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**Promotion of Lifestyle Changes by Community Pharmacists Among Adults with Hypertension in Nigeria**

**POSTER  
PRESENTATION**

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## Abstract

Hypertension is a global public health problem. However there is not enough focus on the contribution of pharmacists towards promotion of lifestyle modification (PLM) in the management of hypertension in Nigeria. From a thematic data analysis conducted in a phenomenological study, an overarching theme emerged. The theme is that the roles and practice of PLM by community pharmacists among hypertensive adults is influenced by cognitive factors, pharmacy school training, agency (self-efficacy, strategies, and patient factors), and social structure (stakeholders and environmental factors). One contribution of this research to public health is the development of a practice protocol that can serve as a guide to community pharmacists while performing PLM.

*Doctoral Capstone*

## Problem

**Hypertension** (HTN) is a preventable global public health problem.

The most common cause of morbidity and mortality from cardiovascular diseases in Nigeria with a prevalence as high as 30% (Daniel et al., 2013; Falase et al., 2015).

There is low level of awareness, treatment, and control of HTN in Nigeria (Akinlua, et al., 2015).

Poor understanding of how community pharmacists (CPs) in Nigeria contribute to PLM

Need for practice guidelines on PLM for CPs in the management of HTN (Adeniyi et al., 2015; Gelayee et al., 2017; Laliberte et al., 2012).

## Purpose

To explore the phenomenon of **promotion of lifestyle modification** (PLM) among adults with HTN using interpretive phenomenology in a qualitative research approach.

Provide an understanding of how CPs promote lifestyle modification in order to reduce the burden of HTN in Lagos, Nigeria.

To develop a practice protocol for CPs for PLM.

## Significance

The study provided an understanding of the perspectives and practice of PLM by CPs among hypertensive patients and would also provide evidence for further studies of the phenomenon in other settings across Nigeria. Additionally it would serve as evidence base for explaining the contribution of CPs in the management of hypertension in Nigeria.

The practice protocol designed will help to guide CPs in interventions aimed at PLM in the management of patients with hypertension and thus contribute to improved patient outcomes and a consequent reduction in health disparity due to HTN in Nigeria.

## Theoretical Framework

Social cognitive theory (SCT) was used to explain the interaction between personal cognitive factors, behavioral factors and environmental factors involved in the practice of PLM by CPs. Relevant constructs of SCT to the practice of PLM by CPs were found to be knowledge, self-efficacy, intention, and environmental factors including the practice environment.

The health promotion model (HPM) provided further basis for explaining that the actions and behaviors of CPs in the practice of PLM was influenced by their perceptions of benefits, barriers, and self-efficacy, emotions (exemplified by a good rapport with patients), and by interpersonal and situational environmental influences such as relationship with other stakeholders and availability of social infrastructure.

## Relevant Scholarship

Hypertension is one of the most common causes of morbidity and mortality in Nigeria with increasing prevalence (Falase et al., 2015). 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). This chronic disease is often preventable and may also be controlled through the adoption and maintenance of healthy lifestyles (Joseph et al., 2016; Linden et al., 2010).

In Nigeria and some other African countries, CPs are usually the first healthcare professionals consulted for treatment of diseases and other health-related issues. This is because they are accessible and do not charge any consultation fees, hence they must be involved in PLM ( Adje and Oli, 2013; Agomo et al., 2018; Gelayee et al., 2017). PLM in patients by health professionals including CPs promotes public health and reduces health disparities.

Some studies have highlighted strategies and interventions used by healthcare professionals in PLM among adults suffering from hypertension (Adeniyi et al., 2015; Agomo et al., 2018; Akinlua et al., 2015; Laliberté et al., 2012; Um et al., 2013). However, there is a need to document how CPs in Lagos, Nigeria perform this role among adults with HTN.

There is a need to develop and use practice guidelines for PLM by CPs for managing HTN in Nigeria, as this would contribute to their effectiveness (Adeniyi et al., 2015; Gelayee et al., 2017; Laliberte et al., 2012). This study therefore aimed to fill these gaps.

## Research Question

**RQ1:** What are the perspectives of CPs about contributing to PLM among adults living with hypertension in Lagos Nigeria?

**RQ2:** How do CPs perform the role of PLM among adults living with HTN in Lagos Nigeria?

**RQ3:** How is practical knowledge and pharmacy practice protocol revealed from the experiences of the CPs?

## Participants

Purposeful sampling technique of key knowledgeable was used in this study. 12 community pharmacists practicing in Eti-Osa Local Government area 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.

## Procedures

The data collection method involved face to face in-depth interviews lasting between 65minutes and 130 minutes. The interviews involved using a semi-structured protocol (with 13 open-ended questions and 5 sub-questions) designed by the investigator to capture the views of participants about PLM.

The interviews were audio-recorded and later transcribed verbatim manually and by dictation. The constructs of SCT and HPM guided the design of the interview protocol as well as some concepts of PLM gleaned from literature (Laliberté et al., 2012).

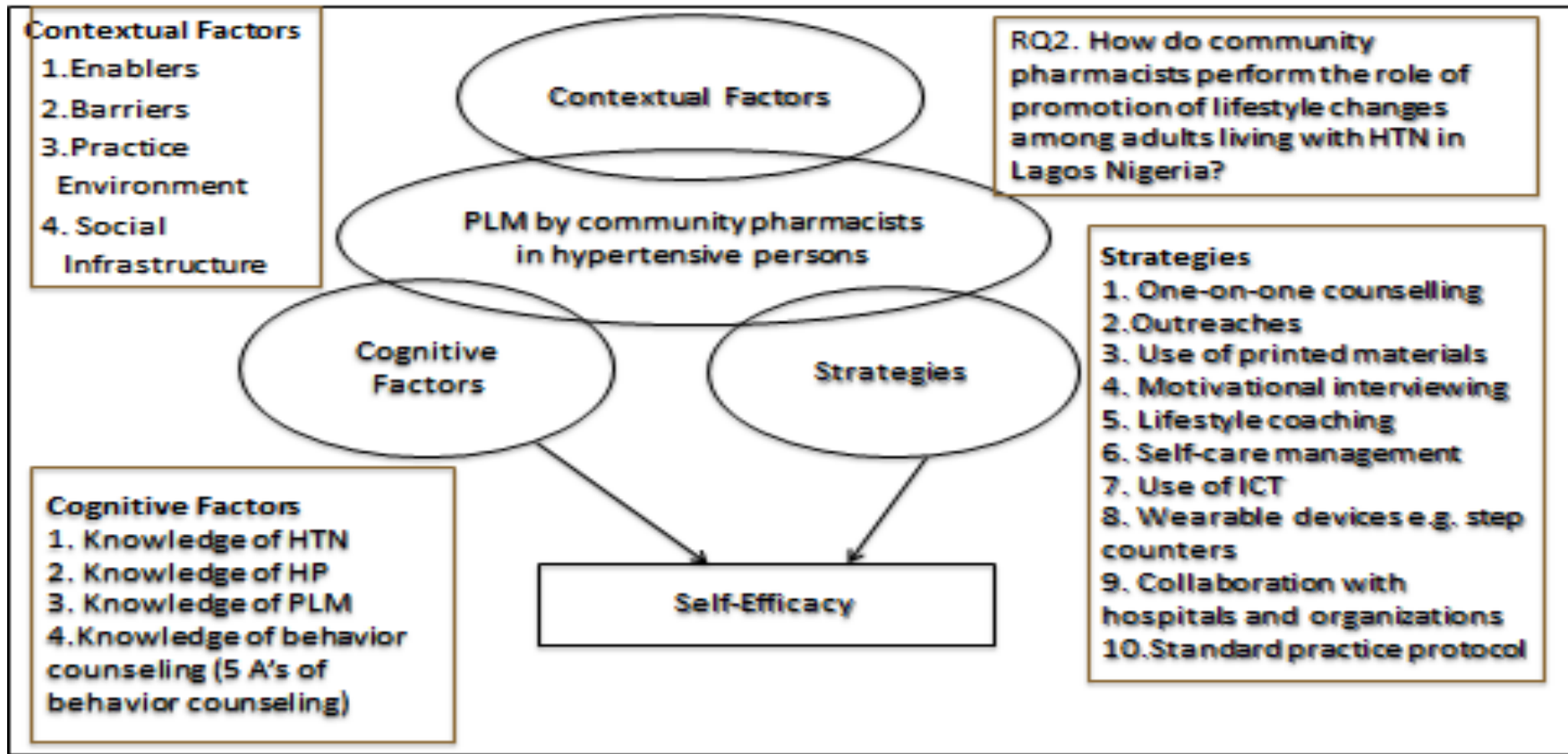
## Analysis

Thematic data analysis was conducted manually using Excel spreadsheets to generate codes, themes, and categories. Word clouds were generated to add to the rigor of the analysis.

# Findings

Emerging themes about the perspectives of PLM included: an understanding of health promotion; role of other stakeholders; relevance of pharmacy school curriculum; and the actual roles of community pharmacists in PLM.

Themes Relating to RQ2



## Findings contd.

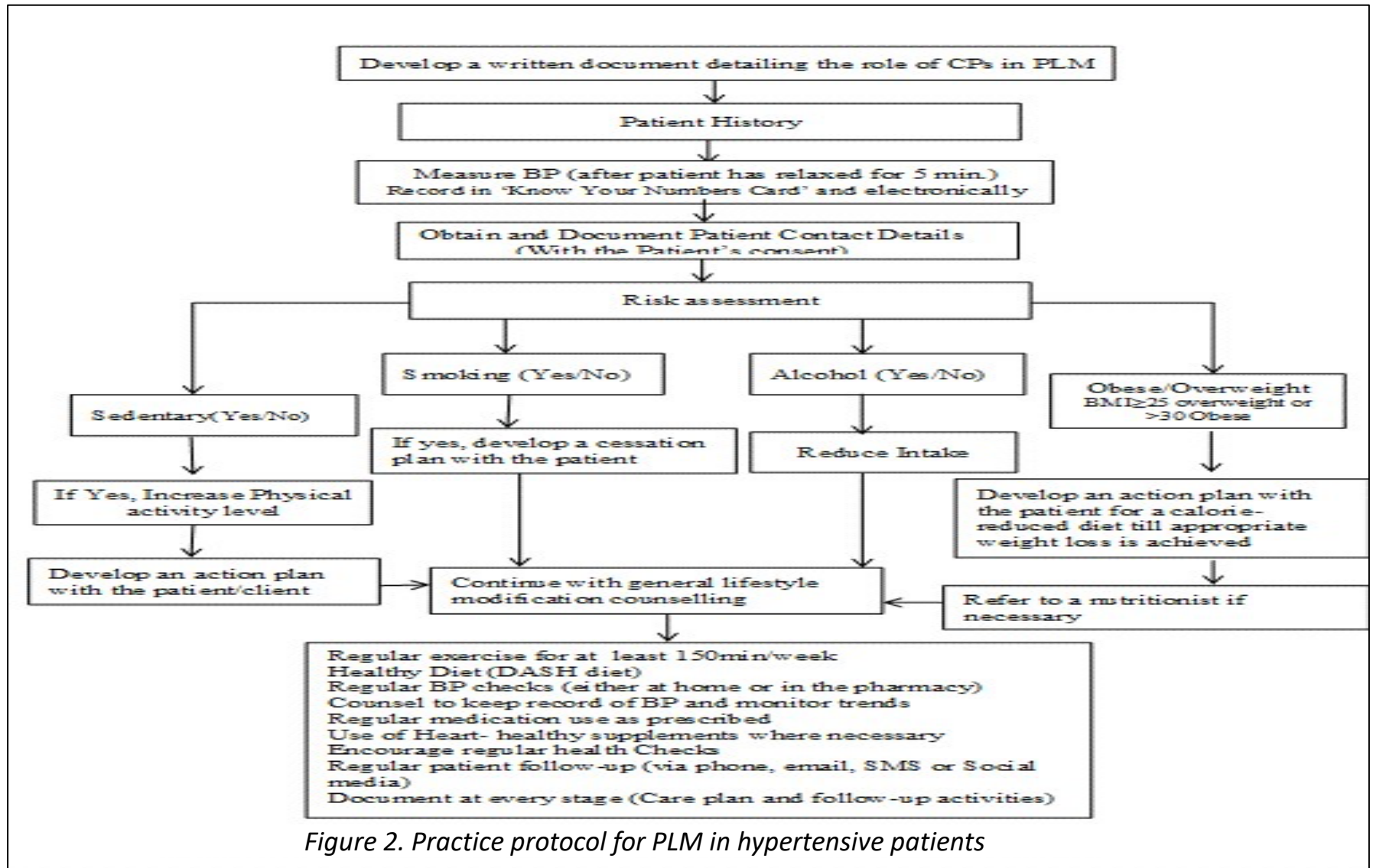


Figure 2. Practice protocol for PLM in hypertensive patients



# Interpretation

PLM is a holistic and multidimensional phenomenon; and is the mainstay of preventive care in the management of HTN.

CPs must be actively involved in the practice of PLM and update their knowledge constantly in order to improve effectiveness.

The roles and practice of PLM by CPs among hypertensive adults is influenced by cognitive factors, pharmacy school training, agency (self-efficacy, strategies, and patient factors), and social structure (stakeholders and environmental factors).

Social media and ICT are useful tools for extending access to counseling on lifestyle modification and other health issues. CPs need to understand the factors and use the strategies appropriately in order to contribute to improving health outcomes in patients with HTN.

CPs promote lifestyle modification based on the perceived benefits to patients, barriers to their role and their self-efficacy. Self-efficacy enhances their effectiveness and reach for PLM. Environmental factors also affect performance of PLM by CPs. The practice protocol developed will help CPs in Eti-Osa LGA to perform this role more effectively and to standardize practice.

## 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.

## Recommendations

Community pharmacists need to be familiar with and use behavior change counseling techniques and health promotion strategies as motivational interviewing, lifestyle coaching, concordance, and self-care management in order to promote lifestyle modification more efficiently.

The practice protocol should be standardized for community pharmacies in Lagos and Nigeria, after similar studies are conducted in all the local government areas of Lagos State, and across randomly selected states in Nigeria. This will help to improve the practice of PLM by CPs and enhance pharmaceutical care in managing HTN.

The need for further research to explore barriers and facilitators to the performance of the roles of CPs in PLM across Nigeria is highlighted.

Training on PLM should be incorporated into the pharmacy school curriculum across Nigeria.

## Social Change Implications

The practice protocol developed would provide a standard guideline that all CPs in Eti-Osa local government area can follow in order to perform the role of PLM more effectively. This would contribute to improving their self efficacy.

Greater involvement of CPs in PLM in adults would likely lead to a reduction in the incidence and prevalence of hypertension in Lagos with attendant positive economic and social implications on individuals, families, and communities and reduced healthcare costs in Lagos state and Nigeria.

Ultimately these benefits would contribute to reducing health disparity in Nigeria.

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