

## Original article

# Educational Needs of Hypertensive Patients in Buea Hospital Setting (Cameroon)

## *Besoins éducationnels des patients hypertendus en milieu hospitalier à Buea (Cameroun)*

Olivier Pancha Mbouembou<sup>1</sup>, Natacha Aïdego Ama Milamem<sup>1</sup>, Marcel Tangyi Tamanji<sup>2,3</sup>, Mary Bi Atanga<sup>4,5</sup>

<sup>1</sup>Department of Biomedical Sciences, Faculty of Science, University of Ngaoundéré

<sup>2</sup>University of Buea, <sup>3</sup>Ngaoundéré Regional Hospital

<sup>4</sup>Department of Nursing, <sup>5</sup>University of Bamenda

Corresponding author: Dr PANCHА Olivier; Tel: (237)674982237;

Email: [olivier\\_pancha@yahoo.fr](mailto:olivier_pancha@yahoo.fr)

### ABSTRACT

**BACKGROUND.** High blood pressure is a worldwide public health problem, responsible for approximately 8 million deaths annually and a wide range of exacerbating complications. Escalating trends in hypertension incidence raise concern in the prevention and management of hypertension. This may denote insufficiencies in the education of hypertensive patients and sensitization of the general population. In this work, we assessed the educational needs of hypertensive patients in an African hospital setting.

**METHODS.** This is a survey type study. 35 participants were randomly selected in a population of patients who attended the diabetes and hypertension unit of the Buea Regional Hospital for medical follow-up. 15 health personnels involved in their management were also included. A structural questionnaire was used to collect information from both groups.

**RESULTS.** 22 hypertensive patients (62.9%) were aged sixty and above. All the patients accepted having received instructions on the management of hypertension during consultation and general meetings for hypertensive persons, although five patients had no knowledge about arterial hypertension. 11 patients (31.5%) were of the opinion that the measures prescribed for hypertension were too hard to follow. Also, we noticed knowledge gaps among the health personnel on knowledge concerning hypertension; five of the nurses surveyed were not aware of the link between hypertension and stress.

**CONCLUSION.** Although efforts are made in the Buea Regional Hospital to satisfy educational needs of hypertensive patients, there is much to be done towards providing patients, medical and non-medical personnel with adequate knowledge concerning hypertension and encouraging the involvement of the patients in their own care.

**KEYS WORDS:** education, hypertension, South West, Cameroon.

### RESUME

**INTRODUCTION.** L'hypertension artérielle est un problème de santé publique d'envergure mondiale. On estime à un peu moins de huit million par an, le nombre de décès qui lui sont imputable. De plus, la morbidité liée à l'hypertension artérielle est alarmante. Ces données inquiètent et traduisent un problème de prise en charge incluant aussi bien l'éducation du grand public, que celle des patients souffrant d'hypertension artérielle. L'objectif de cette étude était d'identifier les besoins éducationnels des patients et des personnels de santé sur l'hypertension artérielle.

**MÉTHODOLOGIE.** Il s'agit d'une étude transversale descriptive. Un questionnaire structuré a été administré de manière aléatoire aux participants. Les patients hypertendus suivis dans l'unité de diabète et d'hypertension artérielle de l'Hôpital Régional de Buea (35 patients) et le personnel infirmier impliqué dans leur prise en charge (15 infirmiers) ont répondu à ce questionnaire. Le critère de jugement était les bonnes connaissances sur l'hypertension artérielle et sa prise en charge.

**RÉSULTATS.** 22 hypertendus (62,9%) étaient âgés de 60 ans et plus; la totalité des patients affirmait recevoir des instructions concernant la prise en charge de leur maladie en consultation médicale et lors des séances d'éducation collective; toutefois cinq patients n'avait aucune connaissance de la notion d'hypertension artérielle. Onze patients sur trente cinq trouvaient pénible le respect des mesures hygiéno-diététiques; le personnel infirmier présentait des lacunes concernant les connaissances sur l'hypertension artérielle, en particulier cinq infirmiers ne se représentaient pas qu'il puisse y avoir un lien entre l'hypertension et le stress.

**CONCLUSION.** Des efforts sont fournis pour assurer l'éducation des patients hypertendus suivis à l'Hôpital Régional de Buea. Toutefois beaucoup reste à faire, notamment pour améliorer l'implication des patients hypertendus dans leur prise en charge.

**MOTS CLÉS :** éducation, hypertension, Sud-Ouest, Cameroun.



## INTRODUCTION

The proportion of patients suffering from hypertension is estimated to be about 26.4% in the world and it is purported to increase and reach 29.2% by 2025 [1]. It is well established that 34.3% of hypertensive patients come from the developed countries, and 65.7% from developing countries [2]. In Cameroon about 20% of the population is suffering from hypertension [3]. Hypertension is responsible for approximately of 8 million deaths per year worldwide and 92 million disability adjusted life years [4]. Recent data shows that there is a steady increase in hospitalisations attributable to hypertension and its associated complications [5]. For this purpose, hypertension has become a major source of expenditure for individuals, families, communities, and governments at large [6]. The management of hypertension relies extensively on educating hypertensive patients on the adoption of healthy behaviours and thus requires identification of factors involved in the disease progression and indicators for the observance and evaluation of patient care [7].

The aim of this study was therefore to investigate on the educational needs of patients with hypertension performing medical visits at Buea Regional Hospital.

## MATERIAL AND METHODS

### Study Area and Population

This study was conducted in Buea, the administrative headquarters of the South West region of Cameroon. Buea is located on the eastern slopes of Mount Cameroon, averagely 870km (2854ft) above sea level and having a humid climate, and covering a surface area of about 25,410 square kilometers[8] with a population of approximately 150,000 inhabitants[9]. The target population consisted of hypertensive patients who attended the Buea Regional Hospital for their medical follow-up and medical personnel responsible of their care. The final sample was made up of 35 hypertensive patients and 15 nurses.

### Design and Procedure for Collective Education

A prospective cross-sectional descriptive study to assess the educational needs of hypertensive patients was conducted at the Buea Regional Hospital during the period spanning May 2<sup>nd</sup> to June 10<sup>th</sup> 2013, within which study participants were randomly recruited into the study at the diabetes and hypertension unit after obtaining their consent. Hypertensive patients who refuse to consent to the study were excluded from the study.

During the study period, collective education sessions were held every Tuesday morning at the diabetes and hypertension unit of Buea Regional Hospital and before each education session, the blood pressure of each patient was measured. Specific topics were planned, prepared, and discussed at every educational session at the end of which participants were free to ask questions. These topics were generally focused on the need for strict adherence to a healthy diet, medical treatment, and on the importance of stress control and regular

monitoring of blood pressure in the management of hypertension.

### Materials and methods

The assessment of educational needs of hypertensive patients was made on the basis of a pre-established structural questionnaire submitted at the beginning of the education sessions to each participant, the main purpose being to identify their knowledge on hypertension and its daily management. The questionnaire was also designed to assess the knowledge of nurses on hypertensive patient care. Study variables included: demographic data, source of the education received by hypertensive patients, knowledge about hypertension and patient's perception of his illness and lifestyle changes.

### Statistical analysis

Analysis was performed using the Epi info version 3.4.3 statistical package and results were presented in the form of frequency and percentage.

### Ethical consideration

This study received approval from the administrative authorities of the Buea Regional Hospital. Patients gave a written consent before the study. Apart from the time spent during the Tuesday morning education sessions, to no other unnecessary risk were participants subjected to. Blood pressure results were delivered to individual participants and confidentiality of all information obtained during the study period was maintained.

## RESULTS

### Sociodemographic and Educational Characteristics

#### Study Participants

The sample size was made of 35 hypertensive patients and 15 nurses. 71.4% of study participants (n=25) were women and 28.6% (n = 10) were men. 22 patients (62.9%) were 60 years of age and above. 68.6% (n=24) of the studied patients were married, 28.6% (n=10) widowed and 2.9% (n=1) celibates. 13 patients were illiterate (37.1%) and 14 had just primary education (40%). Concerning professional status, it included: housewives (25.70%; n=9), farmers (25.70%; n=9), retirees (20%; n=7), teachers (5.70%; n=3), traders (2.90%; n=1) and unemployed (20%, n=7). General characteristics of the hypertensive study participants are represented in Table I.

**Table I.** General characteristics of the patients

Parameter	Frequency (n=35)	%
<b>Sex</b>		
Female	25	71.4
Male	10	28.6
<b>Age (in years)</b>		
≤40	0	0
40-49	4	11.4
50-59	9	25.7
60 and above	22	62.9
<b>Marital Status</b>		
Bachelor	1	2.9
Married	24	68.6
Widowed	10	28.6
<b>Education level</b>		
Illiterate	13	37.2
Primary school	14	40
Secondary school	4	11.4
High school	2	5.7
University	2	5.7
<b>Occupation</b>		
Housewives	9	25.7
Farmers	9	25.7
Teachers	3	5.7
Traders	1	2.9
Retirees	7	20
Unemployed	7	20

Concerning the characteristic of the health personnel, the 11 were women (73.3%), and age ranged from 20 to 29 years (86.7%; n=13). No medical doctor was enrolled in the sample. 66.6% (n=10) of the studied personnel had at least a bachelor's degree (superior nurses) and 33.3% (n=5) were state registered nurses (SRN).

#### Source of the Education Received by Hypertensive Patients

All the hypertensive patients reported that they received instructions about the management of their disease condition from health personnel. These instructions were:

- A - Take drugs in time
- B - Follow strictly the hypertensive diet
- C - Practice exercise regularly
- D - Maintain a good way of life
- E - Avoid stress

#### Knowledge of Participants on Hypertension

Five hypertensive patients did not know the basic definition of hypertension. 19 patients were aware that hypertension may be linked to hereditary factors and one patient stated that hypertension may have a mystical origin. 33 patients stated that stress influences blood pressure, 31 patients knew that the diagnosis of hypertension is made through the measurement of blood pressure and 34 patients knew that hypertension leads to

dangerous complications. All the patients were aware that the practice of exercise may be essential to maintain blood pressure at normal level as well as the consumption of fruits and vegetables. In our sample, 34 patients affirmed that weight control was important for the management of high blood pressure, and 33 that there may be a link between hypertension and smoking. We also found out that 10 of the study participants depended and trusted the efficiency of traditional medicines for the treatment of hypertension.

All personnel (nurses) agreed on the fact that hypertension is a rise in blood pressure, that it is determined by measurement of blood pressure, and that hypertension may expose its sufferers to dangerous complications. We noticed that 14 nurses in the sample recognised the hereditary feature of hypertension. On one hand 5 nurses did not know that stress may be a risk factor to hypertension while on the other, 8 of them supposed that hypertension could be caused by certain drugs (Table II).

**Table II.** Patient's and personnel's general knowledge on hypertension

Parameters	Patients with a "yes" answer % (n)	Personnel with a "yes" answer % (n)
Definition of hypertension	85.7% (30)	100% (15)
Hypertension linked with hereditary factors	54.3% (19)	93.3% (14)
Hypertension linked with stress	94.3% (33)	66.6% (10)
Diagnosis of HBP by blood pressure measurement	88.6% (31)	100% (15)
Hypertension leads to dangerous complications	97.1% (34)	100% (15)
Practice of sports improves control of HBP	100% (35)	100% (15)
Eating Fruits and vegetables improve control of HBP	100% (35)	100% (15)
Reduced salt consumption may control HBP	100% (35)	100% (15)
Traditional medicine is useful in treatment of hypertension	71.4% (25)	93.3% (14)
Weight control is useful in management of HBP	97.1% (34)	100% (15)

### Patient's Perception of Dietary Adjustments in Hypertension

In our study 15 hypertensive patients affirmed that hypertension changed their life style, 11 complained on the difficulties in respecting the dietary recommendations, and 25 said that their family had a direct implication in the management of their disease. All hypertensive patients expressed the fact that they were satisfied with the therapeutic education received in Buea Regional Hospital and they encourage the health personnel to continue with their efforts.

According to the survey, patients had respective difficulties in adhering to the dietary recommendations especially with the restriction of alcohol consumption (54.5%), 18.2% with reduced salt consumption and not having to eat what they wanted, and 9.1% of the patients with controlling daily stress levels. Regarding dietary adjustments, adherence to treatment and financial support, 30%, 38%, 12% of the patients respectively affirmed that their families were of help to them. In addition, 20% of patients would like their families to co-operate in the control of their daily stress levels.

## DISCUSSION

The findings observed in the current study show that the basic definition and predisposing factors to hypertension were still not well known to a number of participants. Also, several patients reported specific difficulties with adhering to dietary recommendations.

### Sociodemographic and Educational Characteristics of Participants

The average age of the hypertensive patients in our sample was 58 years, with 71.4% being female patients. These results are similar to those obtained by another study carried out in Ivory Coast in which the average age was of 50 years with a majority of the study participants being women (59.5%) [8].

Our results indicate that most of the hypertensive patients were housewives (25.70%), farmers (25.70%), retirees (20%) and the unemployed (20%). This contradicts with a European study which sustained the link between socioeconomic status and high blood pressure, indicating that socioeconomic status determined by educational level is a strong independent predictor of high blood pressure incidence and progression among female health professionals [10].

### Knowledge of Patients on Hypertensive

The results of our study concerning knowledge of the hypertensive patients indicate that 94% of the patients were aware of the necessary measures in the control of blood pressure and assuming responsibility of their disease. This result is comparable to that obtained in a U.S. study in which 90% of patients were aware of the need to control blood pressure [11]. Another study held in the Seychelles Islands where most persons whether hypertensive (aware or unaware) or non-hypertensive, had good basic knowledge relating to hypertension determinants and consequences, possibly an outcome of

a nationwide cardiovascular disease prevention program over the last years, although relevant lifestyle changes and adoption of a positive attitude was recorded in smaller proportions of participants, with minimal differences between aware and unaware hypertensive patients, and non-hypertensives. Thus several authors reiterated the need to emphasise on therapeutic education of hypertensive patients as it improves patient compliance and disease prognosis [12-15].

### Patient's Perception of their Disease and Assumption of Responsibility

It is now well documented that patient's perception of their disease and its treatment are both inter-connected [16, 17]. In our study, 54.5 % affirmed having difficulties in respecting recommended hygienic and dietary measures because they were too constraining. Those measures are part of their treatment and include low salt consumption, consumption of vegetables, weight loss and control of daily stress. It has been shown that a high salt intake, a low consumption of fruit and vegetables, obesity, excess alcohol intake and lack of physical exercise all contribute to the development of high blood pressure. However, the diversity and strength of the evidence is much greater for salt than for other factors [18]. Another study reported that weight reduction program (diet and physical activity) can be a possible approach to treat hypertension [19].

Surprisingly, 97.1% of patients affirmed to following their treatment strictly. This contradicts existing reports which indicate in all cases that adherence to anti-hypertensive treatment is a real problem in the management of hypertensive patient [19].

At the end of our study, 20% of hypertensive patients reiterated on the need for their families to be implicated in the management of their disease. This is specifically needed for daily stress level control, dietary and therapeutic follow-ups, and to a greater extent financial support. There is therefore a need to emphasise on the role of patients' families in long-term care. Quality therapeutic patient education must include educational and psychological-support roles of the families. It is essential for the long-term well-being of patients that their family members understand their difficulties and realise that their assistance to the patients can be of considerable value.

### Study Limitation

This data recorded was based on patient's verbal affirmation, thus the absence of other methods of verification of the information provided represented a major limitation in the study.

## CONCLUSION

This investigation showed that efforts are made within the framework for the satisfaction of educational need of hypertensive patients at the Buea regional hospital. However, much remains to be done to reach recommended quality standards levels establish by WHO guidelines. These efforts could primarily be moved



towards an educational action on the specific patient related factors, specialized professional training and capacity building of medical personnel, the education of hypertensive patients on their responsibilities in the management of their disease and the implication of patients' families in the management of their condition. The education of the patient by the nurses should lead to his independence according to the conceptual model of Dorothea Orem who defines the man as "an individual having capacities, aptitudes and a capacity to engage and to achieve the actions of the self-care"(22).

## CONFLICT OF INTEREST

None declared

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## ACKNOWLEDGMENT

We thank the staff of Buea Regional Hospital for their collaboration for the accomplishment of this work.

## AUTHOR'S CONTRIBUTION

Study conception: OPM, MBA,

Data collection and analysis: NAAM, OPM

Script drafting: OPM, MMT

Manuscript revision: MBA, MTT

Approval of the submission to the journal: All authors

