International Journal of Science and Research (IJSR)
ISSN: 2319-7064
SJIF (2020): 7.803

Hypoactive Sexual Desire Disorder among Menopausal Women in Moroccan and Factors Influencing It

Hakima Bouhahi[1], Saïd El Kettani[2], Bahia Charaf[3]

[1]Doctorante au Laboratoire Biologie Santé Environnement, Faculté des sciences et techniques, Université Hassan 1^er, Settat;
E-mail: bouhahiha[at]yahoo. fr; Numéro de téléphone: +212663795888.;
[2]Spécialiste en Médecine Interne libérale, Settat, Maroc.: E-mail: said. elkettani[at]gmail.com
[3]Professeur encadrante; Laboratoire Biologie Santé Environnement, Faculté des sciences et techniques, Université Hassan 1^er, Settat. fst. charaf[at]gmail.com

Abstract: ***Introduction: Various factors can influence the sexual desire of postmenopausal women, which affects the quality of their life; mental well-being associated risk factors for Female problem of sexual desire in post-menopausal women with Muslim culture from health center of morocco. Methods: This cross-sectional study investigated 125 women (35 and 50 years and more) from September 2018 to September 2019 in the settat city of morocco. The questionnaire used in this study has included several demographic, socio-economic, diabetes, medications and stress. To do this statistical analysis, we used a IBM SPSS Statistics software, Chicago Illinois, version 21. Results: The average age of the women in this study was average 50 ± 4, 35 years. The results of the linear regression factors such a low socioeconomic level (p < 0.001), diabetes (97.2%, p <0.001), medication (100%, p< 0.001), stress (98%, p <0.0001), a Exercising (100%, p < 0.048).); First traumatic sexual intercourse (77.8%; p = 0.002) marriage age at age 25 and over (100%; p = 0.001) significantly affected sexual desire. Multivariate analysis showed that the odds of Hypoactive Sexual Desire Disorder were significantly increased with older age (odds ratio, OR = 1, 07), low and moderate socioeconomic level (OR = 1.20), presence of Diabetic (OR = 1.22). Conclusion: It can be concluded from the findings of this study that several factors affecting the Hypoactive Sexual Desire Disorder age, low socioeconomic level, diabetes, medications. It is necessary to devote more careful attention to Hypoactive Sexual Desire Disorder in menopausal.***

Keywords: Hypoactive Sexual Desire, Menopause, Risk factors, morocco

1. Materials and Methods

Our study concerns 125 postmenopausal women, 98 of whom have hypoactive desire disorder and 36 postmenopausal women without desire disorder. The average age of the women studied was 53.2 years. The majority were married. This is a cross-sectional survey on desire disorder in postmenopausal women in Africa (Morocco) using a questionnaire including several demographic, socio-economic, endocrine, drug and psychological factors. Statistical analysis was performed by logistic regression using SPSS Version 23 software.

2. Results

The level of education of the women studied is characterized by illiteracy or a very low level of education (68.5%). Husband's age was a statistically significant factor (p <0.001). For socio-economic factors most of the women had a low socio-economic level (61.8%) with a strong relationship significant for the cramped nature of housing. drug and endocrine factors as well as mental disorders are statistically significant factors of hypoactive desire disorder in postmenopausal.

3. Introduction

Menopause is one of the evolutionary stages that all women experience through aging, and this phenomenon exposes them to massive changes. [1, 2].

The most comprehensive talk of menopause is menstruation, following the decline in ovarian activity at the end of women's fertility period, and short and medium term effects such as vasomotor disorders, urinary symptoms, atrophic vaginitis, and sexual disorders, as well as long-term effects such as osteoporosis and cardio-vascular disorders, along with many evolutionary, physical, emotional and social abnormalities. [3]. During menopause, women experience biological, sociological, and psychological changes, some of them are responsible for poor self-acceptance and the onset of anxiety and even depression. These changes are responsible for the appearance of HSDD [4].

Hypoactive sexual desire disorder (HSDD) is defined as a persistent or recurrent deficiency (or absence) of sexual fantasies and desire for sexual activity that causes marked distress or interpersonal difficulty not related to a medical or psychiatric condition or the use of a substance or medication. [5] As it is the most common of the 4 disorders in Female sexual dysfunction and affects approximately 10% of adult women worldwide [6], it should be carefully assessed and treated by healthcare professionals [7].

HSDD may root in biological, psychological, sexual, and social factors [8]. According to an international study of sexual health, women diagnosed with HSDD reported greater sexual and marital dissatisfaction, hopelessness, frustration, anger, loss of femininity, and low self-esteem compared to those women without HSDD [9].

HSDD can be primary, when it has always been weak or absent. This affects a minority of women. The secondary HSDD corresponds to a desire which was present, but which decreased or disappeared gradually or suddenly. Situational HSDD l occurs in certain situations (for example; with a specific partner or when the children are sleeping in the next room). Whereas, generalized HSDD appears at any situation and independently of the partner [5].

The objective of this study was to determine the prevalence of Hypoactive sexual desire disorder and examine risks factors in post-menopausal women in Settat, Morocco.

4. Material and method

This was a cross-sectional, descriptive survey which included a representative sample of the population of women who were 35 and 50 years and more, who attended the urban health center of settat from September 2018 through September 2019. The study was approved by the institutional review board and each subject gave her written informed consent before she was interviewed.

A copy of the survey questionnaire was administered to 805women; 305women did not wish to participate in the survey. Overall, 299 questionnaires were not returned, and 174 questionnaires were excluded due to multiple reasons: hysterectomy, hormonal treatment substitute and pelvic surgery for bilateral-ovary-ectomy. Finally, 125effective and valid questionnaires were included for the study Figure 1).

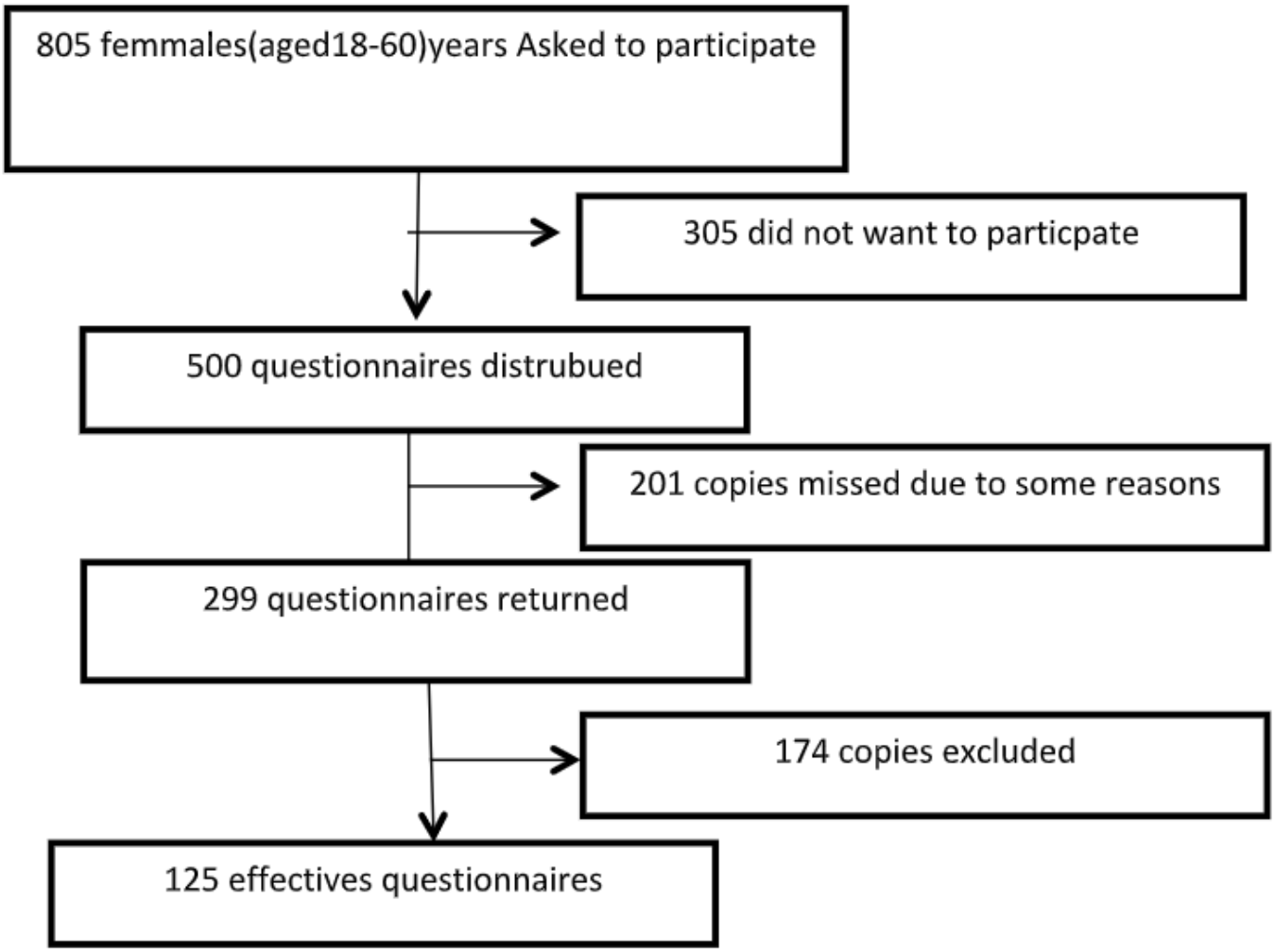

Figure 1: Survey participant disposition

The women interviewed were accepted and they were available for a 1-hour face-to-face interview by doctor.

Written, informed consent was obtained from all women and the study was approved by the ethical committee of health, biology and environment laboratory of the faculty of science and technology. And delegation of the ministry of health of settat.

The eligible women who were invited to take part in this study, they were informed about the importance of sexual health and it affects their overall well-being. Those who agreed to participate; they were interviewed confidentially about their sexual health.

The recruiting of those women was a difficult process and took a long time, because most of them hesitated to talk about their sexual life. Therefore, the interview was marked by a lot of modesty. . Based on our experience of

identifying sexual problems among women presenting with somatic complaints, we developed a structured questionnaire with terminology familiar to Moroccan women to determine the prevalence and nature of sexual problems.

We analyzed variables described in the literature as potentially having an effect on desire including age, marital status, parity, socioeconomic status, depression, comorbidities, general health, and education level [10, 11, 12].

The inclusion criteria were natural "menopause" was defined as diagnosis after >12 months of amenorrhea [13]

The exclusion criteria were hysterectomy, hormonal treatment substitute and pelvic surgery for bilateral-ovary-ectomy.

The determination of decrease in sexual desire was difficult and the clinical interview was a diagnostic tool in our study (taboo).

HSDD was defined as the lack of thoughts, motivation or receptivity of sexual desire. It was classified as primary when the women had never had a sexual interest before and secondary when she had settled after a period when the desire existed [10]. It was appreciated for women to get some education or reliable knowledge about sexuality, based on a healthy model of sexual education during their school years, and also based on information taken from safe practices of sexual behavior before their marriage.

Concerning the traumatic nature of the first report, it was the presence or not of a physical suffering during the defloration on the wedding night.

A positive erotic image of the self-had been kept when the woman felt desirable. Women were asked about the degree of satisfaction with each part and aspect of their body and the concern about their weight. we asked if negative erotic image has an impact of on sexual health in postmenopausal women.

The medications which affected the sexual activity potentially were anti-depressants, anti-histamines and anxiolytics.

Although we did not fully utilize Psychometric properties the Perceived Stress Scale and the Hospital Anxiety and Depression Scale (HADS) to measure stress the perception of the disorder was relevant. They were in constraints, stress on housework, family organization and professional activities. They have difficulty sleeping.

Statistical analysis

To compare the frequencies of the different qualitative variables studied namely age groups, socio-economic parameters, clinical and drug data and data relating to sexuality, we used Pearson's $\chi 2$ test. supplemented by odds ratios (OR) and 95% confidence intervals (CI) which were used to estimate the strength of associations Analyzes were performed using IBM SPSS Statistics software, Chicago Illinois, version 21. The statistical significance level was ($p < 0.05$).

.

5. Results

The study include 125 Moroccan table showed their various socio demographic, clinical and sexual characteristics. (table1).

The 125 women who participated were all post-menopausal, their average age was 50 ± 4, 35 years old. The extreme ages were 35 and 58 years old.72% of those women were aged 50 years old or more and 6.4% were at the age of 40 years old. These women had an early menopause, gene or idiopathic.

The questionnaire shows just over 60% of those women were illiterate and only 16% of them had a professional job outside of their houses. The remaining 84.0% were housewives. The low socio-economic level was present in 52% women, and 48.8% lived in cramped houses. In the study of population, just under 80% who were married, and 16% were accounted as widows.28.8% of these post-menopausal women were diabetic.27.2% were taking medications which affected their sexual activity potentially.68% of the women were living under stress, and less than 8% of them declared that they practiced sports regularly.

Only 7, 2% of the interviewed post-menopausal women declared that they got sessions about sex education during their school years.

More or less three-quarters (73.6%) of patients started their sexual activity between the ages of 18 and 25. All women had their first sexual intercourse only on the wedding night. Approximately four-fifths (79.2%) reported that their first sexual activity was traumatic.

Only 5.6% of women reported having a positive erotic image of the self (that is, feeling desirable)

Table 1: Characteristics of125 postmenopausal Moroccan women

Characteristic	No. (%)
age groups	
between 35 and < 50 years	35 (28)
50 years and more	90 (72)
Marital status	
married	99 (79, 2)
Divorced	6 (4, 8)
Widow	20 (16)

education	
Illiterate	77 (61, 6)
educated	48 (38, 4)
Profession	
housewives	105 (84)
yes	20 (16)
Socio-économic level	
High	60 (48)
Low or moderate	65 (52)
Cramped houses	
	65 (52)
yes	*61 (48, 8)*
no	64 (51, 2)
Diabetes	
yes	36 (28, 8)
no	89 (71, 2)
Medications	
Yes	34 (27, 7)
no	91 (72, 8)
Exercising	
yes	9 (7, 2)
no	119 (92, 8)
stress	
Yes	85 (68)
No	40 (32)
Sexual education	
yes	9 (7, 2)
No	116 (92, 8)
The onset of sexual activity	
< 18 ans	17 (13, 6)
18 à 25 ans	92 (73, 6)
25 ans et plus	16 (12, 8)
First traumatic sexual intercourse	
Yes	99 (79, 2%)
no	26 (20, 8%)
erotic image of positive self	
yes	118 (94, 4)
no	7 (5, 6)

Table 2: factors Influencing Hypoactive Sexual Desire Disorder

	Total	Hypoactive Sexual Desire Disorder		p-value
Total	125	89	71, 2%	
Age groups				
Between 35 and < 50 years old	35	26	74, 3%	<0, 635
50 years and more	90	63	70, 0%	
Instruction				
illiterate	77	45	58, 4%	<0, 001
educated	48	44	91, 7%	
Profession				
housewives	105	72	68, 6%	<0, 137
yes	20	17	85, 0%	
Socio-économic level				
High	60	34	56, 7%	<0, 001
Low or moderate	65	55	84, 6%	
Cramped houses				
No	64	29	45, 3%	<0, 001
yes	61	60	98, 4%	
Marital status				
Divorced	6	4	66, 7%	<0, 001
Married	99	81	81, 8%	
Widow	20	4	20, 0%	
Diabetes				
yes	36	35	97, 2%	<0, 001
No	89	54	60, 7%	
Médication				

yes	34	34	100, 0%	<0, 001
No	91	55	60, 4%	
Exercising				
No	116	80	69, 0%	<0, 048
yes	9	9	100, 0%	
Stress				
No	40	9	22, 5%	<0, 001
yes	85	80	94, 1%	
Sexual education				
No	115	85	73, 9%	<0, 059
yes	9	4	44, 4%	
The onset of sexual activity				
< 18 ans	17	5	29, 4%	<0, 001
18 à 25 ans	92	68	73, 9%	
25 years and more	16	16	100, 0%	
First traumatic sexual intercourse				
No	26	12	46, 2%	<0, 002
yes	99	77	77, 8%	
erotic image of positive self				
No	117	85	72, 6%	<0, 092
yes	7	3	42, 9%	

The prevalence of HSDD was 71.2%. It was significantly higher among married women ($p < 0.001$), those with primary or secondary school education ($p < 0.001$), those who live under the standards of living or live in cramped housing ($p < 0.001$), diabetics (97.2%, $p < 0.001$), those who take medications (100%, $p < 0.001$), those who are under stress (98%, $p < 0.001$) and those who practice sports are (100%, p 0<.048).

Also from univariate analysis HSDD was significantly higher among post-menopausal women who had not had sex education at school (73.9%; $p < 0.049$); those who reported having experienced trauma during their wedding night sex (77.8%; $p < 0.002$) and those who were married at age 25 and over (100%; $p < 0.001$). (table2)

Table3: Significant independent predictors of Hypoactive Sexual Desire Disorder

Predictor	P	Odds ratio	95% CI
age			
50 years and more	0, 55	1.07	0.86-1.32
Socio-économic level			
low or moderate	0, 85	1.200	0.71-1.32
chronic disease			
Diabetes	0, 011	1.11	0.73-1.68
The onset of sexual activity			
25 years and more	0, 22	1.22	0, 89-1, 68

Multivariate analysis showed that the odds of decrease in sexual desire were significantly increased with older age (odds ratio, OR = 1, 07), low moderate socioeconomic level (OR = 1.20), presence of Diabetic (OR = 1.22).

6. Discussion

The Large differences have been found in the prevalence of HSDD between countries. the decrease in sexual activity was found in 86.5% among Moroccan post-menopausal women and in 63.3% for Tunisian women [15]. A Senegalese study showed that the prevalence of HSDD in post-menopausal women was 83.5% [16], 39% was in Nigeria. [17], 35% was in Iran [18]. And 26.7% was in Brazil [8]. Simon et al. 31 in their study on 2000 postmenopausal women and men in North America, showed that vaginal discomfort leads to loss of sexual desire (64%) [19].

Research on older women's sexual problems generally finds that as age increases, rates of problems increase as well. [20].

In a large, population-based study of U. S. adults, aged 57–85, Lindau et al. found that sexually active older women most frequently reported experiencing low desire (43%), [21]

In this study, the prevalence of HSDD was significantly in the illiterate women. This agrees with the data in the literature which has shown that decreased sexual desire is inversely related to school level [10]. A number of studies have shown a positive link between a woman's high level of education and the quality of her sexual function [22]. A good level of education increases self-confidence and allows a good understanding of anatomy and sexual function [23]

The prevalence of HSDD was significantly higher in women who were taking medications. This is superimposed on the results of the literature which shows the negative impact of taking medications (anti-hypertensive and anti-histamines. . .) on female sexual desire [24]. Anti-depressants can also have a deleterious effect on a woman's sexual function [25].

Some chronic diseases, such as hypothyroidism, diabetes mellitus and cardio-vascular can directly or indirectly affect the woman's sexual function [26].

Diabetics significantly affected sexual desire, this corroborates with studies which have shown that there is more HSDD in diabetic women than in non-diabetics [27]. Also, the other possible comorbidities such as having difficulty in getting aroused or lubricated, having difficulty

in reaching orgasm, feeling pain during or after intercourse, and experiencing vaginal dryness should be addressed while assessing female sexual desire problems, which were not measured in the study and our questionnaire was not psychometrically validated.

Our findings that HSDD was significantly higher among women with low socio-economic status and those who lived in cramped houses. Similar results were reported by a study conducted in Babol city, which found that the highest level of sexual disorder was in women whose spouses were laborers; this relationship was statistically significant. [28, 9]. . Contrary to this study, afzali found that sexual satisfaction was higher in women with unemployed spouses than in women with employed spouses. [29]

In our study that stress has a negative impact on female sexual desire is in accord with other study shows that women who report complaints from life stresses have more HSDD more than women not living in stressful conditions. [30]

Various studies have shown that high levels of stress, anxiety and depression can have negative effects on women's sexual self-concept in menopause stage [31] . Bener illustrated a strong relationship between depression, anxiety and stress in post-menopausal women [32]. Also Stress can lead to the emergence and exacerbation of physical and mental symptoms such as depression and anxiety during menopause [33].

Only 7.2% of the post-menopausal women who were surveyed declared that they had received sexual education sessions during their school years (as matter of fact, the lessons were on anatomy and reproductive function and contraception). The prevalence of HSDD was higher among those who had not had sex education at school. It should be understood that education, counseling and necessary information on the physiology of sexual responses could increase the ability to take effective measures to resolve a sexual problem [34, 35].

Abedi made a study which aimed to compare the effect of education on groups and individual of women to see how they are satisfied about their sexual relations in the post-menopausal, which concluded that women's sexual satisfaction was higher in the groups of education groups than the individual groups [36]

In our study, in almost the majority of cases, it is about the age of marriage. Since the woman, in her conservative circles, abstains from all sexual relations before marriage.

The prevalence of HSDD increased significantly with age at onset of sexual activity, reaching 100% among those who married aged 25 and over. This is in agreement with a Brazilian study [24]. Other study had found that HSDD are 50–60% lower in the women with age at first intercourse ≥ 21 [37]. . In Iran, it was found that a younger age at marriage significantly contributed to sexual dysfunction. [38].

In the present study, the HSDD was significantly higher among those who reported they had a trauma during their first intercourse. Reversely, a Tunisian study showed that the conditions of defloration did not influence the couple's subsequent sexual desire [39]. However, a Saudi study observed a negative impact of the first sexual relation circumstances on the subsequent development of the woman [40].

the higher level of positive sexual self-concept, the reduced level of depression, stress and anxiety will be observed. Also, in line with negative self-concept relationship with the psychological factors, the results indicated that with increasing negative sexual self-concept, depression, stress and anxiety will also increase [1]. However, In our study, only 5.6% of women reported that they had a positive erotic image of the self, that is to say, they felt desirable.

The studies conducted in this respect showed that positive sexual self-concept is considered as one of the factors affecting individual's psychological dimensions. [37].

7. Conclusion

A large proportion of menopausal women in morocco lack sexual desire. Overall, 72% of the respondents had hypoactive sexual desire disorder.

HSDD is affected by many factors; socio-economic, diabetes, medications intake as well as stress. Besides, this disorder was also affected by the lack of sex education. In our point of view, the overall assessment of women should be systematically detected and taken into account, and giving them more attention will certainly improve their quality of life and well-being.

Abbreviation , **HSDD:** hypoactive sexual desire disorder.

Conflicts of interests:

The authors have not declared any conflict of interest.

Contributions from the authors.

All the authors contributed to the conduct of this work. All authors also declare that they have read and approved the final version of the manuscript.

References

[1] Heidari M, Ghodusi M, Rafiei H. Sexual self-concept and its relationship to depression, stress and anxiety in postmenopausal women. J Menopausal Med.2017; 23: 42–48.
[2] Heidari M, Shahbazi S, Ghafourifard M, Ali Sheikhi R. Prediction of marital satisfaction based on emotional intelligence in postmenopausal women. J Menopausal Med.2017; 23: 196–201
[3] Enkhbold T, Jadambaa Z, Kim TH. Management of menopausal symptoms in Mongolia. J Menopausal Med.2016; 22: 55–

[4] Nappi RE, Martini E, Martella S, Capuano F, Bosoni D, Giacomini S, et al. Maintenir la sexualité pendant la ménopause. Santé post-reproduction.2014; 20 (1): 22-29
[5] American Psychiatric Association. Diagnostic and statistical manual of mental disorders, 4th edition, text revision, Washington, DC: American Psychiatric Press; 2000
[6] Goldstein I., Kim N. N., Clayton A. H., et al. Hypoactive sexual desire disorder. Mayo Clinic Proceedings.2017; 92 (1): 114–128. doi: 10.1016/j. mayocp.2016.09.018.
[7] Kingsberg S. A., Rezaee R. L. Hypoactive sexual desire in women. Menopause.2013; 20 (12): 1284–1300. doi: 10.1097/gme.0000000000000131. (7)
[8] Abdo CH, Valadares AL, Oliveira WM, Jr, Scanavino MT, Afif-Abdo J. Hypoactive sexual desire disorder in a population-based study of Brazilian women: associated factors classified according to their importance. Menopause.2010; 17 (6): 1114–1121. doi: 10.1097/gme.0b013e3181e19755.
[9] Leiblum SR, Koochaki PE, Rodenberg CA, Barton IP, Rosen RC. Hypoactive sexual desire disorder in postmenopausal women: US results from the Women's International Study of Health and Sexuality (WISHeS) Menopause.2006; 13 (1): 46–56. doi: 10.1097/01. gme.0000172596.76272.06.
[10] Laumann EO, Paik A, Rosen RC. Sexual dysfunction in the united states: Prevalence and predictors. Jama.1999; 281 (6): 537–544.
[11] Paroisse SJ, Hahn SR. Trouble du désir sexuel hypoactif: examen de l'épidémiologie, de la biopsychologie, du diagnostic et du traitement. Sexe Med Rév.2016; 4 (2): 103-120. doi: 10.1016/j. sxmr.2015.11.009
[12] Kingsberg SA, Woodard T. Dysfonctionnement sexuel féminin: focus sur le faible désir. Obstet Gynéco.2015; 125 (2): 477-486. doi: 10.1097/AOG.000000000000000620
[13] Nelson H. D. Menopause. The Lancet.2008; 371 (9614): 760–770. doi: 10.1016/s0140-6736 (08) 60346-3
[14] (Pai HC, Lee S, Yen WJ. The effect of sexual self-concept on sexual health behavioural intentions: a test of moderating mechanisms in early adolescent girls. J Adv Nurs.2012; 68: 47–55)
[15] Dennerstein L, Lehert P. Modeling mid-aged women's sexual functioning: a prospective, population-based study. J Sex Marital Ther 2004; 30: 173—83.
[16] Safarinejad, M. Dysfonctionnement sexuel féminin dans une étude basée sur la population en Iran: prévalence et facteurs de risque associés. Int J Impot Res 18, 382-395 (2006). https://doi.org/10.1038/sj.ijir.3901440
[17] Abdo, CHN, Valadares, ALR, Oliveira, WM, Scanavino, MT, & Afif-Abdo, J. (2010). Trouble du désir sexuel hypoactif dans une étude basée sur la population de femmes brésiliennes. Ménopause, 17 (6), 1114-1121. doi: 10.1097/gme.0b013e3181e19755
[18] Dennerstein L, Lehert P, Burger H, Dudley E. Factors affecting sexual functioning of women in the mid-life years. Climacteric.1999; 2 (4): 254–262.
[19] Simon JA, Nappi RE, Kingsberg SA, Maamari R, Brown V. Enquête Clarifying Vaginal Atrophy's Impact on Sex and Relationships (CLOSER): impact émotionnel and physical vaginal discomfort in North American postmenopausal women and their partners. Menopause.2014; 21: 137-142
[20] Lindau ST, Schumm LP, Laumann EO, et al. . A study of sexuality and health among older adults in the United States. New Engl J Med 2007; 357: 762–774
[21] Hayes R, Dennerstein L. The impact of aging on sexual function and sexual dysfunction in women: A review of population-based studies. J SexMed 2005; 2: 317–33
[22] Llaneza P, Fernández-Iñarrea JM, Arnott B, García-Portilla MP, Chedraui P, Pérez-López FR. Sexual function assessment in postmenopausal women with the 14-item changes in sexual functioning questionnaire. The journal of sexual medicine.2011; 8 (8): 2144–2151.
[23] Mitchell KR, Mercer CH, Ploubidis GB, Jones KG, Datta J, Field N, et al. Sexual function in britain: Findings from the third national survey of sexual attitudes and lifestyles (natsal-3). The Lancet.2013; 382 (9907): 1817–1829.
[24] Moraes AVG de, Valadares ALR, Lui Filho JF, Costa-Paiva L, Pedro AO. Medication use and sexual function: A population-based study in middle aged women. The journal of sexual medicine.2019; 16 (9): 1371–1380
[25] Kingsberg SA, Woodard T. Female sexual dysfunction: Focus on low desire. Obstetrics & Gynecology.2015; 125 (2): 477–486
[26] Cour F, Bonierbale M. Troubles du désir sexuel féminin. Progrès en urologie.2013; 23 (9): 562–574.
[27] Trifi M, Elkissi Y, Slim Iet al. Évaluation de la fonction sexuelle des femmes ayant un diabète de type 2: étude cas-temoins. Sexologies.2016; 25 (2): 78–84.
[28] Bakouei F., Omidvar S., Nasiri F. Prevalence of female sexual dysfunction in married women and its related factors (Babol 2006) J Babol Univ Of Med Sci.2007; 9: 59–64
[29] Afzali M, Khani S, Hamzehgardeshi Z, Mohammadpour R-A, Elyasi F. Investigation of the social determinants of sexual satisfaction in Iranian women. Sexual medicine.
[30] Konstantinidis C, Tzitzika M, Bantis A, Nikolia A, Samarinas M, Kratiras Z, et al. . Female Sexual Dysfunction Among Greek Women With Multiple Sclerosis: Correlations With Organic and Psychological Factors. Sexual medicine.2019; 7 (1): 19-25.
[31] Sang JH, Kim TH, Kim SA. Flibanserin for treating hypoactive sexual desire disorder. J Menopausal Med.2016; 22: 9–13
[32] Bener A, Saleh N, Bakir A, Bhugra D. Depression, anxiety, and stress symptoms in menopausal arab women: Shedding more light on a complex relationship. Annals of medical and health sciences research.2016; 6 (4): 224–231.
[33] Lim K. The study of menopause-related quality of life and management of climacteric in a middle-aged female population in korea. Public Health WklyRep.2013; 6 (31): 609–613

[34] Karimi A, Dadgar S, Afiat M, Rahimi N. The effect of sexual health education on couples' sexual satisfaction. Iran J Obstet Gynecol Infertil 2013; 15: 23-30.
[35] Kaviani M, Rahnavard T, Azima S, Emamghoreishi M, Asadi N, Sayadi M. The effect of education on sexual health of women with hypoactive sexual desire disorder: A randomized controlled trial. Int J Commun Based Nurs Midwifery 2014; 2: 94-102.
[36] Abedi P, Jafarzadeh M, Abbaspoor Z, Bastami P, Haghighizadeh MH, Hassani M. Education for sexual satisfaction promotion in p]ostmenopausal women: Individual or group education? Iran J Obstet Gynecol Infertil 2017; 20: 16-23.
[37] Hamzehgardeshi, Zeinab et al. “Socio-demographic determinants of low sexual desire and hypoactive sexual desire disorder: a population-based study in Iran. ” BMC women's health vol.20, 1 233.14 Oct.2020,
[38] Nekoo EA, Burri A, Ashrafti F, Fridlund B, Koenig HG, Derogatis LR, et al. Propriétés psychométriques de la version iranienne de l'échelle de détresse sexuelle féminine révisée chez les femmes. J Sexe Med.2014; 11 (4): 995–1004. doi: 10.1111/jsm.12449.
[39] J. Ben Thabet, F. Charfeddine, N. Charfi, I. Baati, L. Zouari, N. Zouari, M. Maâlej . “Sexualité de la femme tunisienne: entre le religieux et le culturel”. In: L’Encéphale 41.2 (2015), p.144-150
[40] Chaleby, Kutaiba. “Traditional Arabian marriages and mental health in a group of outpatient Saudis”. In: Acta Psychiatrica Scandinavica 77.2 (1988), p.139-142