

Research Article

Knowledge and Attitude of Congolese Women of Childbearing Age Regarding the Risks and Consequences of Self-Medication: A Cross-Sectional Study

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Abstract

Introduction: Regulations on the sell and use of medicines in the Democratic Republic of Congo are at a rudimentary level. Self-medication is frequently used and its practice in all country, and in all social categories. It is the first therapeutic remedy used by the Congolese, before going to a hospital institution, if and only if the disease persists or worsens. The concern lies in the practice of self-medication among women of childbearing age. Hence the objective of the present study was to evaluate the knowledge and attitude of Congolese women of childbearing age regarding the risks and consequences of self-medication. **Methods:** It was a cross-sectional study, with an analytical aim, carried out among women of childbearing age, in Kinshasa town, during the period from March 15 to November 30, 2022. The selection of participants was made in the 4 districts of the Town, by taking women who met our criteria of selection. Study parameters included sociodemographics, prevalence, and determinants of self-medication. **Results:** In total, 402 subjects have been enrolled (mean age 27.3 ±8.4), women in the age group of 25-34 years (53.5%), singles (56.0%), with a high level of education (76.4%) and having a profession (59.2%). The majority of women knew the person authorized to prescribe the medications (78.6%), knew of the existence of self-medication (77.4%), and even practiced it (76.4%); but the majority (78.1%) were unaware of the dangers resulting from the practice of self-medication. The majority of them (64.4%) are victims of complications from self-medication. Civil status and religion remain the risk factors independently associated with self-medication. **Conclusion:** The Congolese woman of childbearing age, single and with a high level of education, knows the role of the Doctor in medical prescription, knows the existence and practice of self-medication, while ignoring the dangers that can result from it, despite she herself is a victim of complications from self-medication. This practice had as risk factors, marital status and religion.

Keywords

Self-Medication, Self-Care, Woman, Risk, Congo, Complication

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1. Introduction

Context

In the world, for countries where the system of purchasing pharmaceutical products is still done under medical prescription, there are more than 4.000 medications for sell without a prescription, a figure including products in syrup, tablets and injectables. And these pharmaceutical products are directly accessible in drugstores [1]. So what about countries whose culture of purchasing medicines with medical prescriptions is not required? This demonstrates the very high degree of self-medication.

Studies focused on drugs are few in number around the world. However, there are studies on variations in the use and consumption of medicines [2, 3], the distribution of pharmacies and the distribution of medicines in the territory [4], geographical variations in access to medicines, or again the place of medicine in the circulation of care practices and patients [5, 6]. Self-medication, on the other hand, to our knowledge, has not yet been the subject of in-depth studies.

Indeed, the self-medication in question, according to the World Health Organization (WHO), consists of the use of a medication by an individual, on their own initiative or that of a loved one, with the aim of treating an infection or a symptom that we identified ourselves, without resorting to a health professional [7].

This use of medication by an individual, on their own initiative, is encouraged in France. The French public authorities, in an effort to control health spending, are encouraging the population to resort to self-medication. Self-care behaviors place the latter at the heart of unknown dangers, and outside of all interventions by medical personnel [8]. There is an information problem at this level, the population only knows about medicines through advertising. However, in the latter, the dangers of the product are not noted; therefore the population is not truly informed, and therefore blindfolded, faces the dangers of self-medication [1].

A study carried out in France by IPSOS in 2005 for the National Health Insurance Fund, reporting the overconsumption of medicines by the French compared to their European neighbors [9]. Self-medication in France has a very low prevalence rate, which is why the public authorities encourage these practices [8].

When it comes to self-medication, “zero risk” does not exist. Unfortunately, “zero effectiveness” is indisputable for more than 55% of self-medication drugs. available on the market [1].

In Africa, malaria is endemic and constitutes the first cause of mortality and morbidity. In Senegal, access to health services remains insufficient. Self-medication in terms of presumptive treatment of fever and malaria has a very high prevalence [10].

In the Democratic Republic of Congo (DRC), in 2001, the estimated prevalence of self-medication among the entire population was 49 % [11]. On the other hand, in the Town of

Goma in 2013, self-medication had a prevalence of 57% [12]. In the Copper Town, Lubumbashi, a study on self-medication in the student population aged 18 to 35, residing on the Kasapa Campus of the University of Lubumbashi, reported a prevalence of 99% of respondents, in favor of self-medication. Even more serious, 35% of respondents started it as teenagers, and 78.8% of students recognize that self-medication can lead to therapeutic failure, and that dose errors, such as unsuitable treatment, side effects and diagnostic errors are plausible [13].

In the country's capital, Town Province of Kinshasa, at the Cliniques Universitaires de Kinshasa (CUK), a study carried out on patients aged 14 to 92 admitted to the internal medicine emergency department, reported 59.6% patients who self-medicated between the onset of symptoms and the consultation at the CUK [14].

Regulations on the sell and use of medicines in the DRC are at a rudimentary level. Self-medication is frequently used and is practiced throughout the country as in all social categories. It is the first therapeutic remedy used by the Congolese before going to the hospital, if and only if the disease persists or worsens. The concern lies in the practice of self-medication among Congolese women of childbearing age, given the complications and congenital malformations that could arise from the pharmaceutical products consumed.

This study aimed to evaluate the knowledge and attitude of Congolese women of childbearing age regarding the risks and consequences of self-medication, by determining the socio-demographic profile of these women, the prevalence, and in researching the determinants of self-medication among Congolese women.

2. Methods

2.1. Setting and Period of the Study

The study was carried out in the four districts of the Town Province of Kinshasa, during the period from March 15 to November 30, 2022.

2.2. Type of Study

This study was transversal, with an analytical aim.

2.3. Inclusion and Non-Inclusion Criteria

The population which was subject to this study consisted of women of childbearing age, living in the City Province of Kinshasa. We included all women aged between 15 and 42 years old, and who are familiar with the practice of self-medication. Anyone who did not answered to those questionnaires was excluded.

2.4. Sampling and Sample Size

The selection of our sample was made in the 4 districts of the province of Kinshasa, where we selected two communes in each district, and randomly chose three institutions (Church, University, and Hospital) in which we found our target population and carry out the investigation. We used non-probability sampling to constitute our sample, which was of convenience and set at 402 respondents.

2.5. Collection of Data

The data have been collected using a questionnaire developed based on our objectives, and used by an investigator. This questionnaire contains three sections, including: the socio-demographic profile, knowledge of the risks and consequences of self-medication in the body, and the attitude of women of childbearing age towards the risks and consequences of self-medication.

2.6. Variable of Interest

This study had as variable of interest, socio-demographic data (age, marital status, level of studies, profession and residence), knowledge of risk and consequences of self-medication, and the attitude of women of age of procreation facing risk and consequence of self-medication.

2.7. Statistical Analysis

The data was entered into the computer using an Excel 2013 file, and was presented in the form of figures and tables. The statistical software SPSS version 24 allowed us to carry out the analyses.

To describe the variables, the mean, the standard deviation and extremes were used for the quantitative variables. Concerning the qualitative variables, they were described in the form of relative frequency (100 percent), and or absolute. We also used the chi-square test to compare the proportion.

The determinants of risk and consequences of self-medication were sought using the logistic regression test. The OR and 95% CI were calculated to measure the strength of association between the risks and consequences of self-medication and variables of statistical significance.

2.8. Ethical Consideration

The study was conducted under the authorization and approval of the Ethics and Research Committee of John Wesley Methodist University, under number 0001/UMJW/SGAC/DEC/2022. All methods were performed in accordance with the relevant guidelines and regulations.

The respondents signed informed consent after having explanations about the objectives of the study. Confidentiality and anonymity was assured.

3. Results

3.1. Socio-Demographic Characteristics

The sociodemographic profile of our target population is recorded in [Table 1](#).

Table 1. Sociodemographic profile.

Variable	Frequency	
	n (402)	%
Age (years)		
15-24	162	40.3
25-34	240	59.7
Average \pm Standard deviation		27.3 \pm 8.4
Median		27 (15-34)
Place of birth		
Kinshasa	305	75.87
Outside Kinshasa	97	24.13
Marital status		
Married	156	38.81
Bachelor	239	59.45
civil union	6	1.49
Cohabitation	1	0.25
Level of study		
Primary	81	20.15
Secondary	197	49
University	80	19.9
Postgraduate	44	10.95
Occupation		
Unemployed	139	34.58
Public engagement	36	8.96
Private employee	50	12.44
Entrepreneur	94	23.38
Pupils/Students	83	20.25
Residence		
Funa	81	20.1
Tshangu	108	26.87
Lukunga	119	29.60
Mount Amba	94	23.36
Religion		

Variable	Frequency	
	n (402)	%
Catholic	69	17.16
Protestant	105	26.12
Wake Church	162	40.3
Muslim	44	10.95
Kimbanguiste	19	4.73
Church of black	3	0.75

With 402 respondents having voluntarily consented to participate in this study, the most common age group was between 25 and 34 years old, which represents 59.70% of cases. The majority of respondents were born in Kinshasa (75.87%), and were single (59.45%), with secondary education (49%), without profession or occupation (34.58%), and of which 29.6% resided in the Lukunga district.

3.2. Prevalence of Self-Medication

3.2.1. Awareness Surveys on the Person Authorized to Prescribe

Table 2 describes the respondents' knowledge of the person authorized to prescribe medications.

Table 2. Prevalence of knowledge of who is authorized to prescribe a medication.

Variable	Knowledge of the person authorized to prescribe		Together
	Know	Do not know	
Age (years)			
15-24	157 (39.1)	5 (1,2)	162 (40.3)
25-34	234 (58.2)	6 (1.5)	240 (59.7)
Place of birth			
Kinshasa	298 (74.1)	7 (1,7)	305 (75.9)
Outside Kinshasa	93 (23.1)	4 (1,0)	97 (24.1)
Marital status			
Married	152 (37.8)	4 (1,0)	156 (38.8)
Bachelor	236 (58.7)	3 (0,7)	239 (59.5)
civil union	3 (0,7)	4 (1,0)	7 (1,7)
Level of study			
Low level	75 (18.7)	6 (1,5)	81 (20.1)
High level	316 (78.6)	5 (1,2)	321 (79.9)
Occupation			
Unoccupied	131 (32.6)	8 (2,0)	139 (34.6)
With occupation	260 (64.7)	3 (0,7)	263 (65.4)
Residence			
Funa	78 (19.4)	3 (0,7)	81 (20.1)
Tshangu	104 (25.9)	4 (1,0)	108 (26.9)
Lukunga	117 (29.1)	2 (0,5)	119 (29.6)
Mount Amba	92 (22.9)	2 (0,5)	94 (23.4)
Religion			
Christian	352 (87.6)	3 (0,7)	355 (88.3)

Variable	Knowledge of the person authorized to prescribe		Together
	Know	Do not know	
Non-Christian	42 (10.4)	5 (1,2)	47 (11.7)

In majority, the respondents in the age group of 25 to 34 years (58.2%), single (58.7%), and with a high level of education (78.6%) and a profession (64.7%), knew the person authorized to prescribe the medication.

3.2.2. Knowledge of the Practice of Self-Medication

Table 3 illustrates the prevalence of respondents who know the practice of self-medication.

Table 3. Prevalence of those who know the practice of self-medication.

Variable	Knowledge of self-medication practice		Together
	Know	Do not know	
Age (years)			
15-24	156 (38.8)	6 (1.5)	162 (40.3)
25-34	230 (57.2)	10 (2.5)	240 (59.7)
Place of birth			
Kinshasa	297 (73.9)	8 (2,0)	305 (75.9)
Outside Kinshasa	89 (22.1)	8 (2,0)	97 (24.1)
Marital status			
Married	150 (37.3)	6 (1.5)	156 (38.8)
Bachelor	234 (58.2)	5 (1,2)	239 (59.5)
civil union	2 (0.5)	5 (1,2)	7 (1,7)
Level of study			
Low level	75 (18.7)	6 (1.5)	81 (20.1)
high level	311 (77.4)	10 (2.5)	321 (79.9)
Occupation			
Unoccupied	131 (32.6)	8 (2,0)	139 (34.6)
With occupation	255 (63.4)	8 (2,0)	263 (65.4)
Residence			
Funa	76 (18.9)	5 (1,2)	81 (20.1)
Tshangu	105 (26.1)	3 (0.7)	108 (26.9)
Lukunga	115 (28.6)	4 (1,0)	119 (29.6)
Mount Amba	90 (22.4)	4 (1,0)	94 (23.4)
Religion			
Christian	349 (86.8)	6 (1.5)	355 (88.3)
Non-Christian	37 (9.2)	10 (2.5)	47 (11.7)

Awareness of the existence of the practice of self-medication is effective among the majority of respondents aged 25-34 (57.2%), singles (58.2%), and with a high level of education (77.4%), and having a profession (63.4%).

3.2.3. Practice of Self-Medication by the Respondents

Table 4 describes the prevalence of respondents who have practiced self-medication.

Table 4. Prevalence of respondents practicing self-medication.

Variable	Practice of self-medication		Together
	Practical	Don't practice	
Age (years)			
15-24	141 (35.1)	21 (5.2)	162 (40.3)
25-34	215 (53.5)	25 (6.2)	240 (59.7)
Place of birth			
Kinshasa	286 (71.1)	19 (4.7)	305 (75.9)
Outside Kinshasa	70 (17.4)	27 (6.7)	97 (24.1)
Marital status			
Bride	127 (31.6)	29 (7.2)	156 (38.8)
Bachelor	225 (56.0)	14 (3.5)	239 (59.5)
civil union	4 (1.0)	3 (0.7)	7 (1.7)
level of studies			
Low level	49 (12.2)	32 (8.0)	81 (20.1)
High level	307 (76.4)	14 (3.5)	321 (79.9)
Occupation			
Unoccupied	118 (29.4)	21 (5.2)	139 (34.6)
With occupation	238 (59.2)	25 (6.2)	263 (65.4)
Residence			
Funa	69 (17.2)	12 (3.0)	81 (20.1)
Tshangu	102 (25.4)	6 (1.5)	108 (26.9)
Lukunga	107 (26.6)	12 (3.0)	119 (29.6)
Mount Amba	78 (19.4)	16 (4.0)	94 (23.4)
Religion			
Christian	319 (79.4)	36 (9.0)	355 (88.3)
Non-Christian	37 (9.2)	10 (2.5)	47 (11.7)

The practice of self-medication is predominant among respondents aged 25-34 (53.5%), single (56.0%), with a high level of education (76.4%), and with a profession (59.2%).

3.2.4. Awareness the Danger of Self-Medication

The prevalence of knowledge of danger of self-medication is presented in table 5.

Table 5. Prevalence of knowledge of the danger of self-medication.

Variable	Knowledge of the danger of self-medication		
	Know the danger	Don't know the danger	Together
Age (years)			
15-24	5 (1,2)	157 (39.1)	162 (40.3)
25-34	5 (1,2)	235 (58.5)	240 (59.7)
Place of birth			
Kinshasa	5 (1,2)	300 (74.6)	305 (75.9)
Outside Kinshasa	5 (1,2)	92 (22.9)	97 (24.1)
Marital status			
Married	3 (0.7)	153 (38.1)	156 (38.8)
Bachelor	5 (1,2)	234 (58.2)	239 (59.5)
civil union	2 (0.5)	5 (1,2)	7 (1,7)
Level of study			
Low level	3 (0.7)	78 (19.4)	81 (20.1)
High level	7 (1,7)	314 (78.1)	321 (79.9)
Occupation			
Unoccupied	4 (1,0)	135 (33.6)	139 (34.6)
With occupation	6 (1.5)	257 (63.9)	263 (65.4)
Residence			
Funa	3 (0.7)	78 (19.4)	81 (20.1)
Tshangu	3 (0.7)	105 (26.1)	108 (26.9)
Lukunga	2 (0.5)	117 (29.1)	119 (29.6)
Mount Amba	2 (0.5)	92 (22.9)	94 (23.4)
Religion			
Christian	6 (1.5)	349 (86.8)	355 (88.3)
Non-Christian	4 (1,0)	43 (10.7)	47 (11.7)

The dangers resulting from the practice of self-medication are ignored by the majority of respondents, with 58.5% of respondents aged 25 to 34, 58.2% of single, 78.1% of respondents with a high level of education and occupation (63.9%).

3.2.5. Respondents Who Suffered Complications from Self-Medication

The prevalence of respondents having suffered complications of self-medication is presented in the [table 6](#).

Table 6. Prevalence of respondents having suffered complications of self-medication.

Variable	Having suffered the complications of self-medication		Together
	Complication	No complications	
Age (years)			

Variable	Having suffered the complications of self-medication		Together
	Complication	No complications	
15-24	135 (33.6)	27 (6,7)	162 (40.3)
25-34	138 (34.3)	102 (25.4)	240 (59.7)
Place of birth			
Kinshasa	230 (57.2)	75 (18.7)	305 (75.9)
Outside Kinshasa	43 (10.7)	54 (13.4)	97 (24.1)
Marital status			
Married	100 (24.9)	56 (13.9)	156 (38.8)
Bachelor	171 (42.5)	68 (16.9)	239 (59.5)
civil union	2 (0.5)	5 (1,2)	7 (1,7)
Level of study			
Low level	14 (3.5)	67 (16.7)	81 (20.1)
High level	259 (64.4)	62 (15.4)	321 (79.9)
Occupation			
Unoccupied	105 (26.1)	34 (8.5)	139 (34.6)
With occupation	168 (41.8)	95 (23.6)	26 (65.4)3
Residence			
Funa	47 (11.7)	34 (8.5)	81 (20.1)
Tshangu	52 (12.9)	56 (13.9)	108 (26.9)
Lukunga	98 (24.4)	21 (5,2)	119 (29.6)
Mount Amba	76 (18.9)	18 (4.5)	94 (23.4)
Religion			
Christian	267 (66.4)	88 (21.9)	355 (88.3)
Non-Christian	6 (1.5)	41 (10.2)	47 (11.7)

The prevalence of respondents having suffered complications from self-medication is preponderant among respondents aged 25-34 (34.3%), single (42.5%), with a high level of education (64.4%), and with a profession (41.8%).

3.3. Univariate and Multivariate Analyzes

3.3.1. Factor of Risks Associated with the Practice and Their Determinants in Relation to the Frequency of Self-Medication

Table 7 illustrates the factors and determinants associated with practice in relation to the frequency of self-medication.

Table 7. Factors and determinants associated with knowledge of the practical self-medication.

Variable	Univariate analysis		Multivariate analysis	
	p-value	OR (95% CI)	P-value	ORa (95%CI)
Age (years)				

Variable	Univariate analysis		Multivariate analysis	
	p-value	OR (95% CI)	P-value	ORa (95%CI)
15-24	0.43			
25-34				
Place of birth				
Kinshasa	<0.0001	5.7 (3.0-11.1)	<0.0001	1.29 (1.10-1.41)
Outside Kinshasa		1		1
Marital status				
Bride	<0.0001	6.09 (1.1-30.4)	<0.0001	1.55 (0.8-2.96)
Bachelor		1		1
civil union				
level of studies				
Low level	<0.0001	0.07 (0.03-0.14)	<0.0001	0.63 (0.5-0.75)
high level		1		1
Occupation				
Unoccupied	0.09			
With occupation				
Residence				
Funa	0.05			
Tshangu				
Lukunga				
Mount Amba				
Religion				
Christian	0.02	2.23 (1.05-5.1)	<0.0001	1.14 (0.97-1.32)
Non-Christian		1		1

In univariate analysis of logistic regression analysis, place of birth, marital status, level of education and religion have emerged as the main factors associated with their knowledge about self-medication. After adjustment for the aforementioned risk factors, all 4 factors persisted as major factors independently associated with practice of self-medication, multiplying this risk respectively by: 1.2; 1.5; 0.6 and 1.1.

3.3.2. Associated Determinants Has Their Knowledge of the Danger of Self-Medication

Table 8 describes the determinants associated with knowledge of the danger of self-medication.

Table 8. Determinants associated with their knowledge of the danger of self-medication.

Variable	Univariate analysis		Multivariate analysis	
	p-value	OR (95% CI)	P-value	ORa (95%CI)
Age (years)				
15-24	0.52			

Variable	Univariate analysis		Multivariate analysis	
	p-value	OR (95% CI)	P-value	ORa (95%CI)
25-34				
Place of birth				
Kinshasa	0.05			
Outside Kinshasa				
Marital status				
Bride	<0.0001	1.8 (2.28-7.22)	0.01	4.7 (3.63-8.48)
Bachelor		1		1
civil union				
level of studies				
Low level	0.43			
High level				
Occupation				
Unoccupied	0.72			
With occupation				
Residence				
Funa	0.82			
Tshangu				
Lukungu				
Mount Amba				
Religion				
Christian	<0.0001	0.18 (0.04-0.77)	0.02	0.19 (0.05-0.67)
Non-Christian		1		1

In univariate analysis of logistic regression analysis, civil status and religion, emerged as the main factors associated with there knowledge about the danger of self-medication. After adjusting the aforementioned risk factors, the two factors persisted as major factors independently associated with knowledge of the danger of self-medication, respectively multiplying this risk of 4.7 and 0.2.

3.3.3. Determinants Associated with Knowledge About the Complications of Self-Medication

Table 9 describes the associated factors and determinants to knowledge about the complications of self-medication.

Table 9. Determinants associated with knowledge about the complications of self-medication.

Variable	Univariate analysis		Multivariate analysis	
	p-value	OR (95% CI)	P-value	ORa (95%CI)
Age (years)				
15-24	<0.0001	3.7 (2.28-6.02)	<0.0001	1.4 (1.27-1.64)
25-34		1		1

Variable	Univariate analysis		Multivariate analysis	
	p-value	OR (95% CI)	P-value	ORa (95%CI)
Place of birth				
Kinshasa	<0.0001	3.8 (2.38-6.21)	<0.0001	1.7 (2.38-6.21)
Outside Kinshasa		1		1
Marital status				
Bride	0.19			
Bachelor				
civil union				
level of studies				
Low level	<0.0001	0.05 (0.02-0.09)	<0.0001	0.21 (0.13-0.34)
High level		1		1
Occupation				
Unoccupied	0.01	1.7 (1.10-2.79)	0.01	1.1 (1.0-1.34)
With occupation		1		1
Residence				
Funa	0.03	1.7 (1.03-2.81)	<0.0001	1.21 (0.99-1.47)
Tshangu		1		1
Lukunga				
Mount Amba				
Religion				
Christian	<0.0001	0.5 (0.83-4.92)	<0.0001	5.89 (2.78-12.46)
Non-Christian		1		1

In univariate analysis of logistic regression analysis, age, place of birth, level of education, occupation, residence and religion, emerged as the main factors associated with their knowledge about the complications of self-medication. After adjustment for the aforementioned risk factors, all persisted as major factors independently associated with knowledge about the complications of self-medication, thus multiplying this risk respectively of: 1.4, 1.7, 0.2, 1.1, 1.2 and 6.

4. Discussion

This cross-sectional study with an analytical aim on the knowledge and attitude of Congolese women of childbearing age regarding the risks and consequences of self-medication, showed unprecedented prevalence of self-medication:

4.1. Prevalence of Self-Medication

In the present study:

The majority of respondents knew the person authorized to prescribe the medications: i.e. 78.6% considering that the respondents had a high level of education.

Compared to the study of Stéphanie Larramendy and Sébastien Fleuret, carried out in France, they described that self-medication in France is distinguished by a very low prevalence rate. This difference lies in the fact that, in France, health care is guaranteed to all, to reduce spending allocated to health, the public authorities encourage these self-medication practices which are always weak [8].

The practice of self-medication is effective among all respondents, with a preponderance among respondents with a high level of education (76.4%).

A study conducted by Bashige Chiribagula and al on self-medication in the student population aged 18 to 35, residing on the Kasapa Campus of the University of Lubumbashi, reported a prevalence of 99% of respondents who practiced self-medication. This result is higher than ours, but is consistent with the intellectual characteristics of the re-

spondents in the two studies. Indeed, in the present study, respondents with a high level of education had high prevalence rates of self-medication; in addition, Bashige's study was carried out in an environment of intellectuals where the rate reached almost the maximum.

The majority of respondents were unaware of the dangers resulting from the practice of self-medication, with a preponderance of 78.1% of respondents having a high level of education and having an occupation (63.9%).

Bashige Chiribagula and collaborators in their study, have found similar prevalence (78.8%), but oriented in the opposite direction, that of recognition of the dangers of self-medication by students [13].

The prevalence of respondents who are victims of complications from self-medication is preponderant among respondents who are single (42.5%), with a high level of education (64.4%), and with a profession (41.8%).

In a study carried out by Mbutiwi Ikwa Ndol and collaborator on patients admitted to the internal medicine emergency department of the University Clinics of Kinshasa (CUK), reported 59.6% of patients who self-medicated between the onset of symptoms and consultation at CUK after complications of self-medication [14]. This similarity of the results of two studies carried out on the same population of Kinshasa simply justifies how much self-medication is practiced in the city of Kinshasa, and how many complications there are due to this practice.

4.2. Risk Factors and Their Determinants Associated with Self-Medication

We have pointed out in the previous lines how self-medication does not benefit from several scientific studies around the world.

The univariate analysis in this study allowed the emergence of a number of risk factors and their determinants associated with self-medication; after adjusting these factors in multivariate logistic regression analysis, the marital status and religion persisted as independent factors associated with both the birth on self-medication, on the danger of self-medication, on the complications of self-medication and on their practice of self-medication.

To our knowledge, we have not found any study that has discussed risk factors and determinants of self-medication.

The marital status and religion which persisted as independent factors associated with self-medication, are justified by the fact that in many religions, the caring body (Doctor) is directly linked to occultism, and that illness would be the result of the spell of demons and witchcraft.

5. Conclusion

At the end of this cross-sectional study focused on the Knowledge and attitude of Congolese women of childbearing age regarding the risks and consequences of self-medication;

we can remember the following: The Congolese woman of childbearing age, single and with a high level of education, knows the role of the Doctor in medical prescription. She also knows the existence and practice of self-medication, while ignoring the dangers that can result from this, despite the fact that she herself is a victim of complications from the practice of self-medication, which practice had as a risk factor, marital status and religion.

Conducted a scientific study to find out the prevalence of pregnant women who expose their future newborn to birth defects as a result of self-medication, and to know the different malformations in newborns resulting from self-medication, will advance scientific knowledge on the dangers of self-medication. And will make it possible to plan appropriate actions to fight against this phenomenon.

6. Strength of the Study

The strength of this study lies in the fact that it is one of the rare studies carried out on self-medication, and the first study on self-medication in girls of childbearing age, therefore a reference.

7. Limitation of the Study

The weakness or limitation of the present study is that it did not investigate the prevalence and complications of self-medication in pregnant women; and also, the prevalence of future newborns exposed to the risk of visible and non-visible congenital malformations.

Abbreviations

WHO	World Health Organization
DRC	Democratic Republic of Congo

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Ethical Consideration

The research is conducted under the permission and approval of the John Wesley Methodist University Research and Ethics Committee under number 0001/UMJW/SGAC/DEC/2022. All methods were performed in accordance with the relevant guidelines and regulations.

Participants signed informed consent after receiving the necessary explanations of the objectives of the study. They were free to leave the study without being obliged to give an

explanation for their decision.

Author Contributions

Kapitene Kamuanga Michael: Conceptualization, Data curation, Formal Analysis, Methodology, Supervision, Validation, Writing – original draft, Writing – review & editing

Wembosongo Shokanga Michel: Investigation, Resources

Makolo Bueyi Steve: Supervision, Validation

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Data Availability Statement

The data analyzed in this study are available from the author Kapitene Kamuanga Michael, upon reasonable request.

Conflicts of Interest

The authors declare no conflicts of interest.

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