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Medication-Assisted Treatment (MAT): Experience and Opinions of Substance Use Treatment Professionals in Nigeria

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Abstract

Introduction: Rates of drug use in Nigeria are among the highest globally, with the use of opioids associated with increased morbidity and mortality, more so with injecting drug use (IDU). Medication-assisted treatment (MAT) can reduce risks, and with a country-specific guideline in place, plans for country-wide implementation of MAT are underway. A notable barrier to MAT uptake is professionals' knowledge and attitudes. Aim: This study aimed to evidence the opinions of treatment and prevention substance use (SUD) professionals in Nigeria regarding MAT. Method: An online Google form was developed by the researchers to assess knowledge and attitudes towards MAT. This form was circulated among substance use professionals across the six geopolitical zones and the capital territory in Nigeria. Three hundred and thirty-eight professionals completed the questionnaire. Results: Most were medical doctors (53.8%) and worked in the public sector (89%). Average work experience was 11 years, and respondents estimated that nearly 1 in 10 Opioid use disorder (OUD) patients they cared for were IDUs. A majority (85.7%) endorsed the need for MAT in Nigeria, though had no previous experience (65.3%), training (74.2%), or knowledge of existing guidelines (68.7%). Over half (55%) en-

dorsed a preference for buprenorphine and methadone to be made available. Conclusion: Most endorsed positive attitudes towards MAT and its rollout. SUD professionals endorsed positive attitudes towards MAT for OUDs and its rollout in Nigeria. Awareness of published guidelines and training are unmet needs arising from this study.

Keywords

Medication-Assisted Treatment, Nigeria, Attitudes, Knowledge, Health Professionals

1. Introduction

Rates of drug use in Nigeria are among the highest globally, accounting for 14.3% of people aged between 15 and 64 years, according to the Drug Use Report in Nigeria 2018. This degree of use almost triples the global annual prevalence of any drug use of 5.6 percent among the adult population. Among high-risk drug users in Nigeria, almost 90% use opioids, among which 75% are injection users, and one–fifth are dependent on pharmaceutical opioids [1].

The unprescribed use of medications such as tramadol, codeine, pentazocine, and other injecting opioids is common [2]. Opioid use is associated with increased morbidity and mortality, more so with injecting drug use (IDU). A recent report in Nigeria revealed 1.9 million people living with HIV/AIDS, 9% of people who inject drugs had HIV/AIDS, compared to a 1.4% prevalence among the general population [3].

To address the high prevalence of opioid use disorders, Nigeria has developed programs and policies to support evidence-based interventions as well as the implementation of harm reduction intervention packages. More recently, Guidelines for Medication-Assisted Treatment for Opioid Dependence and Standard Operating Procedures for Medication-Assisted Treatment for Opioid Dependence have been developed for the implementation of Medication-Assisted Treatment (MAT), which was launched in 2022. The MAT guideline highlights scaling up of comprehensive services, including psychosocial support, ensuring safe and standardized clinical practices, promoting care and patient stability with integration of care for those with co-morbidities like HIV.

A recent feasibility study on MAT acceptability among people who inject drugs and relevant stakeholders showed that the treatment option is acceptable and useful; however, perceived stigma and discrimination by health personnel against IDUs have been stated as one of the hindrances to this treatment option [4]-[6].

This study aimed to evidence the opinions of treatment and prevention substance use (SUD) professionals in Nigeria regarding MAT, as MAT can reduce risks and, with a country-specific guideline in place, plans for country-wide implementation of MAT are underway.

2. Methods

A convenience sampling approach was employed to recruit mental health professionals across Nigeria from November 20 to December 20, 2023. Participants were drawn from various professional cadres, including medical doctors, nurses, laboratory scientists, pharmacists, clinical psychologists, counsellors, community health workers, social workers, and occupational therapists. Recruitment was conducted through professional WhatsApp groups via an online Google form designed by the researchers to assess attitudes towards MAT and knowledge of MAT guidelines among substance use professionals. To enhance geographic representation, authors based in the 6 geopolitical zones of the country facilitated the dissemination of the survey through their respective professional bodies.

Items were adapted from the opinions on the MAT questionnaire [7], the MAT guidelines for Nigeria [8], and the perception of researchers in their practice. A total of 34 questions were asked. The initial questions addressed participants' sociodemographic characteristics, including their profession, years of practice, awareness of the MAT guidelines in Nigeria, and receipt of MAT training. Other specific knowledge and attitude questions were drawn from the guidelines for MAT treatment for opioid dependence in Nigeria and the opinions on the MAT questionnaire [7] [8]. Some questions were dichotomous, while others were scored on a Likert scale. SUD professionals assessed the questionnaire for face and content validity. Informed consents were obtained from respondents, and anonymity and confidentiality were maintained throughout the research.

Responses were extracted from the Excel sheet created by the Google form to SPSS version 27 for further analysis.

3. Results

Sociodemographic characteristics of participants

A total of 338 substance-use treatment and prevention professionals completed the survey. The modal age class for participants was the 20 - 40-year age class, with slightly over half male (59.2%). At least half of the respondents were medical professionals (n = 180, 53.3%), followed by nursing professionals (n = 76, 22.5%) and psychologists (n = 31, 9.2%). The majority worked in government-funded settings (n = 299, 88.5%). On average, participants had 11.49 (SD:7.46) years of practice/experience and estimated that 14.29 (SD: 20.07) % of the service users they encounter inject psychoactive drugs. See **Table 1**.

Knowledge and experience with MAT

Though the majority (n = 290, 85.5%) endorsed the need for MAT in Nigeria, only about a third had practical experience with MAT. Over half (n = 186, 55.0%) expressed a preference for MAT programs to use methadone and buprenorphine, compared to methadone alone (35.5%) or buprenorphine alone (9.5%).

Most (n = 229, 67.8%) reported a lack of resources or collaborative initiatives at the community level to sustain a nationwide rollout of MAT, had not received

Table 1. Sociodemographic characteristics of respondents.

Variable	Freq N = 338	%
Age		
20 - 40	176	52.1
41 - 50	110	32.5
51 - 60	52	15.4
Gender		
Female	136	40.2
Male	202	59.2
Profession		
Community health officer	1	0.3
Community facilitator	1	0.3
CHEW	2	0.6
Doctor	180	53.3
Laboratory scientist	3	0.9
Nurse	76	22.5
Occupational therapist	2	0.6
Pharmacist	21	6.2
Psychologist	31	9.2
Counsellor	1	0.3
Social worker	20	5.9
Setting of practice		
Private	15	4.4
Public	299	88.5
NGO	23	6.8
Faith-Based Organization	1	0.3

training on MAT (n = 252, 74.6%), and were unaware of already published guidelines for MAT in Nigeria (n = 233, 68.9%). Furthermore, only about a third (n = 116, 34.3%) agreed that the country was ready for a nationwide rollout for MAT, while most were in favour of MAT services being domiciled in secondary/tertiary health facilities (n = 146, 43.2%), compared to community settings (27.5%) or a hybrid of both (29.3%). See Table 2.

Attitudes towards MAT

Professionals' attitudes towards MAT were mixed. Professionals surveyed on the one hand endorsed positive attitudes regarding the benefits of MAT; reducing harms from needle sharing, improvement in overall quality of life, managing physical dependence and compulsive drug use, as well as being made available even for those who abuse other psychoactive drugs.

Table 2. Experience of respondents on MAT.

Question	Freq	%
Is there a need for MAT in Nigeria?		
Yes	290	85.8
No	17	5.0
Not sure	31	9.2
Have you had any practice experience with MAT?		
Yes	117	34.6
No	221	65.4
Which opioids would you prefer for MAT intervention in Nigeria?		
Methadone only	120	35.5
Buprenorphine only	32	9.5
Methadone and Buprenorphine	186	55.0
Are there existing community resources or collaborations that can facilitate MAT implementation?		
Yes	109	32.2
No	229	67.8
Have you ever received training on MAT?		
Yes	86	25.4
No	252	74.6
Are you aware of the guidelines for MAT for opioid dependence in Nigeria?		
Yes	105	31.1
No	233	68.9
Nigeria is ready for the roll out of the MAT programme?		
Yes	116	34.3
No	43	12.7
Not sure	179	53.0
What type of treatment model would you prefer?		
OSS / Community based	93	27.5
Secondary/tertiary based	146	43.2
Hybrid	99	29.3

On the other hand, professionals were in favour of complete abstinence being the best goal of treatment, were concerned that it is just basically substituting one addiction for another, the policy that service users be compulsorily diverted to a SUD clinic if they don't quit drug use when on MAT, and that the majority who stop MAT often relapse.

The majority also disagreed with the assertion that MAT would create problems

of diversion and misuse, were not opposed to facilities being cited close to where they live or were concerned that it would raise levels of insecurity in the area where it is cited. See Table 3.

Table 3. Attitudes towards MAT.

Question	Freq	%
Many (or a majority of) people with opioid use disorders are able to stop on their own without support		
Strongly agree	20	5.9
Agree	10	3.0
Neutral	17	5.0
Disagree	158	46.7
Strongly disagree	133	39.3
MAT will reduce high risk of sharing needles and associated harms		
Strongly agree	135	39.9
Agree	156	46.2
Neutral	30	8.9
Disagree	9	2.7
Strongly disagree	8	2.4
MAT would improve the overall quality of life of persons with OUDs		
Strongly agree	135	39.9
Agree	161	47.6
Neutral	35	10.4
Disagree	5	1.5
Strongly disagree	2	0.6
MAT is only appropriate for patients with opioid dependence who have made at least one serious attempt at withdrawal		
Strongly agree	38	11.2
Agree	115	34.0
Neutral	64	18.9
Disagree	107	31.7
Strongly disagree	14	4.1
MAT can only be offered to persons who can access clinic daily for methadone and every other day for buprenorphine		
Strongly agree	41	12.1
Agree	112	33.1
Neutral	90	26.6

Continued

Disagree	**83**	**24.6**
Strongly disagree	12	3.6
People who use other drugs alongside with opioids should not get MAT		
Strongly agree	16	4.7
Agree	31	9.2
Neutral	68	20.1
Disagree Strongly disagree	180	53.3
Strongly disagree	43	12.7
MAT will create problems of medication diversion and misuse.		
Strongly agree Agree	33	9.8
Neutral	89	26.3
Disagree	76	22.5
Strongly disagree	121	35.8
Strongly disagree	19	5.6
The majority who stop MAT relapse		
Strongly agree	31	9.2
Agree	116	34.3
Neutral	129	38.2
Disagree	56	16.6
Strongly disagree	6	1.8
MAT is valuable in helping people successfully manage physical dependence, craving and compulsive drug use		
Strongly agree	129	38.2
Agree	185	54.7
Neutral	20	5.9
Disagree	3	0.9
Strongly disagree	1	0.3
The best goal of treatment should be complete abstinence from opioids		
Strongly agree	170	50.3
Agree	114	33.7
Neutral Disagree	33	9.8
Strongly disagree	19	5.6
Strongly disagree	2	0.6

Continued

MAT is just basically substituting one addiction for another		
Strongly agree	37	10.9
Agree	83	24.6
Neutral	56	24.6
Disagree	40	16.6
Strongly disagree	22	6.5
In areas where MAT clinics are situated the level of insecurity is raised		
Strongly agree	22	6.5
Agree	71	21.0
Neutral	107	31.7
Disagree	118	34.9
Strongly disagree	20	5.9
MAT clinics should be situated only in tertiary hospitals where there is supervision by a psychiatrist		
Strongly agree	77	22.8
Agree	93	27.5
Neutral	41	12.1
Disagree	107	31.7
Strongly disagree	20	5.9
There should be a policy that MAT clinic users should compulsorily attend SUD clinics after some time if they haven't been able to completely stop drug use		
Strongly agree	104	30.8
Agree	178	52.7
Neutral	38	11.2
Disagree	17	5.0
Strongly disagree	1	0.3
I would not like a MAT clinic to be situated near my house or vicinity		
Strongly agree Agree	27	8.0
Agree	52	15.4
Neutral	105	31.1
Disagree	115	34.0
Strongly disagree	39	11.5
A former drug user can be employed to work in a MAT clinic		
Strongly agree	55	16.3
Agree	154	45.6

Continued

Neutral	**71**	**21.0**
Disagree	39	11.5
Strongly disagree	19	5.6
If a member of my family has an OUD, having a clinic nearby would be convenient		
Strongly agree	76	22.5
Agree	173	51.2
Neutral	57	16.9
Disagree	22	6.5
Strongly disagree	10	3.0

Opinions on country readiness and roll-out

Respondents suggested that the nationwide rollout should involve mental health units in hospitals, primary health care centres, and non-governmental organisations for sustainability. Commonly cited barriers to effective roll-out were lack of trained personnel, lack of awareness, misuse, diversion, and inadequate facilities.

4. Discussion

This study examined the knowledge, experiences, and attitudes of substance use treatment and prevention professionals toward medication-assisted treatment (MAT) in Nigeria, providing timely evidence for ongoing policy and service delivery discussions. Overall, the findings demonstrate strong conceptual support for MAT alongside substantial gaps in training, system readiness, and alignment with evidence-based treatment paradigms.

The sociodemographic profile of respondents suggests that perspectives captured largely reflect those of experienced, medically oriented professionals working within government-funded services. This mirrors the structure of addiction and mental health service delivery across much of Nigeria, specifically, and sub-Saharan Africa in general, where public-sector facilities remain the primary providers of care [9] [10]. The relatively high estimated proportion of service users who inject drugs is notable and consistent with emerging data indicating increasing injection drug use in Nigeria and West Africa, particularly in urban centres [11] [12]. This reinforces the relevance of MAT as both a treatment and a harm-reduction intervention in the Nigerian context.

Although most respondents endorsed the need for MAT, only a minority had direct experience delivering such services. This discrepancy between perceived need and implementation capacity reflects patterns observed in other African settings where MAT has been introduced, including Kenya, Tanzania, and Senegal [13] [14]. Limited exposure to MAT, lack of formal training, and poor awareness of national guidelines suggest that policy advances in Nigeria have not yet trans-

lated into widespread clinical practice. Similar gaps have been documented globally during early phases of MAT scale-up, particularly in low- and middle-income countries where addiction medicine remains underdeveloped as a specialty [15].

Respondents' preference for programs offering both methadone and buprenorphine aligns with international best practice, which emphasizes treatment choice as a key determinant of engagement and retention [16] [17]. African pilot programs increasingly reflect this approach, recognizing the heterogeneity of opioid use patterns and patient needs [18]. However, the strong preference for MAT delivery within secondary and tertiary health facilities suggests persistent concerns about decentralization, lack of training, and limited professional experience, which may favour more supervised settings due to unfamiliarity. While hospital-based models may be appropriate during early implementation phases, global evidence indicates that primary care and community-based MAT can be safely and effectively delivered with adequate training and regulatory oversight [19]. Over-reliance on higher-level facilities may therefore limit scalability and access, particularly in resource-constrained settings.

Attitudes toward MAT were complex and, at times, contradictory. On one hand, professionals strongly endorsed its benefits in reducing injection-related harms, improving quality of life, and managing compulsive drug use. These views are well supported by global evidence demonstrating MAT's effectiveness in reducing HIV transmission, overdose mortality, and illicit opioid use [20] [21]. Studies in sub-Saharan Africa, though fewer in number, similarly report improvements in health and social functioning among MAT recipients [13].

Conversely, abstinence-oriented beliefs remained prominent. Concerns that MAT constitutes substitution of one addiction for another, coupled with expectations of relapse following discontinuation, reflect long-standing ideological tensions within addiction treatment [22]. Such views have been widely documented among healthcare providers in Africa and other regions where abstinence-based, moral, or faith-informed models of care predominate [10] [23]. While relapse after MAT cessation is common, contemporary addiction science conceptualizes opioid dependence as a chronic relapsing condition requiring long-term management rather than cure [24]. Persistent abstinence-centric attitudes among professionals may therefore undermine treatment retention and advocacy for sustained MAT access.

Notably, respondents largely rejected fears that MAT would increase community insecurity or lead to widespread diversion. This contrasts with early implementation experiences in parts of Eastern Europe and Asia, where community opposition posed a major barrier to the expansion of MAT [25]. The finding suggests that resistance in Nigeria may be driven less by community-level concerns and more by systemic limitations and professional uncertainty, highlighting an opportunity for targeted capacity-building interventions.

Opinions on country readiness further underscore these structural challenges. Respondents' emphasis on multi-sectoral involvement, including hospitals, pri-

mary health care, and non-governmental organizations, is consistent with integrated care models recommended for sustainable MAT scale-up [26]. Similar approaches have proven effective in African HIV and mental health programs through task-sharing and stepped-care frameworks [10]. However, the recurrent identification of inadequate training, limited infrastructure, low awareness, and concerns about diversion indicates that Nigeria may benefit from a phased rollout strategy supported by strong governance, monitoring, and professional education.

In summary, this study highlights a critical gap between professional endorsement of MAT and confidence in Nigeria's readiness to implement it at scale. While attitudes toward its benefits are largely favourable, persistent abstinence-oriented beliefs and significant capacity constraints remain. Addressing these challenges will require not only technical investments in training and infrastructure but also deliberate efforts to align professional perspectives with contemporary, evidence-based models of opioid dependence treatment. Lessons from African and global experiences suggest that without such alignment, the public health potential of MAT in Nigeria may remain unrealized.

The findings may be limited by selection and social desirability biases, as the use of a self-administered online survey (Google Forms) required internet access (including WhatsApp use) and may have disproportionately attracted respondents who were more engaged with, interested in, or held stronger views about MAT, as well as relying on self-reported attitudes.

5. Conclusions

This study demonstrates that substance use treatment and prevention professionals largely recognize the public health importance of medication-assisted treatment (MAT) for opioid use disorders, particularly in reducing injection-related harms and improving quality of life. However, this endorsement exists alongside limited practical experience, insufficient training, low awareness of national guidelines, and ambivalent attitudes rooted in abstinence-oriented treatment paradigms. These findings suggest that while professional acceptance of MAT is emerging, systemic and ideological barriers continue to constrain readiness for nationwide implementation. The preference for facility-based delivery and concerns about workforce capacity further underscore the need for a phased, well-regulated scale-up anchored within existing health systems and supported by strong governance structures.

Future research should prioritize implementation-focused studies that examine context-specific models for integrating MAT into Nigeria's health system, particularly at the primary care and community levels. Mixed-methods research exploring how professional attitudes influence MAT uptake, retention, and patient outcomes would provide valuable insights for targeted training interventions. Additionally, longitudinal studies assessing the impact of structured capacity-building programs on provider competence and attitudes are warranted. Research involving service users' perspectives and community stakeholders will also be critical to

inform culturally responsive and sustainable MAT models. Collectively, such evidence will be essential to guide policy, optimize service delivery, and ensure that MAT contributes effectively to addressing opioid-related harms in Nigeria.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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