Perceptions of Smoking Cessation Counselling among Physiotherapists in Benin City, Nigeria

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Abstract

Background: Physiotherapists regularly manage conditions affected by smoking, providing an opportunity to support smoking cessation efforts. This study examined physiotherapists' perceptions of smoking cessation counseling and identified barriers affecting their practice in Benin City, Nigeria.

Methods: A cross-sectional survey was administered to licensed physiotherapists across three local government areas of the Benin city municipality. Data were analyzed descriptively, and Likert scale responses were merged into agreement and disagreement categories.

Results: All respondents recognized smoking as harmful, and 74% believed that cessation counselling should be part of physiotherapy practice. The key barriers included low personal motivation and negative personal experiences. Patient nonadherence and doubts regarding cessation strategies were also frequently cited.

Conclusion: Physiotherapists support smoking cessation counselling but require additional training and organizational reinforcement. Integrating smoking cessation content into professional education may strengthen clinical practice.

Keywords: Smoking cessation, physiotherapists, counseling, Nigeria

Introduction

Tobacco use remains a leading cause of preventable illness and death worldwide, with more than eight million deaths annually (World Health Organization, 2023). Smoking contributes to cardiovascular disease, chronic respiratory disorders, several cancers, and complications affecting nearly all the organ systems. In Africa, rising tobacco marketing and changing social norms have contributed to increased tobacco use, especially within urban centers (Chido-Amajuoyi et al., 2021). Nigeria reflects this pattern, with national surveys indicating persistent experimentation and uptake among young adults (Chido-Amajuoyi et al., 2021). Local reports describe smoking patterns shaped by peer influence, limited cessation resources, and inadequate enforcement of tobacco control laws.

The effects of smoking extend beyond general health. Among physiotherapy patients, smoking slows tissue healing, reduces exercise tolerance, increases pain sensitivity, and worsens chronic conditions, such as low back pain and

COPD (Luxton & Redfern, 2020). These outcomes have direct implications for physiotherapists who manage rehabilitation programs that rely on adequate circulation, oxygenation, and adherence to lifestyle recommendations.

Globally, research shows that physiotherapists recognize their potential influence on health behavior and often support health promotion roles (Devine et al., 2014). Within Africa, studies have reported positive attitudes towards health promotion but inconsistent application in clinical settings (Onyeso et al., 2019). In Nigeria, work in broader health professional groups suggests limited training in smoking cessation and hesitance to provide counselling in routine practice (Okeke et al., 2020). However, local evidence concerning physiotherapists in Benin City is limited.

The absence of local data presents several gaps. Using Miles' taxonomy, this study addresses a population gap (physiotherapists in Benin City are understudied), a methodology gap (previous work has focused on qualitative insights rather than structured surveys), a conceptual gap (limited understanding of how physiotherapists perceive their role in cessation counselling), and a contextual gap (local practice environments differ from national averages). This study aimed to provide empirical evidence on physiotherapists' perceptions, identify barriers and facilitators to counselling, and contribute data that may guide training or policy development.

Literature Review

Tobacco use affects nearly every system. Recent evidence has shown strong associations with cardiovascular disease, COPD, lung cancer, metabolic dysfunction, and musculoskeletal impairment (Dai et al., 2025). Smoking reduces bone mineral density and delays tissue healing, affecting rehabilitation outcomes (Wong et al., 2020). In physiotherapy patients, these effects translate into longer recovery periods and reduced response to therapy.

Second-hand smoke also poses significant risks. Exposure increases the likelihood of respiratory infections, asthma exacerbations, and cardiovascular events (Huang et al., 2025). These consequences reinforce international recommendations for health-care professionals to support smoking cessation as part of routine care.

Recent studies have underscored the important role of physiotherapists. International surveys have demonstrated a high willingness but limited confidence in counselling skills (Darabseh et al., 2023). A South African study found that physiotherapists acknowledged health promotion duties but described limited implementation due to workload and training gaps (O'Donovan et al., 2017). In Nigeria, recent work shows positive attitudes towards health promotion among physiotherapists, yet smoking cessation remains poorly integrated into clinical encounters (Onyeso et al., 2022).

The barriers identified across studies include lack of training, time constraints, uncertainty about professional

responsibility, and perceived low patient motivation (Jørgensen et al., 2024). Facilitators include structured training, organizational support, and clear practice guidelines. This literature indicates the need for localized research exploring physiotherapists' readiness to contribute to smoking cessation efforts within their work environments.

Methodology

Research Design

A cross-sectional survey design was used. This design is appropriate for describing attitudes, knowledge, and perceptions within a defined population at a single point in time and is widely recommended for health behavior research (Setia, 2016).

Research Setting

The study was conducted in Benin City municipality, Nigeria, comprising the Egor, Oredo, and Ikpoba-Okha local government areas. These areas were selected because they host all major public and private physiotherapy facilities in the municipality, ensuring access to the entire practicing population.

Sampling/Participants

At the time of this study, approximately 130 physiotherapists were practicing in Benin City. Eligible participants were licensed physiotherapists actively engaged in clinical practice in public or private facilities and registered with the Medical Rehabilitation Therapists Board of Nigeria. Participants on extended leave or working exclusively in academic roles were excluded.

A purposive sampling approach was used to ensure representation across clinical specialties, including orthopaedics/musculoskeletal, neuromuscular, cardiopulmonary, pediatrics, women's health, and adult neurology/geriatrics, and practice settings, encompassing both inpatient and outpatient care. This approach was selected to capture diverse professional experiences relevant to smoking cessation counselling rather than generalizing the findings to all physiotherapists in Nigeria.

A sample of 100 physiotherapists was determined based on the total registered population and guided by Yamane's formula for finite populations $n = N / [1 + N(e^2)]$, which indicated a minimum sample size of 98 respondents. Of the 100 approached, 92 completed the study, providing sufficient data to describe the participants' sociodemographic characteristics, clinical practice profiles, beliefs about smoking, and perceived barriers to smoking cessation counselling.

Instrument Development and Validation

The survey was adapted from the modified version of the Global Health Professionals Survey (GHPS) on smoking (Global Tobacco Surveillance System Collaborative Group [GTSS], 2006) and existing literature on physiotherapy and health promotion. The survey consisted of three sections: (1) sociodemographic and clinical practice characteristics, (2) knowledge and attitudes towards

smoking, and (3) perceived barriers and facilitators to smoking cessation counselling. The sociodemographic data obtained in the survey were age, sex, local government area of practice, place of practice, main scope of practice, clinical experience (years), primary professional qualification, patient type, age range of patients seen, and estimated percentage of patients who smoke. Knowledge and attitudes regarding smoking and cessation counselling were assessed using the Global Health Professionals Survey (GHPS) questionnaire on tobacco use (GTSS, 2006). Barriers were measured using a 5-point Likert scale ranging from 1 ("strongly disagree") to 5 ("strongly agree"). Content validity was assessed by three experts in cardiopulmonary physiotherapy and public health who reviewed the clarity, relevance, and alignment with the study objectives. Reliability testing conducted in a pilot group of ten physiotherapists yielded a Cronbach's alpha of 0.82, indicating acceptable internal consistency.

Data Collection Procedures

Permission to access the hospitals was obtained from the relevant facility heads. The researcher met with designated representatives at each facility, who assisted with distributing the survey. Participants received an information sheet, consent form, and survey form. Completed forms were returned in sealed envelopes to ensure confidentiality. Data were collected over eight weeks.

Data Analysis

Data were analyzed using IBM SPSS Statistics (version 24). Descriptive statistics summarized the socio-demographic variables and response patterns. For interpretation, the Likert scale responses were merged into two categories: agreement (strongly agree and agree) and disagreement (strongly disagree, disagree, and unsure). Inferential statistics were not applied because the data did not meet the assumptions for comparative testing.

Ethical Considerations

The University of Benin Teaching Hospital Ethics Committee granted approval. Participation was voluntary, and no incentives were provided. Respondents completed consent forms and were informed of their right to withdraw at any stage. This study ensured anonymity, confidentiality, and protection from harm.

Results

A total of 92 physiotherapists practicing in Benin City participated in this study. The findings are presented under four major domains: socio-demographic characteristics, clinical practice profiles, beliefs and attitudes towards smoking and smoking cessation, and perceived barriers and patient-related factors influencing the provision of smoking cessation support. The results highlight the professional readiness of physiotherapists to engage in smoking cessation activities and the contextual factors that may influence their involvement.

As shown in Table 1, 92 physiotherapists participated in the study. The sample comprised predominantly males (65.2%), with females accounting for 34.8%. Most respondents were in the 20–29-year age category (69.6%), followed by 30–39 years (19.6%), 40-49 years (6.5%), and 50–59 years (4.3%). Participants were drawn from three major local government areas in Benin City, Nigeria. More than half of the respondents practiced in Egor (55.4%), followed by Oredo (34.8%), while 9.8% reported practicing in Ikpoba-Okha. In terms of educational qualifications, most respondents held a bachelor's degree (76.1%). An additional 18.5% held master's degrees, while 5.4% held doctorates.

Table 1

Socio-demographic of Physiotherapists in Benin City

Characteristics	Frequency	Percent (%)
Gender		
Male	60	65.2
Female	32	34.8
Age (years)		
20-29	64	69.6
30-39	18	19.6
40-49	6	6.5
50-59	4	4.3
Local Government Area of Practice		
Oredo	32	34.8
Egor	51	55.4
Ikpoba-Okhar	9	9.8
Entry Level Qualification		
Bachelors' Degree	70	76.1
Master's Degree	17	18.5
Doctorate Degree	5	5.4

Among the participating physiotherapists, Table 2 shows that most respondents (59.8%) had 1–10 years of clinical experience, while 21.7% had 11–20 years and 16.3% had 21–30 years. Only 2.2% of the respondents reported more than three decades of practice. Orthopaedics and musculoskeletal physiotherapy were the predominant practice areas (43.5%). Other areas included neuromuscular physiotherapy (14.1%), pediatrics (14.1%), cardiovascular/pulmonary physiotherapy (10.9%), adult neurology/ geriatrics (9.8%), and women's health (7.6%). Among the physiotherapists, 71.7% practiced in public health facilities, 13.1% in private settings, and 15.2% in both sectors. Regarding patient populations, 38.0% managed both inpatient and outpatient clients, 34.8% primarily treated outpatients, and 27.2% worked predominantly with inpatients.

Table 2

Clinical Practice Characteristics of Physiotherapists in Benin City

Characteristics	Frequency	Percent (%)
Clinical Experience (years)		
1-10	55	59.8
11-20	20	21.7
21-30	15	16.3
>30	2	2.2
Predominant area of practice		
Cardiovascular/Cardiopulmonary	10	10.9
Neuromuscular	13	14.1
Orthopaedics/Musculoskeletal	40	43.5
Pediatrics	13	14.1
Women's health	7	7.6
Adult neurology/Geriatrics	9	9.8
Practice setting		
Private	12	13.1
Public	66	71.7
Private and public	14	15.2
Patient group		
Inpatient	25	27.2
Outpatient	32	34.8
Inpatient and outpatient	35	38.0

Table 3 shows how physiotherapists responded—whether they agreed or disagreed—with statements about smoking. All the respondents agreed that smoking is harmful to health. 74% acknowledged a professional responsibility to support smoking cessation, emphasizing the importance of setting a good example, providing cessation advice, and serving as positive role models. More than three-quarters of the respondents indicated that physiotherapists should routinely inquire about patients' smoking status, and 80.4% believed that they should offer advice on quitting.

Among the physiotherapists, 31% disagreed with the statement that physiotherapists who smoke are less likely to encourage patients to quit smoking. Most respondents (70%) supported the need for formal training in smoking cessation counselling. Nearly all physiotherapists (91.3%) considered community-based smoking prevention initiatives important, and all endorsed the need for smoke-free hospital environments. In addition, 88.0% expressed willingness to assist patients in smoking cessation.

Table 3

Physiotherapists' Views on Statements About Smoking

Health Effects of Smoking/ Quitting Smoking	**Agree** *N (%)*	**Disagree** *N (%)*
Smoking is harmful to health	92 (100)	0 (0)
PTs serve as a role model	65 (70.7)	27 (29.3)
PTs should ask about smoking	76 (82.6)	16 (17.4)
PTs should advise patients to quit	74 (80.4)	18 (19.6)
PTs should receive cessation training	70 (76.1)	22 (23.9)
PTs should set a good example by not smoking	68 (73.9)	24 (26.1)
A patient can quit smoking if advised by PTs	62 (67.4)	30 (32.6)
PTs who smoke are less likely to advise people to quit	61 (66.3)	31 (33.7)
PTs should speak to community groups about smoking	84 (91.3)	8 (8.7)
Hospitals and health care centers should be "smoke free"	92 (100)	0 (0)
Neonatal death is associated with passive smoking	84 (91.3)	8 (8.7)
I intend to help my patients who smoke to quit	81 (88.0)	11 (12.0)

Note. PTs = Physiotherapists

Table 4 displays different perceptions of barriers to offering smoking cessation support. Similar proportions agreed and disagreed that inadequate reimbursement, limited resources, intrusion into patient privacy, or lack of time posed challenges to their involvement. Lack of motivation was the most strongly endorsed barrier, reported by 75% of respondents. Other factors, including unpleasant personal experiences, language difficulties, and perceived lack of success with cessation efforts, received nearly equal levels of agreement and disagreement.

Patient-related factors were perceived as significant obstacles. Nearly all physiotherapists (93.5%) identified poor patient adherence as a major barrier. The majority also cited emotional or psychological issues (67.4%) and patients' doubts about the effectiveness of cessation interventions (68.5%) as limiting factors. Fewer respondents (41.3%) considered a lack of long-term patient commitment to be a substantial barrier.

Table 4

Physiotherapists' Responses to Barriers and Patient Factors in Smoking Cessation

Barriers	**Agree** *N (%)*	**Disagree** *N (%)*
Lack of adequate reimbursement	44 (47.8)	48 (52.2)
Lack of resources	41 (44.6)	51 (55.4)
Intrusion into client/patient's privacy	44 (47.8)	48 (52.2)
Lack of motivation	69 (75.0)	23 (25.0)
Unpleasant personal experience	48 (52.2)	44 (47.8)
Language barrier	47 (51.1)	45 (48.5)
Lack of success	49 (53.3)	43 (46.7)
Lack of time (assuming motivation)	45 (48.5)	47 (51.1)
Patients' Factors		
Lack of patient adherence	86 (93.5)	6 (6.5)
Patient has emotional or psychological issues	62 (67.4)	30 (32.6)
Patient has no long-term commitment	38 (41.3)	54 (58.7)
Patient doubts effectiveness of approach	63 (68.5)	29 (31.5)

Discussion

This study of 92 physiotherapists in Benin City, Nigeria, demonstrates a strong awareness among practitioners that smoking is harmful, coupled with a widespread belief that physiotherapists should play a role in smoking cessation. The findings are consistent with global trends showing that physiotherapists acknowledge their potential to contribute to tobacco control and cessation counseling (Darabseh et al., 2023). In line with previous research, most respondents supported routine inquiry about smoking status and offering brief advice, reflecting elements of the 5A model (Ask, Advise, Assess, Assist, Arrange), which is commonly recommended in clinical cessation guidelines (Luxton & Redfern, 2020).

Nevertheless, despite this readiness, significant barriers impede the translation of positive attitudes into practice. Among the most pronounced obstacles were low motivation and negative past experiences, both cited by approximately three-quarters of the respondents. Such intrapersonal constraints mirror findings in broader healthcare settings, where motivation, self-efficacy, and role identity are linked to the frequency and quality of smoking cessation counselling (Devine et al., 2014). Moreover, time constraints and concerns over intruding on patient privacy, though less strongly endorsed, reflect well-documented challenges across health professions (Labarre et al., 2023).

Patient-related factors were particularly salient in this study. Nearly all physiotherapists identified poor patient adherence as a barrier, and substantial proportions also pointed to emotional or psychological issues and patients' skepticism about cessation effectiveness as barriers. These perceptions echo

established behavioral change frameworks: the success of cessation interventions depends heavily on patient readiness, motivation, and social context, as well as the healthcare provider's ability to address these dimensions (Mokdad et al., 2023).

Organizational and systemic factors also emerged. The fact that 70% of physiotherapists supported the need for formal smoking cessation counselling training indicates a perceived gap in their professional preparation. This aligns with findings from international scoping reviews, which highlight the lack of training, time, and resources as common barriers to integrating cessation support into physiotherapy practice (Darabseh et al., 2023). Moreover, similar themes such as lack of time, perceived role ambiguity, and insufficient institutional support have been identified in hospital-based healthcare provider surveys (Labarre et al., 2023).

In the Nigerian context, these barriers may be compounded by resource constraints and limited access to continuous professional development. A previous national survey of Nigerian physiotherapists revealed inconsistent assessments of lifestyle risk factors, including smoking, with respondents citing a lack of time, knowledge, and referral options as barriers (Okonji et al., 2017). Our findings underscore the need for context-specific strategies that address both individual and system-level challenges to leverage physiotherapists' willingness to engage in cessation support.

Conclusion

Physiotherapists in Benin City recognize smoking cessation counselling as within their professional remit and display high awareness of the harmful impact of tobacco. However, internal barriers (such as motivation and prior negative experiences), patient-level obstacles (such as poor adherence and psychological challenges), and insufficient training and organizational support impede routine counselling practice. To enable physiotherapists to contribute more effectively to tobacco control, there is a clear need for structured training, institutional backing, and the integration of cessation competencies into physiotherapy education.

Implications for Practice

Based on the results, it is important to develop and implement structured smoking cessation training for physiotherapists, including motivational interviewing, behavioral counseling, and the application of the 5A framework. Incorporating tobacco cessation content into pre-registration physiotherapy curricula can help build competency early in training. Additionally, advocating for health facilities to formalize physiotherapists' roles in smoking cessation through policies, protocols, and job descriptions is crucial. More so, establish referral pathways linking physiotherapists to specialist cessation services or multidisciplinary tobacco control teams. Finally, integrate patient-readiness assessment tools into routine care to tailor interventions based on

motivation and psychological state. Motivational interviewing and follow-up mechanisms should be used to address patients' doubts about quitting and support long-term adherence.

Limitations

The study was limited to physiotherapists in Benin City, Nigeria, and may not represent the views or practices of physiotherapists in other regions or countries. Additionally, reliance on self-reported attitudes and perceptions could be affected by social desirability or recall bias and might not accurately reflect actual counseling behaviors. Moreover, the study did not involve direct observation or measurement of physiotherapists' cessation counseling behavior or patient outcomes, which limits understanding of how readiness and barriers are translated into practice.

Future Research

Future research should investigate how physiotherapists' knowledge and attitudes influence their actual smoking cessation practices. Long-term studies employing observational or mixed-methods approaches could assess how often, how well, and how effectively counseling is delivered in clinical environments. Furthermore, multicenter studies across various regions of Nigeria or sub-Saharan Africa would improve the generalizability of results and enable comparisons between urban and rural healthcare settings. Additional research is necessary to assess how structured training and organizational support affect physiotherapists' confidence, motivation, and counseling behaviors. Using implementation science, researchers can identify individual and systemic barriers and facilitators, including resource accessibility, institutional policies, and patient engagement strategies. Ultimately, studies focusing on patient outcomes such as quit rates, adherence, and behavioral changes are vital to demonstrate the efficacy of physiotherapy-led smoking cessation interventions in low-resource contexts.

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Conflicts of Interest

None

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