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Knowledge and Attitude of Kinshasa Women Towards the Dangers of Excessive Use of Corticosteroids and Cyproheptadine in Order to Gain Weight: Cross-Sectional and Analytical Study

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ABSTRACT

Introduction: It is a cultural issue related to feminine aesthetics that has given rise to men's taste for plump women with roundness. Thin women, especially those who appreciate pants, dresses or skirts thattightenthe body, feel self-conscious and engage in the practice of abusing corticosteroids and cyproheptadine for weight gain. This practice consists of taking Cyproheptadine syrup, mixing it with 60 corticosteroid tablets, and then taking it orally before going to sleep. This is repeated every 5 days. The aim of this study is toto determine the prevalence of Kinshasa women consuming corticosteroids and cyproheptadine in order to gain weight, as well as their levels of knowledge and their attitude towards the resulting dangers and risks.

Methods: It was a cross-sectional and analytical study carried outamong women aged 15 to 35 residing in the city of Kinshasa, in the DR Congo. The selection of participants was made in the 4 districts of the City. Women who knew the usecorticosteroids/cyproheptadine for weight gain were selected.Study parameters included sociodemographic data, prevalence and determinants of corticosteroid and cyproheptadine consumption.

Results: A total of 260 respondents (average age21.12 ± 3.49 years), singles (84%), of secondary education level (54%) and having no occupation or unemployed (81.53%). The majority of respondents, 98.84%, are aware of the types of corticosteroids/cyproheptadine; 98.41% of respondents say they know the weight gain effects of these products. In addition, 94.21% of respondents consume corticosteroids/cyproheptadine for weight gain. As for knowledge of the side effects and illnesses related to taking these corticosteroids/cyproheptadine, 92.69% of respondents knew its side effects and illnesses and identified obesity as a complication and illness in 56.53% of cases. The majority, 88.07% of those surveyed, had the attitude of taking thecorticosteroids/cyproheptadine despite their knowledge of the side effectsand the complications of this taking. But in 80.38% of cases, these respondents did not know the seriousness of the side effects resulting from this intake.

Conclusion: The single Kinoise, with a secondary education and no profession, knows the types of corticosteroids/cyproheptadine, knows the weight gain effects of these products, and consumes them for the purpose of weight gain. She also knows the side effects and diseases that can result from taking them, citing obesity without knowing the seriousness of these side effects. But, she has the attitude of still consuming themcorticosteroids/cyproheptadine.

1. INTRODUCTION

1.1. Context

Corticosteroids and cyproheptadine have seen their sales increase considerably, under prescription in different medical disciplines, and also in self-medication. Their therapeutic effects in multiple pathologies are, however, obtained at the cost of equally varied side effects, sometimes by their pharmacological action. Also, their self-medication is done on the basis of side effects, in particular weight gain [1, 2].

Worldwide, the prevalence of side effects related to corticosteroids and cyproheptadine is not known, because to our knowledge, there are no studies related to this subject. Estimating this prevalence is even more difficult when taking corticosteroids and cyproheptadine goes beyond its usual therapeutic framework, and is integrated into a dimension of self-medication, without any medical monitoring or control [1, 2, 3].

In Africa, in a study conducted in the female population of certain regions of Morocco, it was demonstrated that these women self-medicate with corticosteroids in order to gain weight. Very serious health complications related to this self-medication have also been reported [1].

In the City Province of Kinshasa in the Democratic Republic of Congo, according to an observation, women in general, and also some men, automatically take either a corticosteroid or a cyproheptadine, or both at the same time, in order to gain weight. Indeed, in Kinshasa, excess weight and roundness are considered as the most important criterion of feminine beauty, and are not only culturally accepted in society, but are also sought after without taking into account the risks involved.

A review of the literature on the non-medical use of drugs by adolescents and young adults indicates that practices involving sports doping, performance enhancement, intellectual and sexual performance, as well as mood control and body shaping are on the rise.[1, 2, 3]. The rates of women who are dissatisfied with their body image and who, under the influence of the environment, indulge in the consumption of corticosteroid products and cyproheptadine for non-medical purposes, but rather to gain weight, are increasing day by day, without taking into account the multiple side effects and health risks that are run in this practice [4].

It is a cultural issue related to feminine aesthetics that has given rise to the taste of some men for plump women with roundness. Women"badly off"", especially those who like pants, dresses or skirtswho servesthe body, feel self-conscious, and engage in the practice of abusing corticosteroids and cyproheptadine, locally known as "Tshanfuen". This practice consists of taking Cyproheptadine syrup (more often, the one with the trade name C4), mixing it with 60 corticosteroid tablets (much more, the one sold under the trade name Dexacort), and taking it orally, before going to sleep. This is repeated every 5 days [3,4].

These products are consumed in several ways, but the common point remains the abundance of tablets, and the excessive quantities of syrup to be taken, as a result, also the mixture of corticosteroids and cyproheptadine [4]. Despite the scarcity of studies on this subject, the ANSM has already warned us several times about the dangers of consuming corticosteroids and cyproheptadine to gain weight [5].

This study aimed to dto determine the prevalence of Kinshasa women consuming corticosteroids and cyproheptadine in order to gain weight, as well as their level of knowledge and attitude towards the resulting dangers.

2. METHODS

2.1. *Framework and period of the study*

The study was carried out in the four districts of the City Province of Kinshasa, during the period from January 30 to December 15, 2022.

2.2. *Type of study*

This study was cross-sectional and analytical.

2.3. *Target population and selection criteria*

The target population of this work consisted of women aged between 15 and 35, residing in the City Province of Kinshasa andknowing the use of corticosteroids/cyproheptadine for weight gain.

We included women aged between 15 and 35 years, aware of the use of corticosteroids and cyproheptadine for weight gain, and who had given informed consent on the subject. Any personwho did not want to answer the questionnaires were excluded.

2.4. *Sampling and sample size*

We had to apply a convenience sampling, and the selection was made in the 4 districts of the City of Kinshasa, with 65 subjects per district, giving a sample of 260 respondents.

2.5. *Collection of giving*

Data were collected using a questionnaire developed based on the objectives of the study, and used by an investigator. This questionnaire contains three sections, including: the sociodemographic profile, the knowledge of Kinshasa women on the harmful effects of taking corticosteroids and cyproheptadine to gain weight, and the attitude of Kinshasa women towards the side effects and complications resulting from the abusive use of corticosteroids and cyproheptadine.

2.6. *Variable of interest*

This study had as variables of interest, sociodemographic data (age, marital status, profession, residence, cultural area, and religion), the knowledge of Kinshasa women on the harmful effects of taking corticosteroids in order to gain weight, and the attitude of Kinshasa women towards the side effects and complications resulting from taking corticosteroids.

2.7. *Statistical analysis*

After collecting the data, they were entered into the computer using an Excel 2013 file, and represented in the form of figures and tables. SPSS version 24 software was then used for the analyses.

The statistics used to describe the variables were the mean, standard deviation and extremes for continuous variables. Qualitative variables are described in the form of relative frequencies (%) and/or absolute frequencies (n). Chi-square text was applied to compare proportions.

The determinants of the abusive use of corticosteroids were sought using multivariate logistic regression analysis, the OR and their 95% CI were calculated in order to measure the strength of association between the use of corticosteroids to gain weight, and the independent variables in univariate and multivariate analysis.

The value of $P < 0.05$ is therefore the threshold 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 0002/UMJW/SGAC/DEC/2022. Participants had signed the informed consent after receiving the necessary explanations on the objectives of the study. Refusal or withdrawal of participation in the study had no consequences.

3. RESULTS

3.1. Sociodemographic characteristics

The socio-demographic characteristics of the respondents are presented in Table 1.

Table 1: Sociodemographic profile of respondents

Variables	n=260	%
Age (years)		
15-24	218	83.85
25-34	42	16.15
Average± Standard deviation	21.12 ± 3.49	
Median (Extreme)	21 (15-34)	
Place of birth		
Kinshasa	202	77.69
Outside Kinshasa	58	22.31
Marital status		
Bride)	39	15
Bachelor	218	84
In a common-law relationship	3	1
Level of education		
Primary	10	4
Secondary	140	54
University	88	34
Postgraduate	22	8

Occupation		
None	212	81.53
State official	8	3.07
Liberal profession	21	8.07
Publicly engaged	5	1.92
Private Hire	14	5.38
Residence		
Funa	40	15
Mount Amba	98	38
Lukunga	61	23
Tshiangu	61	24
Cultural area		
Kongo	64	25
Ngala	86	33
Swahili	36	14
Luba	74	28
Religion		
Catholic Christian	61	23.46
Protestant Christian	38	14.61
Kimbanguist Christian	49	18.84
Christian Church Revival	108	41.53
Muslim	1	0.38
Others	3	1.15

The most common age group in this study is between 15 and 24 years (83.85%). The average age is21.12 ± 3.49 and the median age of 21 years with extremes ranging from 15 to 34 years. In addition, 77.69% of respondents were born in Kinshasa.
The marital status of the respondents is represented by 84% of single respondents, with secondary education (54%), without any profession (81.53%), 38% residing in the Mont-Amba district.

3.2. Knowledge of Kinshasa women on the harmful effects of taking corticosteroids to gain weight

Table 2 presents the knowledge of Kinshasa women on the harmful effects of taking corticosteroids to gain weight.

Table 2: Knowledge of Kinshasa women on the harmful effects of taking corticosteroids to gain weight

Variables	Level of education		Set n(%)	P-value
	low level n(%)	high level n(%)		
Knowledge of types of corticosteroids				**0.007**
Yes	9(3.46)	248(95.38)	257(98.84)	
No	1(0.63)	2(0.77)	3(1.15)	
Knowledge of the effect of weight gain				**0.02**
Yes	9(3.46)	247(95.00)	256(98.41)	
No	1(0.63)	3(1.15)	4(1.54)	
Corticosteroid/Cypro consumption				0.93
Yes	9(3.46)	227(87.30)	236(90.76)	
No	1(0.63)	23(8.84)	24(9.23)	
Type of corticosteroid/Cyproheptadine consumed				0.81
C4 (cyproheptadine)	3(1.15)	120(46.15)	123(47.30)	
Dexacort (corticosteroid)	4(1.54)	81(31.15)	85(32.69)	
Corancyl (corticosteroid)	1(0.63)	14(5.38)	15(5.76)	

Appetite increased (cyproheptadine)	1(0.63)	13(5.00)	14(5.38)	
Super Appetit, nutrilin (cyproheptadine)	1(0.63)	22(8.46)	23(8.84)	
Knowledge of side effects/disease				0.73
Yes	9(3.46)	232(89.23)	241(92.69)	
No	1(0.63)	18(6.92)	19(7.30)	
Knowledge about types of complications and diseases				0.82
Obesity	6(2.30)	141(54.23)	147(56.53)	
Others (hypertension, diabetes, acne, etc.)	4(1.54)	109(41.92)	113(43,46)	

In relation to the level of knowledge of Kinshasa women on the harmful effects of taking corticosteroids to gain weight, the following observation emerges: 98.84% of respondents are aware of the types of corticosteroids and of this category, 98.41% say they know the weight gain effects of these products. In addition, 94.21% of respondents mainly consume C4 in 47.30% of cases. As for knowledge of the side effects and diseases related to taking these corticosteroids, 92.69% of respondents knew these side effects and diseases and had identified obesity in 56.53% of cases as a complication and disease caused.
Comparing respondents with low and high levels of education, only the cKnowledge of types of corticosteroids and knowledge of the weight gain effect were significantly different in favor of the respondentsof high level of education.

3.3. Attitude of Kinshasa women towards side effects and complications resulting from taking corticosteroids and cyproheptadine

Table 3 describes the attitudes of Kinshasa women towards the side effects and complications resulting from taking corticosteroids and cyproheptadine.

Table 3: Attitude of Kinshasa women towards the side effects and complications resulting from taking corticosteroids

Variables	n=260	%
Taking corticosteroids/Cyproheptadine in the face of lack of appetite and weight loss despite these effects		
Yes	229	88.07
No	31	11.92
Knowledge about the severity of side effects		
Yes	51	19.62
No	209	80.38
Stop taking corticosteroids/Cyproheptadine due to serious side effects		
Yes	64	24.62
No	196	75.38
Number of times of taking corticosteroids		
No time	47	18.08
Once	24	9.23
Twice	76	29.23
Several times	113	43.46

Regarding the attitude of Kinshasa women towards the side effects and complications resulting from taking corticosteroids, the following observation emerges: 88.07% of those surveyed took themcorticosteroids/Cyproheptadine despite knowing about their side effects. These respondents in 80.38% of cases, did not know the seriousness of this intake, but would still consume these drugs, despite their side effects in 75.38% of cases. Concerning the number of times corticosteroids were taken, 43.46% of respondents said they had taken it several times.

3.4. Univariate and multivariate analyses on knowledge

3.4.1. Risk factors and their determinants associated with knowledgeof the weight gain effect

Table 4 describes the frisk actors and their determinants associated with knowledgeof the weight gain effect.

Table 4: Associated factors and determinantsto knowledgeof the weight gain effect

Variable	Univariate analysis		Multivariate analysis	
	p-value	OR(95% CI)	P-value	ORa(95% CI)
Age (years)				
15-24	<0.0001	3.5(1.43-9.16)	<0.0001	5.3(2.66-10.35)
25-34		1		1
Place of birth				
Kinshasa	<0.0001	3.8(1.02-8.16)	<0.0001	2.6(1.78-3.65)
Outside Kinshasa		1		1
Occupation				
Unoccupied	0.0005	10.3(2.11-76.4)	0.002	3.1(090-10.35)
With occupation		1		1
Residence				
Urban	0.0001	0.3(0.13-0.55)	0.0001	0.7(0.48-0.88)
Urban-rural		1		1
Religion				
Christian	0.01	9.9(1.03-26.4)	0.06	3.0(0.56-6.82)
non-christian		1		1

After applying univariate analysis, the following factors were associated with theknowledge of the weight gain effect:Age [OR :3.5; (95% CI: 1.43-9.16)], p <0.0001; place of birth [OR:3.8 (95% CI: 1.02-8.16)], p<0.0001 ;profession [OR :10.5; (95% CI: 2.10-76.4)],p =0.0005;residence [OR:0.3; (95% CI: 0.13-0.55)], p<0.0001 and religion [OR: 9.9; (95% CI; 1.03-26.4)], p =0.006. On the other hand, marital status and level of education are not associated withthereknowledge of the effect of weight gain.

After adjustment, all 4 factors were confirmed to be determinantsto the knowledge of the weight gain effect:Age [OR :5.3; (95% CI: 2.66-10.35)],p<0.0001; place of birth [OR:2.6 (95% CI: 1.78-3.65)], p<0.0001 ;the profession [OR:3.1; (95% CI: 0.9-10.35)],p =0.002;residence [OR:0.7; (95% CI: 0.48-0.88)],p=0.0002. Religion was not found to be a determinant associated with knowledge about the effect of weight gain.

3.4.2. Risk factors and their determinants associated with theknowledge of side effects and diseases

Table 5 describes the frisk actors and their determinants associated with knowledgeon side effect and disease.

Table 5: Associated factors and determinants to the knowledge about side effects and diseases

Variable	Univariate analysis		Multivariate analysis	
	p-value	OR(95% CI)	P-value	ORa(95% CI)
Age (years)				
15-24	0.0001	5.6(2.06-15.2)	0.0004	1.2(1.03-1.42)
25-34		1		1
Place of birth				
Kinshasa	<0.0001	7.2(2.68-20.4)	<0.0001	1.2(1.06-1.39)
Outside Kinshasa		1		1
Marital status				
Bride	0.01	3.4(1.18-9.29)	0.02	1.1(0.98-1.30)
Bachelor		1		1
Level of education				
Low level	0.004	0.2(0.03-0.83)	0.02	0.7(0.49-1.12)
High level		1		1
Occupation				
Unoccupied	0.05			
With occupation				
Religion				
Christian	0.0009	13.7(1.35-138.4)	0.02	1.9(0.70-4.97)
Non-Christian		1		1

Univariate analysis identified the following associated factorsto theknowledge about side effect and disease: age [OR:5.6 (95% CI: 2.06-15.18)],p<0.0001 ;place of birth [OR:7.2 (95% CI: 2.68-20.43)], p<0.0001 ;civil status [OR:3.4 (95% CI: 1.18-9.29)], p=0.01 ;level of education [OR:0.2 (95% CI: 0.03-0.83)], p=0.02 and religion [OR: 13.7; (95% CI; 1.35-138.4)], p=0.0009. On the other hand, only the profession and the place of residence are not associatedto theknowledge about side effects and disease.

After adjustment by multiple regression, all factors were confirmed to be determinantsto theknowledge about side effect and disease: age [OR :1,2 (95% CI: 1.03-1.42)],p=0.0004 ;place of birth [OR:1.2 (95% CI: 1.06-1.39)],p=0.00003 ;civil status [OR:1.1 (95% CI: 0.98-1.30)],p=0.02 ;level of education [OR:0.7 (95% CI: 0.49-1.12)],p=0.02 and religion [OR: 1.59; (95% CI; 0.70-4.97)], p<0.0001.

3.4.3. Risk factors and their determinants associated with the attitude of Kinshasa women on thecorticosteroid/cyproheptadine intake

Table 6 describes the risk factors and their determinants associated with the attitude of Kinshasa women on thetaking corticosteroids / Cyproheptadine in the face of lack of appetite and weight loss despite these effects.

Table 6: Risk factors and their determinants associated with the attitude of Kinshasa women on thetaking corticosteroid/cyproheptadine due to lack of appetite and weight loss despite these effects

Variable	Univariate analysis		Multivariate analysis	
	p-value	OR(95% CI)	P-value	ORa(95% CI)
Age (years)				
15-24	<0.0001	9.7(4.28-22.64)	<0.0001	1.6(1.22-2.02)
25-34		1		1
Place of birth				
Kinshasa	0.06			
Outside Kinshasa				
Occupation				
unoccupied	0.0007	8.2(1.76-38.3)	0.004	1.8(0.89-3.57)
with occupation		1		1
Religion				
Christian	<0.0001	3.8(0.45-6.07)	<0.0001	3.6(0.65-19.15)
Non-Christian		1		1

Univariate analysis determined the following factors, associatedto the attitude of the women of Kinshasa on The taking corticosteroids / Cyproheptadine in the face of lack of appetite and weight loss despite these effects: age [OR :9.7; (95% CI (4.28-22.64)], p <0.0001; profession [OR:8.2 (95% CI: 1.76-38.34)], p = 0.0007 and religion [OR: 3.4; (95% CI; 0.45-6.07)], p = 0.00008. On the other hand, place of birth, marital status and level of education are not associatedto the attitude of the women of Kinshasa on thetaking corticosteroid/cyproheptadine in the face of lack of appetite and weight loss despite these effects.

After adjustment, the following factors were confirmed to be determinantsto the attitude of the women of Kinshasa on thetaking corticosteroids/cyproheptadine in the face of lack of appetite and weight loss despite these effects:age [OR:1.6; (95% CI: 1.28-2.02)], p <0.0001; profession [OR:1.8 (95% CI: 0.89-3.97)],p=0.0004 and religion [OR: 3.6; (95% CI; 0.65-19.45)], p =0.001.

3.4.4. Risk factors and their determinants associated with attitude on cawareness of the seriousness of side effects

Table 8 describes the risk factors and their determinants associated with attitude on the cknowledge of the seriousness of side effects.

Table 7: Risk factors and their determinants associated with attitude on the *knowledge of the severity of side effects*

Variable	Univariate analysis		Multivariate analysis	
	p-value	OR(95% CI)	P-value	ORa(95% CI)
Age (years)				
15-24	<0.0001	0.1(0.06-0.25)	<0.0001	0.2(0.15-0.36)
25-34		1		1
Place of birth				
Kinshasa	<0.0001	0.1(0.03-0.13)	<0.0001	0.1(0.09-0.24)
Outside Kinshasa		1		1
Marital status				

Married	0.03	0.1(0.04-1.59)	0.18	0.3(0.12-0.60)
Bachelor		1		1
Level of study				
Low level	0.09			
High level				
Occupation				
Unoccupied	0.02	0.2(0.05-1.06)	0.02	0.4(0.19-0.78)
With occupation		1		1
Religion				
Christian	0.78			
Non-Christian				

After applying univariate analysis, the following factors were associatedto the attitude on theknowledge of the seriousness of side effects:age [OR:0.1; (95% CI: 0.06-0.25)], p <0.0001; place of birth [OR:0.1 (95% CI: 0.03-0.13)],p<0.0001 :civil status [OR:0.1; (95% CI: 0.04-1.59)], p=0.003 andprofession [OR :0.2; (95% CI: 0.05-1.06)],p=0.02. On the other hand, the level of education and religion are not associatedto the attitude on the cknowledge about the severity of side effects.
After adjustment, both factors were confirmed to be determinantsto the attitude on the cKnowledge of the severity of side effects: âge [OR :0.2; (95% CI: 0.15-0.36)], p <0.0001 andplace of birth [OR:0.1 (95% CI: 0.09-0.24)],p<0.0001 ; on the other handcivil status and professionare not associated determinantsto the attitude on theknowledge of the seriousness of side effects.

4. DISCUSSION

The present cross-sectional and analytical study on the knowledge and attitude of Kinshasa women towards the dangers of excessive use of corticosteroids and cyproheptadine in order to gain weight, showed a high prevalence of self-medication.

4.1. Prevalence of knowledge on the use of corticosteroids and/or cyproheptadine

In this study:

- Regarding the knowledge of the side effects (harmful) and diseases related to taking these corticosteroids/cyproheptadine in order to gain weight, 92.69% of respondents were aware of these side effects and diseases, and identified obesity as complications and diseases in 56.53% of cases.
  - Compared to the study by Zavier Zomalheto and collaborator on the "pprevalence of corticosteroid therapy complications in West African subjects consulting in rheumatology", it emerged thatGeneral corticosteroid therapy was responsible for weight gain in more than 1 in 2 cases (i.e. 50%) [11]. This result is significantly lower than the prevalence of the present study, because it is a study carried out in a hospital setting where the patients (surveyed) used corticosteroids under medical prescription with the aim of treating pain; unlike ours who were self-medicating, and with the aim of gaining weight.
  - This is similar to the side effect of skin discoloration at the injection site (40%) of corticosteroids in the Zavier Zomalheto study, compared to the side effect of obesity designated in our study.
- Regarding the attitude of Kinshasa women towards the side effects and complications resulting from taking corticosteroids for the purpose of gaining weight: 88.07% of those surveyed took thecorticosteroids/cyproheptadine despite their knowledge of the side effects. These respondents, in 80.38% of cases, did not know the seriousness of the side effects of taking corticosteroids/cyproheptadine.
  - Mahmoud Amine Laffinti and collaborator, in their study on "Corticosteroids and culture: a case of acute corticosteroid-induced psychotic episode",report the case of a young woman who had an acute psychotic episode following self-medication with corticosteroids for weight gain [2]. This represents a similar result to our study, where the respondent was not aware of the seriousness of the side effect that could arise in a case of self-medication with corticosteroids for weight gain reasons.

Risk factors and their determinants associated with theknowledge and attitude

- **Risk factors and their determinants associated with theknowledge of side effects and diseases, as well as the severity of side effects associated with the overuse of corticosteroids/cyproheptadine**

The univariate analysis in the present study allowed the emergence of a number of risk factors and their determinants (age,the place of birth,civil status,the level of educationand religion)associatesto theknowledge of the side effects and diseases associated with the excessive use of corticosteroids/cyproheptadine for weight gain; after adjusting for these factors in multivariate logistic regression analyses, age,the place of birth,civil statusAndthe level of education,have persisted as independent factors associated with both,to theknowledge of the side effects and diseases, and knowledge of the seriousness of these side effects, associated with the excessive use of corticosteroids/cyproheptadine for weight gain.

- **Risk factors and their determinants associated with attitudeon side effects and diseases, as well as the severity of side effects associated with the excessive use of corticosteroids/cyproheptadine**

Univariate analysis allowed us to determine the associated risk factorsto the attitude of the women of Kinshasa on theexcessive use of corticosteroids/cyproheptadine due to lack of appetite and weight loss despite their side effects: age, profession,level of education,cultural areaand religion.After adjustment, the following factors were confirmed to be independent determinants relatedto the attitude of the women of Kinshasa on thetaking corticosteroids/cyproheptadine, due to lack of appetite and weight loss, despite their side effects:age, profession, cultural areaand religion.

To our knowledge, we have not found any study that has discussed risk factors and their determinants associated with knowledge and attitude towards the effects of excessive use of corticosteroids/cyproheptadine for weight gain.

Age, THEPlace of birth,civil statusAndthe level of education,which have persisted as independent factors associated at the same time with knowledge andthe attitude of the women of Kinshasa on thetaking corticosteroids/cyproheptadine due to lack of appetite and weight loss to gain weight, despite their side effects, are justified by the fact that:

- Young age is the period likely to commit many abuses without taking into account the dangers and complications that may arise in the long run;
- The place of birth, especially in large cities, greatly influences the natives, especially from a behavioral point of view;
- Civil status, especially for singles, knowing well that Congolese men have a preference for graceful and curvy women, women tend to seek weight gain by consuming corticosteroids/cyproheptadine to either conquer men (for singles), or keep their man (for married people);
- Level of education: A high level of education allows one to rationally criticize or question any information one receives, on the other hand, with a low level of education, one is subject to doing certain practices for the simple reason of having seen others do it.

Limit and strength of the study

As a limitation, this study did not consider the use of corticosteroids and cyproheptadine in boys for weight gain.

As a strength, this work is the first scientific study on a global scale, in terms of knowledge, attitude and even prevalence, conducted on the use of corticosteroids and cyproheptadine for gaining weight.

CONCLUSION

The single Kinoise, with a secondary education, and without a profession (unemployed), knows the types of corticosteroids and cyproheptadine and their categories; knows the weight gain effects of these products, and consumes them for the purpose of weight gain. She also knows the side effects and diseases that can result from taking them, citing obesity; without knowing the seriousness of its side effects. But, she has the attitude of always consuming thecorticosteroids and/or cyproheptadine, despite knowledge of the side effectsand complications of this abusive taking.

ABBREVIATIONS AND ACRONYMS

UMJW : John Wesley Methodist University;
ANSM : National Agency for the Safety of Medicines;
NSAIDs: Non-Steroidal Anti-Inflammatory;
ENT : Oto-Rhino-Laryngology;
COPD : Chronic Obstructive Pulmonary Disease;
DRC : Democratic Republic of Congo;
GOLD : Odd- Ratio;
IC : Confidence Interval;
SSP : Primary Health Care.

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AUTHORS' CONTRIBUTIONS

- KKM wrote the manuscript, performed the statistical analyses and led the entire research process;
- EMP carried out the field survey;
- MNC and MTM read, edited and approved the manuscript.

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