

ATTITUDE, PERCEPTION AND PRACTICE AND BARRIERS OF PHYSIOTHERAPISTS TOWARDS THE ASSESSMENT AND MANAGEMENT OF RISK FACTORS OF LIFESTYLE-RELATED DISEASES: A CROSS-SECTIONAL SURVEY

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Abstract

Background of the study: Prevention and management of lifestyle-related diseases (LRDs) are deemed a priority in contemporary physiotherapy. However, questions subsist in developing countries like Nigeria on the place of physiotherapy practice in the assessment and management of risk factors of LRDs.

Aim of the study: This study provide insights into the attitude, perception and practice of physiotherapists towards the assessment and management of risk factors of LRDs during patient care.

Materials and Method: A total of 110 physiotherapists were recruited from public and private hospitals in Lagos State, Nigeria. Participants completed an adapted questionnaire. The questionnaire consisted of 10 sections that assessed demographic and physical characteristics, risk factors and management of LRDs, and attitudes of participants in the assessment and management of LRDs. Data was summarized using frequencies and percentages.

Results: Respondents always assessed risk factors of LRDs in the descending order of: blood pressure 68 (61.8%), alcohol use 41 (37.3%), exercise 41 (37.3%), level of activity 40 (36.4%), tobacco use 37 (33.6%), and diet 31 (28.2%). Regarding respondents' management options for 20% overweight or more, 58 (52.7%) always use exercise regularly, 57 (51.8%) always use decreasing calorie intake, 49 (44.6%) always use decreasing dietary fats, 45 (40.9%) always perform specific exercises, whereas 28 (25.5%) advises patients to quit smoking. Also, respondents' reported as 'very effective' the use of exercise (64, 58.2%), healthy diet (61, 55.5%) and weight reduction (57, 51.8%) for changing patients behaviour.

Conclusions: Blood pressure was the most assessed risk factors of LRDs by physiotherapists in Lagos. Physiotherapists in Lagos always advise individuals with LRDs on dieting, weight reduction, cessation of smoking and alcohol intake. Management options of exercise, healthy diet and weight reduction are very effective for changing patients' behaviour.

Keywords: *Lifestyle-related diseases, attitude, perception, practice, physiotherapists.*

Introduction

Global disease burden has been increasingly dominated by lifestyle-related diseases (LRDs) often referred to as non-communicable diseases (NCDs) which are the leading causes of global deaths.¹⁻⁶ Lifestyle-related diseases are a major health concern in the 21st century accounting for 74% of all deaths (41 million) worldwide with 33.3 million deaths attributed to NCDs.⁷ Quite commonly, LRDs have been described as diseases derived from behavioural habits and choices and include ischaemic heart diseases, chronic obstructive lung diseases, hypertension and stroke, cancers, type 2 diabetes and obesity.^{2,5,7,8} Associated behavioural risk-factors of LRDs include tobacco smoking, unhealthy diet, alcohol abuse, sedentariness, stress and poor sleep.^{2,5,8}

The prevalence of these factors of LRDs remains high worldwide with low-and middle-income countries in daring upsurge.⁴ The world health organization's NCDs country profiles showed that in Nigeria alone, non-communicable diseases accounted for about half a million deaths of individuals under age 60 years, the most common of which were chronic respiratory diseases, cardiovascular disease and diabetes and that these NCDs accounted for 24% of all deaths in Nigeria.^{6,7} A report by the World Economic Forum and Harvard University, estimated that NCDs (LRDs) over the next two decades will cost more than US\$30 trillion, a figure adduced to represent 48% of the global GDP in 2010.⁹ The implication of **this report** suggests that millions of people around the world would be below the poverty line, especially in low-income countries who may be unable to cope due to financial distress. Also, it is suggested that failure to mitigate the surge of LRDs would yield heavy financial burden of diseases which in projection may be a heavy financial burden for even the wealthiest countries of the world.¹⁰ Thus, prevention of lifestyle diseases should be the priority of every country.

Consequently, prevention and management of lifestyle conditions are deemed a priority in general medical practice or contemporary physiotherapy.^{2,11} Indeed, it is imperative that healthcare focus should shift from an illness model to a wellness model which necessitates the need of healthcare providers to re-adjust their goals, strategies and patterns of interaction with healthcare recipients and to develop workforce capacity for sustainable, ethical and effective health promotion action to target lifestyle diseases at all levels.^{2,12} Regardless of job designation, each member of the health team should see that health promotions of lifestyle modification are incorporated in the plan of optimal care.

The World Physiotherapy (WPT) describes physiotherapy as a profession concerned with identifying and maximising quality of life and movement potential within the spheres of promotion, prevention, treatment/intervention, and rehabilitation.¹³ Therefore, physiotherapists have a major role in reshaping the healthcare system especially in wellness and optimal care.¹³ The role of physiotherapists in counselling for exercise, nutrition, dieting, smoking, stress reduction and other lifestyle modification was recently explored in the light of modern view of healthcare professionalism.² Thus, physiotherapists make tremendous contributions to the society through incorporating various strategies to induce lifestyle behaviour change into the overall clinical care. However, questions still subsist in developing countries like Nigeria on the place of physiotherapy practice in the assessment and management of risk factors of LRDs. Therefore, this study was aimed at providing insights into the attitude, perception and practice of physiotherapists towards the assessment and management of risk factors of LRDs during patient care in a developing country.

Methodology

The study involved 110 physiotherapists recruited from 2 Teaching hospitals, 5 General hospitals, 3 Specialist/ Reference hospitals, 5 Private hospitals/Clinics, and attendees at a 2-day workshop held by the Medical Rehabilitation Therapist (Registration) Board of Nigeria in Lagos 2017. Instrument used was a questionnaire adapted from a related previous study titled 'Assessment and Management of Risk Factors for the Prevention of Lifestyle-related Diseases: A cross-sectional survey of current activities, barriers and perceived training needs of primary care physiotherapists in the Republic of Ireland'.¹⁴ The questionnaire was adapted to the present study by a Focus group made up of experienced physiotherapy Academics, Researchers and Clinicians. The adapted questionnaire has 10 sections. Section 1 obtained demographic data of the participants; Section 2 sought information on physiotherapist' assessment of various risk factors (harmful use of alcohol, unhealthy diet, low exercise, tobacco use, high blood pressure, lack of physical activity and exercise); Sections 3 to 6 obtained information on physiotherapists' management of the risk factors of LRD's; Sections 7, 8 & 9 obtained information on the perception and attitudes towards the assessment and management of risk factors of lifestyle-related diseases.

Section 10 obtained information on the barriers faced by physiotherapists in assessing and managing behavioural risk factors.

One hundred and ten questionnaires were retrieved from a total of one hundred and fifty-seven administered questionnaires on a one-on-one basis with the aim of the study clearly explained on copies of the questionnaire. Respondent's consent was also sought and obtained before the questionnaire was distributed and self-administered by the respondents and retrieved the following day by the researchers.

Data Analysis

Descriptive statistics of frequencies and percentages were used to analysed the data and the results were represented using Tables, Histograms and Pie charts.

Results

A total of 110 questionnaires were retrieved from the respondents yielding a response rate of 70%. The majority 63 (57.3%) of the respondents were males, while 47 (42.7%) were female physiotherapists.

Thirty eight (34.5%) of the respondents graduated from the University of Lagos, 32 (29.1%) graduated from University of Ibadan, 18 (16.4%) graduated from Obafemi Awolowo University, 7 (6.4%) graduated from University of Nigeria, Nsukka, 8 (7.3%) graduated from Bayero University, Kano, 3 (2.7%) graduated from University of Maiduguri, 2 (1.8%) graduated from University of Ghana and 1 (0.9%) graduated from Nnamdi Azikiwe University.

Twenty-eight (25.5%) of the respondents had worked for 1 to 5 years while 19 (17.3%) had a working experience of 20 years and above (Figure 1). Thirty-four (30.9%) of the respondents worked in the Teaching hospitals while only 2 (1.8%) worked in the Sport centre (Figure 1). On the respondents' specialist/practice units, Orthopaedics specialist were in the majority 56 (50.9%), while specialists in Ergonomics and Women's health were in the minority 1 (0.9%) (Figure 2).

Table 1 presents respondents practice settings and grade levels. Respondents who worked in the Teaching hospitals were in the majority 34 (30.9%), while respondents who worked in Sport centres were in the minority 2 (1.8%). Also, respondents in Physiotherapy cadre were in the majority 36 (32.9%), followed by Senior physiotherapists 30 (27.3%), while respondents in Directorate cadre were in the minority 2 (1.8%). The number of patients treated by the respondents weekly are presented in Table 2. The mean number of patients treated weekly was 28.3.

The highest number of patients treated was 180 patients reported by one respondent 1 (0.9%), while the lowest number of patients treated weekly was 1 reported by 2 respondents 2 (1.8%). Majority (108, 98.2%) of the respondents claimed that they participated in Continuous Professional Development (CPDs)/ Training/seminar while only 2 (1.8%) respondents did not participate (Figure 3). Forty-seven (42.7%) reported that they participated in more than thrice CPDs yearly (Figure 3).

Respondents' assessment of risk factors of LRDs including alcohol use, diet, exercise, tobacco use, activity level and blood pressure are presented in Table 3. Majority 68 (61.8%) of the respondents always enquired about the patient's blood pressure. Thirty-one (28.2%) of the respondents always assessed dietary status of the patients, forty-one (37.3%) always assessed exercise in patients and forty (36.4%) always assessed activity level in patients. Forty-one (37.3%) always assessed alcohol use whereas 5 (4.5%) never assessed them.

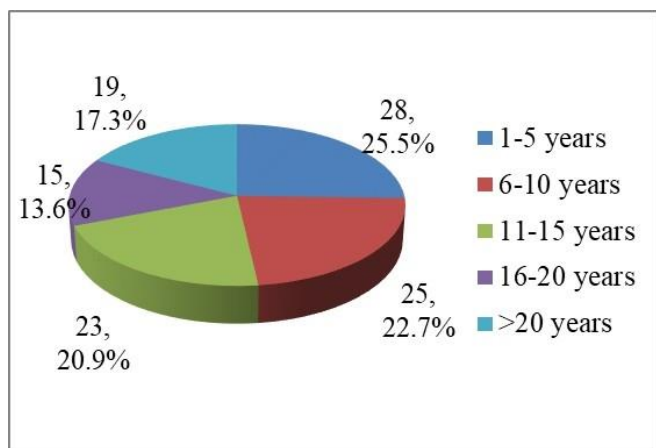


Figure 1: Years of working experience of the respondents

Table 2: Number of patients treated weekly by the respondents

Number of patients treated weekly	Frequency (n)	Percentage (%)
1	2	1.8
3	3	2.7
4	2	1.8
5	4	3.6
6	2	1.8
7	2	1.8
8	3	2.7
10	11	10.0
12	2	1.8
14	1	0.9
15	9	8.2
18	1	0.9
20	12	10.9
24	3	2.7
25	7	6.4
28	1	0.9
30	8	7.3
35	6	5.5
40	16	14.5
50	8	7.3
53	1	0.9
65	1	0.9
70	1	0.9
100	2	1.8
150	1	0.9
180	1	0.9
Total	110	100.0

Table: Frequency Distribution of Respondents' Practice Setting and Grade level

	Frequency (n)	Percentage (%)
Practice Setting:		
Private hospital	16	14.5
Specialist hospital	26	23.6
Teaching hospital	34	30.9
General hospital	23	20.9
Military hospital	9	8.2
Sport centre	2	1.8
Total	110	100.0
Grade level:		
Physiotherapist	36	32.7
Senior Physiotherapist	30	27.3
Principal Physiotherapist	1	10.0
Chief Physiotherapist	14	12.7
Assistant Director	13	1.8
Deputy Director	4	3.6
Director	2	1.8
Total	110	100.0

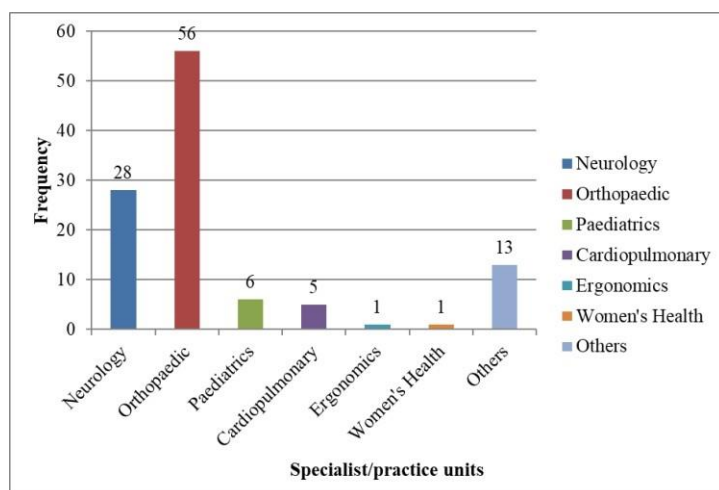


Figure 2: Frequency distribution of specialist/practice units

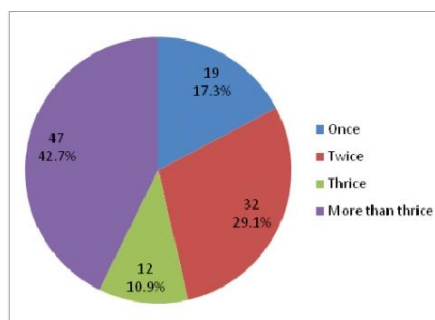


Figure 3: Respondents' yearly participation in Continuous Professional Development Training/seminar

Table 3: Frequency Distribution of Respondents' Assessment of Risk Factors of Lifestyle-related Diseases and Management Options in an Asymptomatic Adult Patient

Risk factor	Never n (%)	Rarely n (%)	Sometimes n (%)	About ½ the time n (%)	Often n (%)	Usually n (%)	Always n (%)
Assessment							
Alcohol usage	5 (4.5)	7 (6.4)	14 (12.7)	10 (9.1)	21 (19.1)	12 (10.9)	41 (37.3)
Diet	2 (1.8)	7 (6.4)	13 (11.8)	13 (11.8)	24 (22.7)	19 (17.3)	31 (28.2)
Exercise	0 (0)	2 (1.8)	10 (9.1)	11 (10.0)	30 (27.3)	16 (14.5)	41 (37.3)
Tobacco usage	6 (5.5)	7 (6.4)	14 (12.7)	12 (10.9)	24 (21.8)	10 (9.1)	37 (33.6)
Activity level	0 (0)	1 (0.9)	4 (3.6)	18 (16.4)	28 (25.5)	19 (17.3)	40 (36.4)
Blood Pressure	0 (0)	0 (0)	4 (3.6)	5 (4.5)	14 (12.7)	19 (17.3)	68 (61.8)
Management							
Regular exercise	2 (1.8)	2 (1.8)	7 (6.4)	16 (14.5)	26 (23.6)	29 (26.4)	28 (25.5)
?fruits & veg. consumption	0 (0)	8 (7.3)	14 (12.7)	13 (11.8)	30 (27.3)	27 (24.5)	18 (16.4)
? Dietary fats consumption	0 (0)	8 (7.3)	11 (10.0)	10 (9.1)	26 (23.6)	27 (24.5)	28 (25.5)

Key: ?=Increase; ?=Decrease; veg.=Vegetables

Thirty-seven (33.6%) always assessed tobacco usage in patients, whereas 6 (5.5%) never assessed for tobacco usage. Thus, respondents always assessed risk factors of LRDs in the descending order of: blood pressure 68 (61.8%), alcohol use 41 (37.3%), exercise 41 (37.3%), level of activity 40 (36.4%), tobacco use 37 (33.6%), and diet 31 (28.2%). Also, presented in Table 3 is respondents choice of general management options for LRDs. More than a quarter of the respondents always use regular exercise, increase fruit and vegetable consumption and decrease dietary fat consumption in managing LRDs.

Similarly, respondents were asked about specific management options for risk factors of LRDs under several subheadings: exercise and diet, 20% overweight or more, cigarette smoking with high blood pressure (Table 4). About half of the respondents always used management options of: exercise regularly; decrease calorie intake, decrease dietary fat consumption and performing specific exercises for patients with 20% overweight or more; whereas about a third of the respondents used management options of setting weight loss goals and setting specific exercises for patients with 20% overweight or more (Table 4). Over half of the respondents focused on advising patients to exercise regularly [(58, 52.7%) and decrease caloric intake (57, 51.8%) in their management of overweight (Table 4). Thirty-five (31.8%) of the respondents reported that they 'usually' advised patients to set a goal for weight loss (Table 4). Forty-nine (49, 44.5%)

of the respondents reported that they 'always' advised patients to decrease dietary fat consumption (Table 4). Most of the respondents reported that they 'often' (28, 25.5%) and 'always' (38, 34.5%) advised patients to set specific exercise goals in terms of frequency and duration (Table 4). Only 45 (40.9%) of the respondents reported that they advised patients to perform specific exercises.

Also, in the management of patients with LRD that smokes cigarettes, the respondents (30, 27.3%) reported that they 'always' advised the patients to quit smoking (Table 4).

The respondents were less likely to advise setting a 'quit date' and provide self-help materials. The same number of respondents (22, 20.0%) 'never' and 'usually' advised setting a 'quit date', while only 10 (9.1%) of the respondents 'always' advised setting a 'quit date' (Table 4). Most respondents did not provide any self-help materials to patients who smoked cigarettes (25, 22.7%), while only 9 (8.2%) of the respondents provided self-help materials.

Also, respondents' management options for patients who smoked cigarettes with high blood pressure is presented in Table 4. Only 39 (35.5%) of the respondents 'always' reviewed health risks of hypertension. Forty-six (41.8%) of the respondents advised weight loss for patients who were overweight. Forty-five (40.9%) of the respondents reported that they

advised salt reduction for a hypertensive patient. Over half of the respondents (72, 65.5%) focused on talking about the importance of taking medication regularly.

Thirty-eight (34.5%) of the respondents 'somewhat agreed' that smoking cessation counselling was an effective use of their time as physiotherapist (Table 5). Eleven (10%) of the respondents reported that they 'strongly agreed' that for most patients, health education does little to promote their adherence to a healthy lifestyle (Table 5). Thirty-four (30.9%) of the respondents 'somewhat disagreed' that they are less effective than professional counsellors in getting patients to quit smoking (Table 5). Nineteen (17.3%) of the respondents 'strongly disagreed' that patients without symptoms will rarely change their behaviour on the basis of their advice and over half of the respondents (58, 52.7%) 'somewhat agreed' that most patients try to change their lifestyles if they advised them to do so (Table 5). The Table also shows the frequency distribution of respondents' attitude towards the assessment and management of risk factors of lifestyle-related diseases. About half of the respondents (54, 49.1%) reported that they were 'moderately effective' in changing their patient's behaviour with respect to alcohol consumption.

Over half of the respondents reported that they were 'very effective' in changing their patients' behaviour with respect to exercise (64, 58.2%), healthy diet (61, 55.5%) and weight reduction (57, 51.8%). When asked about smoking cessation, four (3.6%) of the respondents 'do not counsel' their patients on smoking cessation. Forty-nine (49, 44.5%) of the respondents reported that they were 'very effective' in changing their patients' behaviour with respect to stress management (Table 8). Majority of the respondents felt it was 'very important' to counsel patients about alcohol consumption (77, 70.0%), blood pressure (106, 96.4%), exercise (105, 95.5%), healthy diet (96, 87.3%), smoking (78, 70.9%), weight reduction (99, 90.0%) and stress/relaxation (92, 83.6%) (Table 6). Table 7 provides detailed information relating to the barriers preventing the respondents from assessing and managing risk factors of lifestyle-related diseases. Over half of the respondents (56, 50.9%) felt lack of time was a 'very important' barrier. Eighteen (16.4%) of the respondents reported that their personal lack of interest in providing preventive services was 'not important' enough to be a potential barrier.

Forty-nine (44.5%) of the respondents reported that the lack of patient interest in prevention was a 'very important' barrier (Table 7). Thirty-three (30.0%) of the respondents felt their uncertainty about what preventive services to provide was a 'very important' barrier (Table 7). Less than half of the respondents reported the following barriers to be 'very important': lack of proper patient education materials (46, 41.8%), communication difficulties with patients (50, 45.5%), cultural differences between physiotherapists and patients (38, 34.5%), the patient came for a different purpose (25, 22.7%) and patient's social belief concerning certain risk factors (50, 45.5%).

Table 4: Frequency Distribution of Respondents' Management for Participants who were more than 20% Overweight; who smoked cigarettes and who had High Blood Pressure in addition to Cigarettes Smoking

Management Options	Never n (%)	Rarely n (%)	Sometimes n (%)	About ½ the time n (%)	Often n (%)	Usually n (%)	Always n (%)
<u>≥20% overweight</u>							
Exercise regularly	0 (0)	1 (0.9)	1 (0.9)	3 (2.7)	15 (13.6)	32 (29.1)	58 (52.7)
? Calorie intake	1 (0.9)	2 (1.8)	2 (1.8)	5 (4.5)	16 (14.5)	27 (24.5)	57 (51.8)
Set weight loss goals	1 (0.9)	3 (2.7)	5 (4.5)	10 (9.1)	17 (15.5)	35 (31.8)	39 (35.5)
? Dietary fat consumption	0 (0)	2 (1.8)	2 (1.8)	9 (8.2)	14 (12.7)	34 (30.9)	49 (44.6)
Set specific exercise goals in terms of freq. and duration	1 (0.9)	4 (3.6)	8 (7.3)	12 (10.9)	19 (17.3)	28 (25.5)	38 (34.5)
Perform specific exercises	1 (0.9)	1 (0.9)	9 (8.2)	10 (9.1)	18 (16.4)	26 (23.6)	45 (40.9)
Smoked cigarettes							
Advises to quit smoking	2 (1.8)	2 (1.8)	7 (6.4)	16 (14.5)	26 (23.6)	29 (26.4)	28 (25.5)
Advises on setting a quit date	0 (0)	8 (7.3)	14 (12.7)	13 (11.8)	30 (27.3)	27 (24.5)	18 (16.4)
Provide self-help materials	0 (0)	8 (7.3)	11 (10.0)	10 (9.1)	26 (23.6)	27 (24.5)	28 (25.5)
HBP and smoked cigarette							
Reviewed health risks of HBP	1 (0.9)	3 (2.7)	4 (3.6)	8 (7.3)	29 (26.4)	26 (23.6)	39 (35.5)
Advises weight loss	1 (0.9)	0 (0)	4 (3.6)	6 (5.5)	20 (18.2)	33 (30.0)	46 (41.8)
Advises salt reduction	3 (2.7)	2 (1.8)	11 (10.0)	3 (2.7)	18 (16.4)	28 (25.5)	45 (40.9)
Advises adherence to medication	0 (0)	1 (0.9)	1 (0.9)	2 (1.8)	12 (10.9)	22 (20.0)	72 (75.5)

Key: ?=Decrease; HBP=High blood pressure

Table 5: Frequency distribution of respondents' attitude towards the assessment and management of risk factors of lifestyle-related diseases

Variable	Strongly Agree n(%)	Somewhat Agree n(%)	Neither agree nor disagree n(%)	Somewhat Disagree n(%)	Strongly Disagree n(%)
Extent to which you agree with the following statements					
Smoking cessation counselling is an effective use of my time as a physiotherapist	34 (30.9)	38 (34.5)	24 (21.8)	9 (8.2)	5 (4.5)
For most patients, health education does little to promote their adherence to a healthy lifestyle	11 (10.0)	17 (15.5)	6 (5.5)	27 (24.5)	49 (44.5)
I am less effective than professional counsellors in getting patients to quit smoking	7 (6.4)	20 (18.2)	19 (17.3)	34 (30.9)	30 (27.3)
Patients without symptoms will rarely change their behaviour on the basis of my advice	11 (10.0)	23 (20.9)	30 (27.3)	27 (24.5)	19 (17.3)
Most patients try to change their lifestyles if I advise them to do so	29 (26.4)	58 (52.7)	19 (17.3)	2 (1.8)	2 (1.8)
Effectiveness in changing patient's behaviour with respect to some risk factors	Very effective n(%)	Moderately effective n(%)	Somewhat Effective n(%)	Minimally effective n(%)	Do not counsel n(%)
Alcohol consumption	21 (19.1)	54 (49.1)	21 (19.1)	9 (8.2)	5 (4.5)
Exercise	64 (58.2)	34 (30.9)	11 (10.0)	1 (0.9)	0 (0)
Healthy diet	61 (55.5)	38 (34.5)	10 (9.1)	1 (0.9)	0 (0)
Smoking cessation	12 (10.9)	46 (41.8)	29 (26.4)	19 (17.3)	4 (3.6)
Weight reduction	57 (51.8)	36 (32.7)	15 (13.6)	2 (1.8)	0 (0)
Stress management	49 (44.5)	35 (31.8)	18 (16.4)	7 (6.4)	1 (0.9)

Table 6: Frequency distribution of respondents' perception towards the assessment and management of risk factors of lifestyle-related diseases

Variable	Not important n(%)	Minimally Important n(%)	Somewhat Important n(%)	Moderately Important n(%)	Very Important n(%)
Alcohol consumption	1 (0.9)	1 (0.9)	7 (6.4)	24 (21.8)	77 (70.0)
Blood pressure	1 (0.9)	0 (0)	1 (0.9)	2 (1.8)	106 (96.4)
Exercise	1 (0.9)	0 (0)	0 (0)	4 (3.6)	105 (95.5)
Healthy diet	1 (0.9)	1 (0.9)	1 (0.9)	11 (10.0)	96 (87.3)
Smoking	1 (0.9)	5 (4.5)	6 (5.5)	20 (18.2)	78 (70.9)
Weight reduction	1 (0.9)	0 (0)	5(4.5)	5 (4.5)	99 (90.0)
Stress/Relaxation	1 (0.9)	0 (0)	3 (2.7)	14 (12.7)	92 (83.6)

Table 7: Frequency distribution of respondents' barriers to the assessment and management of risk factors of lifestyle-related diseases

Variable	Not Important n(%)	Minimally Important n(%)	Somewhat important n(%)	Moderately Important n(%)	Very important n(%)
Lack of time	10 (9.1)	4 (3.6)	17 (15.5)	23 (20.9)	56 (50.9)
Personal lack of interest in providing preventive services	18 (16.4)	10 (9.1)	22 (20.0)	23 (20.9)	37 (33.6)
Lack of patient interest in prevention	10 (9.1)	6 (6.5)	26 (23.6)	19 (17.3)	49 (44.5)
Uncertainty about what preventive services to provide	14 (12.7)	9 (8.2)	23 (20.9)	31 (28.2)	33 (30.0)
Lack of proper patient education materials	10 (9.1)	8 (7.3)	16 (14.5)	30 (27.3)	46 (41.8)
Communication difficulties with patients	14 (12.7)	6 (5.5)	17 (15.5)	23 (20.9)	50 (45.5)
Cultural differences between physiotherapists and patients	18 (16.4)	15 (13.6)	17 (15.5)	22 (20.0)	38 (34.5)
The patient came for a different purpose	19 (17.3)	24 (21.8)	23 (20.9)	19 (17.3)	25 (22.7)
Patient's social belief concerning certain risk factors	7 (6.4)	6 (5.5)	26 (23.6)	21 (19.1)	50 (45.5)

Discussion

This study determined the attitude, perception and practice of physiotherapists in Lagos, Nigeria towards the assessment and management of risk factors of lifestyle-related diseases in patient management. This study also provided information on the barriers physiotherapists encounter in the assessment and management of risk factors of lifestyle-related diseases in patient management. The profile of respondents in this study is quite appealing given their years of working experience, areas of specialization, practice setting, grade level of practice, continuous professional development and number of patients encountered in practice. The profile of physiotherapists presented in this study is comparable with that reported among Spanish physiotherapists.¹⁵ Also, the finding of more male Nigerian physiotherapists than females in this study corroborates the report of Balogun et al of male dominance in Nigerian physiotherapists workforce.¹⁶ Blood pressure was the most assessed risk factor of LRDs by respondents in this study. This finding is in agreement with the report of Abaraogu and colleagues that Nigerian physiotherapists always assessed blood pressure in the management of LRDs.¹⁷ However, this finding contrasts with a recent study among Italian physiotherapists that reported that less than a third of physiotherapists measured exercise related blood pressure in clinical practice.¹⁸ Severin and colleagues opined that it is necessary that physiotherapists routinely assess blood pressure in clinical practice.¹⁹ Also, more than a third of respondents in this present study agreed that they always assessed physical activity and exercise status in their management of patients with LRDs. This finding is lower than the report of O'Donoghue et al who observed that 78% of primary care physiotherapists always assessed physical activity level.¹⁴ Overall, assessments of blood pressure, physical activity level and exercise status are imperative in clinical practice as there is evidence that physical activity and exercise are effective treatments or adjuncts to treatments in the prevention and management of LRDs.^{20,21} Also, the finding of this study that more than a third of the respondents always assessed the dietary status of patients was in agreement with O'Donoghue et al who stated that 55% of primary care physiotherapists sometimes assessed dietary status of their patients.¹⁴ In this present study, it was observed that a number of the respondents always assessed the dietary status of patients, with even fewer respondents providing interventions like increasing consumption of fruits and vegetables and decreasing dietary fat consumption respectively.

Many respondents reported healthy diet as being very effective in changing patient's behaviour. This finding is contrary to the report by O'Donoghue et al that primary care physiotherapists lacked the knowledge and expertise relating to nutritional issues.¹⁴ However, the report of Johnston et al indicated that it is possible for healthcare professionals to make their clients mindful of lifestyle subjects outside of their immediate areas of expertise.²²

About half of the respondents advised overweight patients to decrease caloric intake. This finding is contrary to the report by O'Donoghue et al whose study on prevention of LRDs indicated that over half of the primary care physiotherapists in Ireland did not recommend intake of fewer calories.¹⁴ On the other hand, the finding that respondents in this study advised overweight patients to decrease calorie intake is in accordance with previous studies.^{17,23,24}

Our finding that less than half of the respondents advised the patients to quit smoking and only very few of the respondents always provided self-help materials corroborates O'Donoghue et al who found that less than half of the primary care physiotherapists always assessed smoking status and that most did not provide any written advice or educational materials relating to smoking cessation.¹⁴ With smoking as the leading cause of preventable death, and the estimation that smoking will cause more deaths than any single disease worldwide by 2020, its assessment requires immediate prioritisation by all healthcare professionals.^{10,25,26} Reports

from the US Centers for Disease Control and Prevention show that many smokers seek information on how to quit, and approximately 70% of these smokers want to quit.²⁷ Physiotherapists' lack of confidence in their ability to provide smoking cessation interventions was identified as the greatest barrier to providing this service.²⁸⁻³⁰

The last of the behavioural risk factors considered was alcohol consumption. In this study a small number of the respondents never assessed alcohol use in patients. This is contrary to the report by O'Donoghue et al that almost all of the primary care physiotherapists did not assess alcohol consumption.¹⁴ O'Donoghue and colleagues demonstrated that the provision of an information leaflet is somewhat effective in changing one's drinking habits and this is encouraging for primary care healthcare professionals, such as physiotherapists, who are unaccustomed to broaching the subject of alcohol consumption.¹⁴

Finally, the respondents in this study reported that advising on LRDs were 'very effective' in changing their patients' behaviour with respect to exercise, healthy diet and weight reduction. This is reflected by the management options advised by respondents to each category of individuals with LRDs. Some barriers to the assessment and management of risk factors of lifestyle-related diseases were identified among physiotherapists in this study, the most common of which were lack of time, communication difficulties with patients and patient's social belief concerning certain risk factors. There is need to address these limitations in order to enhance the perception, knowledge and skills in contemporary and

emerging health care delivery and to enhance physiotherapy practice in line with global professional trends and best practices, and overall to champion health professionals' role in health promotion, wellness and healthy ageing.

Conclusion

Blood pressure was the most assessed risk factor of lifestyle related diseases by physiotherapists in Lagos, Nigeria. Physiotherapists in Lagos do advise individuals with lifestyle-related diseases on dieting and weight reduction, smoking cessation and alcohol intake. Management options of exercise, healthy diet and weight reduction are very effective for changing patients' behaviour, whereas alcohol consumption, blood pressure, exercise, diet, smoking, weight reduction and stress or relaxation are perceived as very important in the assessment and management of LRDs. Lack of time, communication difficulties with patients and patient's social belief concerning certain risk factors were some common barriers to assessing and managing risk factors of LRDs.

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