

**Hidden Reality Behind Female Contentment**

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Abstract:	<p>Female aging is associated with sexual decline, impaired self-confidence, depression, marital dissatisfaction, or apathy. Several women aspire to resolve interpersonal issues via vaginal rejuvenation, improving vaginal laxity and dyspareunia. Energy-based laser and RF technologies often reduce female sexual sensation while increasing male satisfaction during intercourse. FSFI reports of female contentment are reviewed with respect to females' often prominent tendency to focus on satisfying their partners rather than themselves. Our double blind longitudinal clinical psychological research included 14 women after laser or RF vaginal rejuvenation with high FSFI satisfaction scores. We demonstrated a high positive correlation between FSFI scores and the L (Lie), Hy (hysteria) and D (Depression) scales of the MMPI-2, negating the FSFI reported increase in female sexual satisfaction following laser and RF vaginal rejuvenation. Despite reports to the opposite, Hy and D scales suggest that vaginal rejuvenation did not improve interpersonal relationships or quality of life for these females. Results on the Differential Emotions Scale (DES) reveals that 98% of the subjects were organized around the emotions of shame, sadness and joy. Such results indicate a multi-layered emotional organization reflecting joy on the outside and shame and sadness on the inside. Going down the path that starts with a dismissal of their need for fulfilment to focus on their partners' satisfaction, may bring several women to the endpoint of disingenuous interpersonal relationships tainted by repressed disillusionment. A deeper understanding of the female dynamic is necessary before claiming an improvement in female sexual satisfaction or quality of life.</p>

## Hidden Reality Behind Female Contentment

Xanya Sofra, Ph.D<sup>a</sup>

*<sup>a</sup>Department of Signaling, IELLIOS Research Center, United Kingdom  
e-mail [science@iellios.com](mailto:science@iellios.com) Tel.: 4420332399013*

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**Abstract**

Female aging is associated with sexual decline, impaired self-confidence, depression, marital dissatisfaction, or apathy. Several women aspire to resolve interpersonal issues via vaginal rejuvenation, improving vaginal laxity and dyspareunia. Energy-based laser and RF technologies often reduce female sexual sensation while increasing male satisfaction during intercourse. FSFI reports of female contentment are reviewed with respect to females' often prominent tendency to focus on satisfying their partners rather than themselves. Our double blind longitudinal clinical psychological research included 14 women after laser or RF vaginal rejuvenation with high FSFI satisfaction scores. We demonstrated a high positive correlation between FSFI scores and the L (Lie), Hy (hysteria) and D (Depression) scales of the MMPI-2, negating the FSFI reported increase in female sexual satisfaction following laser and RF vaginal rejuvenation. Despite reports to the opposite, Hy and D scales suggest that vaginal rejuvenation did not improve interpersonal relationships or quality of life for these females. Results on the Differential Emotions Scale (DES) reveals that 98% of the subjects were organized around the emotions of shame, sadness and joy. Such results indicate a multi-layered emotional organization reflecting joy on the outside and shame and sadness on the inside. Going down the path that starts with a dismissal of their need for fulfilment to focus on their partners' satisfaction, may bring several women to the endpoint of disingenuous interpersonal relationships tainted by repressed disillusionment. A deeper understanding of the female dynamic is necessary before claiming an improvement in female sexual satisfaction or quality of life.

## Introduction

Sexual dysfunction among all women is between 25% to 63%. This number dramatically increases in postmenopausal women to 68% or even higher 86.5%. [9] Recent research indicates that only 56% of married women older than 60 (compared to 75% of men) are sexually active [10]. Overall, estrogen decline in aging women, leads to loss of subcutaneous tissue from the pubis, atrophy of labia and shortening and loss of elasticity of the vaginal barrel. The pelvis that supports the anterior vagina shows a decreased ratio of collagen I, III and V. This decreased ratio is apparently the result of a 75% decrease in collagen I in postmenopausal women that disturbs the balance between collagen I and the other collagens. [11] The reduction of vaginal thickness of the epithelium from 8-10 layers to 3-4 leads to bleeding and burning sensations during intercourse. Lactic acid and increased vaginal pH affect the microbial population leading to increased bacterial infections. Women aspire to solve the problems generated by hormonal and collagen structural changes by altering their genital anatomy to gain greater self-esteem and diminish functional discomfort. The field of vaginal rejuvenation surgical procedures has been expanded by laser and RF technologies in the absence of a robust qualitative body of data on the therapeutic advantages of these technologies [12-14]. One of the issues that appears to be quite pervasive is the method of assessing female satisfaction following vaginal rejuvenation. For example, Alinsod's research [13] on 25 women receiving RF vaginal rejuvenation, assessed female sexual satisfaction by an 8 items self-made questionnaire with no established validity or reliability asking straight forward questions such as "did you achieve orgasms after the ThermiVa treatments?" to which 23 out of 25 subjects answered "yes". This question was followed by the question "were your orgasms more or less intense after ThermiVa treatments?" to which 16 out of 25 subjects answered: "no change" and 9 out of 25 subjects answered: "more intense." Provided that all subjects were truthful rather than tailoring their responses to please their doctor or partners, the fact that the technology was clearly effective in increasing orgasms in only 9 of the subjects sets the significance level of this study below chance since only 36% of the subjects experienced an improvement in sexual satisfaction and 64% of the subjects reported no change. The only question that appeared to be statistically significant was the RF effect on vaginal tightening that pertains to increasing male satisfaction. Additionally, it is impossible to assess the long-term effects of this treatment since this research was not longitudinal.

Another study [15] studied 30 "premenopausal" women (21-52 years) treated with a single session of RF therapy. This study was longitudinal and used a battery of tests such as the Female Sexual Function Index (FSFI), the Female Sexual Distress Scale-Revised (FSDS-R) and the Vaginal Laxity and Sexual Satisfaction Questionnaires. The authors reported a significant improvement in sexual functioning and a decreased distress related to sexual activity at the 6-month follow-up. Women also reported decreased vaginal laxity within the first months after the RF treatment. Unfortunately, there are many problems with self-report questionnaires like the FSFI, and FSDS-R or the Vaginal Laxity and Sexual Satisfaction questionnaire. The problems primarily concern the transparency of items, none of which controls for distortion that could range all the way from inadequate self-insight to deliberate faking. Such questionnaires merely collect evidence that confirms the hypothesis of female satisfaction following vaginal rejuvenation intervention. Searching only for confirmation instances leads to phenomenological confirmation bias. Only the absence of falsification instances that makes it impossible to refute the hypothesis can lead to scientific proof based on truth rather than subjective phenomenology [16, 17].

A recent laser study [18] investigated the effects of fractional CO<sub>2</sub> laser on sexual function

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3 and satisfaction in 77 post-menopausal women with atrophy on the basis of the FSFI. At the  
4 12-week follow-up, the authors found a significant improvement in the FSFI total score and  
5 domain scores. A new vaginal rejuvenation technique [19, 20] showed a substantial  
6 improvement in sexual function in a year, especially for FSFI rates of satisfaction. According  
7 to the FSFI, subjects' rate of orgasms significantly increased. Most of them 92.8% were also  
8 satisfied with the vaginal width correction. It should be noted that these results are not  
9 statistically significant. Complications included implant exposure (5%), capsule (3.9%), and  
10 infections (1.7%). Again, the rate of satisfaction with a procedure is as valid and reliable as  
11 the instrument adopted to evaluate the research. The FSFI, and other self-report  
12 questionnaires like the FSDS-R are short, straight forward, prone to lying or a subject's wish  
13 to appear under a positive light. They only verify hypotheses, possibly tainting their research with a  
14 subjective confirmation bias that cannot offer solid scientific proof. We need measures which  
15 comprise objective items, which have no readily discernible connection with the items being  
16 measured since content validity is no guarantee of validity. The Minnesota Personality  
17 Inventory (MMPI-2) [1-7], is well recognized as a highly reliable and valid instrument because  
18 its contains 567 questions including an L (Lie) scale designed to detect answers from  
19 individuals who deliberately hide the truth, or strive to present themselves under a positive light.  
20 The research teams that evaluate female sexual satisfaction on short self-report questionnaires with  
21 no Lie scale, may fail to notice and consider that several women are embarrassed to admit problems  
22 about their sexuality. Many will deny that the problems remain or got worse despite the  
23 expensive treatment, because such admittance would either question the justification of their  
24 decision or signify a self-centered point of view that dismisses the increased level of  
25 satisfaction expressed by their partners. Additionally, women who have faked their orgasms  
26 most of their lives will not suddenly drop their customary façade of pleantry to give negative  
27 feedback to a vaginal rejuvenation procedure. They will be happy that at least their partner is  
28 more satisfied as a result of the procedure.

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33 There are additionally problems with the self-report questionnaires widely used to assess  
34 female satisfaction. For example, the FSFI has been validated on women with a clinical  
35 diagnosis, such as female sexual arousal disorder or female orgasmic disorder, by basically  
36 verifying the accuracy of the diagnosis [21, 22]. Only three of the women in Meston's sample  
37 (2003) met the criteria for dyspareunia, one of the main issues studied and reported by vaginal  
38 rejuvenation studies. FSFI has not been validated on the same population of normal females  
39 included in laser and RF studies mostly represented by women who make a lifestyle choice to  
40 potentially improve their sex lives. Additionally, FSFI has not been validated in demonstrating  
41 improvement of dyspareunia, or general dissatisfaction in the sexual aspect of interpersonal  
42 relationships. It has only been validated on confirming the diagnosis of pathological sexual  
43 dysfunction, which is not the same thing. Additionally, there are some scoring problems  
44 related to the FSFI scoring. Of the 19 FSFI items, 15 items have a response option of "no  
45 sexual activity" or "did not attempt intercourse," which is assigned a score of zero if  
46 selected. The FSFI scoring algorithm assumes that the zero category indicates the lowest level  
47 of functioning on each item's ordinal response scale. However, these 15 items measure sexual  
48 activity in addition to their intended sexual functioning domain, thus violating the  
49 psychometric assumption of item unidimensionality when administered to women with no  
50 recent sexual activity [7-8].

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54 The different laser and RF methods touting female satisfaction from successful vaginal  
55 rejuvenation stand against the strict comments from a number of Federal agencies and Medical  
56 Associations. The U.S. Food and Drug Administration recently issued a stern warning (US  
57 Food and Drug Administration, 2018) about procedures that destroy or reshape vaginal tissue  
58 using lasers or other energy-based devices, such as RF. The warning elaborates that "the full  
59 extent of the risks is unknown... reports indicate that these procedures can cause serious  
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3 harm". The American College of Obstetricians and Gynecologists (2007) has stated that "women  
4 should be informed about the lack of data supporting the efficacy of these procedures and their  
5 potential complications, including infection, altered sensation, adhesions, and scarring". The  
6 Royal College of Obstetricians and Gynecologists stated in 2013 that "Presenting Female  
7 Cosmetic Genital Surgery (FCGS) procedures as an unproblematic lifestyle choice is  
8 inappropriate" (Royal College of Obstetricians and Gynecologists, 2013). The Royal  
9 Australian and New Zealand College of Obstetricians and Society of Obstetricians and  
10 Gynecologists of Canada holds a public stand against FCGS (The Royal Australian and New  
11 Zealand College of Obstetricians and RANZCOG College Statement: 24, 2015. [23]

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13 An extensive review paper [24] strongly recommend that psychological and counseling is  
14 proposed to all women who seek genital cosmetic surgery, firstly to help identify untreated  
15 psychiatric conditions, and lastly to help some women identify the true origin of their sexual  
16 dysfunction problems that may be interpersonal or in nature. Earlier research has also  
17 underlined the association between body dysmorphic disorder, a psychiatric condition, and the  
18 request for cosmetic surgery [25].

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20 On the opposite end lie non-invasive strategies claiming to improve vaginal atrophy and  
21 dryness, such as lubricants and estrogen plus replacement therapy [26]. This part of research brings  
22 us closer to the hormonal imbalance that is intricately related to both sexual and psychological  
23 problems involving anxiety, depression and hysteria. A systematic review and meta-analysis of  
24 randomized controlled trials found a positive association between hormone therapy (estrogen  
25 alone or in combination with other hormones) and improvement in sexual function in women  
26 with menopausal symptoms or in early menopause [27]. The results of these studies, however,  
27 suggest that hormone therapy is primarily beneficial in alleviating pain during intercourse,  
28 whereas evidence specific to increased sexual desire, female satisfaction and improved quality  
29 of life is lacking [32]. The most important criticism of hormone therapy is its narrow spectrum,  
30 focusing exclusively on specific hormones without considering the possibility that female  
31 sexual behavior, self-confidence and satisfaction may be intrinsically related to hormonal  
32 balance, a complex constellation of over 200 hormones that have been discovered in the human  
33 body that depend on both optimum concentration levels of individual hormones and their  
34 interactions at different ages. If the replacement of one or two hormones could solve the  
35 problems of female sexuality and aging, solutions would be instant and symptoms would not  
36 start piling up, manifested in terms of decreased metabolism, increased visceral fat deposits,  
37 hair loss, decreased mobility, increased incidence of body aches and impaired self-confidence  
38 leading to marital dissatisfaction, hopelessness, conflicts, or apathy. Hormonal imbalance is a  
39 complex systemic problem defined by decreases in certain hormones (e.g. sex hormones, thyroid  
40 and growth hormones) which may be further aggravated by toxicity, oxidative damage and  
41 increases in other hormones (e.g. cortisol).

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43 Our thesis is that a systemic problem that involves several intertwined components  
44 interacting at different degrees of balance, is eventually transformed into a Gestalt, an  
45 irreversible entity that is not only more but it is also independent from the sum of its parts. A  
46 Gestalt has a life and a disposition of its own that cannot be found in any of the parts that  
47 compose it. A Gestalt cannot be solved by treating only part of the problem, like performing  
48 vaginal rejuvenation, or replacing particular hormones. A concrete example to illustrate this  
49 abstract problem is a modern painting with several parts of a face subtracted and yet, the face  
50 shape and identity remain, despite the omissions. Similarly, the process of substituting a few  
51 hormones that cause hormonal imbalance, thus eliminating certain aspects of the hormonal  
52 imbalance does not equal to hormonal balance. An example of the intricacy and complication  
53 of the hormonal balance construct is given in the analysis that follows. Sexual desire and  
54 decreased female orgasms are believed to be regulated by neuromodulators (neurotransmitters  
55 and hormones) of excitatory pathways (dopamine, norepinephrine, melanocortins, oxytocin,  
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3 etc.) and inhibitory pathways (serotonin, opioids, endocannabinoids) in addition to estrogen,  
4 progesterone, testosterone, cortisol, etc. Sex steroid hormones are synthesized from cholesterol  
5 and exert pleiotropic effects notably in the central nervous system. Due to their anti-  
6 inflammatory, antioxidant, and anti-apoptotic properties, sex steroids also exert  
7 neuroprotective properties in the brain, particularly after CNS insults such as stroke and  
8 traumatic brain injury [31]. Sex steroids are delivered from the gonads to target cells, including  
9 immune cells. Immune cells possess an extensive capacity to generate and metabolize sex  
10 steroids. Sex steroid secretion by immune cells could confer paracrine signaling effects in  
11 neighboring cells within metabolic tissues. Immune cell intracrinology appears to reveal key  
12 mechanisms underlying immune cell-mediated metabolic regulation, and so on. Sexual desire  
13 is not a simple event like pressing a button on or off, but a long sequence of intertwined  
14 dynamic events that start with sexual desire and radiate through the entire communications  
15 network of the body.  
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### 19 **Methodology**

20 Data from 14 females, aged 45-59, was collected over a period of six years (2012-2018)  
21 on the basis of their testing battery records and specifically the FSFI, the K scale, assessing  
22 normality, the Code scores of the MMPI-2, the Lie (L), Depression (D) and Hysteria (Hy)  
23 scales of the MMPI-2, the Differential Emotions Scale (DES), and psychotherapy notes. The  
24 main inclusion factors were: a/ All females had previously received at least one vaginal  
25 rejuvenation procedure with energy-based technologies like laser and RF. b/ The battery of  
26 tests, MMPI-2, and DES were administered at least one month following the vaginal  
27 rejuvenation procedure. c/ The FSFI was administered by the doctor who had performed the  
28 vaginal rejuvenation procedure. d/ All patients had relatively low scores on the K validity  
29 scale of the MMPI-2, yet not low enough to indicate normal functioning, basically,  
30 suggesting some degree of psychopathology in the absence of a severe mental illness. The  
31 “d” factor of inclusion intended to eliminate females with a serious mental disorder and only  
32 involve those with less severe psychological problems. The MMPI-2 K scale has 30 items  
33 measuring self-control, family and interpersonal relationships, designed to identify  
34 psychopathology, which is the most severe when individuals have high K scores. All 14  
35 women had been in psychotherapy for at least one month prior to their vaginal rejuvenation  
36 procedure and at least four months following their vaginal rejuvenation procedure. The reason  
37 for psychotherapy was lack of overall satisfaction in interpersonal relationships that included  
38 sexual issues, mild depression and anxiety. None of these women was on any psychiatric  
39 medication. The subjects’ MMPI-2 Code 13 or 31 score indicated a character structure  
40 defined as follows: “Immature, egocentric, selfish; sees self under a positive light as normal,  
41 responsible and without fault; insecure with strong needs for attention and affection. Often  
42 dependent but denying dependency, socially extraverted but lacking genuine involvement  
43 with people despite overt devotion, optimism and Pollyannaism. Harbors resentment and  
44 hostility when experiencing lack of support or being overcontrolled and is often passive-  
45 aggressive. Physical symptoms and complaints often increase under stress. Main defences  
46 include denial and rationalization.”  
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52 All females included in the study gave their consent to the anonymous release of their  
53 clinical records, including the relevant clinical notes from their sessions. The clinical records  
54 included a battery of tests such as the Minnesota Multiphasic Personality Inventory (MMPI-  
55 2), the Female Sexual Function Index (FSFI) questionnaire and Izard’s Differential Emotions  
56 Scale (DES) of basic emotions. The MMPI-2 is a 567-item standardized psychometric test of  
57 adult personality and psychopathology based on a large number of reliability and validity  
58 studies [1-7]. The FSFI [14] [15] is female sexual functioning brief questionnaire measure  
59 assessing domains of sexual functioning (e.g. sexual arousal, orgasm, satisfaction, pain).  
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According to its developers “The FSFI may be useful for evaluation of treatment outcome in a clinical trial situation, but this remains to be demonstrated.” The DES is a validated 30 item self-report inventory, with each item scored on a 5-point Likert system [37] [38–44]. DES items are sensitive indicators of innate facial expressions postulating 10 basic emotions, universally discernible in the human facial expression: Interest, Joy, Surprise, Sadness, Anger, Disgust, Contempt, Fear, Shame and Guilt. The reason for choosing a discrete emotions instrument was to investigate the subjects’ unexpressed feelings on the premise that emotions are often experienced and described as a visceral event, like for example when we describe disappointment as a sinking heart and nervousness as butterflies in the stomach.

Subjects results on the FSFI were correlated with the L(Lie) validity scale of the MMPI which consists of 15 items and is intended to identify individuals who are deliberately trying to present themselves under a positive light, basically distorting reality. FSFI was also correlated with the Hy (Hysteria) subscales that reveal a tendency to repress feelings and the need for other’s approval, specifically the Hy2 (need for affection), H3 (lassitude malaise assessing a general feeling of unhappiness in the home environment) and Hy (inhibition of aggression) subscales of the MMPI-2, and the D (Depression) subscales indicating a general dissatisfaction with one’s life, specifically the D1 (subjective depression) and D4 (mental dullness), D5 (brooding / worrying) subscales scores of the MMPI-2. These subscales also reflected the subjects highest scores, once again confirming the absence of severe psychopathology in these women.

None of the subjects had any other psychological or medical issues not reported in this study. The administration of psychological tests involves no contraindications, warnings, side effects or adverse reactions so such information was not applicable in our study. After making sure that all subjects had thoroughly understood the information, all subjects were told that they had the right to refuse participation and were then presented with the consent form which they had to read thoroughly and sign. Informed consent was obtained from all individual participants included in the study. None of the subjects were in a dependent relationship with Dr Xanya Sofra. None of the subjects had a bias or a personal interest in the direction of the study results.

### Results:

Results of the 14 women’s high scores on the FSFI indicated that the subjects perceived sexual satisfaction following their vaginal rejuvenation procedure with either a laser or RF technology. Both technologies produced high scores on the FSFI as shown on table 1.

Subjects	Type of Vaginal Rejuvenation Procedure	FSFI Score	FSFI Orgasm Score	FSFI Satisfaction Score	FSFI Arousal Score
1	Laser	32	4	5	2
2	Laser	30	3	5	2
3	RF	33	5	5	3
4	RF	29	4	4	2
5	Laser	30	5	4	4
6	RF	28	4	4	3
7	Laser	31	5	4	3
8	RF	28	4	4	2
9	RF	29	4	4	3
10	Laser	31	4	5	4

11	Laser	30	4	4	2
12	RF	29	3	4	4
13	Laser	31	5	4	4
14	RF	28	3	3	5

The average mean score of all subjects on the FSFI was 29.92. Most subjects gave high scores on the satisfaction and orgasms subscales, and lower scores on the arousal, subscale which appeared interesting, therefore we included these 3 subscales on table 1, just for reference. According to the psychotherapy notes, when a distinction was drawn between personal sexual satisfaction and that of sexually fulfilling their partners, 99% of women admitted that although it was a relief not experiencing pain during intercourse, some of the sexual sensation they had prior to the vaginal rejuvenation had either dissipated or was mostly muffled. They also admitted that their orgasms were less frequent than before the procedure. All of these women had reported improved orgasms in their FSFI questionnaires given to them after their vaginal rejuvenation, so it is not clear if they had simply been untruthful or whereas they were referring to their partners' orgasms rather than their own.

#### Correlation between the MMPI-2 scales and the FSFI scores:

FSFI scores were plotted against the MMPI-2 L, D and Hy scales of the MMPI-2 depicted on Table 2. The L-scale scores range from 1-9 with scores higher than 5 revealing dishonesty. The D-scale scores that fall within the 55-64 range reveal a general sense of dissatisfaction with life situation and lacking self-confidence. The Hy-scale scores that fall within the 55-64 range reveal denial, immaturity, need for approval, being suggestible and attention seeking.

Subjects	Type of Vaginal Rejuvenation Procedure	FSFI Score	MMPI-2 L validity scale	MMPI-2 D scale	MMP1-2 Hy Scale
1	Laser	32	8	59	60
2	Laser	30	7	57	59
3	RF	33	8	61	63
4	RF	29	6	57	59
5	Laser	30	8	57	57
6	RF	28	6	56	57
7	Laser	31	8	59	61
8	RF	28	7	57	60
9	RF	29	7	57	58
10	Laser	31	8	61	64
11	Laser	30	8	60	62
12	RF	29	7	57	61
13	Laser	31	8	59	63
14	RF	28	6	56	58

Results were analyzed both with the Pearson Correlation Coefficient and the Spearman's Rho statistical tests.

#### Correlation between FSFI and MMPI-2 Lie Scale: Pearson Correlation Coefficient

*X Values*



$$\sum = 419 \quad \text{Mean} = 29.929$$

$$\sum(X - M_x)^2 = SS_x = 30.929 \quad Y \text{ Values}$$

$$\sum = 102 \quad \text{Mean} = 7.286$$

$$\sum(Y - M_y)^2 = SS_y = 8.857$$

*X and Y Combined*

$$N = 14$$

$$\sum(X - M_x)(Y - M_y) = 13.286$$

*R Calculation*

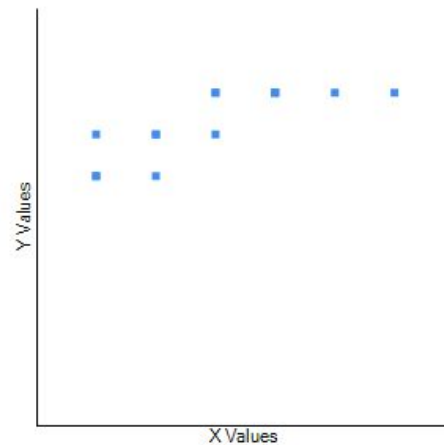
$$r = 13.286 / \sqrt{((30.929)(8.857))} = 0.8027$$

*Meta Numeric (cross-check)*

$$r = 0.8027$$

$$R = 0.8027. \quad R^2 = 0.6443$$

*The P-value is 0.000549. The Result is significant at  $p < 0.01$*



### **Correlation between FSFI and MMPI-2 Lie Scale: Spearman's Rho**

$$r_s = 0.85864, p \text{ (2-tailed)} = 8E-05.$$

Spearman's Rho revealed that the association between the two variables is statistically significant. Results showed a strong positive correlation between the high FSFI scores of sexual satisfaction and the L-scale of the MMPI-2, confirming the statistically significant results obtained by the Pearson Correlation Coefficient. This significantly positive correlation between the two variables suggests that either these women were untruthful in their FSFI responses or they had a tendency to deny or deliberately distort reality.

### **Correlation between FSFI and MMPI-2 D Scale Pearson Correlation Coefficient**

*X Values*

$$\sum = 419$$

$$\text{Mean} = 29.929$$

$$\sum(X - M_x)^2 = SS_x = 30.929$$

*Y Values*

$$\sum = 813$$

$$\text{Mean} = 58.071$$

$$\sum(Y - M_y)^2 = SS_y = 38.929$$

*X and Y Combined*

$$N = 14$$

$$\sum(X - M_x)(Y - M_y) = 29.071$$

*R Calculation*

$$r = 29.071 / \sqrt{((30.929)(38.929))} = 0.8378$$

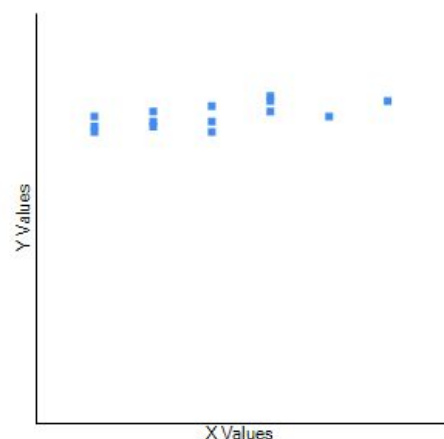
*Meta Numerics (cross-check)*

$$r = 0.8378$$

$$R = 0.8378 \quad R^2 = 0.7019$$

*The p-value is 0.000184.*

*The result is significant at  $0 < 0.01$ .*



**Correlation between FSFI and MMPI-2 D-Scale: Spearman's Rho**

$$r_s = 0.86086, p \text{ (2-tailed)} = 8E-05.$$

Spearman's Rho correlation revealed that the association between the two variables is statistically significant. Results showed a strong positive correlation between FSFI scores and the D-scale of the MMPI-2 in both the Pearson correlation coefficient and the Spearman's Rho tests, suggesting that the reports of sexual fulfilment and interpersonal satisfaction on the FSFI were based on a superficial positive outlook shielding an underlying general feeling of unhappiness in their home environment.

**Correlation between FSFI and MMPI-2 Hy-Scale: Pearson Correlation Coefficient**

*X Values*

$$\sum = 419$$

$$\text{Mean} = 29.929$$

$$\sum(X - M_x)^2 = SS_x = 30.929$$

*Y Values*

$$\sum = 842$$

$$\text{Mean} = 60.143$$

$$\sum(Y - M_y)^2 = SS_y = 67.714$$

*X and Y Combined*

$$N = 14$$

$$\sum(X - M_x)(Y - M_y) = 29.143$$

*R Calculation*

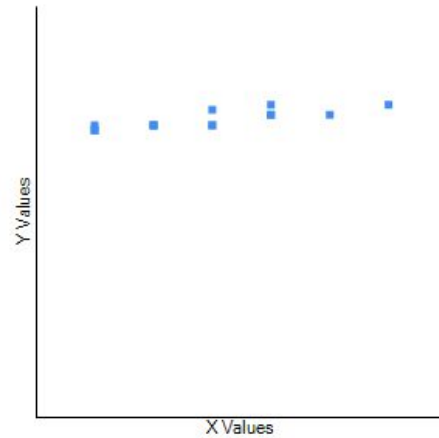
$$r = 29.143 / \sqrt{(30.929)(67.714)} = 0.6368$$

*Meta Numerics (cross-check)*

$$r = 0.6368$$

$$R = 0.6368. \quad R^2 = 0.4055$$

The P-value is 0.014326. The result is significant at  $p < 0.05$

**Correlation between FSFI and MMPI-2 Hy-Scale: Spearman's Rho**

$$r_s = 0.64193, p \text{ (2-tailed)} = 0.01332.$$

Spearman Rho correlation revealed that the association between the two variables is statistically significant. Results showed a strong positive correlation between FSFI scores and the Hy-scale of the MMPI-2 in both the Pearson Correlation Coefficient and the Spearman's Rho tests, suggesting that the reports of sexual satisfaction on the FSFI did not reflect these women's true feelings but was merely driven by their need for approval and affection and perhaps the unrealistic optimism that the pretence of happiness will make everything alright.

The scores of the 14 female subjects on the DES reached the highest scores on the discrete emotions of shame, sadness and joy reflecting an almost surrealistic juxtaposition of contradictory layers, the covert front layer of sexual satisfaction and contentment shielding the hidden layer of unspoken discontent. All women reported physical symptoms, mostly related to the incidence of body aches and indigestion. It is not clear whether the reported physical symptoms were an aspect of the subjects' personality constellation that was characterized by hysterical features as seen in the MMPI-2 or whether there was a significant correlation between the three dominant discrete emotions in our study group (shame, sadness and reported joy) and physical illness.

A high correlation between shame and sadness was observed in a previous unpublished study where 92 subjects were tested with the DES. In that study the DES was correlated with a

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3 10 point Likert scale of self-reported physical health, that was assessed by subjects rating  
4 themselves from 0 - 10 on the following variables for the past two years: Health Problems,  
5 Frequency of Illness, Energy Level, Sense of Well-being and Overall Health. Results revealed  
6 that shame ( $p < 0.0001$ ) and sadness ( $p < 0.001$ ) had the highest negative correlation with overall  
7 physical health, while anger ( $p < 0.0001$ ), had the highest overall positive correlation with  
8 physical health. Interest ( $p < 0.01$ ) joy ( $p < 0.05$ ) and contempt ( $p < 0.05$ ) had a statistically  
9 significant positive correlations with physical health, indicating that people organized around  
10 interest or contempt are usually relatively healthier than others. Fear, disgust and guilt had a  
11 negative correlation with physical health however, these three emotions did not reach statistical  
12 significance suggesting that relatively to individuals organized around shame and sadness and  
13 fear, those organized around disgust and guilt are usually healthier. Surprise had a positive  
14 correlation with overall physical health but did not reach statistical significance. The results  
15 of our current sample where there appeared to be an association between shame, sadness and  
16 joy and physical illness may either indicate hysterical traits or a much more complex  
17 condition that borders type C Personality, discussed in more detail in the next section.  
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### 21 **Conclusions:**

22 The success of interpersonal relationships is largely dependent on understanding and  
23 improving quality of life in the female, who is usually in charge of maintaining the foundation,  
24 continuity and integrity of a relationship. This is not a simple matter but a multi-faced,  
25 psycho-physiological composite that cannot be modified without altering both its physiological  
26 and psychological components. The results we obtained on the DES should be re-examined  
27 for further reliability and validity. However, it is somewhat alarming that our sample of  
28 women who reported a positive outcome on the FSFI accompanied by a high Lie score and  
29 depressive / hysterical traits were organized around the emotions of shame, sadness and joy  
30 along with higher than average reports of physical illness. This multidimensional landscape  
31 reflected a multilayered overtly positive and covertly negative emotional configuration. A  
32 person organized around shame, prone to hide feelings behind the pleasant façade of joy  
33 (according to the DES results) may underlie the emotional organization of the type C  
34 personality that is vulnerable to cancer.  
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37 The Type C personality is a dramatic example of how repressed emotions can  
38 undermine not only sexuality, but overall health. The Type C personality traits include: (i)  
39 difficulty in expressing emotions; (ii) an attitude or tendency toward helplessness and  
40 hopelessness; (iii) maintaining a façade of pleasantness even under the most painful or  
41 aggravating circumstances; (iv) being focused on others' needs and striving excessively to  
42 please people that surround them [28-29]. Individuals with Type C personality keep their  
43 feelings under wraps, never expressed anger, and rarely acknowledge fear or sadness. Type C  
44 personality is a polar opposite of Type A personality defined by pathological impatience, highly  
45 charged competitive tendencies, and the frequent expression of anger and hostility while being  
46 consistently focused on their own needs. A more recent study that compared cancer patients  
47 against healthy controls found that type C personality was significantly more prominent in  
48 cancer patients [30].  
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51 In any case, shame has a profound impact on adult romantic relationships due to the  
52 pervasive sense of self-failure and unworthiness. Shame drives females to hide their flawed  
53 self and avoid the intimacy of relationships that might reveal inadequacies and lead to further  
54 rejection. Emotional organization around shame will distort a subject's sincerity on self-report  
55 questionnaires, therefore it is quite relevant when one administers self-report questionnaires like  
56 the FSFI or the FSFS-R. Emotional organization around sadness may be related, among other  
57 things, to hormonal imbalance. Emotional organization and hormonal imbalance must be taken  
58 into consideration when investigators rely on the results of self-report questionnaires which may  
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3 be false and therefore invalid and unreliable. Looking at hormonal imbalance alone, however,  
4 despite its complexity, is still short of providing a comprehensive perspective on female  
5 sexuality. Research has confirmed [33] that psychological factors diminishing arousability  
6 were identified in 85% of females with depression contributing to low sexual desire in 43% of  
7 them. Androgen deficiency, the cause suggested by referring doctors who prescribe hormonal  
8 therapy, contributed to low sexual desire in only 25% of these forty-seven women.  
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12 It should be noted that the U.S. Food and Drug Administration hasn't approved vaginal  
13 laser treatments for what's known as vulvovaginal atrophy, a condition that often accompanies  
14 menopause and can include symptoms like vaginal dryness, painful intercourse and urinary  
15 incontinence, emphasizing that the safety and effectiveness of these treatments is unproven.  
16 Recent research [34] reported four cases which demonstrated complications after completion of  
17 three consecutive laser treatments for vaginal rejuvenation. Complications included fibrosis, scar-  
18 ring, agglutination, and penetration injury including vaginal tearing, bleeding and scar tissue  
19 formation ultimately causing obstructions. Overall, intercourse became more painful after laser  
20 treatments than it was before. This sample, however, is too small to draw any reliable  
21 conclusions.  
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24 Overall, in the absence of a lie scale and without further exploration of hormonal  
25 imbalance or other contributing psychological factors, self-report questionnaires or clinical  
26 interviews posing straight forward question, may be simply collecting inaccurate data rendering  
27 the study's validity and reliability questionable at best. Without a full diagnostic profile  
28 including both psychological and physiological data, it is unclear how many women are really  
29 satisfied by vaginal rejuvenation interventions performed by energy-based devices like lasers  
30 and RF. Empowering the woman means first understanding both the physiological and  
31 psychological female dynamics and then adopting methods and interventions that can safely and  
32 genuinely help women improve their psychophysiological health, sexuality and interpersonal  
33 relationships. The female dynamic profile should be based on a comprehensive assessment of  
34 overall health status, hormonal balance, optimum weight, emotional organization and  
35 psychological stability.  
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38 Psychotherapy may turn out to be a crucial addition in successfully treating women.  
39 Some of the most commonly important psychotherapy targets are given below:

- 40 1. Introduce individuals to themselves for a realistic self-appraisal and appreciation of  
41 strengths and weaknesses.
- 42 2. Psychotherapy must be designed to increase degrees of freedom by freeing the patient from  
43 the stickiness of past failures, abandonment in relationships, resentments and losses, so  
44 that they get ready to welcome new beginnings and opportunities.
- 45 3. Educate individuals on how to turn adversity into advantage. Learn how to utilize both  
46 character advantages and character flaws in a productive manner.
- 47 4. Help individuals abandon self-deprecating attitudes, self-blame, pathological  
48 dependence and eternal pessimism. Enhance self-driven motivation, self-reliance,  
49 self-confidence and persistence in completing tasks.
- 50 5. Gear Individuals towards a realistic appraisal and acceptance of themselves and others  
51 that renders realistic expectations, thus avoiding repetition of unresolved conflicts in  
52 interpersonal relationships.
- 53 6. Help individuals realistically evaluate life events and situations and develop a strategy  
54 that brings solutions, avoiding teleological explanations and attitudes that give the  
55 distorted perspective of self-punishment or predetermined destiny.  
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