.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.