Sexual Health and Endometriosis

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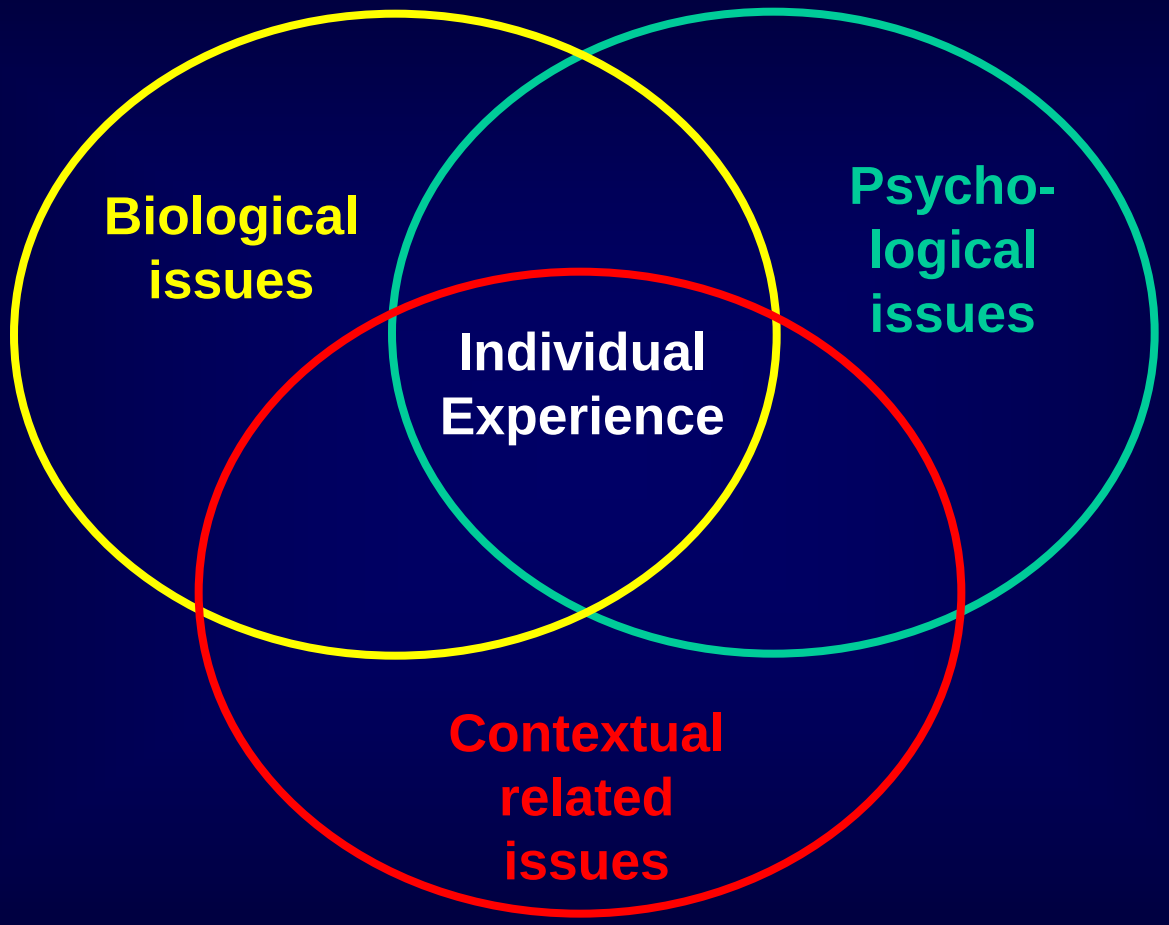
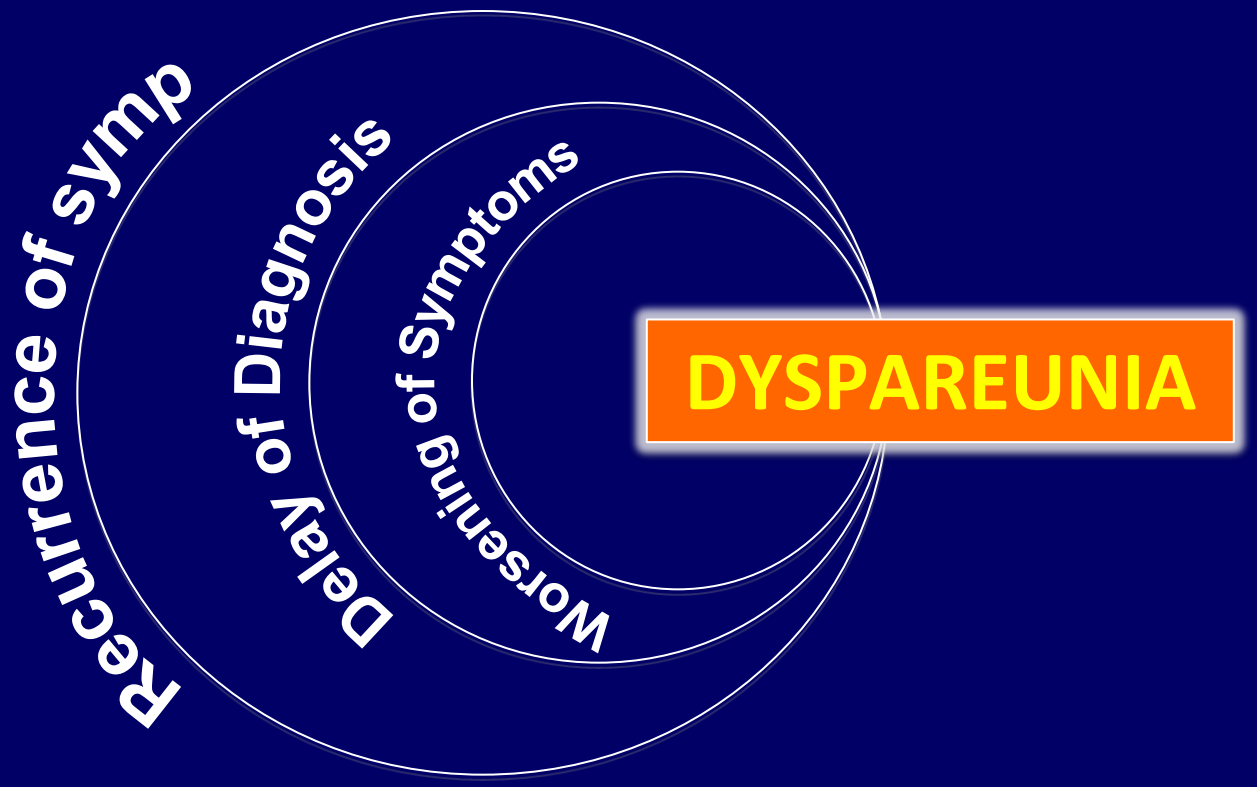
WOMEN'S SEXUAL FUNCTION



- ***Sexual attitudes and behaviour are unique to each woman and are the result of a complex interplay of hormonal and medical variables with intrapersonal and interpersonal factors.***

modified from Plaut et al, 2004

Sexuality in endometriosis



Pluchino N., Hum Reprod Update, 2016

The significant effect of endometriosis on physical, mental and social wellbeing: results from an international cross-sectional survey

A.A. De Graaff[1,*], T.M. D'Hooghe[2], G.A.J. Dunselman[1], C.D. Dirksen[3], L. Hummelshoj[4], WERF EndoCost Consortium[†], and S. Simoens[5]

Table VII Current symptoms.

	Number of patients	Percentage
Dysmenorrhoea[a,b]	533	57
Dyspareunia[a,b]	441	47
Pain at other times (chronic pain)[a,b]	554	60

[a]Factors included in the backward regression analysis for the physical component.
[b]Factors included in the backward regression analysis for the mental component.

Table VI Effect of endometriosis on education, work and social wellbeing (lifetime perspective).

	n	Percentage
Time lost to education[a,b]	150	16
Affected job[a,b]	472	51
Affected relationship[a,b]	468	50

[a]Factors included in the backward regression analysis for the physical component.
[b]Factors included in the backward regression analysis for the mental component.

Hum Rep 2013

Deep Dispareunia

FERTILITY AND STERILITY®
VOL. 78, NO. 4, OCTOBER 2002

Published by Elsevier Science Inc.
Printed on acid-free paper in U.S.A.

Relation between pain symptoms and the anatomic location of deep infiltrating endometriosis

- 90% +++ LUS - vaginal wall - rectum
- 42% Bladder
- 40% Adnexal adhesions
- 27% Bowel
- 25% Endometrioma
- Not related to AFS staging

- Women with endo have a ninefold increase in risk of experiencing this symptom compared with the general female population.

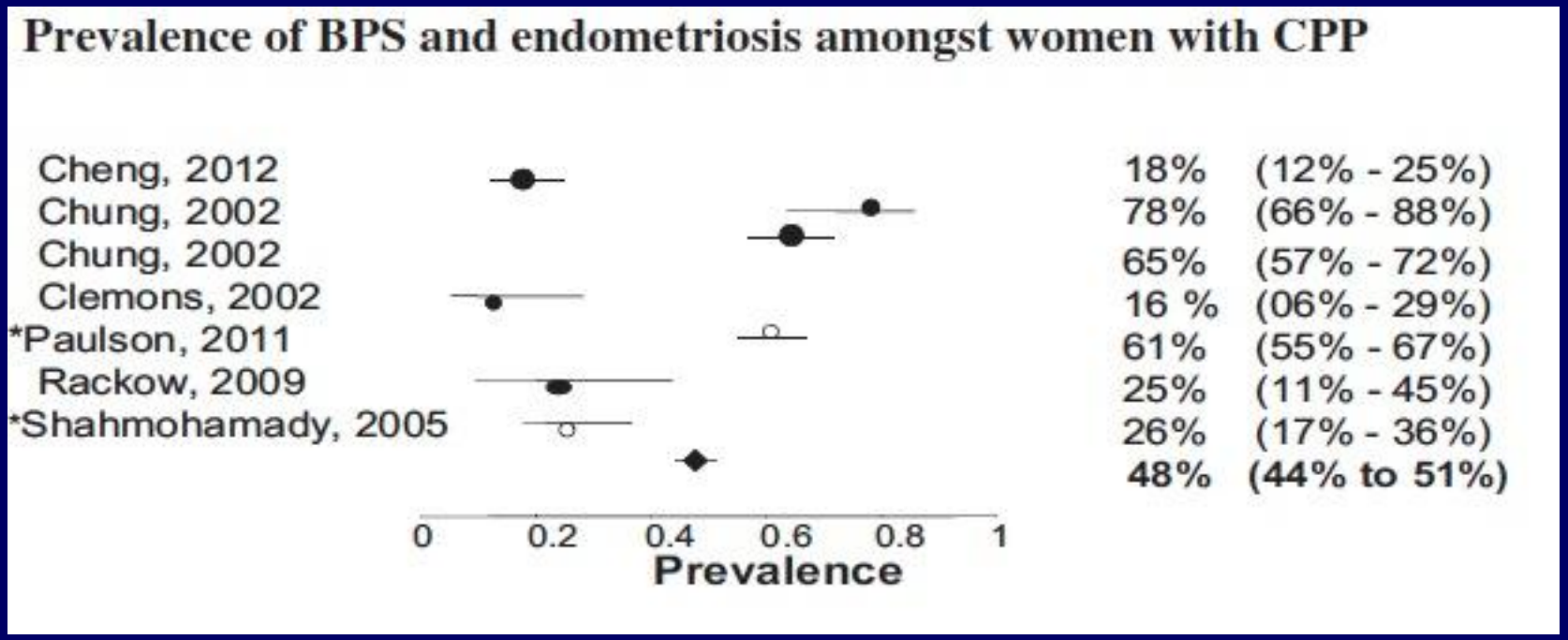
Dyspareunia in Endometriosis

- Endometriosis is a risk factor (OR 4.30; CI 1.16-15.90) for the concurrent presence of deep dyspareunia and superficial dyspareunia/provoked vesitibulodynia.

- dyspareunia is independently associated with pelvic floor tenderness (OR 4.45; 95% CI 1.86 to 10.7)

The 'evil twin syndrome' in chronic pelvic pain: A systematic review of prevalence studies of bladder pain syndrome and endometriosis

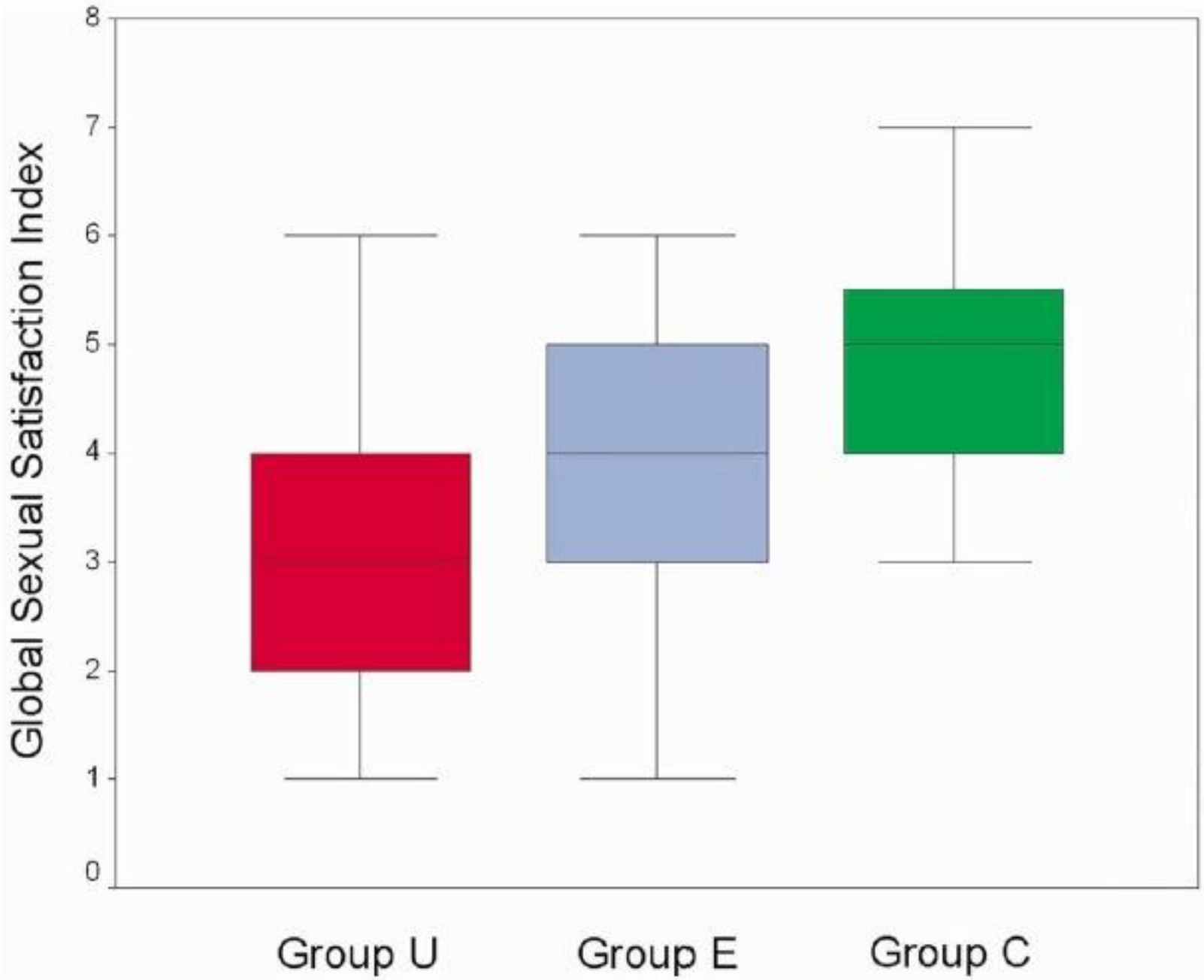
S.A. Tirlapur [a,c,*], K. Kuhrt [b], C. Chaliha [c], E. Ball [c], C. Meads [a,d], K.S. Khan [a,c]



2013 International Journal of Surgery

Sexuality in endometriosis

Deep Dyspareunia
≠
Women’s sexual function



Ferrero. Sexuality in endometriosis. Fertil Steril 2005.

"I Can't Get No Satisfaction"*: deep dyspareunia and sexual functioning in women with rectovaginal endometriosis

Paolo Vercellini, M.D.,[a] Edgardo Somigliana, M.D.,[b] Laura Buggio, M.D.,[a] Giussy Barbara, M.D.,[a] Maria Pina Frattaruolo, M.D.,[a] and Luigi Fedele, M.D.[a]

Fertility and Sterility® Vol. 98, No. 6, December 2012 0015-0282/$36.00

http://dx.doi.org/10.1016/j.fertnstert.2012.07.1129

Comparison of the probability of pathologic outcome in the six subdomains of the revised Sabbatsberg Sexual Self-Rating Scale according to study group, adjusted odds ratio (95% confidence interval).[a]

Item	Rectovaginal endometriosis vs. no endometriosis	Rectovaginal endometriosis vs. peritoneal and/or ovarian endometriosis	Peritoneal and/or ovarian endometriosis vs. no endometriosis
Current sexual interest (little/very little)	5.58 (1.42–22.04)	1.20 (0.50–2.90)	3.85 (0.93–15.87)
Modification of sexual interest (less/much less)	2.18 (0.93–5.13)	1.20 (0.57–2.52)	1.58 (0.67–3.74)
Current sexual activity (little/very little–nonexistent)	2.89 (1.22–6.84)	1.08 (0.52–2.21)	2.27 (0.95–5.40)
Modification of sexual activity (less/much less)	2.32 (1.09–4.96)	1.32 (0.65–2.66)	1.69 (0.78–3.65)
Current sexual satisfaction (less/not satisfying)	2.69 (1.00–7.31)	1.47 (0.63–3.42)	1.89 (0.67–5.36)
Modification of sexual satisfaction (less/much less satisfying)	3.13 (1.17–8.37)	1.70 (0.76–3.80)	1.86 (0.66–5.28)
Current sexual pleasure (little/no pleasure)	3.50 (0.96–12.72)	2.00 (0.72–5.53)	1.84 (0.45–7.47)
Modification of sexual pleasure (less/much less pleasure)	3.45 (1.20–9.94)	1.68 (0.73–3.87)	2.16 (0.70–6.64)
Current ability to reach orgasm (little/very little–nonexistent)	1.99 (0.63–6.28)	0.89 (0.36–2.19)	2.16 (0.70–6.66)
Modification in ability to reach orgasm (less/much less)	4.00 (1.31–12.19)	1.94 (0.79–4.75)	1.88 (0.56–6.38)
Current importance of sex (little/no importance)	1.42 (0.41–4.94)	0.94 (0.31–2.85)	1.23 (0.35–4.36)
Modification of importance of sex (decreased somewhat/a lot)	1.53 (0.53–4.37)	1.60 (0.59–4.32)	1.03 (0.35–3.05)

[a] Adjusted for multiple comparisons, age, marital status, psychiatric disorders, and use of psychotropic drugs.

More than just bad sex: sexual dysfunction and distress in patients with endometriosis

N. Fritzer [a,b,*], D. Haas [c], P. Oppelt [c], St. Renner [d], D. H
G. Fischerlehner [h], M. Sillem [i], G. Hudelist [b]

	N	%
Deep infiltrating endometriosis	74	59%
Superficial/peritoneal endometriosis	51	41%
revAFS		
Stage I	38	(30%)
Stage II	31	(25%)
Stage III	29	(23%)
Stage IV	27	(22%)

Sexual behaviour and emotions of all 125 patients.

	Number (*n*)	Percent (%)
Frequency of interrupted intercourse		
Almost always	13	11%
Frequently	38	30%
Rarely	49	39%
Almost never	25	20%
Feelings during sexual intercourse[a]		
Psychological tension	42	34%
Physical tension	51	41%
Afraid of pain	82	66%
Physical and psychical relaxation	33	26%
Frequency of communication with the partner about sex		
Very frequently	25	20%
Frequently	68	54%
Rarely	27	22%
Never	5	4%
Frequency of communication with the partner about coital pain		
Very frequently	17	14%
Frequently	57	45%
Rarely	39	31%
Never	12	10%
Want more communication	36	29%
Patients motivation for intercourse is to conceive		
Agree	38	30%
Disagree	87	70%
Suffer pain to satisfy the partner		
Agree	57	46%
Disagree	68	54%
Feelings of being a bad wife because of pain		
Agree	38	30%
Disagree	87	70%

[a] Multiple answers possible.

More than just bad sex: sexual dysfunction and distress in patients with endometriosis

N. Fritzer [a,b,*], D. Haas [c], P. Oppelt [c], St. Renner [d], D. Hornung [e], M. Wölfler [f], U. Ulrich [g], G. Fischerlehner [h], M. Sillem [i], G. Hudelist [b]

Relationships between psychological and clinical characteristics of 125 patients with and without a female sexual dysfunction (FSD) measured via FSFI.

Clinical and psychological features	With FSD		Without FSD		p-value
	Mean	SD	Mean	SD	
Duration of dyspareunia	5.8 yrs.	4.9 yrs.	4.5 yrs.	4.0 yrs.	0.12
NAS during intercourse	6.5	2.7	5.2	2.3	<0.01*
NAS after intercourse	5.7	2.8	4.0	2.6	<0.01*
Frequencies of intercourse/month	4.3	5.0	8.0	5.7	<0.01*
Feelings of feminity	2.7	1.2	3.5	1.0	<0.01*
Feelings of guilt towards the partner	3.2	1.5	2.5	1.5	<0.01*
Fear of separation because of pain	1.9	1.2	2.7	1.3	<0.01*
Feel of understanding by the partner	4.2	1.0	3.8	1.4	0.02*

yrs = years; SD = standard deviation; FSD = female sexual dysfunction.
[a,b] = Numeric Analouge Scale 1–10.
[c–f] = Rating Scale 1–5.
* $p < 0.05$; *t*-test for equality of means.

78% had sexual dysfunction using FSFI

30% had sexual dysfunction and sexual distress simultaneously.

Prevalence and Associated Factors of Female Sexual Dysfunction in Women With Endometriosis

Shuang-zheng Jia, PhD, Jin-hua Leng, MD, Peng-ran Sun, PhD, and Jing-he Lang, MD

(Obstet Gynecol 2013;121:601–6)
DOI: http://10.1097/AOG.0b013e3182835777

- **The prevalence of female sexual dysfunction was 73%**
- **Potential predictors of female sexual dysfunction:**
    1. **pelvic pain intensity OR 3.4**
    2. **DIE OR 4.1**
    3. **Stade III-IV OR 4.4**

Contents lists available at ScienceDirect

European Journal of Obstetrics & Gynecology and Reproductive Biology

journal homepage: www.elsevier.com/locate/ejogrb

Do women with endometriosis have to worry about sex?

SHOW-Q total score and its subscales in endometriosis and healthy women groups.

SHOW-Q	Endometriosis group $n = 182$ (%)	Healthy women group $n = 182$ (%)	P value
SHOW-Q total score			
low	90 (49.55%)	30 (16.52%)	<0.0001
medium	59 (32.42%)	68 (37.42%)	0.16
high	33 (18.11%)	84 (46.11%)	<0.0001
Satisfaction scale			
low	62 (34.12%)	24 (13.22%)	<0.0001
medium	51 (28.03%)	28 (15.41%)	0.001
high	69 (37.93%)	130 (71.42%)	<0.0001
Orgasm scale			
low	89 (48.9%)	34 (18.71%)	<0.0001
medium	54 (29.7%)	75 (41.22%)	0.01
high	39 (21.4%)	73 (40.11%)	<0.0001
Desire scale			
low	107 (58.82%)	29 (15.93%)	<0.0001
medium	38 (20.91%)	64 (35.21%)	0.001
high	37 (20.33%)	89 (48.91%)	<0.0001
Pelvic problem interference scale			
low	30 (16.54%)	122 (67.01%)	<0.0001
medium	51 (28.01%)	50 (27.54%)	0.45
high	101 (55.51%)	10 (5.52%)	<0.0001

Not Just Pain!

Serracchioli et al. 2014

Deep Dispareunia

TIME

Previous experiences of coital pain

↓

Altered awareness of pain recurrence

↓

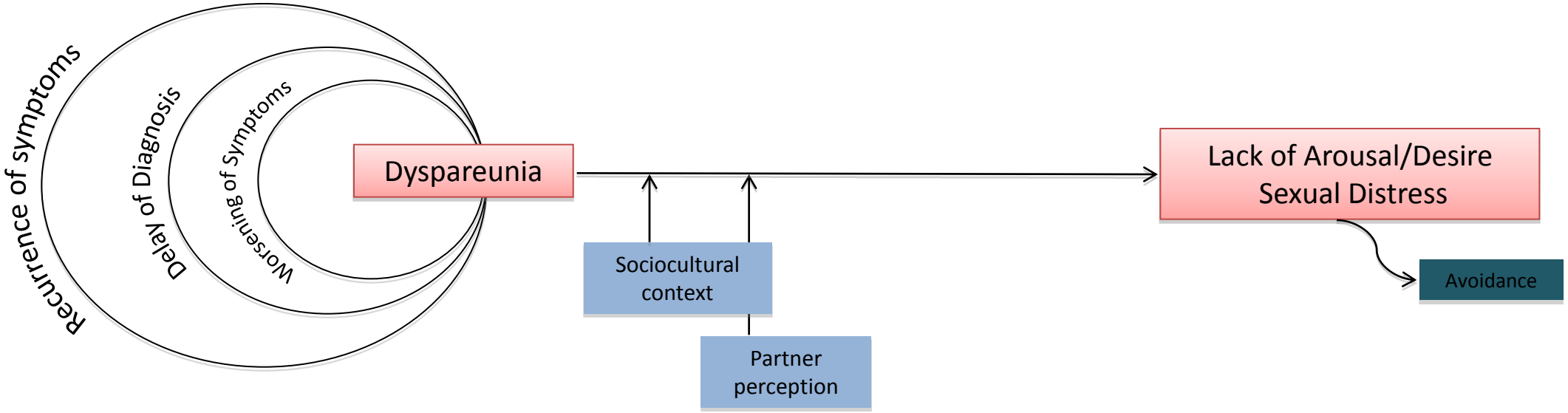
Focus during sexual intercourse turns to sensation of (possible) pain instead of enjoyment

↓

Cognitive scheme of negative expectations that disturbs sexuality

INTESIVITY

Sexuality in endometriosis



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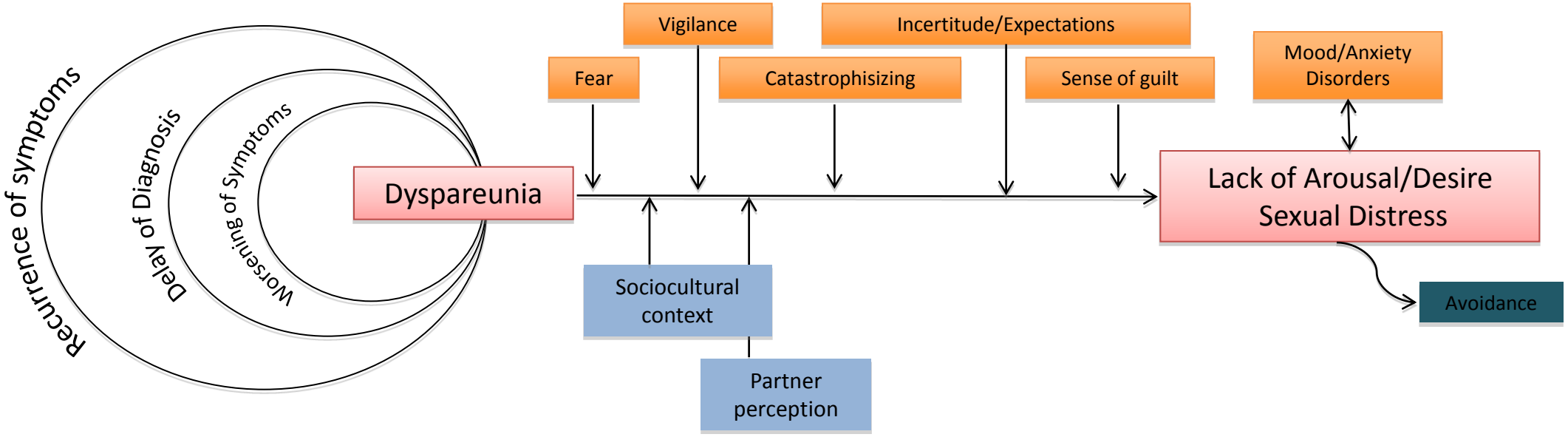
Sexuality in endometriosis

Psychosocial variables



Pluchino N., Hum Reprod Update, 2016

Contents lists available at ScienceDirect

European Journal of Obstetrics & Gynecology and Reproductive Biology

journal homepage: www.elsevier.com/locate/ejogrb

Depressive symptoms, anxiety, and quality of life in women with pelvic endometriosis☆

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[b] Post-Graduation Program in Health Science, Centro de Medicina Reprodutiva, Sociedade de Ginecologia e Obstetrícia, Universidade Federal do Paraná, Rua Imaculada Conceição, 1155, Prado Velho, CEP 80215-901, Curitiba, Paraná, Brazil

86,5% presented depressive symptoms

87,5% presented anxiety

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Keywords:
Endometriosis
Anxiety
Depression
Emotional profile

ABSTRACT

Objective: To assess depressive symptoms, anxiety and quality of life in women with pelvic endometriosis.

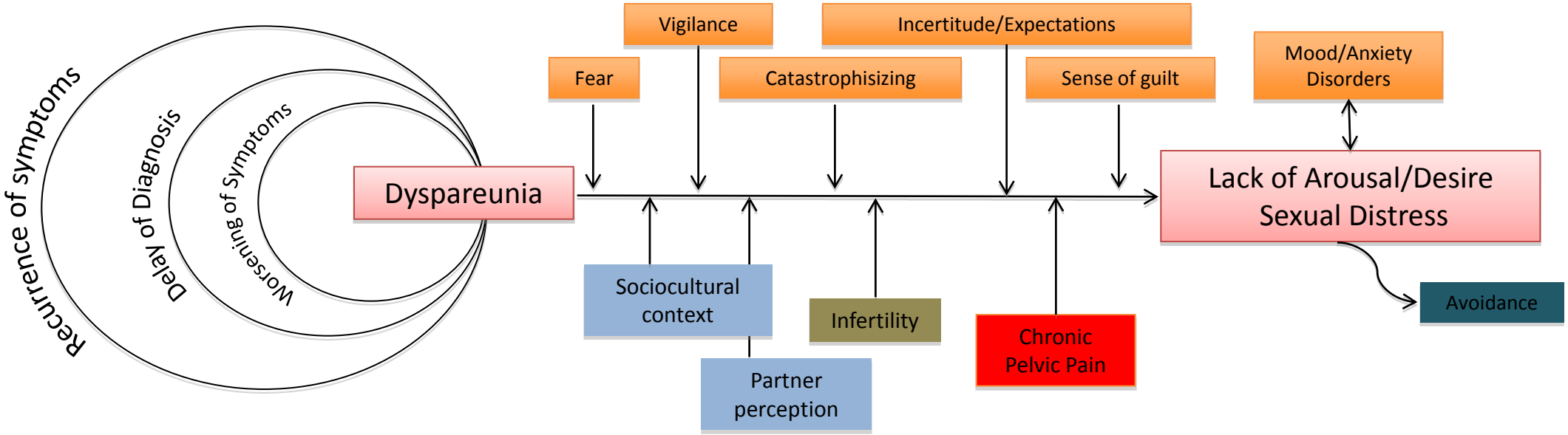
Study design: A prospective study of 104 women diagnosed with pelvic endometriosis. The Beck Depression Inventory (BDI) and the Hamilton Rating Scale for Depression (HAM-D) were used to evaluate depressive symptoms; the Spielberger State–Trait Anxiety Inventory (STAI) and the Hamilton Rating Scale for Anxiety (HAM-A) to evaluate anxiety symptoms; and the short (26-item) version of the World Health Organization Quality Of Life instrument (WHOQOL-BREF) to evaluate quality of life.

Results: Of the patients evaluated, 86.5% presented depressive symptoms (mild in 22.1%, moderate in 31.7%, and severe in 32.7%) and 87.5% presented anxiety (minor in 24% and major in 63.5%). Quality of life was found to be substandard. Age correlated positively with depressive symptoms, as determined using the BDI ($P = 0.013$) and HAM-D ($P = 0.037$). There was a positive correlation between current pain intensity and anxiety symptoms, as assessed using the STAI (state, $P = 0.009$; trait, $P = 0.048$) and HAM-A ($P = 0.0001$). The complaints related to physical limitations increased in parallel with the intensity of pain ($P = 0.017$). There was an inverse correlation between duration of treatment and quality of life ($P = 0.017$). There was no correlation between psychiatric symptoms and endometriosis stage.

Conclusions: A rational approach to endometriosis should include an evaluation of the emotional profile and quality of life. That approach would certainly reduce the functional damage caused by the endometriosis.

Sexuality in endometriosis

Infertility (or fertility concerns) and CPP



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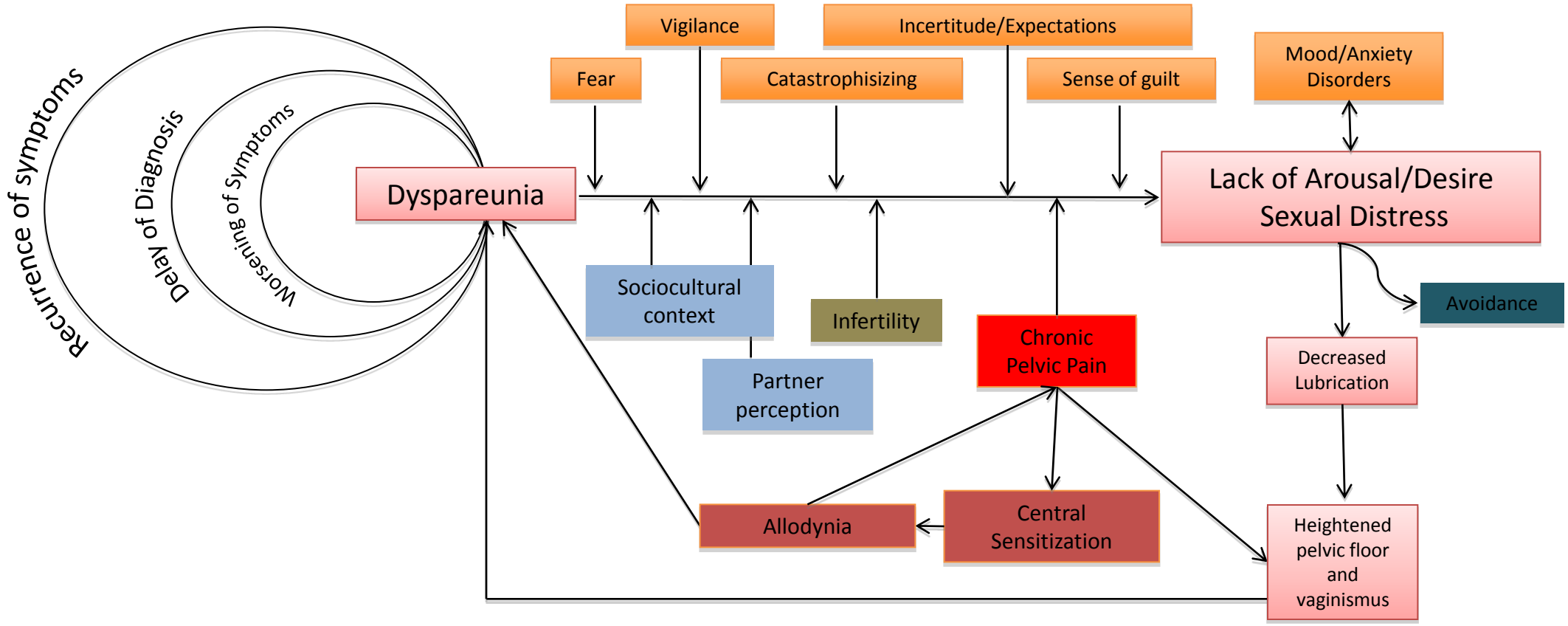
Sexuality in endometriosis

The FEAR-AVOIDANCE model



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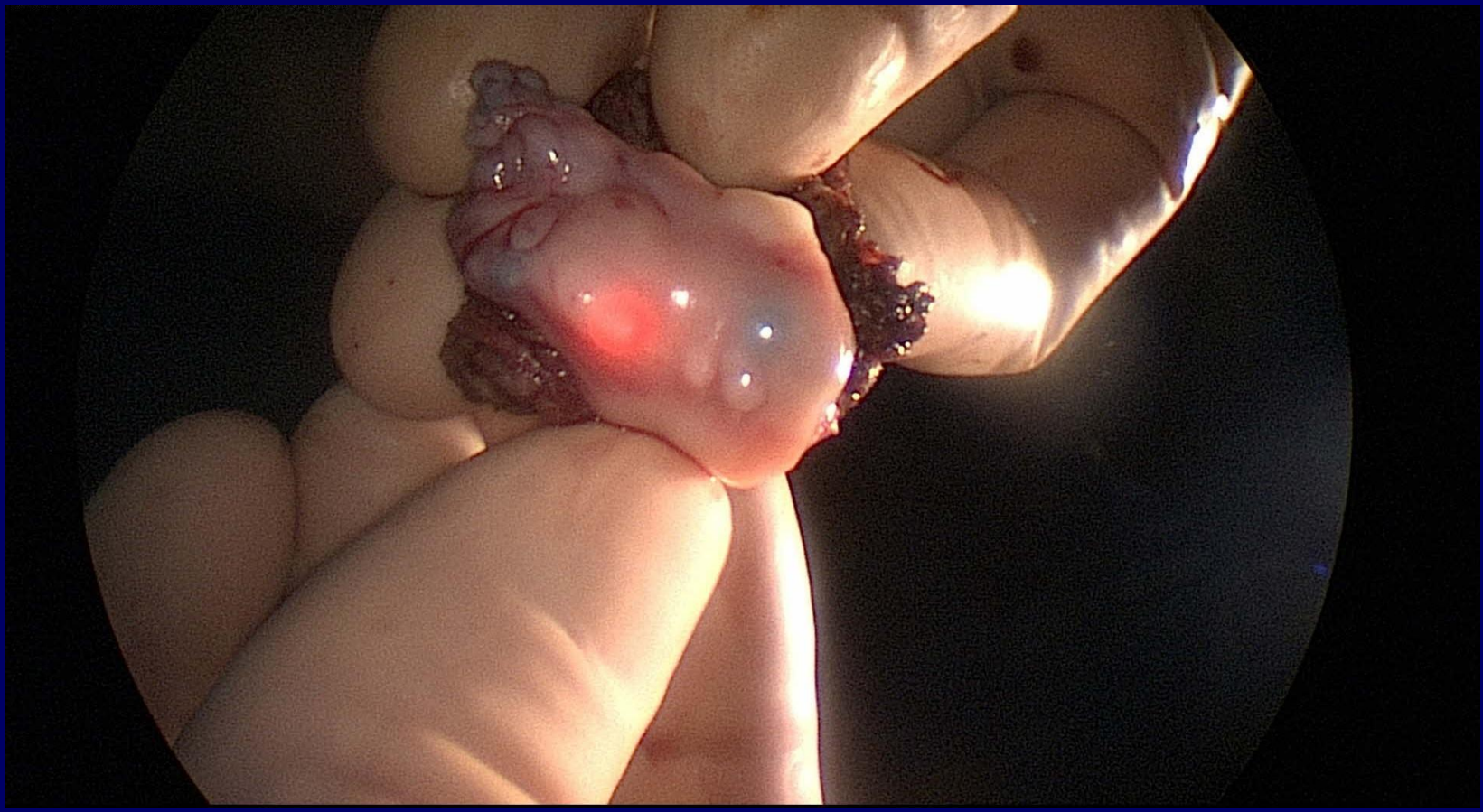

Table I List of studies investigating the effect of surgical management of endometriosis on sexual function.

Reference	Type of study	Number of patients	Type of lesion	Follow-up	Measuring instrument	Result	Note
Garry *et al.* (2000)	Prospective, Observational	57	AFS I-IV	4 months	The sexual Activity Questionnaire	Improved pleasure, habit, discomfort	
Vercellini *et al.* (2003)	RCT	37 without USL resection + 28 with USL resection	AFS I-IV	1 year	Revised Sabbatsberg Sexual Rating Scale	Index score improved in both groups	No effect of USL resection
Abbott *et al.* (2003)	Prospective, Observational	125	AFS I-IV and mixed deep lesions	2–5 (3.2) years	The Sexual Activity Questionnaire	Improved pleasure, habit, discomfort	Results are not controlled for type of procedure
Ferrero *et al.* (2005)	Prospective, Observational	34	AFS I-IV and mixed deep lesions	1 year	Sexual Satisfaction Subscale of the Derogatis Sexual Functioning Inventory	Improved variety in sexual life, frequency of intercourse, relaxed more easily during sex; more satisfying orgasms and more relaxed and fulfilled after sex	
Setala *et al.* (2012)	Prospective, Observational	22	Deep Lesion involving the vagina	1 year	McCoy Female Sexuality Questionnaire	Improved sexual satisfaction and sexual problems; satisfaction with partner unchanged	Results are not controlled for hormone use
Mabrouk *et al.* (2012)	Prospective Observational	103	Mixed deep lesions	6 months	SHOW-Q	Improved satisfaction, desire, pelvic pain. Orgasm unchanged	All patients received post-operative COC.
Meuleman *et al.* (2011)	Retrospective, Observational	30	Deep lesions involving the bowel (bowel	27 (range: 16–40) months	The Sexual Activity Questionnaire	Improved pleasure, habit, discomfort	

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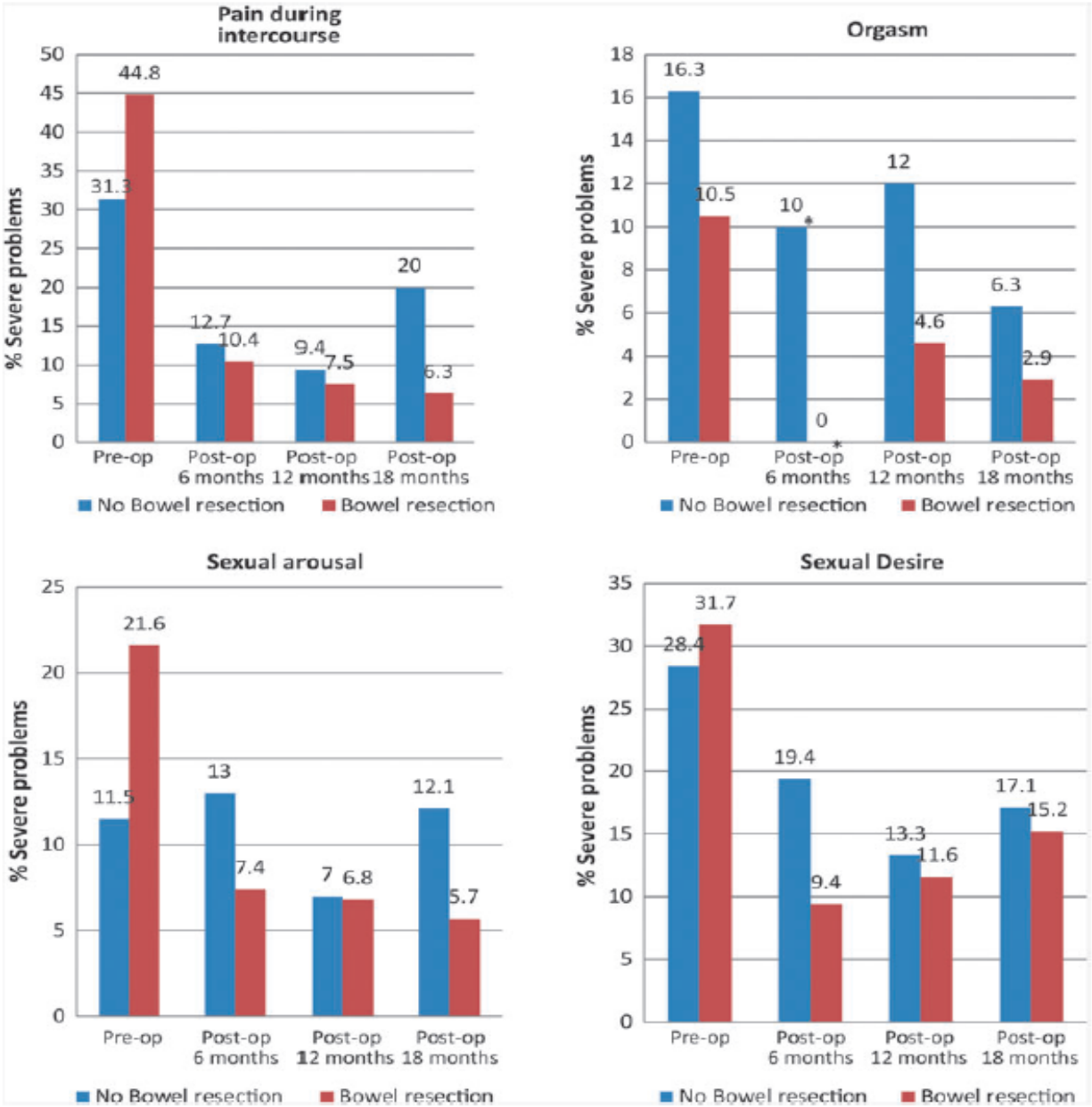
Reference	Type of study	Number of patients	Type of lesion	Follow-up	Measuring instrument	Result	Note
			(bowel resection)				
Di Donato *et al.* (2015)	Prospective	250	Mixed deep lesions	6 months	SHOW-Q	Improved all domains	Results are not controlled for hormone use
Fritzer *et al.* (2016)	Prospective, multicenter	96	AFS I-IV and mixed deep lesions	10 months (9–12)	FSFI and FSD	FSFI unchanged FSD improved only in deep lesions	
Dubuisson *et al.* (2013)	Prospective	20	Mixed deep lesions	23.3 months	Brief Index of Sexual Functioning for Women	Improved desire, arousal, pleasure, orgasm, relational satisfaction	Results are not controlled for hormone use and type of procedure (bowel resection)
Kossi *et al.* (2013)	Prospective, Observational	26	Deep lesions involving the bowel (bowel resection)	1 year	McCoy Female Sexuality Questionnaire	Improved sexual satisfaction; sexual problems and satisfaction with partner unchanged	Results are not controlled for hormone use
Vercellini *et al.* (2013)	Prospective	51	AFS I-IV and mixed deep lesions Second-line surgery	1 year	FSFI	Improved all domains. Score remained below the threshold for sexual dysfunction	
Van den Broeck *et al.* (2013)	Prospective	76 with bowel resection + 127 without bowel resection	AFS III-IV and deep lesions	18 months	Short sexual functioning Scale	Improved arousal, sexual desire, orgasm problems and pain during intercourse. Relationship satisfaction unchanged	
Morelli *et al.* (2015)	Retrospective	10	Deep lesions involving the bowel	1 year	FSFI	Improved pain; other domains unchanged	Results are not controlled for hormone use

Pluchino N., Hum Reprod Update, 2016

human reproduction ORIGINAL ARTICLE *Gynaecology*

Effect of laparoscopic surgery for moderate and severe endometriosis on depression, relationship satisfaction and sexual functioning: comparison of patients with and without bowel resection

U. Van den Broeck[1,*], C. Meuleman[1], C. Tomassetti[1], A. D'Hoore[2], A. Wolthuis[2], B. Van Cleynenbreugel[3], I. Vergote[4], P. Enzlin[5], and T. D'Hooghe[1]



203 Patients

SSFS Questionaire

Hum Rep, 2013

Hormonal Treatment

Table II List of studies investigating the effect of hormonal management of endometriosis on sexual function.

Reference	Type of study	Number of patients (Intervention)	Type of lesion/ inclusion criteria	Follow-up	Measuring instrument	Result	Note
Vercellini *et al.* (2002)	RCT	45 (CA) + 45 (EE + DSG)	Pain recurrence/ persistence after surgery (<1 year)	6 months	Sabbatsberg Sexual Rating Scale	Improved in both groups. Libido decreased in 13% of CA group.	
Guzick *et al.* (2011)	RCT	26 (EE +NETA) + 21 (LA + NETA)	Pain recurrence/ persistence after surgery	1 year (19 patients)	Index of Sexual Satisfaction	Improved only in LA+NETA group after 1 year.	
Vercellini *et al.* (2013)	Prospective	103 (NETA)	Deep dyspareunia recurrence/persistence after surgery (mixed lesions)	1 year	FSFI	Improved all domains. Score remained below the threshold for sexual dysfunction.	
Morotti *et al.* (2014a)	Prospective	25 (DNG)	Rectovaginal lesions in patients not responsive to NETA	6 months	FSFI	Improved total score. Mean score remained below the threshold for sexual dysfunction.	Two doses of NETA had been used.
Vercellini *et al.* (2016)	Retrospective, before and after	90 (NETA) + 90 (DNG)	Mixed lesions	6 months	FSFI	Improved total score in both groups. Score remained below the threshold for sexual dysfunction in both groups.	Results are not adjusted for type of lesion.

CA: cyproterone acetate; LA: leuprolide acetate; NETA: norethindrone acetate; DNG: dienogest.

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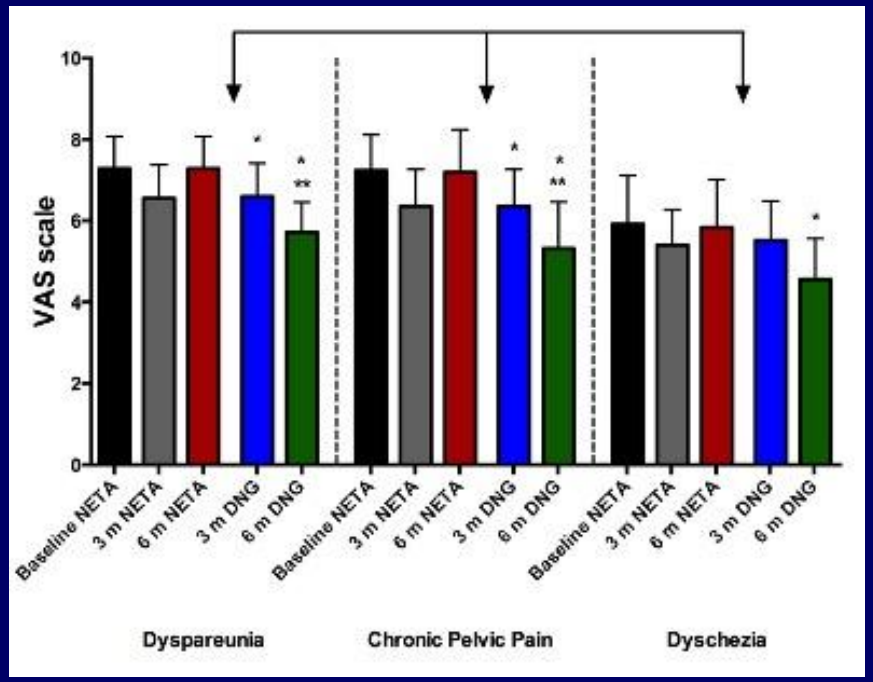
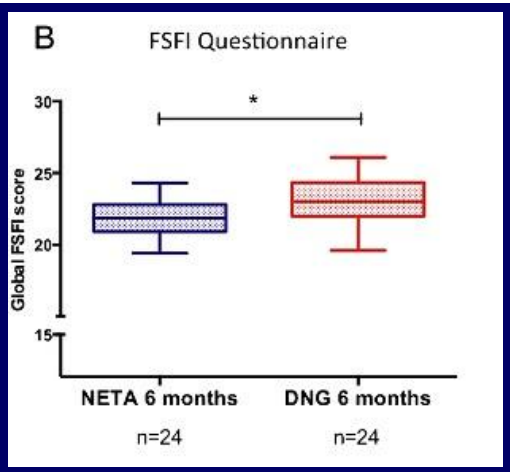
NETA vs DNG

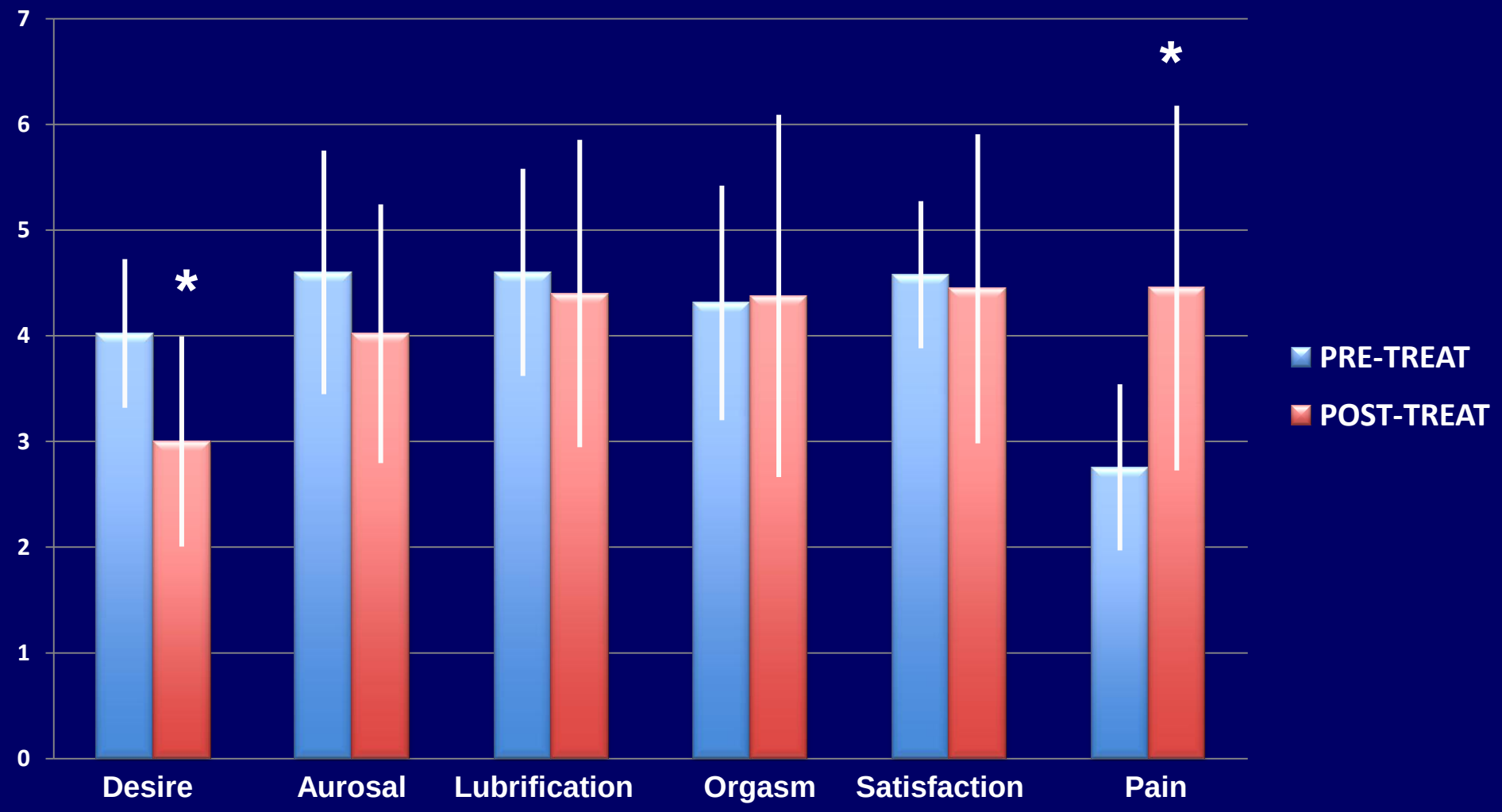
Symptom	Baseline			6 mo		
	NETA (n=87)	Dienogest (n=82)	*P* value[a]	NETA (n=87)	Dienogest (n=82)	*P* value[a]
Dysmenorrhea			.09			.003
Absent	3 (3)	5 (6)		71 (81)	73 (89)	
Mild	2 (2)	3 (4)		14 (16)	2 (2)	
Moderate	37 (42)	20 (24)		2 (2)	7 (8)	
Severe	45 (52)	54 (66)		0 (0)	0 (0)	
Dyspareunia[b]			.15			.75
Absent	1 (1)	7 (8)		48 (55)	47 (57)	
Mild	9 (10)	9 (11)		36 (41)	29 (35)	
Moderate	31 (36)	27 (33)		2 (2)	4 (5)	
Severe	46 (53)	38 (46)		1 (1)	1 (1)	

Vercellini, Fert Steril, 2016





Endometriosis and FSFI



Data on file, 2015

Human Reproduction, Vol.28, No.5 pp. 1221–1230, 2013
Advanced Access publication on February 26, 2013 doi:10.1093/humrep/det041

human reproduction ORIGINAL ARTICLE *Gynaecology*

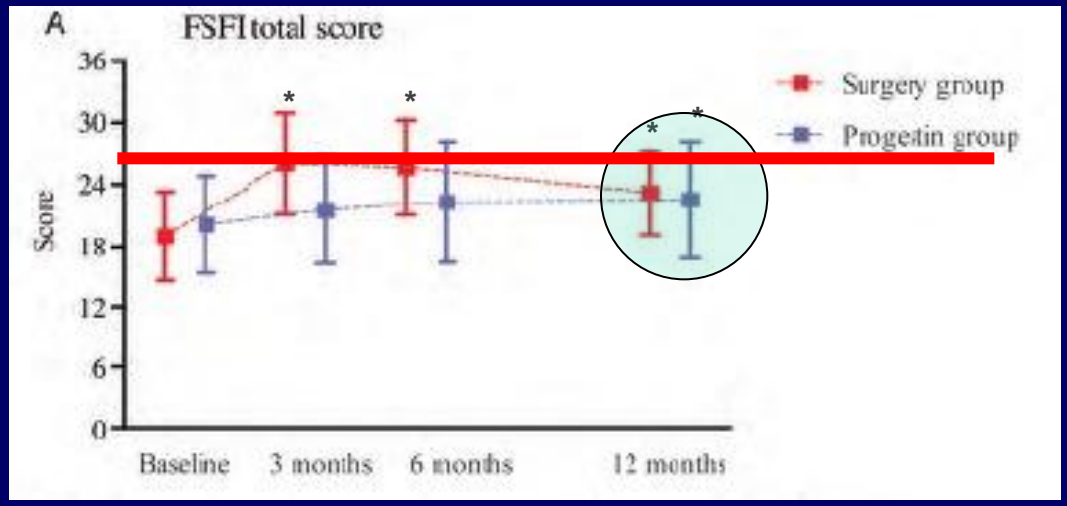
Surgical versus low-dose progestin treatment for endometriosis-associated severe deep dyspareunia II: Effect on sexual functioning, psychological status and health-related quality of life

P. Vercellini[1,2,*], M.P. Frattaruolo[1], E. Somigliana[3], G.L. Jones[4], D. Consonni[5], D. Alberico[1], and L. Fedele[1,2]

Pain recurrence after surgery

Disease stage[b]		
III	17 (33)	47 (46)
IV	34 (67)	56 (54)
Endometriotic cysts	20 (39)	35 (34)
Rectovaginal endometriosis	24 (47)	35 (34)
Baseline FSFI total score (mean ± SD)	19.0 ± 4.3	20.1 ± 4.7
Baseline HADS total score (mean ± SD)	22.9 ± 9.6	20.3 ± 8.6

REDUCED SEXUAL FUNCTION



Conclusions

- Interaction between endometriosis and endometriosis-associated pain and sexual function is complex.

- Deep Dispareunia is only a part of global sexual function, especially in endometriosis.

- The high incidence of sexual dysfunction in endometriosis patients is underestimated.
- Long-time social consequences for partner and relationship are largely unknown.
- Psychopathology may increase endometriosis associated pain and sexual dysfunction.
- Few studies investigate surgery/medical treatment on global sexual function.