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Quality of Life of a Group of Cameroonian Patients Aged over 65 Years in an Urban Setting: a Cross-Sectional Study

Qualité de vie d'un groupe de patients camerounais de plus de 65 ans en milieu urbain: une étude transversale

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Abbreviations
METs: Metabolic equivalent for task
MMSE: Mini mental state Examination
MWT: minute walk test
OPQOL: older people's quality of life questionnaire
SPSS: statistical package for the social sciences

ABSTRACT

Background. The quality of life of the elderly can be compromised by several chronic diseases. This has a considerable impact on their physical and mental capacities. This study aimed to evaluate the quality of life of the elderly at the Yaoundé Central Hospital. **Methods.** We carried out a cross-sectional study of elderly patients who consulted at the Yaounde Central Hospital forfive months. Sociodemographic characteristics were taken, and we also took data concerning their chronic conditions and depressive symptoms. The presence of any cognitive impairment was evaluated using the Mini-mental state Examination (MMSE). Their functional capacity was assessed with the six-minute walk test. Quality of life was evaluated using the older people's quality of life questionnaire (OPQOL). The multivariate analysis was done on the logistic regression model, and the p values < 0.05 were considered statistically significant. **Results.** 66 participants were included (35 women) with a median age of 70 (IQR: 67 - 75) years. About 87.8% had at least one chronic condition, and 47% had two or more. The most prevalent chronic condition was hypertension (71.2%), followed by abdominal obesity (40.9%) and heart failure (24.2%). Mild depressive symptoms were present in 1.5% of our study population. Fourteen participants (21.2%) had a poor quality of life. The factors associated with a poor quality of life was a distance covered in the 6 MWT less than 350 m (OR: 3.7, p < 0.05). **Conclusion.** There is a high prevalence of poor quality of life among elderly patients consulting at the Yaoundé Central Hospital. A distance covered in the 6MWT less than 350m is associated with poor quality of life.

RÉSUMÉ

Introduction. La qualité de vie des personnes âgées peut être compromise par la survenue de plusieurs pathologies chroniques. Cela a un impact considérable sur leurs capacités physiques mais aussi sur leurs capacités mentales. Le but de cette étude était d'évaluer la qualité de vie des personnes âgées suivies à l'Hôpital Central de Yaoundé. **Méthodologie.** Nous avons réalisé une étude transversale analytique sur des patients âgés ayant consulté à l'hôpital central de Yaoundé pendant une période de cinq mois. Les caractéristiques sociodémographiques ont été prises, ainsi que leurs différentes comorbidités. La présence d'un déficit cognitif a été évaluée à l'aide du *Mini Mental State Examination* (MMSE). Leur capacité fonctionnelle a été évaluée à l'aide du test de marche de six minutes. La qualité de vie a été évaluée à l'aide du score OPQOL.. L'analyse multivariée a été effectuée sur le modèle de régression logistique et les valeurs de p < 0,05 ont été considérées comme statistiquement significatives. **Résultats.** 66 participants ont été inclus (35 femmes) avec un âge médian de 70 (IQR : 67 - 75) ans. Parmi eux, environ 87,8 % avaient au moins une maladie chronique et 47 % en avaient deux ou plus. L'affection chronique la plus répandue était l'hypertension artérielle (71,2 %), suivie de l'insuffisance cardiaque (24,2 %) et de l'arthrose (12,1 %). Des symptômes dépressifs légers étaient présents chez 1,5 % de la population de notre étude. 14 participants (21,2 %) avaient une mauvaise qualité de vie. Les facteurs associés à une mauvaise qualité de vie étaient une distance parcourue dans le 6MWT inférieure à 350m (OR : 3,7, p < 0,05). **Conclusion.** Il existe une forte prévalence de la mauvaise qualité de vie chez ce groupe de patients âgés camerounais dont le facteur associé retrouvéest une distance parcourue durant le 6MWT inférieure à 350m. Ceci confirme le bénéfice de l'activité physique sur le plan physique et mental, indispensable pour une meilleure qualité de vie.

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INTRODUCTION

For several decades there has been a gradual increase in life expectancy worldwide [1]. This is linked to considerable advances in medicine[1]. In 2020 around 727 million people were over 65[2]. This number is expected to double by 2050, reaching over 1.5 billion people[2]. The proportion of elderly in the world population should increase from 9.3% in 2020 to 16% in 2050[3]. With this population ageing, we also note a higher prevalence of chronic diseases, which contribute to the deterioration of their quality of life[4]. Quality of life measures good health, comfort, and the ability to enjoy or participate in life events[5]. A good quality of life is associated with lower mortality risk[6]. Therefore, physicians must consider the effect on the quality of life before making medical decisions, especially in old patients[7]. The assessment of the quality of life is very personal, but it depends on environmental, cultural and social factors and the health system[8]. The health system of several developing countries, particularly Cameroon, is mainly focused on child health and infectious diseases[9]. However, most of these countries are also affected by the ageing of the population, hence the importance of controlling their illnesses and all the factors that have an impact on their quality of life [10,11] This study aimed to evaluate the quality of life of the elderly in our context and to investigate the factors associated with poor quality of life in the elderly.

METHODS

Study design and setting

We carried out a cross-sectional study for seven months (01 December 2021 to 29 May 2022) in the geriatric and cardiology's departments of the Yaoundé Central Hospital.

Participants

We included consenting patients at least 65 years of age. Patients with current infections, recent myocardial infarction, severe arrhythmias, severe hypertension, and orthopaedic limitations were excluded.

Sample size

We carried out a cross-sectional study among patients who consulted in the geriatric and cardiology outpatient units during our study period. This is due to the high number of elderly patients who consult in these units.

Data collection

The data was collected using a pre-established data collection sheet. For all the participants, we reported sociodemographic characteristics (age, gender, level of education, professional status, marital status, ethnic origin) and history, which includes chronic conditions, smoking and drinking habits. We then administered the OPQOL questionnaires to evaluate the quality of life [8]. A six-minute walk test was done to objectively measure their functional capacity.

Statistical analysis

All the data collected were analyzed using the software SPSS version 23.0. The qualitative variables were expressed in frequency and percentages. The quantitative variables were expressed in terms of means and standard deviation in the case of a normal distribution or medians and interquartile ranges when this was not the case. The association between the qualitative variables was sought by the Chi-square test when the theoretical numbers were greater than or equal to 5 or the Fisher exact test when at least one number was less than 5.

The multivariate analysis was done on the logistic regression model, and the p values < 0.05 were considered statistically significant.

RESULTS

Sociodemographic and clinical characteristics of the sample

Overall, 66 participants were included in the study. Among them, 35 (53%) were females. Their median age was 70 years (IQR: 67-75), ranging from 65 to 100 years. The most represented age group was those ages 65 – 75 years old. Most of our participants (80.3%) lived in an urban setting. Most patients were married (54.5%), and there was a preponderance of retired individuals (72.7%). The most prevalent cardiovascular risk factor was hypertension (71.2%), followed by abdominal obesity (40.9%) and heart failure (24.2 %). The sociodemographic and clinical characteristics are summarized in **Table I**.

Table I: sociodemographic and clinical characteristics of the study population(N= 66)

Variables	N	%
Age (in years)		
[65-70[	32	48,5
[70-75[	16	24,2
[75-80[	14	21,2
≥ 80	4	6,1

Table I: sociodemographic and clinical characteristics of the study population(N= 66)

Variables	N	%
Residence		
Urban	53	80,3
Rural	13	19,7
Occupation		
Unemployed/Housewife	10	15,2
Civil servant	2	3,0
Private sector worker	6	9,1
Retired	48	72,7
Chronic conditions/ CVRF		
Heart failure	16	24
Rheumatologic diseases	11	16,7
Hypertension	47	71.2
Diabetes	8	12,1
Alcohol consumption	15	22,7
Abdominal obesity	27	40,9
Level of education		
None	3	4.5
Primary	16	24.2
Secondary	18	27.2
High school	13	19.7
University	16	24.2

OPQOL score and sociodemographic characteristics according to the quality of life

The data are shown on table II.

Table II: quality of life according to OPQOL

Quality of life	Number (N= 66)	%
<105	14	21,2
[105-149]	51	77,3
[150-75]	1	1,5
OPQOL: older people's quality of life questionnaire		

When evaluating the quality of life using the OPQOL score, it appears that 14 patients (21.2%) had poor quality of life. . Of the 14 participants with poor quality of life, 10 (71%) were over 70 years, 8 (57%) were female, and 12 (86%) lived in urban areas. Mild depressive symptoms were present in 1.5% of our study population (see **Table III**).

Table III: Sociodemographic characteristics according to quality of life

Variables	< 105 n (%)	[105-149] n (%)	[150-175] n (%)
Age (in years)			
[65-70[	4 (6,1)	27 (40,9)	1 (1,5)
[70-75[	5 (7,6)	11 (16,7)	0 (0)
[75-80[	5 (7,6)	9 (13,6)	0 (0)
≥ 80	0 (0)	4 (6,1)	0 (0)
Gender			
Male	6 (9,1)	25 (37,9)	0 (0)
Female	8 (12,1)	26 (39,4)	1 (1,5)
Residence			
Urban	12 (18,2)	40 (60,6)	1 (1,5)
Rural	2 (3,0)	11 (16,7)	0 (0)
Level of education			
None	1 (1,5)	2 (3,0)	0 (0)
Primary	4 (6,1)	12 (18,2)	0 (0)
Secondary	3 (4,5)	15 (22,7)	0 (0)
High school	4 (6,1)	9 (13,6)	1 (1,5)
University	2 (3,0)	13 (19,7)	0 (0)

Factors associated with poor quality of life

In our study, the only factor associated with a poor quality of life was a distance covered less than 350 meters in the 6-minute walk test. Age, gender, level of education and the presence of comorbidities were not associated with poor quality of life (see Table IV).

Table IV: Factors associated with poor quality of life

Variables	Poor quality of life Yes N= 14 n (%)	Poor quality of life No N=52 n (%)	OR (IC 95%)	P-value
Age (in years)				
[65-70[	4 (28,6)	28 (53,8)	0,3 (0,1–1,2)	0,093
[70-75[	5 (35,7)	11 (21,2)	2,1 (0,6–7,4)	0,300
[75-80[	5 (35,7)	9 (17,3)	2,6 (0,7–9,8)	0,154
≥ 80	0 (0)	4 (7,7)	–	0,571
Gender				
Male	6 (42,9)	25 (48,1)	0,8 (0,2–2,7)	0,728
Female	8 (57,1)	27 (51,9)	1,2 (0,4–4,1)	0,728
Residence				
Urban	12 (85,7)	41 (78,8)	1,6 (0,3–8,3)	0,718
Rural	2 (14,3)	11 (21,2)	0,6 (0,1–3,2)	0,718
Level of education				
None	1 (7,1)	2 (3,8)	1,9 (0,2–22,9)	0,517
Primary	4 (28,6)	12 (23,1)	1,3 (0,4–5)	0,730
High school	4 (28,6)	10 (19,2)	1,7 (0,4–6,5)	0,473
University	2 (14,3)	13 (25,0)	0,5 (0,1–2,5)	0,495

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Table IV: Factors associated with poor quality of life

Variables	Poor quality of life		OR (IC 95%)	P-value
	Yes N= 14 n (%)	No N=52 n (%)		
COMORBIDITY				
Hypertension	11 (78,6)	36 (69,2)	1,6 (0,4–6,6)	0,741
Heart Failure	2 (14,3)	14 (26,9)	0,5 (0,1–2,3)	0,488
Diabetes	2 (14,3)	6 (11,5)	1,3 (0,2–7,1)	0,674
Moderate obesity	2 (14,3)	10 (19,2)	0,7 (0,1–3,6)	0,670
Distance covered in the 6MWT				
< 350 meters	9 (64,3)	17 (32,7)	3,7 (1,1–12,8)	**0,032**
≥ 350 meters	5 (35,7)	35 (67,3)	0,3 (0,1–0,9)	**0,032**

DISCUSSION

To effectively and efficiently respond to the growing health needs of the elderly, it is critical to have an in-depth understanding of their health status, quality of life (QoL) and related factors. This study contributes to a better analysis of the quality of life in elderly subjects, especially since it is one of the few studies carried out in Cameroon..

Our study found that 21% of our participants had a poor quality of life. This high proportion is explained by the fact that among the elderly, there is a higher prevalence of chronic diseases which have a considerable impact on their physical capacities but also sometimes on their mental faculties[12–14]. This significantly hinders their personal development. This proportion found in our study is nevertheless lower than that found in Belgian research where it was found that 41.7% of people aged over 75 had a poor quality of life[15]. This difference can be explained by the fact that in this study, the age limit was higher than ours, but also by the fact that the test used to assess the quality of life was different from ours (quality of life test linked to health)

We did not find any association between the level of education and quality of life. This is contrary to the study of several studies found in the literature where higher educational levels were significant positive predictors of health status andquality of life among the study subjects[16,17]. Education is well known to have a positive effect on health status, better informed about health matters, diet and disease prevention measures leading to better health conditions[16,17]. We also didn't find any association between quality of life and chronic conditions like arterial hypertension and abdominal obesity. This is contrary to a systematic review that shows hypertensive patients had lower quality of life than normotensive people[18]. Some studies also suggest that abdominal obesity increases the risks of disability and poor quality of life[19]. The low size of our sample can explain all these differences.

The only factor associated with a poor quality of life was a distance covered of less than 350 m in the 6-min walk test. Physical activity can play a key role in this process. An active lifestyle has been shown to prevent cardiovascular diseases, maintain independence, and improve functional capacity in older people[20–22]. Moreover, evidence has shown that increased physical activity is associated with an improvement in quality of life[23]. The six-minute walk test (6MWT) has been widely used to assess functional capacity due to the simplicity of its implementation, ease of interpretation, and representativeness of activity in daily life[24,25]. The 6MWT performance has become the most common method for evaluating functional capacity in individuals with various health conditions. Hsieh et al. reported a significant correlation between distance walking in the 6MWT and good quality of life in post-donor liver transplantation[26]. A similar finding was reported in a study of patients with pulmonary emphysema[26]. These findings indicate a relationship between physical activity and good quality of life.

We need to note some limitations of this study. Firstly, the cross-sectional nature of the data limited our ability. Secondarily, the small size of our sample was also a significant limitation of this study. Finally, carrying out this study in a single center could also be a source of selection bias.

CONCLUSION

There is a significant proportion of older people with a poor quality of life in our context. This is associated with little physical activity in the 6-minute walk test. Health policies should encourage physical activity among older people because it will contribute to improving their quality of life but also their health in generalimprove their quality of life and overall health.

DECLARATIONS

Availability of data and materials
The datasets used for this study are available from the corresponding author on request.

Ethical approval and consent to participate
The study was approved by the Institutional Ethical Review Board of the University Yaoundé I (Cameroon). All the participants read and signed an informed consent before their inclusion in the study.

Consent for publication
Not applicable.

Competing interest
The authors declare that they have no competing interests.

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