

Epidemiology of Male Sexual Dysfunction (MSD) in Patients Consulting in Some Health Services in the City of Douala, Cameroon

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Abstract

Sexual dysfunction is a group of diseases, disorders or difficulties experienced by men or women during any stage of normal sexual activity. In Africa in general and Cameroon in particular, statistical data concerning the prevalence and the main causes of male sexual dysfunction are rare due to socio-cultural and religious burdens and sometimes self-medication. The objective of this work was to determine the prevalences, comorbidities and the risk factors of the main sexual dysfunction in some hospitals in city of Douala. Through a descriptive retrospective study carried out from Novembre 2019 to June 2021, sociodemographic parameter, reasons of consultation, risk factors and type of male sexual dysfunction (erectile dysfunction or erectile dysfunction (ED), ejaculation disorders (EjD), libido disorders (LD) and disorders of sexual activity with pain or painful sexual intercourse (PSI)) were collected in the medical files of patients who have made urological consultation between 2016 and 2020 at the Deido District hospital, Laquintinie Douala Hospital and Douala General hospital respectively. At the end of our data collection, out of a total of 24995 consultations, 2743 (10.98%) patients were suffering from at least one male sexual dysfunction. Moreover, sexual disorders were the 2nd reason of urological consultation (13.69%) after urinary disorders (33.85%). Among sexual disorders, erectile (76%) and ejaculatory (20%) disorders were the predominant pathologies recorded with the prevalences of 9.79 et 2.62% respectively, and were mostly represented in patients from [41 - 50] for erectile dysfunction, and [18 - 30] years old for ejaculatory dysfunction.

tion. In addition, the number of patients with ejaculatory and erectile dysfunctions was more important in patients from [18 - 30] and [31 - 40] years old respectively. Among patients presenting sexual disorders, several risk factors or pathologies were associated with the dysfunction: benign prostatic hyperplasia and metabolic syndrome (in patients over 50 years old); psychosocial problems, infections, and alcohol (in patients under 50 years old). These findings could be useful in the elaboration of therapeutic strategies for the management of the Cameroonian population suffering from sexual dysfunctions.

Keywords

Male Sexual Dysfunction, Patient, Urologist, Prevalence

1. Introduction

Sexual health is a state of physical, emotional, mental and social well-being in the area of sexuality (WHO, 2002) [1]. In both sexes, it contributes to the development of the individual through the satisfying sexual act and/or procreation. Most often, it is subject to many influences of both endogenous and exogenous origins that can disrupt the normal course of sexual activity and lead in certain situations, to sexual dysfunctions or disorders. In men, sexual disorders are grouped into four categories. These include desire disorders (translated by decreased libido and sexual aversion); sexual arousal disorders (affecting the different mechanisms involved in erection); orgasm disorders (illustrated by premature or delayed ejaculations or anejaculations) and sexual disorders with pain (which may occur during one or more phases of the act sexual (arousal: priapism; ejaculation: prostatitis) (Kaplan, 1983) [2]. Male sexual dysfunctions (MSD) can be primary or secondary, generalized or specific (to a partner, a situation...). Certain factors (age or quality of life of the patient) and/or certain pathologies (anxious-depressive disorders, cardiovascular pathologies, diabetes, dyslipidemia, etc.) can have a real impact on MSD. These factors can be either the direct cause of MSD (diabetes) or a risk or aggravating factor (age) (Rollini & Meyer, 2009) [3]. MSDs can manifest themselves at any age and in different ways during one or more phases of normal sexual activity. Depending on the severity and duration of the disease, the problems can affect the general health of the individual concerned, the balance of the couple, and even the interactions between the patient and the rest of society (family, professional level...) (El Yazidi *et al.*, 2019) [4]. The taboo around sexual issues in our society makes it difficult to deal effectively with the acceptance of the disease to a cure. In practice, erectile and ejaculatory disorders are the most frequent reasons for consulting the doctor for sexual disorders. (Hatzimouratidis *et al.*, 2010) [5]. Erectile dysfunction (ED) remains the most studied and medicalized pathology. His interest in research is based on its visible and symbolic character in humans (Kokel, 2011) [6]. The de-

cision to seek help from a specialist (urologist or andrologist) is generally the consequence of several factors: loss of self-esteem, alteration of sexuality in the couple inducing an unpleasant atmosphere, incessant complaints of the partner with risk of infidelity. At the onset of a sexual problem (ED), the patient is in denial and some introversion. Given the increase in cases of MSD often translated locally by the absorption of various products and foods aimed at improving sexual performance and many prescriptions of related drugs observed in pharmacies, we asked ourselves the following questions: How to raise public awareness about the seriousness, extent and impact of sexual health problems and the need to be consulted in time? How to understand the distribution of MSD in sexually active Cameroonian people? Based on a survey, the objective of this study was to identify the different sexual dysfunctions in patients consulting in some hospitals (Deido District Hospital, Laquintinie Hospital of Douala, General Hospital of Douala) in the city of Douala, determine the associated prevalences and highlight comorbidities and other risk factors associated to these male sexual dysfunction.

2. Patients and Methods

2.1. Study Location

The study was carried out in the city of Douala, Wouri department, Littoral region-Cameroon. We worked in three hospitals of different categories in the public sector of the Ministry of Health. Category 1, a reference health facility illustrated by the Douala General Hospital, offered the highest level of care. Laquintinie Hospital and Deido District Hospital represented categories 2 and 4 respectively according to the classification of the Ministry. The choice of these health facilities guaranteed the availability of the desired specialists (urologists and/or andrologists) and a considerable sample.

2.2. Administrative Procedures

The administrative procedures were made to the officials of the University of Douala (head of laboratory and thesis director), those of the regional delegation of the Ministry of Public Health for the Littoral and the direction of hospitals concerned under presentation of the thesis project. They allowed us to obtain the research authorizations necessary for access to the various hospitals.

2.3. Reception at Study Sites

After obtaining the research certificate and the attributes of the trainee (badge) within each hospital, we were first referred to the head of the urology department (urologist) who also had the status of supervisor in a professional environment. The urologist introduced us to all his collaborators. The major of this service was responsible for responding to all concerns related to our work, including facilitating our integration into the hospital, access to certain documents (registers, patient files), and guiding us for all our needs.

2.4. Data Collection

The sample size in this study corresponded to the total number of male patients, aged at least 18 years and having consulted in the urology departments of the mentioned hospitals (DDH, LDH, DGH) between 2016 and 2020. For 18 months (Nov. 2019 - June 2021), we collected and anonymously recorded a lot of pieces of information (age, marital status, reason for consultation, health history, toxicology profile, diagnosis, profession, comorbidities, residence, assessment and treatment) contained in patient files and consultation registers available in the archives. Exceptionally, the doctor allowed us to attend the consultations to better understand the realities of the interactions between the caregiver and his patient. At the end of this investigation, the information gathered was processed and analyzed.

2.5. Statistical Analysis of Data

Data were analyzed using SPSS software version 20.0. The Mann-Whitney U test was used it possible to compare the evolution of the MSD (ED) according to age groups. A probability of less than 5% ($p < 0.05$) was considered significant.

3. Results

During the five-year period (2016-2020), 27446 people of both sexes and of all ages made urology consultations in the three hospitals; A total of 24,995 (91.07%) of them were male and under 18 years of age and older.

3.1. Distribution of Urology Consultations on Different Hospitals over 5 Years

Of the 24995 consultations made, 2743 patients suffered from sexual dysfunction or 10.98% of the sample. The year 2017 had the highest number of patients in urological consultation (5523) and the year 2019 had the largest of MSD cases (625). During the five-year period (2016-2020), Laquintinie Hospital had recorded the highest frequency of patients in urological consultation (13451 or 53.82%) than that (frequency) of those suffering from MSD (1770; or 64.52%) followed by the general hospital (8762; 35.05%) and finally that of Deido district (2782; 11.13%) (**Table 1**).

3.2. Socio-Demographic Characteristics of Patients

The average age of the 2743 MSD subjects was 44 years and the extremes were 18 and 87 years. MSD patients in the age group [31 - 40] were the most numerous (662 (24.14%)) and those aged 61 years and older were the least represented (453 (16.51%)). Marital status was divided into 1844 (67.22%) married, 871 (31.75%) single, 21 (0.77%) widowed, 4 (0.15%) divorced and 3 (0.11%) engaged. The majority of patients lived in urban areas (94.02% (2579) and lived in the informal sector at 86.99% (2174). At the occupational level, 359 (13.09%) patients were pupils and students, 301 (10.97%) were pensioners, and 86 (3.14%) were

unemployed. The last professional class (1997 (72.80)) included more than 40 different trades (lawyers, police officers, drivers, carpenters, real estate agents, and painters...) (Table 2).

Table 1. Distribution of urological consultations and patients with MSD for 5 years.

Years of Consultation	Consultations in urology				Consultations of patients for MSD			
	DDH	LHD	DGH	n/year	HDD	HLD	HGD	n/year
2016	446	2297	1267	4010	44	305	127	476
2017	781	2560	2182	5523	79	367	148	594
2018	683	2701	1941	5325	71	350	114	535
2019	759	3033	1280	5072	66	395	164	625
2020	113	2860	2092	5065	39	353	121	513
Total	2782	13,451	8762	24,995	299	1770	674	2743

DDH: Deido District Hospital; LHD: Laquintinie Hospital of Douala; DGH: Douala General Hospital; MSD: Male Sexual Dysfunction. n/year: number of patients per year

Table 2. Sociodemographic characteristics of MSD+ Patients.

Characteristics	Classes	Numbers	Percentage (%)
Gender	Male	2743	100
	Female	0	0
Age <i>N_i</i> = 2743 patients	[18 - 30]	577	21.04
	[31 - 40]	662	24.14
	[41 - 50]	557	20.3
	[51 - 60]	494	18.01
	[61 et +]	453	16.51
Marital Status <i>N_i</i> = 2743 patients	Bachelors	871	31.75
	Divorced	3	0.11
	Engaged	4	0.15
	Married	1844	67.22
	Widowers	21	0.77
Profession <i>N_i</i> = 2743 patients	Students	359	13.09
	Pensioner	301	10.97
	Unemployed	86	3.14
	Others	1997	72.8
Sectors of activity <i>N_i</i> = 2743 patients	Formal	569	13.01
	Informal	2174	86.99
Place of residence <i>N_i</i> = 2743 patients	Urban	2579	94.02
	Rural	164	5.98

MSD+: People with male sexual dysfunction.

3.3. Reasons of Consultation

Patients presented to the specialist (urologist) for different reasons (27,038 reasons) and the severity on their health concerns. The second reason for urological consultations after urinary disorders (9153; 33.85%), male sexual dysfunctions (3701) occupied an important place in urological consultations (13.69% of reasons). With the exception of urinary disorders, the reasons to be consulted by a doctor were more numerous among patients aged between 18 and 50 years. Some patients (4852; 19.95%) met the doctor for several other reasons: presentation of results, check-up, confusion of specialist, advice, scheduling of surgical interventions, non-urological pathologies (chest pain, rachialgia, digestive problems)... (Table 3).

3.4. Frequency of Sexual Dysfunction by Age and Proportion

Of the 22252 patient records browsed, 2743 were for MSD patients. Erectile dysfunction (n = 2448; 89.25%) and ejaculation disorders (n = 655; 24.12%) covering 96% of the MSD in the series, occupied the 1st and 2nd places respectively in all age groups. Patients with libido problems (n = 91; 3.3%) and painful sexual intercourse (n = 39; 1.44%) were less represented in our sample. The frequencies of EjD and PSI were decreasing between successive age groups from the youngest patients [18 - 30] to the oldest [61 and +]. In addition, it was in the 2nd [31 - 40] age group that patients with ED (n = 571) and LD (n = 34) were more numerous. More than 3 out of 4 patients and 1 in 5 patients suffered from erection and ejaculation problems, respectively (Figure 1 and Figure 2).

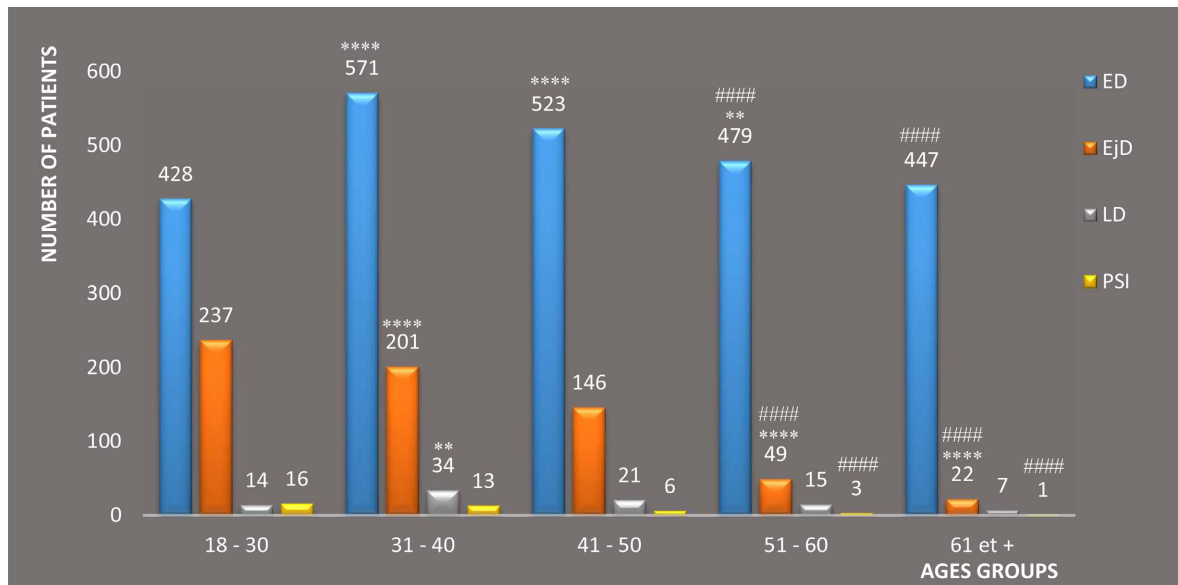
3.5. Prevalences of Male Sexual Dysfunction

The data collected from the various documents during our investigation allowed us to determine: the overall prevalence (10.98%), the prevalences of each form of MSD (ED; EjD; LD; PSI) and those of the different MSD according to the age

Table 3. Reasons for consultation by age.

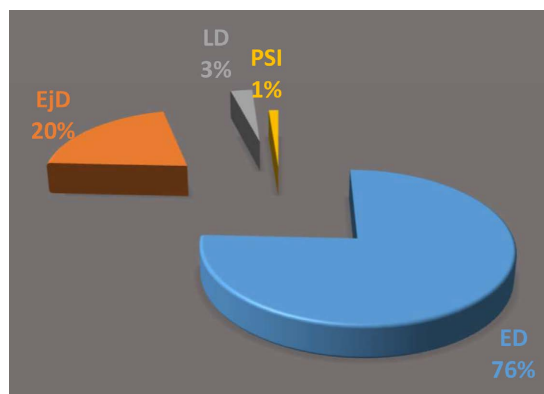
Reasons for consultations of patients consulted by (n; %)	Patients ages of 18 to 49 years n (%)	Patients aged 50 years and older n (%)
Urinary problems (9153; 33.85)	1301 (14.21)	7852 (85.79)
Fertility problems (1286; 4.76)	1145 (89.03)	141 (10.97)
Sexual dysfunctions (3701; 13.69)	2355 (63.63)	1346 (36.37)
Peniles pathologies (474; 1.8)	375 (76.11)	99 (23.89)
Testicles pathologies (3576; 13.23)	2881 (80.56)	695 (19.44)
APIP Region (2745; 10.15)	1483 (54.02)	1262 (45.98)
STI/HIV (1251; 4.63)	1044 (83.45)	207 (16.55)
Other reasons (4852; 17.95)	2608 (53.75)	2244 (46.25)

STI/HIV: Sexually Transmitted Infections/Human Immunodeficiency Virus APIP: Abdomino - Perineo - Inguino - Pelvic.



****P < 0.0001; **P < 0.01 significance of MSD between two consecutive age groups; #### P < 0.00010 significance of MSD between the youngest (18 - 30) and over 50 (groups 4 (51 - 60) and 5 (61 and +)); ED: Erectile Dysfunction LD: Libido Disorder EjD: Ejaculatory Disorder PSI: Painful Sexual Intercourse

Figure 1. Frequency of male sexual dysfunction in patients consulted by age group (n = 2743).



ED: Erectile dysfunction LD: Libido disorder EjD: Ejaculatory Disorder PSI: Painful Sexual Intercourse.

Figure 2. Overall percentage of different male sexual dysfunctions in patients consulted (n = 2743).

groups of the study population. Erectile disorders led the way with a prevalence of 9.79%, followed by ejaculatory problems (2.62%). The last two pathologies (libido disorder and pain) had less than 1% prevalence each (Table 4).

During the quinquennium, patients in the 5th age group [61+] were the most numerous (8282 patients) and accounted for 33.13% of our study population. On the other hand, they had the lowest prevalence of MSD (ED: 5.39%; EjD: 0.26%; LD: 0.08%; PSI: 0.01%). Individuals aged 41 to 50 years were the least numerous (3233 patients) and had the highest prevalence of ED (16.17%). The highest prevalences of EjD (5.22%) and PSI (0.35%) were recorded in the youngest patients [18 - 30]. LD had the highest prevalence in patients aged between 31

Table 4. Epidemiological characteristics of male sexual dysfunctions.

Characteristics	Classes	numbers	Prevalences (%)
Urological consultations	/	24,995	100
	MSD-	22,252	89.02
	MSD+	2743	10.98
	ED	2448	9.79
	EjD	655	2.62
	LD	91	0.36
	PSI	39	0.16

ED: Erectile Dysfunction MSD+: people with male sexual dysfunctions EjD: Ejaculatory disorder MSD-: people without male sexual dysfunctions LD: Libido Disorder PSI: Painful Sexual Intercourse.

Table 5. MSD prevalence by age group.

Ages Groups	Urological consultations	Prevalences of patients suffering of MSD			
		% (n) ED	% (n) EjD	% (n) LD	% (n) PSI
18 - 30	4539	9.42 (428)	5.22 (237)	0.30 (14)	0.35 (16)
31 - 40	4976	11.47 (571)	4.03 (201)	0.68 (34)	0.26 (13)
41 - 50	3233	16.17 (523)	4.51 (146)	0.64 (21)	0.18 (6)
51 - 60	3982	12.02 (479)	1.23 (49)	0.37 (15)	0.07 (3)
61 et +	8282	5.39 (447)	0.26 (22)	0.08 (7)	0.01 (1)

ED: Erectile Dysfunction; LD: Libido Disorder; MSD: Male Sexual Dysfunction EjD: Ejaculatory Disorder; PSI: Painful Sexual Intercourse; n: Number of patients suffering of MSD.

and 40 years.

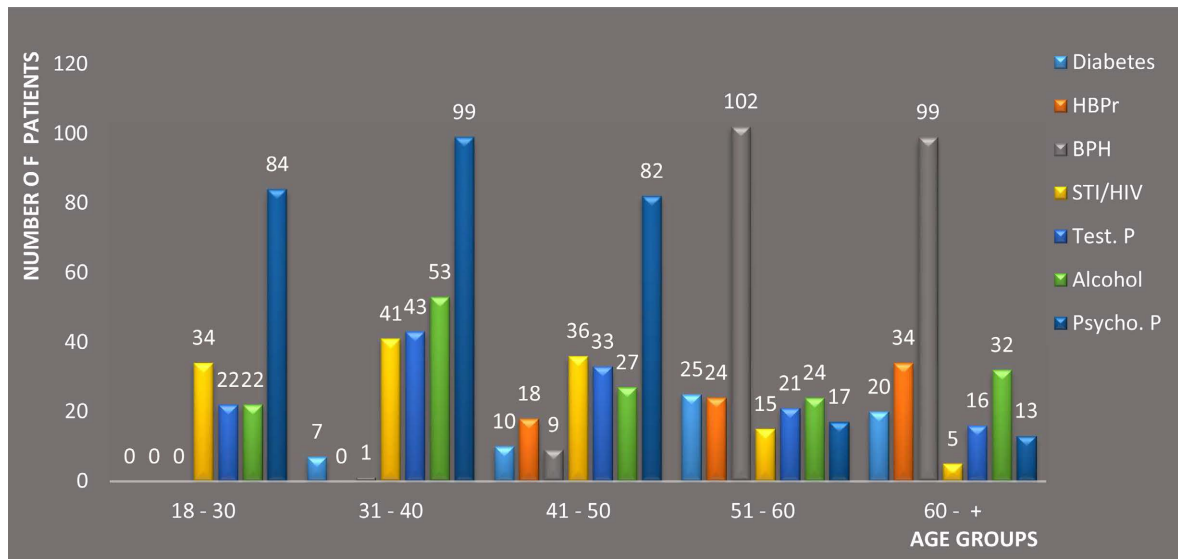
3.6. Pathologies and Factors Associated with Patients Suffering of MSD

Many patients had conditions and factors associated with MSD and whose distribution within the sample depended for some on age. Thus, we found an absence of hypertension, BPH and diabetes in patients aged 18 to 30 years. These cases increased gradually from the 2nd group to reach their maximum in the over 50 s. Patients with psychosocial problems and benign prostatic hyperplasia (BPH) were high among those under 50 and over 50 respectively. In the age group [31 to 40] years we found the highest frequencies of the majority of pathologies and factors associated with MSD in our sample. In general, the different comorbidities and factors associated with the MSD discussed above were distributed as follows: psychosocial problems (27%) and BPH (20%), which covered nearly 50% of this group of individuals; Testicular pathologies and cases of

alcohol consumption among those under 50 years of age accounted for 13 and 15% respectively. On the other hand, metabolic syndrome diseases (diabetes (6%) and hypertension (7%) generally present in those over 50 years of age, had the lowest frequencies of factors associated with MSD (**Figure 3** and **Figure 4**).

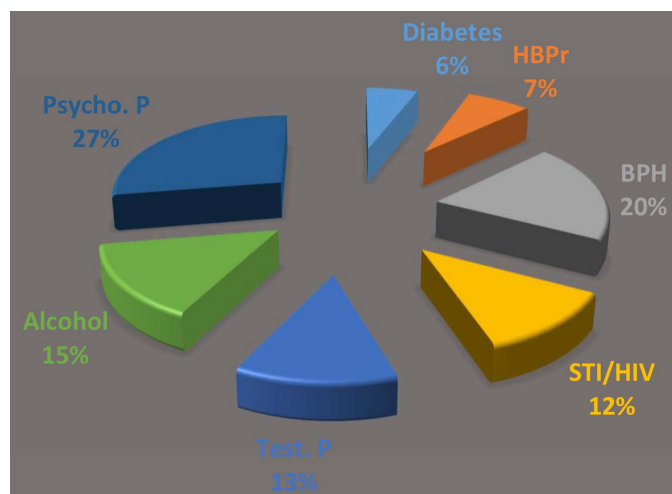
4. Discussion

The objective of this work was to determine the prevalences, comorbidities and the risk factors of the main sexual dysfunction in some hospitals in city of Douala.



BPH: Benign Prostatic Hyperplasia; Psycho. P: Psychosocial Problems HBA: High Blood Pressure; Test. P: Testicular pathology STI/HIV: Sexually Transmitted Infections/Human Immunodeficiency Virus.

Figure 3. Pathologies and factors associated with MSD found in patients consulted by age groups (n = 2743).



BPH: Benign Prostatic Hyperplasia; Psycho. P: Psychosocial Problems HBP: High Blood Pressure; Test P: Testicular Pathology STI/HIV: Sexually Transmitted Infections/Human Immunodeficiency Virus.

Figure 4. Overall percentage of MSD associated pathologies and factors found in patients consulted (n = 2743).

Through a five-year descriptive retrospective study (2016-2020), the importance of MSD in the population, their distribution according to age and some associated risk and/or aggravating factors were identified. Urinary Disorders (UD) were the primary reason for urology consultation; 1 in 3 patients complained about it and those over 50 years of age accounted for 85.79% of this dysfunction. Baka *et al.* [7] while working on the prevalence of ED in Morocco in 2017, highlighted the importance and a similar classification of this pathology in urological consultation. Indeed, the UD, generally put forward by the patient during a consultation, was a kind of gateway that allowed the specialist to investigate the entire urogenital system, including sexual problems. The high rate (85.79%) of patients after their fifties could be explained by the progressive enlargement of the prostate which puts pressure on the urethra by reducing its size and consequently the flow of urine during urination (diameter) (benign prostatic hyperplasia (BPH)) (Wisard and Leisinger, 2005) [8].

The predominant sexual disorder with a prevalence of 9.79%, erectile dysfunction accounted for 76% of all MSDs in our sample. After a significant increase ($p < 0.0001$) of more than 33% in ED cases between the 1st [18 - 30] and the 2nd [31 - 40] age range, we found a significant decrease ($p < 0.0001$) in these cases between age groups 2 [31 - 40] and 3 [41 - 50] and ($p < 0.01$) between groups 3 [41 - 50] and 4 [51 - 60]. We also noted an 11.91% increase in ED cases between youth [18 - 30] and patients aged 51 to 60 years and 4.4% between the youngest [18 - 30] and those over 60 years of age. The frequency of ED in the 2nd age group [31 - 40] being higher, could be explained by the presence of many risk factors or aggravating ED noted in these patients such as psychological problems or depression (stress, anxiety, professional problems...), alcohol consumption, STIs/HIV and others. The involvement of these different factors and pathologies in the development and or aggravation of ED has been demonstrated by several authors. El Yazidi *et al.* in 2019, Wisard in 2007 and Bouhlel *et al.* in 2017 [4] [9] [10] showed in turn the impact of psychological state, alcohol and infections on the sexual health of DSM patients respectively. First sexual disorder in the under 30 s, Ejaculatory disorders (prevalence: 2.62%) ranked 2nd MSD (20% of MSD) of our work (after ED) were more common in the youngest [18 to 30] and were generally manifested by premature ejaculation. From the youngest patients [18 - 30] to the oldest [61 and +], between age groups 1 [18 - 30] and 2 [31 - 40], 3 [41 - 50] and 4 [51 - 60] then 4 [41 - 60] and 5 [61 and +] we found a significant decrease ($p < 0.0001$) in ET cases. This variation in ET frequencies was significant between the youngest [18 to 30] and those over 50 years of age and reached 91.56% between the two extreme age groups ([18 - 30] and [61 and +]). The observed result could be explained on the one hand by the irregularity and/or rarity of sexual intercourse, the lack of experience on the other hand by several psychosocial factors (stress, fear of not insuring, anxiety, trauma...) (Wisard and Audette, 2008; Gonçalves *et al.*, 2022) [11] [12]. A similar observation on the predominance of erectile dysfunction and ejaculations was reported by Buvat *et al.* in 2009 [13] during their work.

Several factors identified during the study separated our population (2743 MSD patients) into two distinct patient groups: those under 51 years of age (65.48%) and those over 50 years of age (34.52%). Among those under 51 years of age, psychosocial problems ranked 1st (89.83%), followed by sexually transmitted infections/HIV (84.73%) and toxicological behaviours (alcohol use) (64.56%). For patients over 50 years of age, BPH (95.26%) was the 1st comorbidity followed by hypertension (76.31%) and diabetes (72.58%). The development, aggravation and prevalence of certain diseases in a given population are age-related. In the case of our study, many of the factors mentioned would have favoured the occurrence or worsening of a MSD and consequently its prevalence in a given population. Several authors by the choice of their sample and the relevance of their results have shown the relationship that exists between certain diseases and age on the one hand and the impact of age on prevalence on the other (Rollini and Meyer, 2009) [3]. Thus, in the case of BPH, Bagayogo *et al.* in 2021 [14] illustrated through their work the period of man's life (speaking of age) to which he is most exposed to this condition (BPH). Metabolic syndrome diseases, hypertension and diabetes (such as BPH concerning age) by multiple pathogenesis (epithelial changes, endothelial dysfunction), factors such as the stage and duration of the disease, side effects of antihypertensive drugs... affect the normal mechanism of erection (Ahsaini *et al.*, 2020; Deribew *et al.*, 2021, Idrissa *et al.*, 2022) [15] [16] [17]. We could not observe a gradual increase in prevalence with age for ED (predominant MSD) (9.42% [18 - 30]; 11.47% [31 - 40]; 16.17% [41 - 50]; 12.02% [51 - 60]; 5.39% [61 and +]) as revealed by some studies (Baka *et al.*, 2017) [7]. The low prevalence (ED) among older people [61+] could be explained by the fact that sexual concerns (MSD) are becoming less and less of a health priority from this age onwards. Most often in consultation, seniors (over 60 years) favor age-related pathologies such as BPH, metabolic syndrome, low testosterone levels. These pathologies coupled with an overall decrease in sexual activity and frequency of sexual intercourse (Rollini and Meyer, 2009) [3] generally affect the quality of life of the patients concerned. The results obtained could be explained on the one hand by methodological differences (the method of data collection, the size or choice of samples) and on the other hand by the self-medication widely practised at the local level, the denial of the patient when the disease sets in and sometimes even the inability to when the disease sets in and sometimes even the inability to be consulted by a specialist due to lack of financial means. Poor retention of archives (patient records and retention records) coupled with the non-computerization of patient data within hospitals were a limiting factor for obtaining a larger sample. In addition, the lack of uniformity in the methods of consultation between different doctors and different hospitals forced us to exclude several patients so the medical data were either poorly informed or missing.

5. Conclusion

This survey allowed us to highlight the different sexual dysfunctions present in

the study population, their distribution across different age groups and the risk factors (associated diseases). Although not representing the entire Cameroonian population, this work revealed some epidemiological aspects of the MSD. Thus, erectile dysfunction and ejaculation represent 3/4 and 1/5 of the MSD respectively. In addition, patients aged 31 and 40 years and those aged 18 to 30 years are the most affected by ED and EjD respectively.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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