# Socio-demographic Characteristics of Teachers Supported at LOMO Medical Center in Limete from 2015 to 2019 in the Democratic Republic of Congo

**Evelyne Lukoki Luila[1], Aliocha Nkodila Natuhoyila[1,2], Christophe Mambueni Thamba[1], Gedeon Longo Longo[1], Hervé Alex Tukadila Kabangi[1,2], Benjamin Longo Mbenza[1,3]**

[1]Lomo University Research, DR Congo
[2]Centre Médical Cité des Aveugle, DR Congo
[3]University of Kinshasa, DR Congo

Corresponding Author: Aliocha Nkodila Natuhoyila

## ABSTRACT

**Background and objective:** Organism is an important part of global morbidity. In developing countries, in absence of morbidity data in population, hospital statistics may be of interest. The objective of study is to analyze sociodemographic typologies of the teachers supported at the LOMO Medical Center in Limete in the DRC.

**Methods:** The study was carried out with teaching professionals supported by LOMO Medical Center in Limete between 2015 and 2019. We included patients who consulted this Center during the study period. The sociodemographic data were collected on standardized sheets.

**Results:** In field covered by the study, 8.195 patient files (62.6% men and 37.4% women) were analyzed. The mean age of patients was 53.2±17.3 years. Outpatient care was the most frequently encountered mode 80.6%. For hospitalized patients, the average length of stay was 20.94±17.45 days with extremes ranging from 1 to 183 days. Teachers were more represented with a frequency of 85.6% and their children represented 7.5% of consultations.

**Conclusion:** In current state of socioeconomic and cultural development in the DRC, we note that only a minority of teachers are supported by the mutual health insurance. Hence the interest in assessing the care needs of teachers in the DRC.

*Keywords:* Sociodemographic characteristics; care, Lomo Médical, Mutual health insurance.

## INTRODUCTION

Organism is common and affects women and men of all age groups in all societies. This is how the WHO estimates that more than 12% of global morbidity is due to the lack of population monitoring. [1] To this important morbidity is added the considerable burden of the disease both for the individual and for society.

In a survey carried out in France, Anguis et al., [2] underlined the considerable impact of the attacks of the organism on daily activities and mobility, and their consequences on the sociability and the employment of the people concerned. Like many developing countries, the Democratic Republic of Congo (DRC) does not have a reliable information system on the extent of the problems of pathologies in general and the disabilities they cause. Populated by around 80 million inhabitants, the DRC currently has only one mutual health insurance for teachers called MESP located in Kinshasa only (Capital du pays). This

mutual health professional teaching staff is established in certain hospital centers in the city of Kinshasa allowing monitoring of teaching staff including the LOMO Medical Center. It is undeniable that only a minority of teachers with a health problem receive care through health facilities. Indeed, as Kovess et al., [3] the population's demand for care is the culmination of a path which is itself a function, admittedly of the symptomatology, but also of the tolerance of the person and his entourage, and of his knowledge of the possibilities of care. In a poor country like the DRC, access to healthcare also depends on the family's financial means. In this context, hospital statistics only partially reflect the extent of health problems. However, these statistics are indicative of the expressed health needs of the population.

Through this study, we wish to make basic data available to decision-makers to plan public health actions for teachers. The objective of this study was to analyze the socio-demographic typologies of the teachers cared for at the LOMO Medical Center in Limete in the DRC.

## MATERIAL AND METHODS

We conducted a cross-sectional and descriptive study at the LOMO Medical Center in Limete. It is a Center with a capacity of 40 beds, with a consultation unit, receiving all cases of pathology regardless of age. The study concerned all the teachers and their families received at the LOMO Medical Center for ambulatory care or for full hospitalization, recruited consecutively between January 1, 2015 to December 31, 2019.

We included in study patients who consulted during period from January 1, 2015 to December 31, 2019, a period of 5 years. For all of patients concerned, the following data were systematically collected age, sex, type of agent, year of consultation and month of consultation.

Data collection was carried out by nurses from the Center. These nurses have been trained beforehand to harmonize data collection procedures.

The quantitative data collected were made anonymous, coded and then entered on a microcomputer equipped with statistical processing software EPI-INFO 7.0. Average values were presented with standard deviation as a dispersion index. To compare the qualitative variables we used the Pearson or Exact chi-square test of Fischer, with the correction of Yates when necessary. Quantitative variables were compared using the Student test. The links between the variables were considered to be statistically significant at the probability threshold less than 0.05.

## RESULTS

Over a total study period of 5 years, 9019 patients were admitted to the service for various reasons. From this workforce, we retained 8 195 patients for the present study. The remaining 724 patients were excluded from study for one of following reasons:
- files not found at the time of data collection;
- files that cannot be used for insufficient information, most often due to the fact that the use of the service was not motivated by a request for treatment (expertise, forensic certificates).

Data on active queues

The distribution of total active queues which correspond to the number of patients seen one or more times during the year is shown in Figure 1. The average of these active queues was 1639 patients per year (minimum = 262, maximum = 4069).
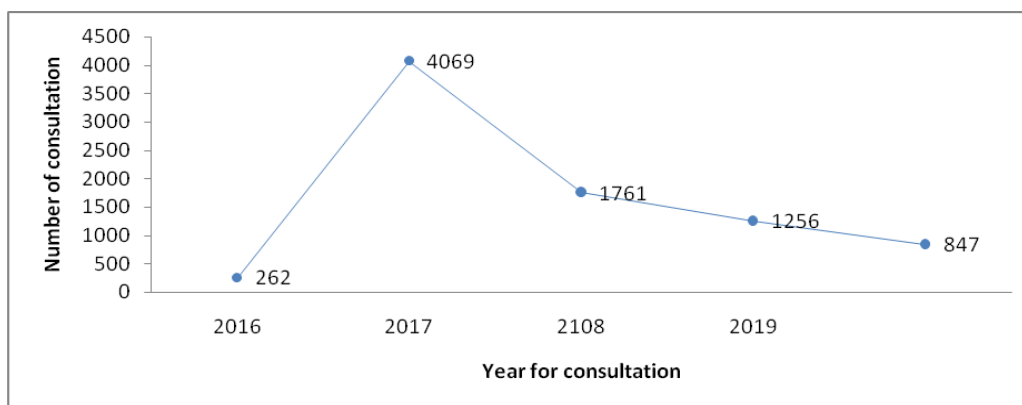
**Figure 1. Evolution of active queues at the LOMO Medical Center from 2015 to 2019.**

## Data on care modalities

Ambulatory care was the most frequently encountered mode: 6,605 cases (80.6%) vs 1,590 cases (19.4%) for full hospital care (Figure 2).
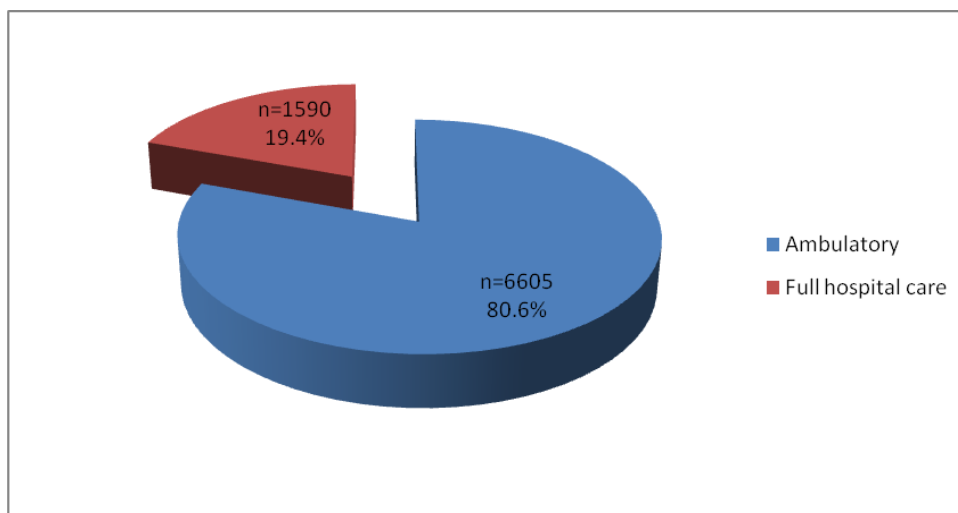


**Figure 2. Distribution of patients by type of care**

Among the hospitalized patients we noted 69.9% of men and 30.1% of women. As regards this subgroup of hospitalized patients, the mean length of stay (MDS) was 20.94 ± 17.45 days with extremes ranging from 1 to 183 days. We did not observe a statistically significant difference between the MDS of men (20.16 ± 20.08 days) and that of women (21.20 ± 18.05 days) (p = 0.895).

## Sociodemographic data of the population monitored

Whatever the year, the population followed at the LOMO Medical Center was predominantly male. For the entire study period, we identified 5,128 men, or 62.6% compared to 3,067 women, or 37.4% (p = 0.010). The sex ratio M / F was 1.67.

**Table 1. Distribution of patients by sex and by years of follow-up**

| Year | n | Male | | Female | |
|------|------|------|------|------|------|
| | | n | % | n | % |
| 2015 | 262 | 178 | 67.9 | 84 | 32.1 |
| 2016 | 4069 | 2484 | 61.0 | 1585 | 39.0 |
| 2017 | 1761 | 1096 | 62.2 | 665 | 37.8 |
| 2018 | 1256 | 816 | 65.0 | 440 | 35.0 |
| 2019 | 847 | 554 | 65.4 | 293 | 34.6 |
| Total | 8195 | 5128 | 62.6 | 3067 | 37.4 |

The age of the patients ranged from 1 to 90 years. The mean age was 53.2 ± 17.3 years. This mean age was significantly higher in men (57.2 ± 16.4 years) than in women (46.5 ± 16.8 years) (p <0.001). The age group over 60 was the most represented

(38.8%). The details on the breakdown by age and sex are shown in Table 2.

**Table 2. Distribution of patients by sex**

| Age (years) | Male | | Female | | Over all | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| Mean ± SD | 57.2±16.4 | | 46.5±16.8 | | 53.2±17.3 | |
| 1-5 | 93 | 1.8 | 86 | 2.8 | 179 | 2.2 |
| 6-12 | 118 | 2.3 | 82 | 2.7 | 200 | 2.4 |
| 13-20 | 110 | 2.1 | 135 | 4.4 | 245 | 3.0 |
| 21-30 | 60 | 1.2 | 158 | 5.2 | 218 | 2.7 |
| 31-40 | 209 | 4.1 | 469 | 15.3 | 678 | 8.3 |
| 41-50 | 554 | 10.8 | 734 | 23.9 | 1288 | 15.7 |
| 51-60 | 1416 | 27.6 | 791 | 25.8 | 2207 | 26.9 |
| >60 | 2568 | 50.1 | 612 | 19.9 | 3180 | 38.8 |
| Total | 5128 | 100.0 | 3067 | 100.0 | 8195 | 100.0 |

Information on the type of agent monitored is shown in Table 3. It shows that teachers were more represented with a frequency of 85.6%.

**Table 3. Distribution of the population monitored by type of agent.**

| Type of agents | Effectif | Percentage |
|---|---|---|
| Teacher | 7019 | 85.6 |
| Child Teacher | 613 | 7.5 |
| Administrative officer of MESP | 276 | 3.4 |
| Spouse Teacher | 256 | 3.1 |
| Child MESP Administrative | 31 | 0.4 |
| Total | 8195 | 100.0 |

## DISCUSSION

The population served by the LOMO Medical Center is difficult to define given the absence of sectorization of medical assistance in the DRC. Indeed, the center receives patients from the capital as well as those from other provinces of the country, which does not allow to deduce a rate of demand for medical care within the reference population. This recruitment method also explains the heterogeneous distribution of the population with regard to the socio-professional category.

The evolution of the number of patients monitored from 2015 to 2019 experienced significant variation with a larger active queue in 2016. This significant flow is due to the popularization of mutual health insurance professionals from the ministry of primary and secondary education and this has led to an increase in the supply of health care by the creation of other care centers.

In our series, we noted a male preponderance in the service clientele (62.6%), a finding that is consistent with the results of Ihezue et al. [4] in Nigeria: 63% of male patients in a population of patients admitted to a hospital. The opposite phenomenon was reported in the study by Anguis et al. [2] in France where the share of women reached 62% of people followed regularly and in that of Pilon et al. [5] in Canada, which noted 51.1% women and 48.9% men in a Quebec hospital center. In a comparative study of the socio-demographic characteristics of Swiss and foreign patients consulting an emergency service, Baleydier et al. [6] respectively reported 59.6% and 60.0% women among Swiss and foreigners. These findings in industrialized countries reinforce the general analysis of Kovess et al. [3] who concluded that women tend to consult more than men for health problems. Compared to the Congolese population made up of more than 50% [7] of women, the results on the distribution by sex call for some comments: it would be excessive to infer from our figures, that men are more affected than women in Ground floor. In such a developing country, women's economic dependence on men is, among other things, a factor that limits access to care by these women. Due to the combination of their roles as wife, mother and worker, their prolonged absence from the home has a painful impact on the family's life, which would explain why even in the event of a pathology for which care is sought. , this is done on an outpatient basis.

Regarding the subgroup of patients treated in full hospitalization, our study also highlights the preponderance of men: 69.9% men vs 30.1% women. In Belgium, Lorant

et al. [8] had listed 51.2% of men in all admissions for care for the years 1997 and 1998. The share of patients treated exclusively on an outpatient basis is very large in our series (80.6 %) but falls within the same ranges noted by Coldefy et al. [9] in France: 40 to 85% of outpatient care. In our particular situation, despite efforts to improve hotel conditions, hospitalization remains marred by an unfavorable prejudice in public opinion, which leads some families to reject it despite the severity of the pathologies presented by the patient . In addition, some families do not have enough income to meet the costs of hospitalization. Among other solutions, we must strengthen the advocacy for a diversification of the modes of care by the creation of day hospitals, part-time therapeutic reception centers, therapeutic workshops in particular.

The distribution by age group also highlighted the fact that the population monitored was overwhelmingly over the age of 60 being the most represented with 38.8% of the total workforce while the young people under 30 years years made up only 11.3%. The proportion of elderly people in our study is higher than that of Anguis et al. [2, 10] in France, which was 7.5% of subjects aged 60 and over in a study covering a population of all ages. Our rate also remains higher than that of Lorant et al. [8] in Belgium, which was 10.8% of subjects aged 65 and over for all of the patients hospitalized during the years 1997 and 1998. Because our working environment is a general medicine service receiving both children, adolescents, adults and the elderly, comparisons with data from more or less specialized structures must be careful.

Nevertheless we can remember that the share of the elderly was relatively high in our recruitment, degenerative pathologies at this age, such as hypertension, diabetes, chronic kidney disease, osteoarthritis and being others, lead in majority to the deterioration of the condition of patients requiring a consultation being that these pathologies are badly tolerated by the family circle, is often the subject of request for care. Pilon et al. [5, 11, 12] in Belgium registered 61.2% of people aged 65 and over in a structure welcoming patients.

It can be noted from this study that the use of the medical service of professionals in primary and secondary education is most often justified by the severity of the pathologies. On the other hand, daily experience teaches us that a good number of patients resort to the medical service after the failures of care through the traditional care system. Consequently, further studies should seek to identify the healthcare needs of populations through surveys of the general population.

The results presented here were obtained from the information available on the files, which in some cases were not always exhaustive. To this limit is added the fact that the diagnosis for patients treated on an outpatient basis, unlike that of hospitalized patients, has not always been a collegial diagnosis and could therefore be sometimes imperfect. Despite the above-mentioned limitations, the contribution of such a study is of definite interest in understanding the profile of patients of the Ministry of Primary and Secondary Education who use the healthcare system. In addition, the recruitment of patients over a fairly wide period of 5 years and the size of the cohort guarantee a certain representativeness of the population.

## CONCLUSION

Although efforts to inform and raise awareness remain to be made, it can be seen from this study that medical care in Kinshasa today concerns a significant number of people. If the policy of development of outpatient treatments deserves to be continued, the diversification of the modes of care is important not only to improve the quality of this care but also to allow the care of a higher number of professionals in primary and secondary education. We remain convinced that the results of studies in the general population would reveal care needs far beyond current demand.

## REFERENCES

1. OMS. Rapport sur la santé dans le monde : la santé mentale : nouvelle conception, nouveaux espoirs. Genève : OMS, 2001.
2. Anguis M, Peretti C, Chapireau F. Les personnes suivies régulièrement pour troubles psychiques ou mentaux. DREES, Études et Résultats 2003 ; n° 231.
3. Kovess V, Labarte S, Chanoit PF. La santé mentale en région Ile-de-France : des données épidémiologiques à la planification. Inform Psychiatr 2002 ; 76 : 43-55.
4. Ihezue Uh, Nwakoby Ban, Okonkwo KO. Admissions and readmissions into a psychiatric hospital in Nigeria. A study of demographic and clinical correlates. Psychopath Afric 1993 ; 25 : 105-14.
5. Pilon W, Arsenault R. Caractéristiques des populations au Centre hospitalier psychiatrique Robert-Giffard : personnes ayant des incapacités intellectuelles et personnes atteintes de maladie mentale. Sant Ment Quebec 1997 ; 22 : 115-36.
6. Baleydier B, Damsa C, Schutzbach C. Étude comparative des caractéristiques sociodémographiques et des facteurs prédictifs de soins de patients suisses et étrangers consultant un service d'urgences psychiatriques. Encéphale 2003 ; 29 : 205-12.
7. Ministère du Plan et Suivi de la Mise en œuvre de la Révolution de la Modernité. Deuxième Enquête Démographique et de Santé (eds-rdc II 2013-2014), 2014 ; 124-129.
8. Lorant V, Kampfl D, Seghers A. Socio-economic differences in psychiatric in-patient care. Acta Psychiatr Scand 2003; 107 : 170-7.
9. Coldefy M, Bousquet F, Hardy-Baylé MC. Une typologie des secteurs de psychiatrie générale en 1999. DREES, Études et Résultats 2002 ; n° 163.
10. United Nations. World Population Ageing 2019. United Nations, Department of Economic and Social Affairs, Population Division 2019; 3-38.
11. Mary Mallappallil, Eli A Friedman, Barbara G Delano, Samy I McFarlane, and Moro O Salifu. Chronic kidney disease in the elderly: evaluation and management. Clin. Pract. (2014) 11(5), 525–535
12. Centers for Disease Control and Prevention. Chronic Kidney Disease Surveillance System website. https://nccd.cdc.gov/CKD. Accessed January 7, 2019.

\*\*\*\*\*\*