



Communicating Non-Medical Treatment of Diabetes through Youtube in A Medical System with Indigenous Knowledge System

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ABSTRACT

Existing research has largely examined diabetes burden, traditional medicine, and the reliability of online health information as separate concerns, leaving unclear how digital platforms bring competing forms of therapeutic authority into patients' treatment decisions. This study examined how YouTube influences awareness, knowledge, and adoption of indigenous and non-medical diabetes treatments among patients aged 40 years and above attending selected Federal Medical Centres in South-East Nigeria. An explanatory mixed-methods design was adopted. Quantitative data were obtained from 340 diagnosed diabetes patients selected through simple random sampling, while qualitative data were generated through semi-structured interviews with 24 medical personnel and caregivers purposively selected across the study sites. The survey instrument was tested for internal consistency using Cronbach's alpha, and the quantitative and qualitative evidence were integrated during interpretation. More than 76% of respondents reported awareness of indigenous or non-medical diabetes treatments through YouTube, while 61.7% indicated that YouTube content had a high or very high influence on their adoption of such practices. Interview evidence further showed that healthcare professionals encountered patients whose treatment decisions were shaped by online claims, including unverified "miracle cure" narratives, raising concerns about misinformation, treatment delays, and declining confidence in professional advice. The study's original contribution lies in connecting three areas often examined separately digital health communication, indigenous diabetes-management knowledge, and therapeutic decision-making by demonstrating how YouTube can alter the communicative environment in which biomedical and non-medical treatment claims become visible and compete for credibility. The findings imply that digital health communication should move beyond simply increasing online information and instead develop culturally responsive, professionally verified, and digitally literate communication strategies capable of engaging the treatment narratives already shaping diabetes care in Nigeria.

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1. Introduction

Diabetes mellitus has become a major health problem whose significance extends beyond the number of people living with the condition to the ways in which diabetes is understood and managed within particular social settings. The International Diabetes Federation estimated that 589 million adults aged 20–79 years were living with diabetes globally in 2024, although the substantial number of undiagnosed cases indicates that official estimates do not fully capture the population negotiating the disease (Federation, 2025). The epidemiological evidence also cautions against treating diabetes as a geographically uniform problem. Issaka et al. (2023), using population-based data from Ghana, Burkina Faso, Guinea, and Niger, found an association between urban–rural location and type 2 diabetes and impaired fasting glucose. Although their cross-sectional design could not establish how geographical circumstances influence the formation of diabetes-related knowledge, the study demonstrates that the distribution of diabetes risk is connected to the environments in which people live.

This is significant for South-East Nigeria, where Sun et al. (2022) identified diabetes and prediabetes among adults living in an urban slum. Their study provides locally relevant evidence of the disease within a socioeconomically disadvantaged population, but its focus on prevalence does not explain how people in that setting obtain information about diabetes or evaluate advice about its management. Olamoyegun et al. (2024) subsequently synthesized Nigerian evidence on the prevalence and risk factors of type 2 diabetes mellitus through a systematic review and meta-analysis, thereby providing national-level evidence that is broader than the setting examined by (Kajal et al., 2024). However, national synthesis cannot, by itself, explain the local information environments through which diabetes-management knowledge acquires meaning. The epidemiological evidence therefore establishes the scale and geographical distribution of diabetes but leaves unexplained how people situated within particular contexts negotiate competing claims about managing the disease.

The question of how diabetes-management knowledge acquires authority becomes more important because treatment practices in African settings are not confined to biomedical medicine. Ekpore et al. (2024), through a systematic review of traditional medicine use among people with diabetes across Africa, demonstrated the continued place of non-biomedical treatment within diabetes care. The breadth of the review establishes the regional significance of the practice, although its synthesis of evidence from different African populations cannot explain how particular therapeutic claims become credible within specific communities. Meshesha et al. (2020) provide more detailed evidence of this coexistence through a cross-sectional study of 791 patients with diabetes attending four public hospitals in Addis Ababa, complemented by qualitative interviews with prescribers. Their finding that 51.7% of participants had used traditional medicine, with 45.1% reporting use within the preceding six months, and that 80.7% of recent users had used herbal medicines after commencing conventional antidiabetic treatment, demonstrates that traditional and biomedical therapies may be incorporated into the same patient's management of diabetes.

The finding that 58.7% of traditional-medicine users considered such treatment more potent or curative than conventional medicine further indicates that treatment decisions involve competing perceptions of therapeutic value (Meshesha et al., 2020). Nevertheless, the Ethiopian hospital-based population cannot be assumed to represent South-East Nigeria, and the cross-sectional design identifies reported practices and beliefs without explaining the communicative processes through which those beliefs are produced and sustained. Frimpong et al. (2024) further reviewed indigenous medicinal plants used in diabetes management in Africa, confirming the existence of

extensive plant-based therapeutic knowledge. Yet identifying available remedies does not explain how such knowledge is transformed into persuasive health messages or how its authority is negotiated against biomedical explanations. The literature therefore establishes the coexistence of competing therapeutic knowledge while leaving the communication through which that knowledge becomes credible insufficiently examined.

Digital media provide an important setting in which this competition over therapeutic knowledge can be observed, as [Mylavarapu et al. \(2023\)](#) assessed diabetes-related YouTube videos through a cross-sectional observational study and identified variation in the quality and reliability of information available on the platform. [Baig et al. \(2023\)](#) similarly examined YouTube content relating to diabetes mellitus and PCOS through a systematic review with cross-sectional analysis and applied established instruments, including DISCERN, the JAMA benchmark criteria, and the Global Quality Scale, to evaluate content quality. [Osman et al. \(2022\)](#), through a systematic review of YouTube as a source of health information, also identified concerns about the reliability of content available on the platform.

Collectively, these studies establish that the presence of diabetes information on YouTube does not guarantee that the information meets professional standards. Their methodological emphasis, however, remains largely directed towards evaluating the content rather than examining how credibility is produced within the communication process. A quality assessment can determine whether a video satisfies particular informational criteria, but it cannot explain why audiences may trust a communicator whose claims do not meet those criteria, or how presenter identity, narrative style, visual presentation, personal testimony, and therapeutic promises influence the perceived legitimacy of a message. This distinction is important because the communication problem is not simply the existence of inaccurate information; it is the possibility that competing forms of therapeutic knowledge may acquire authority through different communicative strategies.

This issue is particularly relevant to the study of Beat Diabetes Naturally (@BeatDiabetesTV), Health Coach SA (@HealthCoachSA), and African Herbal Wisdom (@HerbalWisdomAfrica), whose channel identities represent different possible bases of therapeutic credibility. Natural treatment, health coaching, and African herbal knowledge do not necessarily claim authority in the same way, and their communicative differences provide a basis for examining how diabetes-management knowledge is presented and legitimized within a digital environment. The present study does not assume that exposure to these channels causes particular treatment behaviors among people in South-East Nigeria; the existing evidence does not support such a causal inference.

Rather, the channels provide material for examining the communication of therapeutic authority in a context where biomedical and non-biomedical approaches to diabetes management already coexist ([Ekpor et al., 2024](#); [Meshesha et al., 2020](#)). Existing research has therefore established the geographical distribution of diabetes, documented the coexistence of traditional and biomedical treatment practices, and evaluated the quality of diabetes-related information on YouTube ([Baig et al., 2023](#); [Ekpor et al., 2024](#); [Mylavarapu et al., 2023](#); [Olamoyegun et al., 2024](#); [Osman et al., 2022](#); [Sun et al., 2022](#)). What remains insufficiently examined is how competing diabetes-management claims are communicated and made credible through identifiable digital sources.

Diabetes management is not shaped by biomedical treatment alone. [Ekpor et al. \(2024\)](#) found that traditional medicine remains part of diabetes care across African populations, while [Meshesha et al. \(2020\)](#), in a study of 791 patients attending four public hospitals in Addis Ababa, found that patients used herbal and conventional medicines alongside one another, with many traditional-medicine users considering such treatment more potent or curative. These findings are important

because they show that patients may negotiate diabetes management across different therapeutic systems rather than simply choosing between “modern” and “traditional” medicine. However, evidence from a pan-African review and an Ethiopian hospital population cannot explain how such competing forms of knowledge are understood within South-East Nigeria. [Frimpong et al. \(2024\)](#) further documented indigenous medicinal plants used in diabetes management across Africa, but identifying available remedies does not explain how their therapeutic claims acquire authority when communicated to the public.

YouTube makes this question more difficult because it places different forms of diabetes knowledge within the same communicative space. [Baig et al. \(2023\)](#); [Mylavarapu et al. \(2023\)](#); [Osman et al. \(2022\)](#), found substantial variation in the quality and reliability of health information available on the platform. Yet knowing that information is unreliable does not explain why particular messages continue to appear credible to audiences. Nor does it explain how channels such as Beat Diabetes Naturally (@BeatDiabetesTV), Health Coach SA (@HealthCoachSA), and African Herbal Wisdom (@HerbalWisdomAfrica) may draw authority from different sources, including natural treatment, coaching, and African herbal knowledge.

This is where the central gap lies. Existing studies have examined diabetes prevalence in Nigerian populations, traditional-medicine use in African settings, and the quality of YouTube health information, but these strands of evidence have rarely been brought together to examine how competing diabetes-management claims are communicated and made believable within a specific Nigerian context ([Olamoyegun et al., 2024](#); [Sun et al., 2022](#)). Consequently, there is limited understanding of how selected diabetes-related YouTube channels construct therapeutic authority and position biomedical, lifestyle, and indigenous approaches in relation to one another.

The present study addresses this gap by examining how selected YouTube channels construct and legitimize biomedical, lifestyle, and indigenous approaches to diabetes management, thereby extending existing research from the assessment of health-information quality to the communication processes through which therapeutic authority is produced. The study was guided by the following objectives: First, to ascertain the level of awareness of Southeast diabetes patients about non-medical and indigenous treatments of diabetes communicated through YouTube. Second, to ascertain the level of knowledge of Southeast diabetes patients about non-medical and indigenous treatments of diabetes communicated through YouTube. Third, to examine the extent to which YouTube influences the adoption and practice of non-medical diabetes management among patients in Southeast Nigeria. Fourth, to ascertain the perception of healthcare professionals toward the effect of YouTube’s indigenous and non-medical treatment messages on patient compliance with medical therapy.

This study focuses on diabetes patients attending Federal Medical Centers in the South-East geopolitical zone of Nigeria, including facilities such as the University of Nigeria Teaching Hospital (UNTH) Enugu, Federal Medical Centre (FMC) Owerri, and FMC Umuahia. The research specifically targets diagnosed patients aged 40 years and above who are managing either Type 1 or Type 2 diabetes. It also includes healthcare professionals and caregivers in these centers to provide professional perspectives on how YouTube’s indigenous and non-medical treatment messages influence patient compliance with prescribed medical therapy. The study is geographically limited to the South-East region because it has recorded a steady increase in diabetes prevalence, with cultural reliance on indigenous medicine and digital health information sources contributing to mixed treatment practices. Thematically, the study examines three main areas: patient awareness and knowledge of YouTube-based indigenous treatments, the extent of influence of such messages on medical compliance, and healthcare professionals’ perceptions of these effects, by combining

survey data and qualitative interviews, the study aims to generate region-specific insights that can guide public health communication, improve diabetes education, and foster responsible use of digital platforms for health information dissemination in Nigeria's healthcare sector.

2. Theoretical Framework

This study is anchored in Technological Determinism Theory (TDT), associated with [McLuhan \(1964\)](#) argument that communication technologies can reshape how people encounter information, organise meaning, and act upon knowledge. The theory is relevant because YouTube is not treated in this study as a neutral channel through which diabetes information simply passes; its accessibility, audiovisual format, interactivity, repetition, and algorithmic visibility shape how competing treatment claims become available to patients ([McLuhan, 1964](#); [Metzler & Garcia, 2024](#)).

TDT therefore provides the theoretical basis for linking YouTube exposure to the study's other variables. Exposure to diabetes-related videos may increase patients' awareness and knowledge of indigenous, non-medical, and biomedical treatment options, although greater exposure does not necessarily produce accurate knowledge ([Baig et al., 2023](#); [Mylavarapu et al., 2023](#)). The framework further proposes that repeated and visually presented messages may influence perceived credibility and trust, particularly where personal testimony and demonstrations make treatment claims appear familiar or convincing ([McLuhan, 1964](#); [Osman et al., 2022](#)). These processes may subsequently influence the adoption of indigenous and non-medical diabetes-management practices, including herbal remedies and other alternative treatments ([Ekipor et al., 2024](#); [Frimpong et al., 2024](#)).

The theory is applied because YouTube is not assumed to determine behaviour automatically as patients may already possess cultural knowledge of indigenous treatments, and previous treatment experiences may shape how online messages are interpreted ([Ekipor et al., 2024](#); [Meshesha et al., 2020](#)). The conceptual relationship proposed by the study is therefore YouTube exposure and platform characteristics → awareness and knowledge → perceived credibility and trust → adoption of indigenous and non-medical diabetes-management practices, with cultural knowledge and prior treatment experience potentially influencing these relationships ([McLuhan, 1964](#); [Mylavarapu et al., 2023](#)). TDT consequently enables the study to examine YouTube not merely as a source of diabetes information but as a technological environment that may influence what treatment knowledge becomes visible, credible, and actionable among diabetic patients in South-East Nigeria ([Metzler & Garcia, 2024](#)).

Diabetes management is often discussed as though the central difficulty lies in ensuring that patients receive sufficient medical information, yet the evidence suggests a more complicated problem: patients must continually decide which information to accept when managing a condition that requires treatment decisions beyond the clinic ([Arigo et al., 2019](#)). [Kerr et al. \(2024\)](#) identifies insulin therapy, lifestyle modification, and self-monitoring as continuing requirements of diabetes care, while [Arigo et al. \(2019\)](#) place digital technologies within the expanding effort to support health behaviour outside conventional healthcare settings. The importance of these studies lies in the tension between them, because the need for continuing guidance creates a space in which information from outside formal healthcare can become influential, but neither study explains how patients decide which sources deserve confidence ([Arigo et al., 2019](#); [Kerr et al., 2024](#)). [Bowo-Ngandji et al. \(2023\)](#) demonstrate the wider metabolic-health burden across African populations, but a population-level account of risk cannot show how an individual confronted with different explanations of diabetes determines what should be believed or practised ([Bowo-Ngandji et al.,](#)

2023). The problem, therefore, is not simply that diabetes requires more information, but that the sources competing to define appropriate management have not received equal analytical attention (Arigo et al., 2019; Bowo-Ngandji et al., 2023; Kerr et al., 2024).

The digital-health literature initially appears to offer part of this answer because it presents online communication as a means of extending diabetes support beyond face-to-face care (De Angelis et al., 2018; Kerr et al., 2024). De Angelis et al. (2018) examined how health professionals use social media to facilitate chronic disease self-management, while Kerr et al. (2024) synthesised evidence on digital interventions for type 2 diabetes mellitus, and both studies demonstrate that digital tools can support health-related behaviours beyond the immediate clinical encounter (De Angelis et al., 2018; Kerr et al., 2024). Their contribution, however, also exposes a limitation in the existing evidence, because structured digital interventions do not necessarily resemble the information environment in which patients independently search, watch, compare, and share health content. Smith et al. (2023) reinforce the educational value of video through a randomised study of video-based materials relating to glucose-monitoring technology, but a video prepared for an intervention cannot explain what happens when patients encounter multiple videos produced for different purposes and grounded in different forms of expertise (Smith et al., 2023). The question consequently changes from whether digital media can educate patients to how patients distinguish between competing claims when the medium itself does not guarantee that the speaker is medically qualified or that the information has been clinically validated (Osman et al., 2022; Smith et al., 2023).

Research on YouTube makes this distinction particularly important because it has repeatedly shown that the presence of health information on the platform does not establish its quality (Baig et al., 2023; Mylavarapu et al., 2023; Osman et al., 2022). Mylavarapu et al. (2023) assessed diabetes-related YouTube videos, Baig et al. (2023) examined videos on diabetes mellitus and PCOS, and Osman et al. (2022) reviewed the wider reliability of YouTube as a health-information source (Baig et al., 2023; Mylavarapu et al., 2023; Osman et al., 2022). Their findings are important because they challenge the assumption that visibility and accessibility are equivalent to trustworthy health communication, but their emphasis on quality and reliability leaves a further question unanswered (Baig et al., 2023; Mylavarapu et al., 2023). If reliability is assessed according to professional or scientific criteria, why might audiences still be drawn to messages that do not meet those criteria, and why might medically sound information fail to command the same attention (Baig et al., 2023; Osman et al., 2022). This is where the existing literature begins to move beyond the problem of misinformation, because the more difficult issue is not simply whether a claim is accurate but how a claim comes to appear believable to the person receiving it.

That question cannot be answered by examining digital content in isolation from the therapeutic beliefs already present in the communities where such content circulates (Ekpor et al., 2024; Meshesha et al., 2020). Ekpor et al. (2024) demonstrate through a systematic review that traditional medicine remains part of diabetes management across African populations, while Meshesha et al. (2020), studying 791 patients attending four public hospitals in Addis Ababa and interviewing prescribers, found evidence of patients using herbal and conventional medicines within the same treatment experience. The significance of Meshesha et al. (2020) findings is not simply that traditional medicine is used, but that the boundary between biomedical and traditional treatment may be considerably less clear in everyday patient practice than a simple biomedical-versus-traditional distinction suggests (Meshesha et al., 2020). Frimpong et al. (2024) further document the range of indigenous medicinal plants used in diabetes management across Africa, but their review identifies therapeutic knowledge rather than examining how that knowledge becomes

persuasive when communicated to an audience. The unresolved issue is therefore the point at which existing therapeutic beliefs meet digital communication, because a YouTube message does not enter an empty space but may reinforce, reshape, or challenge knowledge that patients already recognise as meaningful (Ekpor et al., 2024; Frimpong et al., 2024; Meshesha et al., 2020).

This missing connection is particularly important because the literature on traditional medicine and the literature on YouTube have largely answered different questions about diabetes management (Ekpor et al., 2024; Frimpong et al., 2024; Mylavarapu et al., 2023). Research on traditional medicine has established what alternative therapies are used and how widely they appear in diabetes care, whereas research on YouTube has concentrated mainly on the quality and reliability of the information available on the platform (Ekpor et al., 2024; Frimpong et al., 2024). Neither body of research adequately explains what happens when indigenous therapeutic knowledge is presented through a digital communicator, supported by personal experience, given visual form, and encountered repeatedly by viewers. This is the analytical space occupied by channels such as Beat Diabetes Naturally (@BeatDiabetesTV), Health Coach SA (@HealthCoachSA), and African Herbal Wisdom (@HerbalWisdomAfrica), whose different orientations provide an opportunity to examine how diabetes advice may seek legitimacy through natural treatment, coaching, or African herbal knowledge (Ekpor et al., 2024; Frimpong et al., 2024). The significance of these channels for the present study is therefore not that their messages should be presumed to be either correct or misleading, since existing evidence does not establish that conclusion, but that they allow the production of therapeutic authority to be examined as a communication process (Baig et al., 2023; Mylavarapu et al., 2023; Osman et al., 2022).

The need to examine that process within South-East Nigeria follows from the limitations of the existing Nigerian evidence rather than from an absence of research on diabetes in the country (Kajal et al., 2024; Olamoyegun et al., 2024). Kajal et al. (2024) identified diabetes and prediabetes among adults living in an urban slum in South-East Nigeria, thereby showing that the disease burden is visible within a specific local population rather than only in national estimates. Olamoyegun et al. (2024) broadened the evidence through a systematic review and meta-analysis of type 2 diabetes in Nigeria, but the national scale of their synthesis necessarily gives less attention to the particular communication environments in which diabetes-management beliefs are formed and contested (Olamoyegun et al., 2024). The contribution of these studies is therefore substantial in establishing the Nigerian health context, but neither examines how patients encounter and evaluate competing therapeutic claims through YouTube. Similarly, evidence from Ethiopia and broader African populations helps establish the relevance of therapeutic pluralism but cannot explain how digital diabetes messages acquire meaning within South-East Nigeria (Ekpor et al., 2024; Frimpong et al., 2024; Meshesha et al., 2020). The gap is consequently not a general lack of research on diabetes or digital health, but the absence of sufficient explanation of how diabetes-management authority is communicated and negotiated within this specific context (Kajal et al., 2024; Olamoyegun et al., 2024).

The literature therefore leads to a more specific research problem than the familiar claim that social media can either educate or misinform patients. Existing studies have separately established the demands of diabetes self-management, the usefulness of digital interventions, the uneven quality of YouTube information, the continued relevance of traditional medicine, and the burden of diabetes in Nigeria (De Angelis et al., 2018; Ekpor et al., 2024; Kerr et al., 2024; Mylavarapu et al., 2023). What these studies have not adequately brought together is the question of how different therapeutic claims become credible when they are communicated through identifiable digital

sources and encountered by audiences who may already hold biomedical, lifestyle, or indigenous understandings of diabetes (Ekpor et al., 2024; Frimpong et al., 2024; Mylavarapu et al., 2023). The present study extends this body of work by examining how selected YouTube channels construct and communicate competing forms of diabetes-management knowledge, thereby shifting attention from the narrower question of whether online information is reliable to the deeper communication question of how therapeutic authority is produced and negotiated in relation to South-East Nigeria (Baig et al., 2023; Ekpor et al., 2024; Kajal et al., 2024; Mylavarapu et al., 2023).

3. Method

This explanatory mixed-methods study combines a quantitative survey of diagnosed diabetes patients aged 40 years and above with qualitative interviews with clinicians and caregivers to examine YouTube's role in communicating non-medical diabetes treatments in South-East Nigeria (Creswell & Clark, 2018). The study sites are Federal Medical Centre Owerri, Federal Medical Centre Umuahia, Federal Medical Centre Abakaliki, Federal Medical Centre Asaba, and the University of Nigeria Teaching Hospital, Enugu.

Quantitative sampling uses simple random sampling from each facility's diabetes register. Eligible respondents are adults aged 40 years and above who have been diagnosed with diabetes for at least six months and attend the selected clinics during the study period. Cochran's formula for an infinite population was used to determine the sample size at a 95% confidence level, 50% population proportion, and 5% margin of error (Cochran & Cochran, 1977). Cochran's formula for an infinite population (95% confidence, $p = 0.5$, $e = 0.05$) yields in Eq. (1).

$$\frac{n0 = (Z^2 \cdot p \cdot q)}{e^2} \quad (1)$$

The sample size was therefore rounded to 384 respondents. Based on the combined clinic caseload of 2,220 patients, the sample was proportionately allocated as follows: UNTH Enugu, 138 respondents; FMC Asaba, 90 respondents; FMC Owerri, 69 respondents; FMC Umuahia, 52 respondents; and FMC Abakaliki, 35 respondents, giving a total of 384 respondents. Purposive sampling was used to identify key informants for the qualitative strand, comprising three medical personnel consultant/physician, diabetes nurse educator, and dietician and three caregivers per site, yielding 24 interviews, selected because of their direct experience of diabetes care and patients' treatment practices (Palinkas et al., 2015).

A structured questionnaire was administered by trained research assistants in clinic waiting areas or through secure electronic forms. A semi-structured interview guide explored clinicians' and caregivers' perceptions of YouTube influence, pathways of misinformation, and observed clinical consequences. A pilot study involving 20 patients and two clinicians was conducted in Parkline Teaching Hospital to assess the clarity and suitability of the instruments before the main study, with pilot participants excluded from the final sample (Creswell, 2009). Content validity was established through expert assessment of the instruments by specialists in diabetes care, health communication, and research methodology. Internal consistency was assessed using Cronbach's alpha for multi-item scales, including diabetes knowledge and trust in YouTube-based health information (Tavakol & Dennick, 2011).

$$\alpha = K / (K - 1) \quad (2)$$

$$(1 - (\sum \sigma^2_i / \sigma^2_t))$$

The reliability coefficient was approximately $\alpha = 0.72$, indicating acceptable internal consistency in Eq. (2). Where individual items weakened the reliability or lacked conceptual clarity, they were

reviewed before the final administration of the questionnaire. Although 384 questionnaires constituted the calculated target sample, 340 valid questionnaires were retained for analysis after data screening. The difference resulted from incomplete or unusable responses and was reported separately from the original calculated sample. The valid response rate was therefore 88.5% ($340/384 \times 100$). Quantitative data were analysed using SPSS, while qualitative transcripts were thematically analysed following [Braun & Clarke \(2006\)](#) approach using NVivo.

Integration occurred during interpretation, with the qualitative findings used to explain and deepen the quantitative results. Specifically, survey findings on YouTube exposure, diabetes knowledge, trust in online information, and reported use of non-medical treatments were compared with clinicians' and caregivers' accounts of how online information influenced patients' perceptions and treatment decisions. This integration enabled the study to identify areas of convergence and divergence between reported patient patterns and the experiences observed by healthcare providers and caregivers ([Creswell & Clark, 2018](#)).

4. Result and Discussion

Out of the 385 questionnaires that was distributed, 360 (93.5%) was returned and 340 (6.5%) was found valid for the study. Hence the total of questionnaire used for the study is 340.

Table 1. Demographic Characteristics of Respondents

Variable	Category	Frequency (f)	Percentage (%)
Gender	Male	190	55.9
	Female	150	44.1
Age (Years)	40–49	130	38.2
	50–59	110	32.4
	60 and above	100	29.4
Education Level	Primary	40	11.8
	Secondary	110	32.4
	Tertiary	190	55.8
Duration with Diabetes	1–5 years	120	35.3
	6–10 years	140	41.2
	Over 10 years	80	23.5

[Table 1](#) presents the demographic profile of the 340 respondents drawn from five major federal health institutions in South-East Nigeria. The majority were male (55.9%), indicating a slightly higher participation among men living with diabetes. Most respondents (38.2%) were within the 40–49 years age range, followed by those aged 50–59 years (32.4%), reflecting the higher prevalence of diabetes among middle-aged and older adults. Educationally, over half (55.8%) of respondents possessed tertiary education, suggesting a population capable of comprehending digital health information disseminated via YouTube. Furthermore, 41.2% had lived with diabetes for 6–10 years, implying sufficient experiential knowledge to assess both medical and indigenous treatments. The demographic structure highlights an informed and digitally literate patient population likely to interact with online health communication. This diversity across age, education, and duration with diabetes strengthens the representativeness and reliability of findings, ensuring balanced insights across varying socioeconomic and health backgrounds within the sampled hospitals (UNTH Enugu, FMC Owerri, Umuahia, Abakaliki, and Awka).

Table 2. Awareness of Non-Medical and Indigenous Diabetes Treatments Communicated through YouTube

Response	Frequency (f)	Percentage (%)
Strongly Aware	120	35.3
Aware	140	41.2
Undecided	40	11.8
Unaware	30	8.8
Strongly Unaware	10	2.9

Table 2 reveals that a majority of diabetes patients (76.5%) were either “aware” or “strongly aware” of non-medical and indigenous treatments of diabetes communicated via YouTube. This indicates widespread exposure to alternative health information on digital platforms among the study population. Only 11.7% of respondents expressed unawareness, suggesting that YouTube has become a prominent medium for sharing diabetes-related indigenous practices. The result aligns with previous studies emphasizing the growing health information-seeking behavior of older adults online. The relatively small percentage of undecided respondents (11.8%) reflects minimal uncertainty about such online content. These findings imply that YouTube serves as a crucial channel for raising awareness about complementary diabetes management, although the quality and credibility of such content remain unverified. It underscores the need for health educators and practitioners in institutions like UNTH Enugu and FMC Owerri to collaborate with verified content creators to disseminate evidence-based indigenous information to diabetes patients responsibly.

Table 3. Knowledge of Non-Medical and Indigenous Treatments Communicated through YouTube

Response	Frequency (f)	Percentage (%)
Very Knowledgeable	90	26.5
Knowledgeable	150	44.1
Neutral	50	14.7
Low Knowledge	35	10.3
No Knowledge	15	4.4

Table 3 shows that 70.6% of respondents indicated being either “knowledgeable” or “very knowledgeable” about non-medical and indigenous diabetes treatments learned from YouTube. This high level of knowledge may be attributed to the platform’s accessibility and visual demonstration features that simplify understanding of indigenous remedies. However, 14.7% remained neutral, possibly reflecting doubts about the reliability of online content. Only 14.7% of participants admitted to having low or no knowledge, which reinforces YouTube’s role in enhancing patient education. These findings correspond with similar studies in digital health literacy, where online videos were found to boost self-efficacy and understanding of chronic illness management. The implication is that many patients internalize and apply knowledge from YouTube without necessarily validating the authenticity of the content. Hence, integrating digital media literacy and professional oversight could strengthen safe health communication among diabetic populations in hospitals across South-East Nigeria.

Table 4. Extent of YouTube Influence on Adoption of Non-Medical Diabetes Management Practices

Response	Frequency (f)	Percentage (%)
Very High Influence	80	23.5
High Influence	130	38.2
Moderate Influence	70	20.6
Low Influence	40	11.8
No Influence	20	5.9

Findings in Table 4 reveal that 61.7% of diabetes patients reported a “high” or “very high” influence of YouTube content on their adoption of non-medical diabetes management practices. This suggests that online media significantly shapes behavioral decisions among patients, especially regarding herbal remedies, dietary changes, and lifestyle modifications. Moderate influence was noted among 20.6% of participants, while 17.7% indicated minimal or no influence, possibly reflecting skepticism toward digital information or preference for conventional medical advice. The overall trend underscores YouTube’s persuasive power in shaping patient health choices and underscores the dual-edged nature of such influence promoting both helpful and potentially risky practices. Given that these respondents are drawn from tertiary medical centers like UNTH Enugu and FMC Abakaliki, where access to medical professionals is available, the finding highlights an urgent need for regulated digital health communication strategies. Medical practitioners should be actively involved in producing or endorsing verified indigenous treatment content to guide informed patient decisions and minimize misinformation risks.

Interview Question 1

How do healthcare professionals perceive the influence of YouTube’s indigenous and non-medical treatment messages on patients’ compliance with prescribed medical therapy?

Misinformation and Misguided Confidence

Healthcare professionals described YouTube as a double-edged platform while informative, it amplifies unverified indigenous claims that foster false confidence and mislead patients into abandoning prescribed diabetic treatments;

Medical Doctor, UNTH Enugu:

“Most patients now come to consultations quoting what they watched on YouTube. They believe bitter leaf or turmeric can replace insulin therapy completely.”

Nurse, Federal Medical Centre Owerri:

“I have handled several cases where patients stopped medication after watching videos that promised herbal cures. The consequences are often severe.”

Pharmacist, Imo Specialist Hospital:

“Patients argue strongly for herbal treatments because someone online claimed it cured diabetes. They forget that these claims lack any scientific validation.

Dietitian, AE-FUTHA Abakaliki:

“It’s disheartening. Some patients are misled into thinking herbs will normalize sugar levels faster. It makes dietary management harder.”

This theme reveals that YouTube-fueled misinformation gives patients misplaced confidence in unverified indigenous treatments, directly reducing adherence to prescribed therapies. Healthcare professionals report consistent cases of relapse due to this false assurance, indicating that misinformation severely undermines diabetic management outcomes and medical authority in hospital settings.

Erosion of Trust in Medical Advice

Healthcare workers emphasized that YouTube has gradually weakened patient trust in medical professionals. Many now prioritize anecdotal testimonials from online figures over scientifically validated hospital recommendations.

Pharmacist, Imo Specialist Hospital:

“When a YouTube influencer claims they were cured naturally, patients stop believing in our prescribed medications. They view us as profit-driven.”

Nurse, UNTH Enugu:

“Some patients openly say we hide ‘real cures’ to keep them dependent on drugs. That perception comes straight from YouTube.”

Medical Doctor, FMC Owerri:

“YouTube has replaced hospital consultation for some people. They only come when complications set in.”

Dietitian, AE-FUTHA Abakaliki:

“Trust has shifted online. It’s hard to convince patients that what they saw on social media might harm them.”

The findings indicate a profound erosion of trust in medical practitioners due to YouTube’s influence. Patients perceive healthcare professionals as less credible than online voices. This shift undermines compliance and complicates patient–provider relationships, reinforcing the urgency of restoring professional authority in digital health communication.

Interview Question 2

What strategies can be used to mitigate the negative impact of YouTube’s indigenous and non-medical treatment messages on patient adherence?

Patient Education and Digital Literacy

Participants consistently emphasized enhancing patients’ digital health literacy. Educating patients about credible online health sources can reduce the spread and acceptance of misleading indigenous diabetes treatments:

Medical Doctor, UNTH Enugu:

“Most of my patients can’t differentiate between credible medical channels and misleading ones. We need structured health education programs.”

Nurse, FMC Owerri:

“I use group counselling sessions to show patients how to verify health claims online. It helps them make safer choices.”

Pharmacist, Imo Specialist Hospital:

“Digital literacy should be part of community health outreach. When people understand misinformation, they make better treatment decisions.”

Dietitian, AE-FUTHA Abakaliki:

“Education is the strongest tool. Teaching patients how to identify legitimate sources would save many from misinformation-related relapse.”

This theme underscores the importance of sustained patient education to combat misinformation. Strengthening digital literacy builds patient capacity to evaluate online claims critically, fostering improved adherence to medical therapies and bridging the gap between hospital-based health education and social media influences.

Collaboration and Regulation

Healthcare professionals proposed coordinated strategies involving government agencies, medical institutions, and digital influencers to ensure dissemination of credible YouTube content and regulate harmful indigenous health claims:

Pharmacist, Enugu State University Teaching Hospital:

“Medical associations should create partnerships with content creators to spread verified diabetes information.”

Dietitian, National Orthopaedic Hospital Enugu:

“Government should work with YouTube to flag or remove deceptive health content about diabetes cures.”

Medical Doctor, FMC Abakaliki:

“Regulation is key. When regulatory bodies monitor health misinformation, fewer patients fall victim.”

Nurse, Imo Specialist Hospital:

“We can collaborate with popular Nigerian influencers who already have audiences to communicate accurate messages.”

Collaboration between healthcare bodies, digital regulators, and credible influencers can counteract YouTube misinformation effectively. By enforcing accountability and promoting verified medical information, such partnerships would empower the public to make safer, evidence-based health decisions, improving long-term treatment compliance among diabetic patients in South-East Nigeria.

Discussion

The finding that 76% of diabetic patients had learned about indigenous or non-medical treatments through YouTube indicates that the platform has become part of the environment in which diabetes-management knowledge is formed. Its significance lies not simply in the extent of YouTube use, but in the way its audiovisual format, constant accessibility, and repetitive circulation can bring particular treatment claims into patients’ everyday field of attention ([Arigo et al., 2019](#); [McLuhan, 1964](#); [Rhee et al., 2020](#)). This gives greater specificity to the evidence of [Ekpor et al. \(2024\)](#) and [Frimpong et al. \(2024\)](#), whose studies establish the continuing place of traditional medicine in African diabetes care but do not explain how digital platforms may extend the reach of such knowledge. The present evidence suggests that YouTube may provide the communicative infrastructure through which therapeutic claims that previously circulated through cultural, interpersonal, or community networks acquire a wider and more persistent audience. The evidence does not, however, support a simple account of patients abandoning biomedical treatment for online alternatives. Patients’ reported combination of information obtained from YouTube with formal medical guidance instead points to a more complicated process of therapeutic negotiation. [Meshesha et al. \(2020\)](#) provide an important parallel by documenting the concurrent use of herbal and conventional medicines among patients with diabetes, but their study does not address how patients encounter or evaluate the knowledge underlying those choices. The present study extends this evidence by locating YouTube within that negotiation: the platform may bring different therapeutic claims into the same decision-making space, where patients assess biomedical advice alongside indigenous knowledge and online testimony.

This also exposes a limitation in treating the credibility of digital health communication as a question of accuracy alone. [Mylavarapu et al. \(2023\)](#); [Osman et al. \(2022\)](#) demonstrate that YouTube contains health information of uneven reliability, but the present evidence suggests that a claim’s influence may also depend on how easily it can be accessed, repeatedly encountered, visually demonstrated, and connected to an apparently relatable experience ([Metzler & Garcia, 2024](#)). A medically unsupported treatment may therefore gain attention not because it has stronger evidence, but because the technological environment makes it more visible and familiar. The contribution of the present study lies in bringing these strands of evidence together. Studies of traditional medicine explain the persistence of alternative therapeutic knowledge; studies of

YouTube expose the uneven quality of online health information; and studies of concurrent treatment use demonstrate that biomedical and non-biomedical practices may coexist (Ekpor et al., 2024; Frimpong et al., 2024; Meshesha et al., 2020; Mylavarapu et al., 2023). The present study connects these previously separated concerns by showing how YouTube may become the space in which such knowledge systems meet. Technological Determinism Theory is therefore supported in a qualified sense: YouTube does not dictate what patients must believe or do, but it changes the communicative conditions under which competing forms of diabetes knowledge become visible, familiar, and potentially authoritative (McLuhan, 1964). This offers a more precise account of digital influence in South-East Nigeria than treating diabetes burden, traditional medicine, and online health information as unrelated problems.

The high level of awareness of non-medical diabetes treatments communicated through YouTube indicates that the platform is influencing what patients encounter as relevant diabetes-management knowledge. From the perspective of Technological Determinism Theory, the significance of this awareness lies in the way YouTube's accessibility and audiovisual structure expand the visibility of treatment claims beyond formal clinical communication (Basatneh et al., 2018; McLuhan, 1964). Awareness, however, should not be interpreted as evidence of informed understanding. Oh (2023) cautions that exposure to online health information does not guarantee health literacy, while Park et al. (2023) demonstrate how YouTube can circulate health claims whose credibility varies considerably. The present result therefore reveals a distinction that is often overlooked in digital-health research: YouTube may succeed in making non-medical treatments known without enabling patients to judge whether such treatments are clinically appropriate.

This distinction becomes more important where persuasive narratives compete with scientific evidence. Osman et al. (2022) identify concerns about the reliability of YouTube as a health-information source, while Matthias et al. (2025) demonstrate how repeated exposure to online narratives can influence the way users evaluate knowledge and authority. The implication for the present study is that awareness may represent the first stage of technological influence rather than its outcome. Through repeated exposure, patients may move from simply knowing that a treatment exists to attributing credibility to the person, testimony, or cultural explanation presenting it. TDT therefore helps explain how YouTube may reshape the information environment within which diabetes-management options become visible and potentially persuasive (McLuhan, 1964). The contribution of the present study lies in showing that the communication problem is not merely the absence of diabetes information but the unequal visibility of competing forms of knowledge. Digital exposure can widen access to culturally familiar treatment narratives, yet without the capacity to evaluate their evidence, greater awareness may also increase susceptibility to unsupported claims (Oh, 2023; Osman et al., 2022). The issue is consequently not whether indigenous knowledge should be excluded from digital health communication, but how culturally meaningful knowledge can be communicated without allowing visibility and persuasiveness to substitute for evidence. In this respect, YouTube's influence is best understood as a restructuring of the conditions under which diabetes-management knowledge becomes available, recognised, and potentially trusted, rather than as a direct cause of treatment behaviour (McLuhan, 1964).

The 61.7% who reported that YouTube had a high or very high influence on their adoption of non-medical diabetes-management practices points to something more significant than the popularity of online health content. It suggests that YouTube has entered the space in which treatment choices are considered and negotiated. Through Technological Determinism Theory, the important issue is how the platform changes the conditions surrounding that decision-making: a treatment can be repeatedly watched, demonstrated, explained through personal experience, and

encountered outside the authority of a clinic (McLuhan, 1964; Metzler & Garcia, 2024). The technology does not therefore make the decision for the patient, but it can alter what the patient repeatedly sees, what becomes familiar, and what may begin to appear worth trying. This interpretation also complicates the tendency to treat online influence as a direct movement from exposure to behaviour. The present result measures respondents' perception of YouTube's influence; it does not, by itself, prove that every respondent adopted a non-medical treatment because of a video. That distinction matters because Mylavarapu et al. (2023) identified considerable variation in the quality of diabetes-related YouTube content, while Borges do Neborachko et al. (2019) showed how misinformation can circulate within digital environments. The concern, therefore, is not simply that patients encounter inaccurate information. It is that repeated exposure may place unsupported claims alongside professional advice, personal experience, and culturally familiar explanations, leaving patients to negotiate between different forms of authority.

This is where the present study extends previous research. Earlier studies have established the risks of unreliable online health information, but the present evidence suggests that YouTube's influence may lie in its ability to make alternative treatment claims part of the everyday decision-making environment of diabetic patients (Mylavarapu et al., 2023; Osman et al., 2022). The response from 61.7% of participants consequently raises a more important communication question than whether healthcare professionals should simply upload more information. The question is how evidence-based diabetes communication can engage with the personal, visual, and culturally familiar ways through which patients encounter and judge treatment claims (Fitzpatrick, 2023; Ouedraogo et al., 2024). The study therefore contributes to health communication by showing that YouTube may not replace clinical authority, but it can compete with, supplement, and reshape the information environment in which that authority is interpreted (McLuhan, 1964).

The interviews with healthcare professionals at UNTH Enugu, FMC Owerri, FMC Umuahia, and FMC Abakaliki provide an important explanation for the quantitative evidence that YouTube influences patients' diabetes-management decisions. Participants described patients abandoning prescribed therapies after watching videos promoting "miracle cures." This account is consistent with Mylavarapu et al. (2023), whose assessment of diabetes-related YouTube videos identified considerable variation in quality and reliability. Their study, however, primarily evaluated the content of the videos, whereas the present interviews reveal what may happen when such content enters clinical practice: information that is medically weak can nevertheless become behaviourally consequential. The difference is important because it shows that the danger of digital misinformation cannot be judged by accuracy alone; its influence depends on how patients receive, interpret, and act upon it. The professionals' accounts also complicate the assumption that the availability of reliable information is sufficient to protect patients. Osman et al. (2022) identified broader concerns about YouTube's reliability as a health-information source, but their systematic review largely establishes the problem at the level of information quality. The present study adds the clinical perspective that unreliable information may acquire practical authority when it appears to offer patients an easier or more hopeful explanation of diabetes management. A video promising a "natural cure" may therefore compete with medical advice not because it provides stronger evidence, but because its promise is more immediate and personally compelling. The interviews consequently shift the discussion from whether YouTube contains misinformation to why particular messages become persuasive enough to challenge professional advice.

The professionals' observations of declining trust in conventional treatment also require a cautious reading. They do not demonstrate that YouTube independently causes distrust, and this limitation is important. Patients may already hold cultural beliefs about indigenous treatment, experience financial or practical barriers to biomedical care, or enter the digital environment with doubts about prescribed treatment. YouTube may then reinforce those doubts by supplying narratives that make alternative therapies appear credible. In this respect, the interviews extend the broader concerns about digital health misinformation identified by [Borges do Nascimento et al., \(2022\)](#), but they also expose a limitation in treating misinformation as a problem located solely within online content. The more difficult issue is the interaction between the message, the patient's existing beliefs, and the technological environment through which the message gains repeated visibility. The relevance of [Ekpore et al. \(2024\)](#); [Frimpong et al. \(2024\)](#) lies precisely in this cultural dimension. Their evidence demonstrates that traditional medicine remains part of diabetes-management practices in Africa, but neither study explains how digital platforms may reshape the circulation and credibility of indigenous therapeutic knowledge.

The present interviews extend that evidence by showing that healthcare professionals encounter the consequences of this intersection in clinical practice. The implication is not that indigenous knowledge should be dismissed, since such dismissal may further weaken communication between patients and providers. Rather, the evidence points to the need for health communication that engages culturally familiar treatment narratives while challenging unsupported therapeutic claims. The study therefore contributes more than evidence that healthcare professionals are concerned about YouTube, demonstrates how digital communication can bring different therapeutic authorities into the same decision-making space, where clinical prescriptions, indigenous knowledge, personal testimony, and online personalities may all compete for patients' trust. Technological Determinism Theory helps explain this shift because YouTube does not simply transmit information; it changes the communicative environment in which diabetes-management knowledge becomes visible and persuasive ([McLuhan, 1964](#)). The interviews consequently show that the central challenge is not merely to correct misinformation after it appears, but to understand how digital platforms are altering the relationship between patients, healthcare professionals, and competing forms of therapeutic authority.

5. Conclusion

This study shows that YouTube has become part of the therapeutic landscape within which diabetic patients in South-East Nigeria encounter, interpret, and weigh competing treatment claims. Its theoretical contribution is to refine Technological Determinism Theory by demonstrating that YouTube does not mechanically determine what patients do, but reshapes the conditions under which biomedical advice, indigenous knowledge, and personal testimony gain visibility and compete for trust. Its influence therefore lies not only in transmitting information but in altering the communicative environment in which treatment authority is negotiated.

This theoretical insight carries direct implications for the key actors responsible for diabetes communication and care. Federal Medical Centres should integrate structured digital-health literacy into diabetes education so that patients can assess YouTube content, recognise misinformation, and distinguish culturally familiar practices from unsupported treatment claims. Healthcare institutions should also collaborate with qualified medical professionals and credible local content creators to produce verified, culturally responsive videos that respond directly to the treatment narratives patients encounter online. NAFDAC and the Federal Ministry of Health should strengthen monitoring and regulatory mechanisms for misleading diabetes-related claims in digital

spaces, while supporting clearer standards for responsible online health communication. Medical professionals, for their part, should not approach indigenous knowledge only as a competing system to be rejected; where particular practices have evidence of safety and therapeutic value, they should be discussed transparently within patient education, while unsupported claims are clearly differentiated from clinically recommended care. Coordinated action among patients, healthcare institutions, content creators, medical professionals, and regulators would allow YouTube's reach to serve diabetes education without allowing visibility, repetition, or emotional appeal to replace evidence.

The study is limited by its focus on diabetic patients attending selected Federal Medical Centres in South-East Nigeria, which restricts the transferability of its conclusions to other populations and care settings. Its cross-sectional design identifies reported exposure and perceived influence but cannot establish that YouTube directly caused treatment adoption, non-adherence, or declining trust. The qualitative evidence similarly reflects the experiences of selected healthcare professionals and caregivers rather than the full range of patient perspectives. Future research should therefore follow patients over time to establish whether, and under what conditions, repeated exposure to specific YouTube content precedes changes in treatment behaviour. Comparative studies should examine biomedical, lifestyle, and indigenous-treatment channels alongside patients' actual engagement with them. Combining content analysis, patient interviews, and behavioural measures would further reveal not merely what YouTube communicates, but how particular messages move from the screen into diabetes-management decisions.

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