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Factors associated with the practice of self-medication in Barumbu Health Zone, Democratic Republic of the Congo

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ABSTRACT

Introduction
The issue of resorting to self-medication is currently common and no geographical area is spared from it in the world. Millions of people prefer to treat minor ailments rather than follow formal treatment.

Purpose
This study aimed to determine the factors associated with self-medication in the Barumbu Health Zone.

Methods
This is a descriptive correlational and cross-sectional study carried out in the city of Kinshasa, and more precisely in the Barumbu Health Zone. The sample was 266 heads of households. The questionnaire survey method was used with the structured interview technique to collect the data.

Results
After analysis with SPSS version 20 software, we arrived at the results according to which self-medication is practiced by 76.6%. Level of education (secondary) (χ^2 8.084, p=0.044) and monthly income ≤ 100$ (χ^2 20.445., p=0.000) are associated with the practice of self-medication. Insufficient knowledge about the consequences of self-medication (χ^2 8.872, p= 0. 003), insufficient membership of mutual health insurance companies (χ^2 16,677, p=0.000), and the high cost of care (χ^2 30,304, p=0.000), are factors associated with the practice of self-medication in the commune of Barumbu, Kinshasa.

Conclusion
The revision of health care fees in all health care structures to allow everyone to access health care, the mobilisation to join mutual health insurance companies, and the sensitisation to the consequences of self-medication will allow to reduce this practice significantly.

INTRODUCTION

Self-medication is a practice that has existed for a long time. Grandmothers' miracle recipes for treating minor illnesses at home are a kind of self-medication (Fainzang, 2012). The question of self-medication is now being raised at the intersection of the partly antagonistic discourses of public authorities and health professionals. Newly advocated by the former for essentially economic reasons, disapproved of by the latter who see it as both a health hazard and a loss of competence. Self-medication raises questions for the patient who finds himself in a situation where he must learn a new behaviour (Fainzang, 2010).

Most households are only aware of health facilities in the most serious cases, i.e., when it comes to certain complications related to their procedures. All over the world, the practice of self-medication is breaking a considerable record, causing a mortality rate of 25-30% in the age range of 15 to 49 years (Chiribagula, et al., 2015).

The World Health Organisation estimates that 1.3% of deaths are due to self-medication because of the exorbitant cost of health facilities. Modern therapeutic recourse is beyond the reach of the poor. The low income of the poor leads them to reduce their recourse to modern health centres to a strict minimum and to favour alternative solutions such as self-medication and recourse to traditional medicine, as modern medicine is often very expensive (Organisation Mondiale de la Santé, 2017).

In Africa, there are several therapeutic routes or health systems that people use to solve their health problems. These include the modern health system, popular medicine, traditional medicine, prayer, and the practice of self-medication, which is the subject of our study. In fact, a study carried out in Cameroon in 2005 estimated that the cost of medicines when a patient uses modern medicine was CFAF 9,500. This same study reveals that in Mali, this represents an annual loss of income of nearly 20 billion CFA francs. In addition to this economic consideration, health is an essential dimension of the population's well-being (Monteillet, 2006).

The Democratic Republic of the Congo today is one of the poorest countries in the world and the most indebted, despite its wealth of natural resources, insofar as the heads of households are unable to provide care for their families in compliance with health standards, and still resort to self-medication (Programmme National de Lutte Contre le Paludisme, 2009).

A medical consultation costs 16,500 CFA francs, i.e., 10$ per person, and the illness episode is, according to the case, precisely in the provincial city of Kinshasa. In the commune of Barumbu, when there is a bereavement or medical complication of a young girl of childbearing age, self-medication is blamed on previous knowledge of pharmaceutical products. Earlier assessments suggest that 75% of primary and secondary infertility is due to this practice (Bureau Central de la zone de Santé de Brumbu, 2017).

The experience with a particular pharmaceutical product that was successful at the time may lead to self-medication. Other cases are due to poverty. Due to lack of financial means, many people are afraid to go to hospitals and resort to their own conceptions because of the very low income level. Fear of unwanted pregnancies can lead to the use of unauthorised contraceptive methods (Organisation Mondiale de Santé, 2010). The sale of pharmaceutical products not prescribed by doctors with multiple audio-visual advertisements makes the community more inclined to self-medication (Programmme National de Lutte contre le Paludisme, 2007).

During our academic internship in the Barumbu Health Zone (B.C.Z.S), we found that 80% of patients who consulted doctors for curative care practised self-medication, which proved unsuccessful, and eventually decided to consult a doctor or a nurse. In this context, it is necessary to investigate the factors that make the user decide to self-medicate instead of consulting a doctor or a nurse through a secure follow-up. This research aims to analyse the factors associated with self-medication in the Barumbu health zone.

METHODS

Scope and type of study

This study is part of the field of community health. It is based on a quantitative approach of a correlational nature.

Study setting

This study was conducted in the BARUMBU Urban Health Zone, located in the commune of Barumbu, city and province of Kinshasa, in the Democratic Republic of the Congo. It is a geographical entity emanating from the Ministry of Health at the peripheral level; its extent corresponds to the limits of the administrative commune that bears the same name. It is operational at the grassroots level through an administrative structure with a staff of nine Health Areas and eighty-four Health Units.

Target population, sampling technique and sample

Our target population was heads of households aged 18-49 years. We opted for this age group because the taking of medicines is decided by the individual himself. For our

study, we opted for the two-stage stratified probability sampling technique, using the 9 health areas, considering their population.

The procedure used in our work consists of: At the first level, we used an exhaustive list of health areas in the Barumbu health zone; assigning a number to each health area and placing it in a cardboard box in the form of an urn; drawing at random without discounting until we obtain nine health areas to investigate.

At the second level: draw the statistical units (head of household), calculate the sample size; divide the total population into sub-populations (according to the health areas); calculate the proportion of each stratum in relation to the population; multiply the proportions obtained by the sample size. This gives the sub-sample size for each stratum, and the units in each sample will be randomly selected using the random stratification method. All the sub-samples together constitute the total sample of 266 household heads.

Table 1:
Distribution of heads of households by health area

No.	Health Area	Population	Proportion	Sample Unit
1	BITSHAKUTSHAKU	17774	0.097	26
2	FUNA I	16221	0.088	24
3	FUNA II	8100	0.044	12
4	KAPINGA	20739	0.112	30
5	KASAI	28300	0.153	41
6	LIBULU	39288	0.213	57
7	MOZINDO	21047	0.114	31
8	NDOLO	17256	0.094	25
9	TSHIMANGA	15896	0.086	23
TOTAL		184621	1	266

Source: Barumbu Health Zone Demographic Data (2019).

Method and Technique of Data Collection

Given the nature of this study, we used the survey method, which consists of interviewing the heads of households in the Barumbu Health Zone and quantifying the data collected. In order to collect the necessary information to achieve the set goal, we considered it appropriate to use the interview technique, using an interview guide questionnaire.

Data processing and analysis

An analysis plan was developed to guide the coding and analysis of the household data. A coding of the forms was done prior to the administration of the questionnaires to check all data. An Excel template was developed by the team and transmitted to SPSS. This analysis firstly used simple statistics where we proceeded with a description of the data by calculating the percentages; and then in the second place we approached the bivariate analysis, where we crossed the independent variables with the dependent variable to establish the existence or not of links between the different characteristics and the practice of self-medication using the Pearson chi-square test (Chi2).

Ethical considerations

Free and informed consent was obtained from the respondents before data collection. Questions that might infringe on the modesty or privacy of the population were avoided. No purpose inherent in this survey was deemed by the administrative authority or the research team to be likely to offend the moral sensibilities of society. It does not bring any harmful effects or risk of damage to the population or their property.

RESULTS

Table 1:
Socio-demographic characteristics of respondents

Features	Numbers n=266	%
SEX		
Male	71	26.7
Feminine	195	73.3
EDUCATIONAL LEVEL		
Uneducated	37	13.9
Primary	77	28.9
Secondary	110	41.4
Higher and university	42	15.8
OCCUPATION		
Household	176	66.2
Official	36	13.5
Resourceful	42	15.8
Student)	12	4.5
AGE		
18 to 27 years old	31	11.7
28 to 37 years old	122	45.9
38 to 47 years old	103	38.7
48 and over	10	3.8
MARITAL STATUS		
Married	205	77.1
Single	42	15.8
Widower widow	13	4.9
civil union	6	2.3
NUMBER OF PEOPLE IN THE HOUSEHOLD		
1 to 3 people	176	66.2
More than 3 people	90	33.8
Religion		
I don't pray	47	17.7
Christian	168	63.2
Muslim	20	7.5
Protestant	19	7.1
Catholic	12	4.5
Household income level		

Less than 100 Dollar/month	224	84.2
100 to 500 Dollar/month	36	12.4
Over $500	9	3.4

Looking at this Table, the female gender comes first with 73.3%, 66.2% of respondents have a housekeeping profession. 41.4% have a secondary education level, followed by the level of those at primary level (28.9%). The age group of 28 to 37 years is the most represented (with 45.9%), i.e., an average age of 35 years (± 79). 77.1% of respondents are married, 66.2% of whom have 1 to 3 people in their care; 63.2% practice the Christian religion and 84.2% have a monthly income of less than $100 (one hundred dollars).

Table 2:
Characteristics related to the environment of the individual

Features	Workforce n=266	%
HEALTH CARE STRUCTURE ATTENDED IN THE EVENT OF ILLNESS		
1. Nowhere	114	42.9
2. At the hospital or at the health center	124	46.6
3. Among traditional healers	28	10.5
USE SELF-MEDICATION		
1. Yes	204	76.7
2. Nope	62	23.3
PERSON FOR WHOM SELF-MEDICATION	**(n=204)**	
1. For myself	129	63.2
2. For one of the family members	75	36.8
TYPE OF SELF-MEDICATION USED	**(n=204)**	
1. Modern	154	75.5
2. Traditional	50	24.5
PERSON WHO ADVISED THE PRODUCTS TO TAKE	**(n=204)**	
1. Myself	89	43.6
2. friend or family	68	33.3
3. Nurse/doctor	23	11.3
4. Pharmacist	06	2.9
5. Medicine seller	18	8.8
HAVE A FAMILY PHARMACY	**(n=204)**	
1. Yes	123	60.3
2. Nope	81	39.7
BELIEVE IN THE EFFECTIVENESS OF SELF-MEDICATION	**(n=204)**	
1. Yes	165	80.9
2. Nope	39	19.1
BE A MEMBER OF A MUTUAL HEALTH INSURANCE		
1. Yes	76	28.8
2. Nope	188	71.2
HAVE A HEALTH STRUCTURE IN THE NEIGHBORHOOD		
1. Yes	266	100
2. Nope	00	
ASSESSMENT OF THE CARE PROVIDED IN THE STRUCTURE		
1. Quality	59	22.2
2. no quality	165	62.0
3. Doubtful	42	15.8
JUDGMENT OF CARE COSTS		
1. Affordable	30	11.3
2. Raised	236	88.7

Table 2 reveals that 46.6% and 10.5% respectively visit a health facility and a traditional practitioner when they have a case of the disease in the family, on the other hand 42.9% do not go anywhere. 76.6% resort to self-medication, of which 57.9% of them consume modern products. In most cases, it is the person themselves (43.7%) or a friend or family member (33.3%) who advises which products to take. 60% of people who resort to self-medication have a family pharmacy, 80.9% believe in the effectiveness of self-medication. 71.2% have no membership in a mutual health insurance company, unanimously the respondents had a health structure in their neighborhood; 62.0% say that the care provided in the structures is not of quality and 88.7% consider that the costs of care requested are high.

Table 3:
Reasons justifying the use of self-medication

Reasons	Number (n=204)	%
ADVERTISING		
1. Yes	154	75.5
2. Nope	50	24.5
EASY ACCESSIBILITY TO MEDICATION		
Yes	112	54.9
Nope	92	45.1
ILLICIT MARKET		
1. Yes	42	20.5
2. Nope	163	79.5
ADVICE FROM HEALTH STAFF		
1. Yes	37	18.1
2. Nope	167	81.9
THOROUGH KNOWLEDGE OF MEDICATIONS		
1. Yes	47	23.0
2. Nope	157	77.0
PERFECT KNOWLEDGE OF AFFECTIONS		
1. Yes	23	11.3
2. Nope	180	88.7
LACK OF TIME AND MONEY TO GO TO THE HOSPITAL		
1. Yes	183	89.7
2. Nope	21	10.3
HARMLESS SYMPTOMS		
1. Yes	22	10.8
2. Nope	182	89.2
SELF-RENEWING PRESCRIPTION		
1. Yes		13.7
2. Nope		89.3

As for the reasons justifying the use of self-medication, three (3) reasons come successively in mind with a high frequency, lack of time and/or money to go to the hospital (89.7%), advertising on drugs (75.5%) and easy access to drugs.

Table 4:
Knowledge of the consequences of self-medication

Knowledge of the consequences of self-medication	Numbers n=266	%
Knowledge about the consequences of self-medication		
1. Yes	109	41.3
2. Last name	155	58.7
Types of consequences	**(n=109)**	
BAD TOLERANCE		
Yes	43	39.5
Nope	66	60.5
POISONING		
Yes	43	39.1
Nope	66	60.9
WORSENING OF THE STATE OF HEALTH		
Yes	44	39.8
Nope	65	60.2
DRUG DEPENDENCE		
1. Yes	11	10.5
2. Nope	98	89.5
DRUG INTERACTION		
1. Yes	34	31.6
2. Nope	75	68.4

In this Table, 41.3% know the consequences of self-medication. Among the consequences cited, poor drug tolerance (39.5%), aggravation of the disease (39.8%), drug self-medication (39.1%), drug interaction (31.6%) and pharmacology-dependence (10.5%).

Table 5:
Types of drugs used

Family of drugs	Numbers n=204	%
Traditional	10	5.0
Vitamins	02	0.9
Anti-inflammatory and antipyretic	94	46.1
Psychotropics	03	1.5
Antibiotics	17	8.3
Antiparasitic and antispasmodic	72	35.3
Anti-malarial	06	02.9

Looking at this Table, most of the products consumed by our respondents are anti-inflammatory and antipyretic (46.1%) and antiparasitics, antispasmodics (35.3%).

Table 6:
Symptoms for which people resort to self-medication

Sign or symptom	Workforce n= 204	%
sexual impotence	10	5.0
Vertigo,	02	0.9
hypertension,	03	1.4
Fever,	06	2.9
Common cold,	17	8.3
Diarrhea	30	14.7
Abdominal colic	42	20.6
Dysmenorrhea	12	5.9
low back pain	35	17.2
Headache	47	23.0

The products described in the preceding Table were consumed in most cases for the following symptoms: headache (23.0%), abdominal colic (20.6%), low back pain (17.2%), diarrhea (14 .7%).

Table 7:
Association between the socio-demographic characteristics of respondents and the practice of self-medication

Characteristic	practice of self-medication		χ^2–	DL	p	sign
	Yes (n= 204)	**Nope (n= 62)**				
SEX						
Male	60	11	3.309	1	0.069	NS
Feminine	144	51				
LEVEL OF STUDIES						
Without level	26	11	8.084	3	0.044	**S**
Primary	54	23				
Secondary	94	16				
Superior	30	12				
OCCUPATION						
Household	131	45	4,323	3	0.229	NS
Official	26	10				
Resourceful	36	6				
Others	11	1				
AGE						
18 to 27	19	12	7.143	3	0.067	NS
28 to 37	91	31				
38 to 47	86	17				
48 and over	8	2				
RELIGION						
don't pray	38	9	8.548	4	0.073	NS
Christian	130	38				
Muslim	13	7				
Protestant	17	2				
Catholic	6	6				
HOUSEHOLD SIZE						
Less than 3	130	46	2.327	1	0.127	NS
More than 3	74	16				
REVENUE						
≤100$	171	53	20.445	2	0.000	**S**
$100 – $500	31	2				
More $500	2	7				

The association between the socio-demographic characteristics of the respondents and the practice of self-medication revealed that only the level of education (χ^2 8.084, p=0.044) and monthly income ≤ $100 is associated with the practice of self-medication (χ^2 20.445., p=0.000).

Table 8:
Association between characteristics related to the behavior and the environment of the individual and the practice of self-medication

Characteristic	practice of self-medication		χ^2 –	dl	p	sign
	Yes (n=204)	**Nope (n=62)**				
CARE STRUCTURE						
Nowhere	91	23	12.473	2	0.002	S
Hospital or center	99	25				
traditional healer	14	14				

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KNOWLEDGE OF CONSEQUENCE						
Yes	75	36	8.872	1	0.003	S
Nope	129	26				
MUTUAL HEALTH						
Yes	47	31	16.677	1	0.000	S
Nope	157	31				
CARE ASSESSMENT						
Quality	42	17	2.044	2	0.360	NS
no quality	127	38				
Doubtful	35	7				
CARE COSTS						
Affordable	11	19	30.304	1	0.000	S
Raised	193	43				

The association between characteristics related to the behavior and the environment of the individual Structure of care and self-medication revealed that Insufficient knowledge about the consequences of self-medication, Poor, insufficient membership in Mutuelles Health, the high cost of care, because their calculated X^2 is higher than the tabular one, i.e., a p-value is less than 0.05.

DISCUSSION

In this study, we found that the female gender is the most represented (73.3%), 66.2% of whom are housewives, the respondents have secondary education (41.4%) followed by primary education (28.9%), the age group 28 to 37 years is the most represented (45.9%), with an average age of 35 years (± 79), 77.1% are married, 66.2% of whom have 1 to 3 dependents; 63.2% practice the Christian religion and 84.2% have a monthly income of less than $100 (one hundred dollars). Biblot (2013) supports this with her observation that women between 18-45 years are the most likely to resort to self-medication and they represent most women of childbearing age (Biblot, 2013). The same observation was made in Algeria, where self-medication with antibiotics is more likely to be practised by young women with a relatively average level of education and a low to medium socio-professional situation, although they may not be able to determine the exact consequences (Nousseiba et al, 2022). In contrast to a study carried out in France, the use of self-medication is highest at working ages, with a maximum between the ages of 40 and 50, and then the probability of use decreases with age, for both men and women. These consumption profiles according to age and sex are confirmed by a multidimensional analysis, which also considers the state of health of the individuals, their social security cover, and the demographic, social and economic characteristics of the households to which they belong (Raynaud, 2008).

Dannou of course justifies that the use of self-medication is more important among executives, craftsmen, shopkeepers and heads of households or companies, diplomats, or among people with a so-called preventive behaviour (Daniau, 2018).

It should be noted that 76.6% resort to self-medication, 57.9% of whom consume modern products; in most cases, it is the person him/herself (43.7%) or a friend or family member (33.3%) who advises which products to take. A study carried out in the economic capital of Benin, Cotonou, revealed seven categories of vendors, not exclusive of each other: "stall vendors", "shop vendors", "Nigerian street vendors", "itinerant vendors", "roadside vendors", "home vendors" and "vendors in neighbourhood markets" (Baxerres Carine, 2013) . Another study, also carried out in Cotonou, highlighted other characteristics of these actors in relation to the places where they work: "vendeuses dans les chantiers", "vendeuses de cabarets", "vendeuses dans les ateliers" (Kpatchavi, 2012). Informal neighbourhood nurses" have also been described as participating in pharmaceutical distribution in Cotonou, even though they also provide care (Baxerres Carine, 2014). These different informal vendors are equally present in rural and urban areas of the Democratic Republic of the Congo.

Thus, self-medication is practised by all, regardless of the socio-economic status of individuals, whether they live in urban or rural areas. However, the medicines purchased to practice it do not always come from the same places. The upper classes are more likely to go to a pharmacy for this purpose, whereas the lower classes will more easily resort to informal vendors in these cases. The latter seem to have a greater influence on access to medicines and the acquisition of knowledge in this area in rural areas than in urban areas. These qualitative data will be confirmed or refuted by quantitative studies currently underway in the areas where we have worked (Kpatchavi, 2012). 60% of people who use self-medication have a family pharmacy; 80.9% believe in the effectiveness of self-medication; 71.2% are not members of a mutual health insurance scheme; all the respondents had a health facility in their neighbourhood; 62.0% say that the care provided in the facilities is not of good quality and 88.7% consider that the costs of care are high. These results are similar to those of

Kitengye Lubo (2014), where 42.6% of the respondents had a responsible attitude, i.e. they took the elderly to hospital, but 57.4% practised some form of self-medication; 70.5% considered the cost of medical care to be high and 83.6% were not able to provide medical care for the elderly in their care; 80.3% of the respondents said that the care was not of good quality (Kitengye Lubo, 2014). In contrast, in a survey conducted in France, 20% of individuals had made at least one non-prescription purchase of medication, with this proportion rising to 53% for use of a prescription pharmacy. Self-medication is therefore less frequent, and also represents fewer purchases in terms of the number of boxes: on average, people who buy medicines without a prescription are more likely to buy them without a prescription.

In contrast, in Daniau's study, the respondents gave the following reasons: For private clinics, trust (37.6%), proximity to home 27.8% and quality of care 24.3%; For the health centre and the traditional practitioner, the low cost (42.6% and 30.6% respectively) and trust in their services (43.5% and 30.6%); For the hospital, the seriousness of the illness (32.2%) and trust (46.1%), interpersonal relations were mentioned for 15.8% of recourse to the hospital (Kitengye Lubo, 2014).

Regarding knowledge of the consequences of self-medication, it's note that 41.3% know the consequences of self-medication. Among the consequences cited were poor tolerance of medicines (39.5%), worsening of the disease (39.8%), self-medication with medicines (39.1%), drug interactions (31.6%) and drug dependence (10.5%).

Most of the products consumed by our respondents are Traditional, Vitamins, Anti-inflammatory and antipyretic, Psychotropic, Antibiotic, Antiparasitic, Antispasmodic and Malaria Antis. A study conducted in Gabon puts more emphasis on antibiotics, anti-inflammatories, anti-malarials, which are the drugs commonly sold in "pharmacies on the ground". And this very self-medication can unfortunately lead to overdosing among patients and to resistance of certain germs in the absence of dosage control. Moreover, malaria remains the leading cause of morbidity treated by self-medication in the study population. A national survey could be useful to better prioritise the determinants of self-medication in Gabon (Makita-Ikouaya & Rodrigue Tez, 2020).

Nkoma explains that in Africa, there are several therapeutic routes or health systems that people use to solve their health problems. These include the modern health system, popular medicine, traditional medicine, prayer, and the practice of self-medication, which is the subject of our study. Indeed, a study carried out in Cameroon in 2005 estimated the cost of medicines at CFAF 9,500 when a patient uses modern medicine.

The products described were consumed for the following symptoms: Sexual impotence, Vertigo, HTA, Fever, Cold, Malaria, Typhoid fever, Diabetes, Verminosis, Diarrhoea, Abdominal colic, Dysmenorrhoea, Lumbago, Headache (Nkoma, 2015).

The association between socio-demographic characteristics of the respondents and the practice of self-medication revealed that only the Level of education (χ^2 8.084, p=0.044) and monthly income ≤ 100$ is associated with the practice of self-medication (χ^2 20.445., p=0.000). Biblot, (2013) explains that the level of education: The higher the level of education, the more self-medication is important. Managers and craftsmen are very busy people with good incomes, these people have a strong recourse to self-medication because for them it allows them to save time (Biblot., 2013). The association between the characteristics related to the behaviour and environment of the individual Care structure and self-medication revealed that Insufficient knowledge on the consequences of self-medication, Bad, insufficient membership in mutual health insurance, high cost of care, as their calculated χ^2 is higher than the tabular one, i.e., a p-value is less than 0.05. On the other hand, in a study in France, the determining reasons that push the consumer to choose his product are therefore diverse, ranging from the character of the product (the environment and the state of mind of the consumer), and the moments of consumption as are therefore universal, and can be borrowed by all at a precise moment in the life of consumer of self-medication products. Previous use plays a key role in consumer choice. The previous experience and its success are landmarks for the consumer, which he/she hardly abandons. Another key determinant is the pharmacist and the advice he gives. His influence is one of the most

important after family habits or the influence of the environment. He is the person who can advise and take the time to explain the process of self-medication, the dosage and the ways of use for the most anxious. The importance of the effectiveness of the product, or rather the effectiveness perceived by the consumer, is a difficult influence to quantify. It is often associated with the consumer's habit based on previous satisfactory experiences. This perception can be influenced in particular by the media's communication on product effectiveness (Brier et al, 2012).

In addition, another study on self-medication in Libreville (Gabon) goes further to show that self-medication is favoured by a combination of several factors: the lack of first aid administered to patients in health facilities, long queues, the unavailability of public sector health facilities in the evening, the development of low-cost land-based pharmacies, verbal abuse (20%), and staff indifference (15%) (Okoye et al., 2022).

Brier et al (2012) note that if people are in poor health, they often seek advice from a doctor, see pharmacist, but rarely do so without advice. Thus, in this study, the perception of the consequences of self-medication is a factor that can positively or negatively influence the use of self-medication (Brier et al, 2012).

In addition, a feeling of independence from the power of the therapist, the attempt to save on medication, the desire to "save time", the influence of consumer associations, the presence of the family pharmacy and the high socio-cultural level. Here we find people who have a lot of means and documentation at home to self-medicate; the lack of accessibility to health care; the flight from high-cost medical consultations in hospitals; and the sale in pharmacies of medicines that can be dispensed without a medical prescription are approved that they influence the use of self-medication. In addition, the leakage of medical consultations has high costs in hospitals (Kpatchavi, 2012). Thus, it should be noted that this causal complex as suggested by Dab (2017) contributes to the practice of self-medication by patients. Thus, self-medication with arguments is motivated by a variety of determinants at the patient, health professional and system levels (Lescure et al, 2018).

CONCLUSIONS

The practice of self-medication in the city of Kinshasa and more particularly in the health zone of Barumbu amounts to 76.6%. It is determined by the level of education (secondary) (χ^2 8.084, p=0.044), monthly income ≤ 100$ is associated with the practice of self-medication (χ^2 20.445., p=0. 000), insufficient knowledge about the consequences of self-medication (χ^2 8.872,p= 0.003), insufficient membership in mutual health insurance (χ^2 16.677, p=0.000), high cost of care (χ^2 30.304, p=0.000).

Policy makers need to recognise the complexity of self-medication in order to develop multi-faceted interventions that simultaneously target health professionals and patients. While recognising the complexity of the subject, it is important to modernise the principles and methods of traditional medicine which are still archaic. This raises the issue of the positioning of traditional medicine in competition with modern medicine, which is both luxurious and much more discriminatory towards the Congolese rural citizen.

The abundant wealth traditionally used by traditional practitioners, we believe, opens the way to advanced research that could lead to the extraction of selective active principles to make oral serums and other effective and early medicines for the fight against venom. Also, among this wealth, it seems possible to work on understanding which of the plants have repellent effects

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