

ORIGINAL RESEARCH ARTICLE

Community Pharmacists and Promotion of Lifestyle Modification in Adults with Hypertension: A Practice Protocol

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Keywords: Hypertension, practice protocol, promotion of lifestyle modification, community pharmacists, phenomenology

ABSTRACT

Introduction

The growing prevalence of hypertension is a problem of public health importance globally. Lifestyle modification is an important first-step in the management of hypertension requiring promotion by all healthcare professionals. However, there is not enough focus on the contribution of pharmacists towards promotion of lifestyle modification (PLM) in the management of hypertension in Nigeria.

Methods

A phenomenological study involving in-depth interviews of 12 community pharmacists was conducted to explore how community pharmacists promote lifestyle modification in adults with hypertension Lagos, Nigeria and to develop a practice protocol for community pharmacists for guiding the practice of PLM. Participants were purposively selected as key knowledgeable who could give rich and nuanced insights about the phenomenon of PLM and an interview protocol was used to guide the interviews.

Results

From a thematic data analysis conducted, 7 themes emerged to categorize the practice of PLM by community pharmacists among hypertensive adults and the essence of a practice protocol. The themes pertaining to practice were cognitive factors, contextual factors, strategies, and self-efficacy. From the perspectives of the participants, a practice protocol was developed that can serve as a guide to community pharmacists in Lagos while performing the role of PLM among adults with hypertension.

Conclusion

Community pharmacists are well positioned in communities to contribute to reducing the incidence and prevalence of hypertension in Nigeria. The availability of a practice protocol will enhance the performance of community pharmacists while promoting lifestyle modification and can help to standardize the practice of PLM.

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What is already known on this topic?

Promotion of lifestyle modification is the mainstay of preventive care in hypertension and all health professionals must be involved.

Main contribution to Evidence-Based Practice

Community pharmacists promote lifestyle modification based on the perceived benefits to patients, barriers to their role and their self-efficacy. A practice protocol to follow while promoting lifestyle modification in hypertensive adults was developed.

Implications for public health practice

Greater involvement of community pharmacists in PLM would contribute to lowering incidence and prevalence of hypertension in Lagos. This could have positive economic and social implications on families and communities, and reduced healthcare costs for the government. And ultimately contribute to reducing health disparity in Nigeria.

Author' Contributions Statement:

The authors contributed to the study conception and design. Material preparation, data collection and analysis were performed by Olanike Kehinde. The first draft of the manuscript was written by Olanike Kehinde, and all authors commented on all versions of the manuscript. All authors read and approved the final manuscript.

Introduction

Hypertension (HTN) is a preventable global public health problem and a risk factor for other noncommunicable diseases (NCDs) including diabetes, stroke, ischaemic heart disease, heart failure and kidney disease (Joseph et al., 2016). It is known to affect more than one billion people in the world and is a leading cause of death globally (Akinlua et al., 2015). In Nigeria, it is reported as the most common cause of morbidity and mortality from cardiovascular diseases with a prevalence as high as 30% (Falase et al., 2015; Pius et al., 2020). The prevalence rose from 22% in 1990 to 28% in 2009, and is projected to rise above 30% by 2030, (Adeloye et al., 2015; Ajayi et al., 2017). HTN may be prevented and controlled through the adoption and maintenance of healthy lifestyles (Joseph et al., 2016; Pius et al., 2020).

According to the World Health Organization (WHO, 2021), NCDs account for 71% of deaths globally and can be averted through lifestyle modification. Lifestyle modification has been shown to have a positive effect on hypertension (Crittenden, Seibenhener, & Hamilton, 2017). The low level of awareness, treatment, and control of HTN in Nigeria necessitates that all healthcare professionals must be involved in its

management (Akinlua et al., 2015). In Nigeria and some other African countries, community pharmacists (CPs) are usually the first healthcare professionals consulted for treatment of diseases and other health-related issues and so must be involved in promotion of lifestyle modification (PLM). (Agomo et al., 2018).

PLM entails encouraging attitudinal and behavioral changes towards healthier lifestyle choices that are maintained by the individual for long term. It is a useful nonpharmacological strategy for reducing health disparity and the economic burden due to hypertension in Nigeria. PLM in patients by health professionals including CPs promotes public health but there is poor understanding of how community pharmacists (CPs) in Nigeria contribute to PLM. The use of practice guidelines aids standardization of disease management protocols and the need for such protocols to guide PLM by CPs in the management of HTN has been highlighted in some studies (Dineen-Griffin et al., 2019; Laliberte et al., 2012).

We aimed to provide an understanding of how CPs promote lifestyle modification to reduce the burden of HTN in Lagos, Nigeria and to develop a practice protocol for CPs for PLM from the expressed

knowledge and perspectives of the participants. The expressed perspectives provided answers to two research questions (RQ) bordering on how CPs perform PLM in hypertensive adults and how practical knowledge and pharmacy practice protocol for PLM are revealed from the experiences of the CPs.

Methods

We sought to explore the phenomenon of PLM among adults with HTN using interpretive phenomenology in a qualitative research approach. We used the same method as in a previous study exploring the perspectives of pharmacists about the barriers and enhancers to the practice of PLM (Kehinde, Dixon-Lawson, & Mendelsohn, 2020). Interpretive phenomenology involving purposeful sampling technique of key knowledgeable was used in this qualitative study. 12 community pharmacists (5 males and 7 females) practicing in Eti-Osa Local Government area (LGA) of Lagos State, with at least five years' experience, and involved in counseling patients with HTN were selected. CPs who were practicing outside this LGA or who were only involved in administration were excluded from the study.

Procedure

The data collection method involved face to face in-depth interviews lasting between 65 minutes and 130 minutes. The interviews involved using a semi-structured protocol (with 10 open-ended questions and 4 sub-questions) designed by the investigator to capture the views of participants about their knowledge and practice of PLM.

The interviews were audio-recorded and later transcribed verbatim manually and by dictation. The constructs of social cognitive theory and health promotion model guided the design of the interview protocol as well as some concepts of PLM gleaned from literature (Laliberte et al., 2012). Credibility was built into the research by prolonged engagement with the data, triangulation, member checking and use of rich, thick descriptions of the data and methods. Approval for the study was obtained from the Institutional Review Board at Walden University (Approval number – 03-14-19-0532338).

Data Analysis

Thematic data analysis was conducted manually using Excel spreadsheets to generate codes, themes, and

categories. The process involved data compilation, disassembling, reassembling, interpretation, and conclusion (Castleberry & Nolen, 2018). Word clouds were generated to add to the rigor of the analysis.

Results

Demographics: the participants aged between 30-59 years and had been in pharmacy practice between 9 and 33 years. The length of time in community pharmacy practice ranged between 8 and 25 years, with a duration of practice in Eti-Osa LGA ranging from 2 to 16 years. Their highest qualifications were Bachelor of Pharmacy (5 participants), MSc/MPH/MBA (6 participants) and 1 participant had a postgraduate fellowship (FPCPharm).

From the in-depth interviews rich, thick, and nuanced data were collected about the phenomenon of PLM by CPs. The analyzed data were summarized into 7 themes (4 for RQ1 and 3 for RQ2 respectively). Ensuing themes pertaining to the performance of PLM by CPs were cognitive ability, practice of PLM by community pharmacists, contextual factors, and strategies (Table 1). Cognitive ability bordered on the CPs knowledge of hypertension and promotion of lifestyle modification. It included a definition of hypertension as being consistently elevated blood pressure higher than 130/80mmHg and that it is often termed a silent killer.

The participants highlighted that PLM entails promoting regular exercise, dietary control, reducing stressors, smoking cessation, and reducing alcohol intake. One of the participants explained that he practices PLM by advising smokers to quit, people to eat healthy and balanced meals at the right time, eat only fruits for dinner, reduce fatty foods, reduce alcohol intake and encouraging patients to change from a sedentary lifestyle. Another participant highlighted that PLM involves one on one counseling and explaining the benefits of lifestyle modification to the patient. The need for regular BP measurement and documentation was also stated. The contextual factors involved in PLM included necessary skills, follow-up, documentation, barriers, and environmental factors. The need for effective communication skills and better documentation of the practice by CPs were highlighted in addition to patient factors including religious and cultural beliefs among the contextual factors at play. The need to leverage on technology and social media to enhance the practice were highlighted in the study.

Self-care management and lifestyle coaching were among the strategies being used by CPs. A concept diagram was used to represent the factors involved in PLM by CPs (Fig 1).

The 3 themes relating to how pharmacy practice protocol is revealed from the experiences of community pharmacists were self-efficacy, enhancing effectiveness and reach for PLM and community pharmacy protocol for PLM (Table 2).

Practical knowledge of PLM was revealed by affirming

confidence in their ability to teach subordinates and colleagues how to promote lifestyle modification using a training manual. To enhance their effectiveness and reach for PLM, participants mentioned the need for innovation and value-added services to their clients and the use of technology, social media, handbills, and radio jingles. The need for a practice protocol to standardize the practice of PLM was raised by two of the participants. From the analysis of data, a practice protocol was developed to aid and help standardize the practice of PLM by community pharmacists in Eti-Osa LGA (Fig. 2).

Table 1
Codes, Themes, and Categories about PLM by Community Pharmacists

Code Labels	Themes	Theme Clusters	Quotes
Definition of hypertension Symptoms Prevention Management Complications	Knowledge of hypertension	Cognitive ability	Hypertension is persistently high BP greater than 130/80mmHg; determined after three readings within a month (Participant #2) Often referred to as the "silent killer" (Participant #7)
Community Pharmacists and PLM	Knowledge of PLM		Hypertension is preventable through LM and having regular BP checks. LM entails regular exercise, dietary control, reducing stressors, smoking cessation, and reducing alcohol intake. (Participant #8). Highlighting, and creating awareness about a patient's role and the changes a patient needs to make to his daily life in order to have a positive impact on his BP and health (Participant #2).
Knowledge	Practice of PLM by community pharmacists	Practice of PLM by community pharmacists	It entails asking smokers to quit, people eating healthy meals; eating at the right time; eating balanced breakfast and lunch; eat only fruits for dinner; reduce fatty foods; reduce alcohol intake and encouraging patients to change from a sedentary lifestyle (Participant #12)
Benefits of LM			The benefit of PLM is that we have fewer numbers of people coming down with hypertension and can help to delay onset of hypertension in patients with a family history of hypertension (Participant #12).

<p>Involvement of Community Pharmacists in PLM</p>			<p>In our pharmacy, we counsel one-on-one on LM and the benefits of adopting healthy lifestyles. We measure BP and record it. Counsel on regular medication use. Other specific counseling points include Exercise up to three to four times in a week for 30-40 minutes at a time. Reduce salt intake; Smokers to quit smoking; Go off alcohol completely; Cut down consumption of fatty foods Stop red meat; Stop coffee, tea and Kola nut; Increase fruit and vegetable intake. Anyone that is obese, to work towards weight loss (Participant #5).</p>
<p>Necessary Skills</p>	<p>Enablers</p>	<p>Contextual factors</p>	<p>Effective communication skills; use IT to document LM activities and counseling. Leverage on technology to improve communication with patients using phone calls and SMS (Participant #4). Free BP checks offered in our pharmacy encourages repeat visits by customers. We compare trends in BP.</p>
<p>Follow-Up</p>			<p>We phone to remind them. Some come on their own to discuss health issues and their medications. We discuss LM when patients come back for repeat visits (Participant #5).</p>
<p>Documentation</p>			<p>Better documentation (Participant #10).</p>
<p>Barriers</p>	<p>Barriers to effectiveness Overcoming Barriers</p>	<p>Patients are sometimes in a hurry; they want to dash in and out because of the hustle and bustle in the city (Participant #4).</p>	
<p>Environmental factors</p>	<p>Practice environment</p>	<p>Cultural/religious undertones play out. In parts of Northern Nigeria, a male healthcare professional may not be able to get too close to a female patient (Participant #9).</p>	
<p>Social Infrastructure</p>	<p>Social Infrastructure</p>	<p>High vehicular traffic in Lagos contributes to stress (Participant #4)</p>	
<p>Strategies</p>	<p>One-on-one counseling, Integrative Pharmacy, Use of practice guidelines for PLM, LM counseling, MI, Lifestyle Coaching, Self-care management, Concordance</p>	<p>Strategies</p>	<p>Two common approaches to PLM are by encouraging exercises and dietary control (Participant #5). The CP should be able to use smart devices that aid LM (Participant #4).</p>
<p><i>Note.</i> PLM =Promotion of lifestyle modification, LM = lifestyle modification, MI = motivational interviewing</p>			

Figure 1 Factors Involved in Promotion of Lifestyle Modification in hypertensive people from the perspectives of community pharmacists.

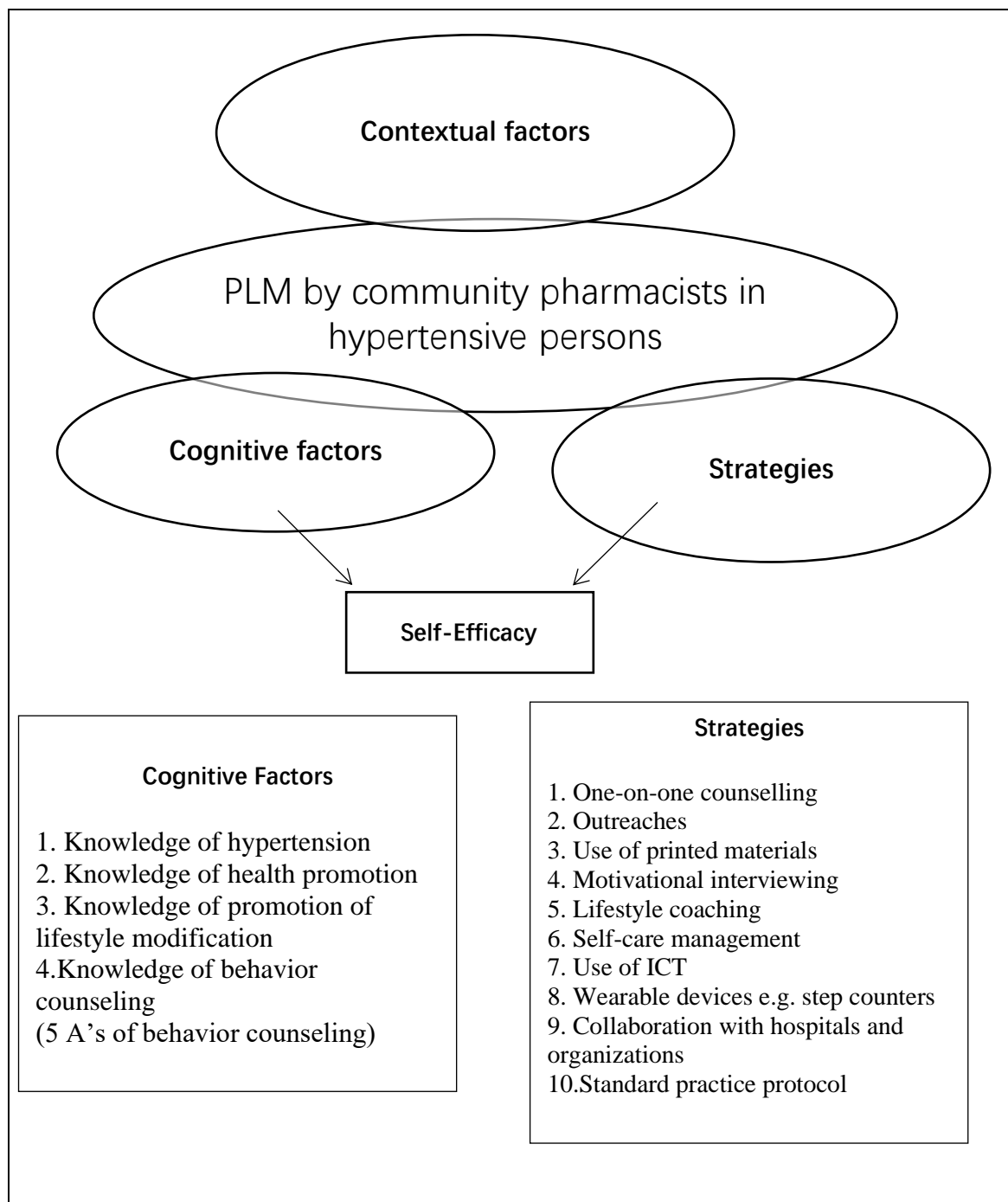
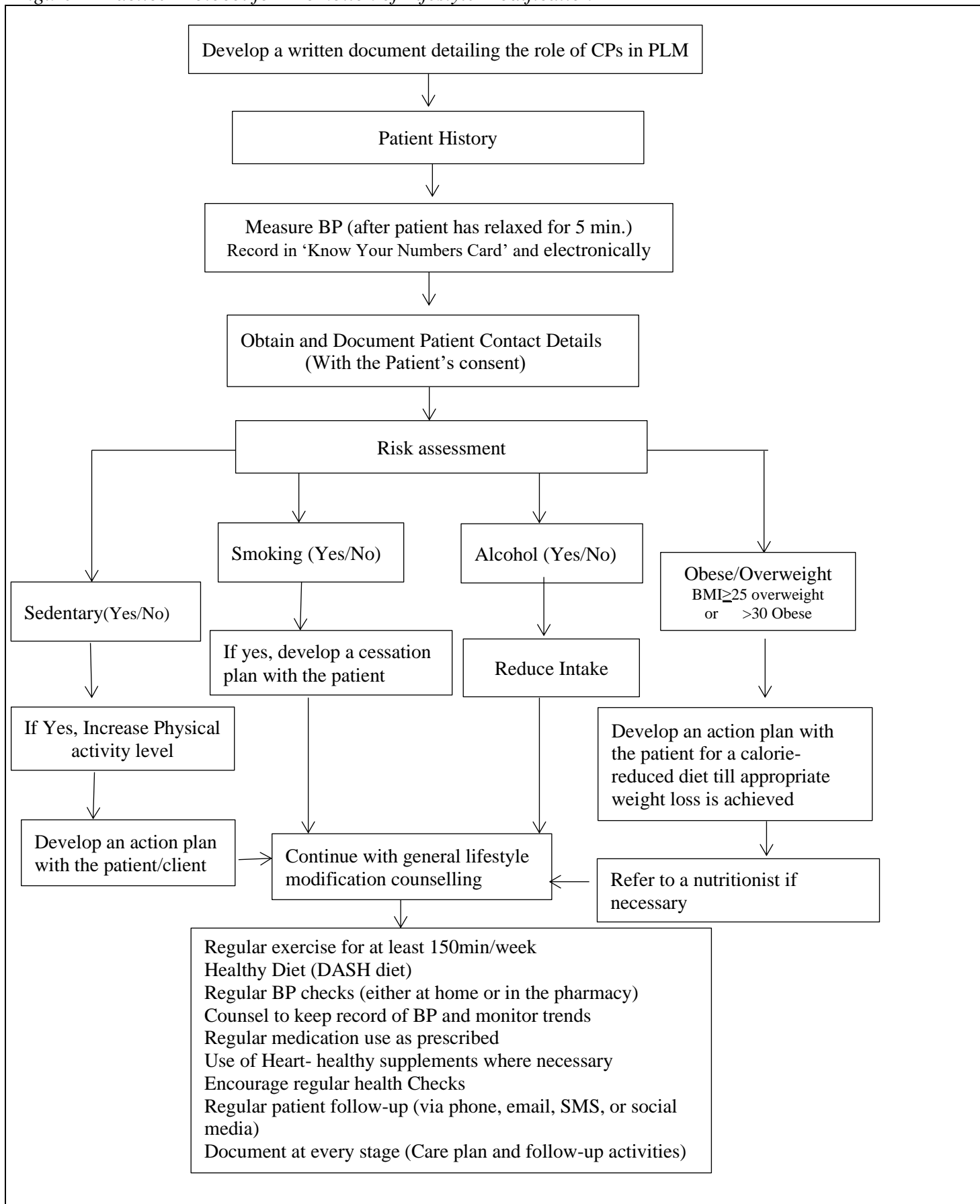


Table 2: Practical Knowledge of Promotion of Lifestyle Modification and Development of a Practice Protocol

Code Labels	Themes	Theme Clusters	Quotes
Confidence in teaching PLM	Self-efficacy	Self-efficacy	Absolutely confident. We have a training manual developed for new recruits. I tend to make them see the importance of gaining the client's interest (Participant #11)
Avenues for conducting health promotion and PLM	Media for conducting health talks, printed materials–flyers and bookmarkers, radio and TV jingles, Social media Innovation and Value-adding service	Enhancing effectiveness and reach for PLM	Promotional materials are given out on the World Health Days (Participant #3). We use social media to promote the campaigns, and the social media is a rich source of health information (Participant #3). For younger patients, we have a loyalty scheme, and they get reminders via email or SMS about time for refills (Participant #2).
Importance of Technology in PLM	Leveraging technology on		Technology is very useful for obtaining health information and makes documentation more effective (Participant #8 and #9)
Specific steps involved in PLM	Essence of a practice protocol Development of a practice protocol for PLM	Community pharmacy protocol for PLM	Develop guiding framework or protocol. There should be uniform implementation of a standard practice protocol for pharmacies (Participant #1).

Note. PLM =promotion of lifestyle modification

Figure 2 Practice Protocol for Promotion of Lifestyle Modification



Discussion

PLM is a holistic, multidimensional phenomenon and the mainstay of preventive care in the management of HTN. Cognitive factors, pharmacy school training, agency (self-efficacy, strategies, and patient factors), and social structure (stakeholders and environmental factors) influence PLM from the perspectives of CPs studied.

Cognitive factors: CPs must have a good understanding of hypertension and the concept of PLM to counsel patients with HTN effectively. Constant knowledge and use of evidence-based strategies will enhance their practices. One of the participants explained that PLM entails,

“Highlighting and creating awareness about a patient’s role and the changes a patient needs to make to his daily life in order to have a positive impact on his BP and health”.

Some risk factors for hypertension mentioned in the study included lack of physical activity, obesity, stress, poor dietary choices. This is similar to findings from a study on nurses by Akinlua et al (2016). The approach of CPs towards PLM in hypertensive patients in this study focused essentially on individual patient counseling on regular BP and health checks, and patient-specific counseling on increased physical activity, DASH diet, smoking cessation, and reduction in alcohol intake. The seventh report of the Joint National Committee on prevention, detection, evaluation, and treatment of high BP (JNC 7) recommended the following lifestyle modifications in the management of hypertension – increasing exercise, adopting DASH eating plan, weight loss, reducing dietary sodium intake, and moderating alcohol intake (Challa et al., 2021). Some of the pharmacists interviewed in this study were not familiar with the term DASH diet. This points to a need for CPs to be trained on how to educate patients about DASH diet and factors influencing healthy food choices (Challa et al., 2021).

The CPs in this study counseled patients to exercise for at least 30 minutes three or four times in a week to maintain their heart health. Physical inactivity has been linked to 10% of all premature deaths and an estimated \$117 billion in annual healthcare costs in the US (Giroir & Wright, 2018). Community pharmacists have an important role to play in highlighting challenges and dangers posed by uncontrolled hypertension including target organ damage, nephropathies and neuropathies

and the need to increase their physical activity level.

Pharmacy School Training: Pharmacy education in Nigeria is undergoing a paradigm shift (Ikhile & Chijioke-Nwauche, 2016). However, there is still the need for updating the curriculum to make it more relevant. Participants also recommended that Doctor of Pharmacy should be the minimum entry qualification into pharmacy practice. This is a policy on paper in Nigeria, so the Pharmacists’ Council of Nigeria and the National Universities Commission should ensure its implementation across all pharmacy schools in Nigeria in keeping with global standards.

Agency is about the capacity of individuals to act independently and make their own decisions. In this study the factors that pertained to agency of the CPs were self-efficacy, strategies, patient factors and other contextual factors including enablers and barriers to effective practice. To enhance their self-efficacy, CPs need to add some other skills to cognitive ability. Such skills include effective communication, presentation skills, persuasion, empathy, listening, counseling, and IT skills. The CP should speak the language the patient understands and be able to switch between dialects or from English to Pidgin English and communicate effectively even with illiterates using signs and symbols. Patient follow-up and appropriate documentation are essential aspects of the practice of PLM by CPs. The need to use appropriate software for documentation as cloud-based software was highlighted.

One-on-one counseling is a major strategy used for PLM and was termed as ‘walk-in customer involvement’ by one study participant. Healthcare professionals must be comfortable with counseling patients on PLM (Franklin, Myers, & Kokkinos, 2020). Social media and ICT are useful tools for extending access to counseling on lifestyle modification and other health issues. Other strategies being used by these CPs include online visibility (websites), integrative pharmacy practice and printed leaflets and flyers. It is recommended that CPs in Lagos should become more familiar with and use evidence-based strategies as motivational interviewing, lifestyle coaching, self-care management, concordance and the 5A’s of behavior change communication in their practices (Franklin et al., 2020; Ikhile & Chijioke-Nwauche, 2016; Marfo & Owusu-Daaku, 2017).

Patient follow-up is a key enabler of the practice of PLM, yet most of the CPs studied acknowledged their need for improvement in this aspect. An understanding

of health behavior theories as the transtheoretical stages of change model (TTM) and their constructs may help to enhance counseling during patient follow up. The professional should identify the stage of change of the patient to be able to promote health behavior changes (Ikhile & Chijioko-Nwauche, 2016). TTM may help CPs to assess the motivational readiness of the patient to change his/her behavior (Glanz, Rimer, & Viswanath, 2015). Patient follow-up is a mutually beneficial strategy to both the CP and the patient and so should be a priority for CPs in their practice. A good rapport between a patient and the CP is essential for good provider-patient relationship (Bajorek et al., 2017). CPs should therefore ensure professionalism and friendliness in their approach, and leverage on technology that can prompt them during the dispensing process to counsel on lifestyle modification (Alonso-Perales et al., 2017). It is important for CPs to document every aspect of patient encounters for lifestyle modification counseling either at initial visits or during follow-up visits as it provides a basis for monitoring trends in blood pressure and other parameters as the BMI and it serves as an evidence of practice and a measure of adherence to counsel given (Maes et al., 2017).

Barriers to practice pertained to the patient (financial constraints, attitude, ignorance, nonadherence to counsel, secretive behavior, belief systems), provider (time constraints, poor remuneration, poor cognitive and relationship skills) and organizational factors (lack of space for counseling and inadequate staffing). It has been recommended that CPs be offered some remuneration for additional pharmaceutical care such as lifestyle modification counseling (Marfo & Owusu-Daaku, 2017). A participant in this study suggested that monetary incentives be given to CPs as motivation to perform PLM. Other strategies for overcoming these barriers include improved practice relationship between doctors and CPs, better patient follow-up, more training, improved knowledge of integrative pharmacy, and the need to have dedicated pharmacist for PLM. A combination of behavioral and motivational strategies would help CPs to provide culturally sensitive health education to individuals with poor health literacy. CPs need to understand the contextual factors and use evidence-based strategies to contribute more to improving health outcomes in patients with HTN.

Social Structure involved stakeholders and

environmental factors. The government, other healthcare professionals, churches, and nongovernment organizations were the stakeholders mentioned by CPs. Environmental factors also affect performance of PLM by CPs. An unfavorable practice environment occasioned by the lack of interprofessional cooperation between pharmacists and physicians has a negative impact on the practice of PLM by CPs. Poor perception of CPs by some doctors was highlighted by some of the participants in the study. In another study poor perception of other health professionals about the competencies of pharmacists was identified as a barrier to the utilization of public health services available in community pharmacies (Saramunee et al., 2017). Isetts et al. revealed from a study that interprofessional collaboration between pharmacists and physicians resulted in better patient outcomes and BP control in the management of hypertension and also led to reduced healthcare costs (Isetts et al., 2016). Networking and interprofessional collaboration are therefore recommended in the interest of the public and patients, and leaders of the various professional groups in the health sector in Eti-Osa LGA should cooperate to ensure better patient health outcomes.

Poor infrastructural development (lack of constant power supply and poor road networks leading to traffic jams in Lagos metropolis) were highlighted as a barrier to optimal practice in this study. A previous study highlighted that lack of social infrastructures hamper the utilization of health services (Chi et al., 2015). One implication of this is that CPs and all other stakeholders in health should step up advocacy to governments in Nigeria at the state and federal levels to provide adequate infrastructures for the citizens to contribute to improvement in quality of life of the people.

Practical knowledge of the practice of PLM by CPs was revealed through their self-report of self-efficacy, how their effectiveness can be enhanced, and this led to the development of a practice protocol shown in Fig 2. The CPs highlighted that they build self-efficacy in different ways including keeping abreast of current practices of PLM, maximizing knowledge, training interns and other colleagues, and attending relevant conferences and training. Self-efficacy for PLM was assessed from steps taken for PLM highlighted by each CP and the specific counsels they would advise their colleagues to give to an adult patient with hypertension.

To enhance their effectiveness, CPs use various

avenues to promote lifestyle modification in adults with hypertension. These avenues include health talks, printed materials –flyers and bookmarkers, radio and TV jingles, and social media. They use social media especially WhatsApp to promote the campaigns and pass across health information. The social media is a very useful tool for extending coverage for lifestyle modification counseling and follow-up. Social media channels have been used for successful health promotion interventions (Gabarron et al., 2018). Social media (including Facebook, WhatsApp, Twitter, and Instagram) provide avenues for efficient, user-friendly, and ubiquitous dissemination of health-promoting information and behavior change communication. These platforms encourage participation, engagement, and action in health promotion activities including lifestyle modification (Gabarron et al., 2018). Greater leverage on social media use is recommended to aid PLM in hypertension by CPs.

To build a successful community pharmacy practice, CPs must build and maintain lasting relationships with patients through the provision of quality value-added services. According to one participant, one way to add value is to “Preach wellness beyond prescription”. This was explained to mean just giving needed counsel without selling any products when not necessary. Value-added services provided also include home visits to the elderly and free BP checks in some of the pharmacies while others have innovated a loyalty scheme targeting younger patients to encourage follow-up and reward their loyalty. The use of “know your numbers” cards for monitoring patient BP trends is another innovation by one of the CPs. The essence of leveraging on technology was highlighted by all participants to provide health information, aid adherence to counsel, ease documentation and as a tool for optimizing effectiveness. One participant said that technology can be used to motivate patients to action through visual images and gadgets may be used to send digital reminders to patients. All the participants in this study reported using telephones to contact patients or send health tips. mHealth and eHealth are two approaches to health by professionals leveraging on technology. eHealth involves the use of digital communications and information technologies to improve health and healthcare usually via the internet (Burke et al., 2015). mHealth on the other hand, involves the use of mobile communication or

computing technologies as mobile phones and wearable devices to provide health information and services. Mobile devices aid self-management of chronic diseases and health promotion, and they facilitate exchange of health information between patients and healthcare providers. Therefore, the use of telephones and mobile applications by CPs in Eti-Osa local government area to send reminders and health tips to patients is an evidence-based approach to healthcare and should be encouraged as it can help to improve health outcomes through collaborative management between the patient and healthcare provider.

One previous study affirmed that guidelines and policies help to streamline services provided for hypertensive patients by CPs in developing countries like Ghana and Nigeria (Marfo & Owusu-Daaku, 2017). Specific steps highlighted by the CPs used for PLM have been used to design a guiding protocol. The steps were categorized according to four risk factors for hypertension – sedentariness, overweight/obese, smoking, or alcohol consumption (Figure 2). The steps involve documenting patient medication and medical history, BP measurement and documentation after allowing the patient to rest for 5min, risk assessment based on lifestyle, weight, smoking and alcohol status. This is followed by appropriate individualized counselling based on lifestyle and stage of change the individual is at. The specific counseling points are about regular exercise for at least 150min/week; healthy Diet (DASH diet); regular BP checks (either at home or in the pharmacy); keeping record of BP and monitoring trends; regular medication use as prescribed; use of heart- healthy supplements where necessary; encouraging regular health checks; regular patient follow-up (via phone, email, SMS or social media). Documentation at every stage of the care plan and follow-up activities is emphasized. The practice protocol developed will help CPs in Eti-Osa LGA to perform this role more effectively and to standardize practice.

This study confirms that community pharmacists contribute to improvement of public health by promoting lifestyle modification in hypertensive adults in Lagos, Nigeria. This role can be enhanced by using a practice protocol. The practice protocol developed in this study would help CPs in Eti-Osa local government area to standardize and enhance their practice of PLM and improve self-efficacy.

Study Limitations

The CPs were not directly observed as they practiced PLM, but their expressed views were taken as actual practice of PLM. The researcher's knowledge of the phenomenon during interviewing may have introduced some bias but this was minimized by

bracketing and reflective journaling.

Conflict of interest

The authors declare no conflict of interest with this research. No Financing was received associated with the article and related research.

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