

African Woman Sexuality: Assessment after Hysterectomy for Uterine Benign Disorders Based on Two Scales; PISQ 12/DFSI

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Abstract

Background: Several authors are studying sexual activity of hysterectomies women. However, the review of literature reveals few data in sub-Saharan Africa on the psychological and sexual impact of this treatment option. **Objective:** To assess sexual activity and sexual satisfaction of women after hysterectomy for benign disorders. **Methods:** Single center analytical study based on patient opinion. It was conducted in a five-year period: from January 2012 to December 2016 at the Yopougon teaching Hospital. 53 patients who answered two questionnaires, on sexuality by Pelvic organ prolapse-urinary Incontinence Sexual Questionnaire (PISQ-12) and sexual satisfaction by Derogatis Sexual Functioning Inventory (DSFI). **Results:** Hysterectomy accounted for 15.9% of gynecological surgical activities. Hysterectomy for benign pathology accounted for 3.3% of hysterectomies. The average age was 47.6 years old. The indications were dominated by uterine fibroid (88.68%). Hysterectomy was performed by the abdominal route in 86.79% of cases. Sexual activity was resumed in the second trimester post-operative in 69.81%. After hysterectomy, dyspareunia was reduced ($p < 0.05$), orgasm was more intense ($p < 0.05$) with a greater sexual satisfaction ($p < 0.05$). **Conclusion:** This study shows that there is no significant difference for women's sexuality before and after hysterectomy.

Keywords

Hysterectomy, Sexuality, Myoma, Africa

1. Introduction

Gynecological pathologies can have psychosexual repercussions among those,

uterus diseases, because of the role of this organ in procreation. Thus, hysterectomy may have sexual impact [1] [2].

In recent decades, the functions of the uterus and cervix remain controversial in sexual and orgasmic function. Master and Johnson in 1966, and Crepault in 1989 described two orgasms: clitoral and vaginal with uterine movements. For others, orgasm involves the pelvic floor and the anterior wall of the vagina [3] [4].

More recently, it would be a complex neuro-psycho-physiological process that activates the autonomic nervous system involving an anatomic-functional entity connecting the vagina, clitoris, urethra and anus [5] [6]. Sometimes, female reproductive system refers to psychic suffering that hysterectomy can destabilize, requiring prevention efforts [7] [8]. With correct indication, hysterectomy improves quality of life and sexuality, and does not alter erotic function [9].

Hysterectomy is a frequent surgical procedure (70,000 per year in France for 20 years, second gynecological intervention throughout the world) mainly for benign pathologies. Laparotomy accounted 40% despite simpler follow-up and less complications for the other pathways: vaginal (39%), pure laparoscopies (10%) [2] [10] [11]. Assessment of women sexuality with hysterectomies has been the subject of numerous studies. Negative consequences directly related to hysterectomy have not been identified, regardless of the pathway or the surgical technique used [8] [12] [13].

In sub-Saharan Africa, hysterectomy is also performed but its impact on the quality of women's sexual life remains poorly documented. We therefore decided to initiate this study to assess the psychosexual impact of hysterectomy. More specifically, to determine the epidemiological profile of patients, specify different types and indications of hysterectomy and sexual behavior of women before and after hysterectomy.

2. Methods

2.1. Study Design

This is a single center analytical study based on patient opinion. The opinion on their sexuality was made by phone call mainly. It concerned patient who underwent hysterectomy in a period of five years: from January 2012 to December 2016 in the gynecology-obstetrics department of the Yopougon; Teaching Hospital (Abidjan-Côte d'Ivoire). The sexuality 6 months before and 6 months after the hysterectomy had been assessed.

We used 2 judgments criteria: sexuality (sexual behavior) and sexual satisfaction. Each of these criteria was assessed through two randomized questionnaires.

- For sexual behaviour, we have chosen the validated questionnaire PISQ-12 (Pelvic organ prolapse-urinary Incontinence Sexual Questionnaire, 12 questions) which is a short version of PISQ-31. The French version of PISQ-12 is a measurement tool of sexuality, validated linguistically in French, specifically developed for women with genital prolapse and/or urinary incontinence. PISQ-12 assesses the impact of certain symptoms on sexual satisfaction and

includes 12 items rated from 0 (never) to 4 (always) [14]. An average, then comparison for item had been done. Higher score meaning depends of each item, it can be better or worse.

- For sexual satisfaction, we have chosen the DSFI questionnaire “Derogatis Sexual Functioning Inventory”. The DSFI is a sexual behavior assessment questionnaire of 254 items, divided into 10 groups. One of the groups (section X) of the DSFI allows the evaluation of sexual satisfaction with 10 items (1 point per response according to the adapted correction grid [15]).

DSFI is often used in studies on effects of treatments and has been subjected to several psychometric tests [16]. There was ten items and an average one ten for each group before and after hysterectomy was made. Higher score means better sexuality.

Sources of information used to complete the survey forms were:

Survey of patients by telephone interview, or physical meeting sometimes or if need be, the register of operating report, hospitalization register of the gynecology unit, patient record. Other parameters studied were socio-demographic characteristics, antecedents, indications and type of hysterectomy.

The research protocol had been submitted for consideration, comment, guidance and approval to a research ethics committee (doctors, professors) before the study begins.

2.2. Population

Premenopausal women who underwent a hysterectomy for benign disorders of the uterus were recruited those who had undergone a hysterectomy for benign uterine disease, without an adnexectomy, regardless of the pathway and having resumed sexual activity was included. Women who have undergone hysterectomy for benign uterine diseases without sexual activity, patients with endometriosis, all other causes of hysterectomy and other diseases that may impact the sexual life have not been selected (**Figure 1**).

2.3. Analysis and Statistic Tests

A preliminary descriptive study has been carried out. During this one, the distribution of each studied parameter was described. Subsequently, an analytical study during which we studied the variations of each item of questionnaires before and after hysterectomy was performed. We used the t-Student test, Fisher’s exact test and Pearson’s Chi2 for the comparison of the variability with a threshold of significance of 5%. Data processing and analysis was done using the Stata 13 software.

3. Results

Mean age was 45.68 ± 3.47 36 - 50. Socio-demographic and clinical aspect were reported in **Table 1**. Dyspareunia was lower ($p = 0.0044$) and orgasm was more intense after hysterectomy ($p = 0.0044$). Comparison of sexuality before and after surgery has been reported in **Table 2** and **Table 3**.

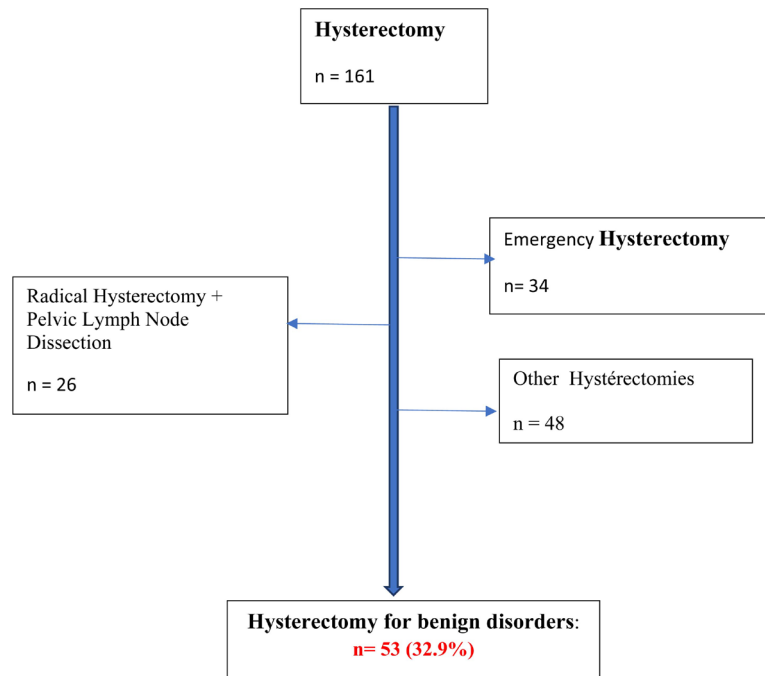


Figure 1. Procedure of sampling.

Table 1. Socio-demographic and clinics aspects.

Socio-demographic aspect	Number	Percent
Age \geq 45 ans	33	62.26
<45	20	37.74
Worker of the informal sector	32	60.38
Marital status		
With partner	45	84.91
Single	08	15.09
Non ménopause	52	98.11
Multigeste (\geq 3)	40	75.47
Parity (\geq 2)	46	86.8
Clinics aspects		
Indication		
Uterine fibroid	47	88.68
Genital prolapse	1	1.89
Endometriosis	1	1.89
Adenomyosis	2	03.77
Other	2	03.77
Hysterectomy's pathway		
Vaginal route	7	13.21
Abdominal route	46	86.79

However, sexual satisfaction did not vary after hysterectomy ($p = 0.3878$). Most patients returned to sexual activity in the second trimester, 69.81% ($n = 37$). Delay in resuming intercourse was also not significantly associated with the surgical pathway ($p = 0.6823$). **Table 2** presented analysis of sexuality.

Table 2. Pelvic organ prolapse/urinary incontinence sexual function questionnaire (PISQ-12).

	BEFORE HYSTERECTOMY					AFTER HYSTERECTOMY					Rating	P value	
	Always = 4	Usually = 3	Sometime = 2	Seldom = 1	Never = 0	Always = 4	Usually = 3	Sometime = 2	Seldom = 1	Never = 0			
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)			
Q1. How frequently do you feel sexual desire? This feeling may include wanting to have sex, feeling frustrated due to lack of sex, etc.?	0 (0)	1 (1.89)	2 (3.7)	49 (92.45)	1 (1.89)	2.94	0 (0)	4 (7.55)	2 (3.77)	46 (86.79)	1 (1.89)	2.83	0.2312
Q2. Do you climax (have an orgasm) when having sexual intercourse with your partner?	0 (0)	1 (1.92)	2 (3.85)	16 (30.77)	33 (63.46)	3.57	2 (3.77)	0 (0)	3 (5.66)	16 (30.19)	32 (60.38)	3.43	0.3957
Q3. Do you feel sexually excited (turned on) when having sexual activity with your partner?	0 (0)	0 (0)	1 (1.89)	11 (20.75)	41 (77.36)	3.75	1 (1.89)	0 (0)	2 (3.77)	8 (15.09)	42 (79.25)	3.70	0.6353
Q4. How satisfied are you with the variety of sexual activities in your current sex life?	0 (0)	3 (5.66)	1 (1.89)	42 (79.25)	7 (13.21)	3.00	1 (0.92)	3 (5.66)	0 (0)	43 (82.69)	5 (9.62)	2.92	0.5591
Q5. Do you feel pain during sexual intercourse?	2 (3.77)	4 (7.55)	6 (11.32)	9 (16.98)	32 (60.38)	3.23	2 (3.77)	3 (5.66)	0 (0)	1 (1.89)	47 (88.68)	3.66	0.0426
Q6. Are you incontinent of urine (leak urine) with sexual activity?	0 (0)	0 (0)	0 (0)	0 (0)	53 (100)	4	0 (0)	0 (0)	0 (0)	0 (0)	53 (100)	4	...
Q7. Does fear of incontinence (either stool of urine) restrict your sexual activities?	0 (0)	0 (0)	0 (0)	0 (0)	53 (100)	4	0 (0)	0 (0)	0 (0)	0 (0)	53 (100)	4	...
Q8. Do you avoid sexual intercourse because of bulging in the vagina (either the bladder, rectum or vagina falling out?)	0 (0)	0 (0)	0 (0)	0 (0)	53 (100)	4	0 (0)	0 (0)	0 (0)	0 (0)	53 (100)	4	...
Q9. When you have sex with your partner, do you have negative emotional reactions such as fear, disgust, shame or guilt?	0 (0)	0 (0)	0 (0)	0 (0)	53 (100)	4	1 (1.89)	0 (0)	1 (1.89)	0 (0)	51 (96.23)	3.89	0.1822
Q10. Does your partner have problem with erections that affects your sexual activity?	0 (0)	0 (0)	0 (0)	0 (0)	53 (100)	4	0 (0)	0 (0)	0 (0)	0 (0)	53 (100)	4	...

Continued

Q11. Does your partner have problem with premature ejaculation that affects your sexual activity?	0 (0)	0 (0)	0 (0)	0 (0)	53 (100)	4	0 (0)	0 (0)	0 (0)	0 (0)	53 (100)	4	...
Q12. Compared to orgasms you have had in the past, how intense are the orgasms you have had in the past six months?	Much less intense 0 (0)	Less intense 9 (16.98)	Same intense 44 (83.02)	More intense 0 (0)	Much more intense 0 (0)	1.83	Much less intense 2 (3.77)	Less intense 5 (9.43)	Same intense 28 (52.8)	More intense 18 (33.96)	Much more intense 0 (0)	2.17	0.0044

Table 3. The sexual satisfaction: Derogatis sexual functioning inventory. (Section X) Rating: Yes = 1, No = 0.

	BEFORE HYSTERECTOMY		AFTER HYSTERECTOMY		p value
	No n (%)	Yes n (%)	No n (%)	Yes n (%)	
Q13. Normally, I am satisfied with my sexual partner.	13 (24.53)	40 (75.47)	11 (20.75)	42 (79.25)	0.4847
Q14. I believe that I don't make love often.	30 (56.60)	23 (43.40)	32 (60.38)	21 (39.62)	0.6418
Q15. There is not enough variety in my sexual life.	16 (30.19)	37 (69.81)	15 (28.30)	38 (71.70)	0.6590
Q16. After coitus, I usually feel relaxed and fully satisfied.	15 (28.30)	38 (71.70)	9 (16.98)	44 (83.02)	0.0570
Q17. Usually, the sexual intercourse doesn't last that long.	42 (80.77)	10 (19.23)	44 (83.02)	9 (16.98)	0.5688
Q18. Sexuality does not interest me that much.	45 (84.91)	8 (15.09)	9 (16.98)	44 (83.02)	-
Q19. Usually, I get an orgasm during sexual intercourse.	15 (28.85)	37 (71.15)	2 (3.77)	51 (96.23)	0.0325
Q20. Usually, preliminaries before sexual intercourse don't get me horny.	1 (1.89)	52 (98.11)	2 (3.77)	51 (96.23)	0.3219
Q21. I am often concerned about my sexual performance	26 (49.06)	27 (50.94)	30 (56.60)	23 (43.40)	0.2520
Q22. Usually my partner and I have a good communication about sexuality.	32 (60.38)	21 (39.62)	31 (58.49)	22 (41.51)	0.5687
Total Score/10	4.43	5.53	3.32	6.51	NS

4. Discussion

4.1. Sociodemographic Features

Women's proportion who has had undergone a hysterectomy in France is 5.8%, 12% in Sweden, 15% in Italy, 20% in England and 37% in the United States [10]. Baldé and al [17] in a study of the sociodemographic characteristics of hysterectomies at Conakry (Guinea) found a prevalence of 4.4% when Gueye [18] found hysterectomy in 5.9% of gynecological surgical activities. Regarding the social-demographic profile, the most represented age groups were women aged over 45 (62.26%). The mean age was 47 years old (36 - 50 years). Our results were like those of Ge and Vaucel [13] who had observed 45 years (39 - 52 years). Nassau in Kinshasa (Democratic Congo) from 2002 to 2010 noted a similar mean age with 47.2 ± 10.2 years and Gueye in Senegal an average age of 44.4 years [18] [19]. Bradford and Ma [20] had noted 41.2 years old. We reported 41.51% of married in our study, lower than those of Nassau [19] and Balde [17]

who reported respectively 82.30% and 75.7% in their series. Multiparity accounted 37.74%, a similar result to that of Balde or 33% [17] [19]. Most of the patients (60.38%) had an informal activity.

4.2. Indications, Surgical Pathway and Type of Hysterectomy

Uterine fibroid was the most common indication with a frequency of 88.69%. Thus, laparotomy was the most usual surgical procedure with 86.79%. Fibroid uterine and the abdominal route accounted respectively, for Gueye in Senegal, Balde in Guinée and Nassau in Democratic Congo 57.1% and 78.6%, [18] 39.6% and 82.28%, and lastly [17] 42.22% and 96.9%. On the other hand, Bradford and Ma noted in the USA, 57.4% for fibroid indication followed by pelvic pain (52.0%), persistent bleeding (46.6%) and endometriosis (32.8%) [20].

Laparotomy is the most commonly used pathway for uterine fibroids. Melis *et al.* [21] reported a frequency of 58.4% vaginal route for uteri weighing on average 249.4 g (range: 93 and 1149 g), 37.6% vaginal and laparoscopic route for uteri weighing an average of 348 g, and finally 4% of abdominal pathway for uteri weighing an average of 586.2 g [21]. In a previous study of uterine fibroid surgery in Côte D'Ivoire in 2013, Koffi [22] found that 85% of uteri from hysterectomy had a size greater than 16 cm, hence the predominance of laparotomy as a pathway the most frequent [22].

4.3. Sexual Activities

Disorders Gynecological provides various effects on the quality of woman life, including sexual life. Female sexuality doesn't only concern sexual activity, but also the perception of its own image of itself and the relationship with others. Gynecological disorders can have an impact on sexual function: women can avoid intercourse because of dyspareunia caused by prolapse, urinary incontinence, bleeding disorders or recurrent urinary tract infections [20] [23].

Questions about sexuality remain very little discussed in the preoperative interview. Bradford observes that 35% of patients talk about it before surgery. The results of a preliminary study indicate that preoperative sexual counseling can positively influence sexual satisfaction after hysterectomy. When negative sexual outcomes are reported, the impact of adverse sexual side effects may be lessened after surgery. We noted that main of patients experienced sexual desire at least once a week, despite the uterine pathology with excitement during sexual activities and a normal orgasm during intercourse. 60.38% of the patients never felt pain during sex before surgery, but after the surgery, there was an improvement in the ratio of the patient without pain. Hysterectomy improved sexual function with regression of pelvic pain and dyspareunia [2] [23] [24]. Before surgery, pain, fibroid-related bleeding are the common causes of disruption of sexual function. Only 52.83% of patients had an orgasm as intense as in the past. The information and the sensitization before surgery would certainly have improved the sexual pleasure.

Regarding the time to resume intercourse, most patients resumed sexual activity in the second trimester (69.81%) and earlier for the vaginal route. Gueye in Sénégal [18] reported a higher proportion of women who returned to sexual activity in the first trimester and those who underwent vaginal hysterectomy regained sexual activity faster [25] [26] [27]. In the Sahana G study [28], resumption of sexual activity was shorter after vaginal hysterectomy (45 days) than after abdominal hysterectomy (62 days) [28]. The absence of abdominal scar, the short period of convalescence and resumption of professional activities, would be the reasons. In addition, other patients reported that this issue of sexuality was more discussed during preoperative counseling when the vaginal route was the option chosen.

In our study, concerning the main criteria (sexuality and sexual satisfaction), there is no statistically significant difference before and after hysterectomy. For the secondary criteria we find a significant reduction of the pain and a significant improvement of the orgasm after the hysterectomy ($p < 0.05$). Mokate's review of the literature in 2006 [25] did not find any difference for the feeling of sexuality according to operative techniques. They looked at the influence of the pathway (abdominal, vaginal and laparoscopic) or the type of hysterectomy [29].

In 2015, in France, Gé [13] concluded improvement of sexual function after hysterectomy. Despite the lack of evidence of the interest of cervix preservation in the literature, his study seemed to show an improvement on some of the criteria for the evaluation of sexuality in the subtotal hysterectomy group, especially on orgasm. For some authors, there is no advantage in retaining the cervix for sexuality, and they recommend considering the patients' preference for operative choice because of their psychological impact [12]. Uterus is it a sexual organ? Thakar [26] thinks that women can be positively reassured that hysterectomy does not negatively affect sexuality. Health professionals need to know that a minority of women may develop adverse effects after the operation [26]. Preoperative education about potential negative sexual outcomes after surgery can improve the satisfaction of hysterectomy, regardless of whether negative sexual outcomes are known. Preoperative deterioration of desire and intercourse has no correlation with sexuality after surgery [19] [26].

Regarding the surgical pathway, according to Sahana Gupta [28], deterioration of sexual function occurred more frequently after abdominal route (24%) than after vaginal route (13.5%) or laparoscopic route (8.5%). All agree on the positive impact of vaginal and laparoscopic hysterectomy on women's sexuality as that of abdominal hysterectomy. It has been difficult to compare our pathways first because they remain dominated by laparotomy; frequent practice of the vaginal route may allow for more in-depth studies in our context.

Overall, sexuality after hysterectomy remained unchanged in more than half of cases and respectively improved or decreased by 21.3% and 18.3% [25] [26] [29]. Helstrom [30] estimates that best indicators of sexuality after surgery were pre-surgical frequency of intercourse, excitement cycle, frequency of desire, and

frequency of orgasm. Multiplicity of orgasm, cycle of desire and attitude towards sexual partner are also related to postoperative sexuality [29] [30] [31]. Fernandes [10] after review of literature in 2014 summarizes in these terms: sexual functioning improves overall after a hysterectomy. Frequency of sexual activity increases and problems of sexual functioning decrease [10] [30] [31].

5. Conclusion

At the African woman, as somewhere else in the world (Europe, Asia, America) results on the primary endpoint reveal that there is no significant difference for women's sexuality before and after hysterectomy. Regarding secondary endpoints, we significantly noted a regression of pain and an improvement in the intensity of orgasm after hysterectomy. The information and the sensitization about hysterectomy and sexuality before surgery would certainly have more improved the sexual pleasure.

Conflicts of Interest

The authors declare that they do not have any conflicts of interest.

References

- [1] Cesbron, P. (1996) Limiting Hysterectomy to True Indications. *Rev Prescrire*, **16**, 142-150.
- [2] Lefebvre-Lacoeuille, C., Dreux, C., Combaud, V., Boussion, F., Catala, L., Gillard, P., *et al.* (2013) Hysterectomy for Benign Lesions: The Point of View of the Gynecologist. *Lett Gynecol*, **378-379**, 46-57.
- [3] Master, W.H. and Johnson, V.E. (1966) Human Sexualreponse. Brown and Company, Boston, Little.
- [4] Crépault, C. and Trempe, J.P. (1989) Female Orgasms and Climaxes. New Avenues in Clinical Sexual Science. Québec University Press, Québec, 99.
- [5] Beltran, L. (2013) Hysterectomy: The Psychologist's Point of View. *Lett Gynecol*, **378-379**, 44-45.
- [6] Carlson, J. and Nichols, D. (1993) Sciffi: Indications for hystérectomy. *The New England Journal of Medicine*, **328**, 856-860.
- [7] Martin, R.L., Ronald, L., Roberts, W.V. and Clayton, P.J. (1980) Psychiatric Status after Hysterectomy. A One-Year Prospective Follow-Up. *JAMA*, **244**, 350-353.
- [8] Galimard-Maisonneuve, E. (2008) Hysterectomy and Deconstruction beyond the Body. French Sexology Clinic Society (SFSC) Sexologos no 30. <http://www.sfsc.fr/publi/puz3000.htm>
- [9] Lachowsky, M. (2004) The Experience of Hysterectomy. In: 28e National Meeting of French National College of Gynecologist et Obstetrician Français (CNGOF). http://www.cngof.asso.fr/d_livres/2004_Gm_175_Lachowsky.pdf
- [10] Fernandez, H. and Berry, R. (2010) Follow-Up of Hysterectomy for Benign Pathology. Entretiens de Bichat, Paris, 126-130.
- [11] Huchon, C. (2013) Status of Hysterectomy in France. Reality in Gynecology-Obstetric, 167.
- [12] Skorupska, K.A., Miotła, P., Kubik-Komar, A., Rechberger, E., Adamiak-Godlewska,

- A. and Rechberger, T. (2016) Are There Any Differences in Quality of Life and Sexual Functions after Various Types of Hysterectomy—Does Prophylactic Salpingectomy Matter? *Ginekologia Polska*, **87**, 26-31.
<https://doi.org/10.17772/gp/60554>
- [13] Gé, P., Vaucel, E., Jarnoux, M., Dessaux, N. and Lopes, P. (2015) [Study of the Sexuality of Women after a Total Hysterectomy versus Subtotal Hysterectomy by Laparoscopy in Nantes CHU]. *Gynécologie Obstétrique & Fertilité*, **43**, 533-540.
<https://doi.org/10.1016/j.gyobfe.2015.04.013>
- [14] Roy, K.K., Goyal, M., Singla, S., Sharma, J.B., Malhotra, N. and Kumar, S. (2011) A Prospective Randomised Study of Total Laparoscopic Hysterectomy, Laparoscopically Assisted Vaginal Hysterectomy and Non-Descent Vaginal Hysterectomy for the Treatment of Benign Diseases of the Uterus. *Archives of Gynecology and Obstetrics*, **284**, 907-912.
<https://doi.org/10.1007/s00404-010-1778-5>
- [15] Derogatis, L.R. and Melisaratos, N. (1979) The DSFI: A Multidimensional Measure of Sexual Functioning. *Journal of Sex & Marital Therapy*, **5**, 244-281.
<https://doi.org/10.1080/00926237908403732>
- [16] Rogers, R.G., Coates, K.W., Kammerer-Doak, D., Khalsa, S. and Qualls, C. (2003) A Short Form of the Pelvic Organ Prolapse/Urinary Incontinence Sexual Questionnaire (PISQ-12). *International Urogynecology Journal and Pelvic Floor Dysfunction*, **14**, 164-168.
<https://doi.org/10.1007/s00192-003-1063-2>
- [17] Balde, I.S., et al. (2014) Hysterectomies at the Conakry University Hospitals: Social, Demographic, and Clinical Characteristics, Types, Indications, Surgical Approaches, and Prognosis. *Médecine et Santé Tropicales*, **24**, 379-382.
- [18] Nzau, N.E., Mboloko, E., Tandu-Umba, N.F.B. and Lokengo, L.D. (2012) [Hysterectomy at University Clinics in Kinshasa: From 2002 to 2010]. *Médecine de l'Afrique noire*, **59**, 221-230.
- [19] Gueye, M., Diouf, A.A., Cisse, A., Coulbary, A.S., Moreau, J.C. and Diouf, A. (2014) [Consequences of Hysterectomy at the National—Hospital of Pikine in Dakar]. *La Tunisie Médicale*, **92**, 635-638.
- [20] Bradford, A. and Meston, C. (2007) Original Research—Women's Sexual Health: Sexual Outcomes and Satisfaction with Hysterectomy: Influence of Patient Education. *The Journal of Sexual Medicine*, **4**, 106-114.
<https://doi.org/10.1111/j.1743-6109.2006.00384.x>
- [21] Melis, A., Buisson, S., Lutz, J.-M. and Salvat, J. (2005) Factors Considered to Choose type of a Hysterectomy for Benign Uterus Lesions (Excluding Prolapsus and Obstetrical Indications). *Journal de Gynécologie Obstétrique et Biologie de la Reproduction*, **34**, 241-251. [https://doi.org/10.1016/S0368-2315\(05\)82742-5](https://doi.org/10.1016/S0368-2315(05)82742-5)
- [22] Koffi, A.B.D., Olou, N., Fomba, M., Seni, K., Horo, A. and Touré-Ecra, A.F. (2013) Uterine Fibroid Surgery: Assessment of Five Years of Activity in the Department of Gynecology of the Yopougonuniversity Hospital (Abidjan). *Revue Internationale des Sciences Médicales*, **15**, 95-99.
- [23] Fatton, B., Letouzey, V., Lagrange, E., Mares, P., Jacquetin, B. and de Tayrac, R. (2009) Validation of a French Version of the Short Form of the Pelvic Organ Prolapse/Urinary Incontinence Sexual Questionnaire (PISQ-12). *Journal de Gynécologie Obstétrique et Biologie de la Reproduction*, **38**, 662-667.
<https://doi.org/10.1016/j.jgyn.2009.02.008>
- [24] Yazbeck, C. (2004) Sexual Function Following Hysterectomy. *Gynécologie Obstétri-*

- que & Fertilité*, **32**, 49-54. <https://doi.org/10.1016/j.gyobfe.2003.10.026>
- [25] Mokate, T., Wright, C. and Mander, T. (2006) Hysterectomy and Sexual Function. *Journal of the British Menopause Society*, **12**, 153-157. <https://doi.org/10.1258/136218006779160607>
- [26] Thakar, R. (2015) Is the Uterus a Sexual Organ? Sexual Function Following Hysterectomy. *Sexual Medicine Reviews*, **3**, 264-278. <https://doi.org/10.1002/smrj.59>
- [27] Kilkku, P., Lehtinen, V., Hirvonen, T. and Gronroos, M. (1987) Abdominal Hysterectomy versus Supravaginal Uterine Amputation: Psychic Factors. *Annales Chirurgiae et Gynaecologiae*, **202**, 62-67.
- [28] Gupta, S. and Manyonda, I. (2006) Hysterectomy for Benign Gynaecological Disease. *Current Obstetrics & Gynaecology*, **16**, 147-153. <https://doi.org/10.1016/j.curobgyn.2006.04.004>
- [29] Ghielmetti, T., Kuhn, P., Dreher, E.F. and Kuhn, A. (2006) Gynaecological Operations: Do They Improve Sexual Life? *European Journal of Obstetrics & Gynecology and Reproductive Biology*, **129**, 104-110. <https://doi.org/10.1016/j.ejogrb.2006.05.026>
- [30] Helström, L., Lundberg, P.O., Sörbom, D. and Bäckström, T. (1993) Sexuality after Hysterectomy: A Factor Analysis of Women's Sexual Lives before and after Subtotal Hysterectomy. *Obstetrics & Gynecology*, **81**, 357-362.
- [31] Fernandes, A.F., et al. (2014) Consequences of Different Hysterectomy Techniques in Sexual Behavior—A Systematic Review. *Open Journal of Obstetrics and Gynecology*, **4**, 333-341. <https://doi.org/10.4236/ojog.2014.46050>