

# The Female Sexual Function Index (FSFI): A Potential “Gold Standard” Measure for Assessing Sexual Function in Women

Sand M,<sup>\*</sup> Rosen R,<sup>†</sup> Meston C,<sup>‡</sup> and Brotto L<sup>§</sup>

<sup>\*</sup>Boehringer Ingelheim Pharmaceuticals, Inc., Ridgefield, CT, USA;  
<sup>†</sup>New England Research Institutes, Watertown, MA, USA;  
<sup>‡</sup>Department of Psychology, University of Texas at Austin, Austin, TX, USA;  
<sup>§</sup>Department of Obstetrics/Gynaecology, Division of Gynaecologic Oncology, University of British Columbia, Canada.

## ABSTRACT

**Objective** The Female Sexual Function Index (FSFI) is a 19-item self-report inventory designed to assess female sexual function. It comprises six domains: desire [two items], arousal [four items], lubrication [four items], orgasm, satisfaction and pain [three items each]. The purpose of this systematic and comprehensive literature review was to identify the number and focus of published articles on the FSFI to determine its level of acceptance by the scientific community.

**Methods** The key terms “Female Sexual Function Index” and “FSFI” were used with eight databases (Ovid Current Contents, Ovid Medline, Ovid EMBASE, PubMed, Scopus, PsychInfo, Google Scholar and CMDI) to identify English language articles published between April–June 2000 (date of initial FSFI publication) to July 2008. Articles (including reference lists) were hand searched for relevancy.

**Results** A total of 211 original publications were identified. These included psychometric studies (n=8), which established the reliability and validity of the FSFI in women with a wide range of Female Sexual Dysfunction (FSD) subtypes or general medical conditions. Three further studies used the FSFI as a comparator in the development of new diagnostic tools. The FSFI has also been used extensively as a measure of sexual function and dysfunction in epidemiological studies (n=113); in laboratory-based psychophysiological studies (n=6); and in studies investigating the sexual response cycle in normal and dysfunctional women (n=2). Perhaps most importantly, the FSFI has been used to assess the effects of a variety of interventions on female sexual function (n=79), including pharmacological, psychological and physical therapies, surgery and diet.

**Conclusions** This review demonstrates that the FSFI has been accepted and utilized by researchers worldwide, becoming the *de facto* “gold standard” in the assessment of female sexual function and dysfunction. The FSFI has been shown to be a robust measure, with the sensitivity to detect therapeutically-induced changes in sexual function over time.

## INTRODUCTION

- Research into the diagnosis and treatment of Female Sexual Dysfunction (FSD) has advanced rapidly over the past decade. This has created an increased need for psychometrically valid instruments for assessing FSD and for monitoring treatment-induced changes.
- The two most fundamental characteristics of good psychological measurement are reliability and validity. Reliability refers to the consistency or replicability of measurement; validity reflects the degree to which an instrument measures what it purports to measure. Unlike reliability, which is established through a specifically prescribed series of studies, validation is a continuous process that accumulates evidence from numerous studies.
- The Female Sexual Function Index (FSFI) is a 19-item self-report inventory designed to assess female sexual function. It comprises six domains: desire [two items], arousal [four items], lubrication [four items], orgasm, satisfaction and pain [three items each].

## OBJECTIVE

- The purpose of this review was to identify the number and focus of published articles that have used the FSFI in order to determine its level of acceptance by the scientific community.

## METHODS

- The key terms “Female Sexual Function Index” and “FSFI” were used with eight databases (Ovid Current Contents, Ovid Medline, Ovid EMBASE, PubMed, Scopus, PsychInfo, Google Scholar and CMDI) to identify English language articles published between April–June 2000 (date of initial FSFI publication) to July 2008.
- Articles (including reference lists) were hand searched for relevancy.

## RESULTS

- A total of 211 original publications were identified, surpassing by 50% the combined number of publications on other validated measures commonly used to assess FSD (Brief Index of Sexual Functioning for Women [BISF-W], Changes in Sexual Functioning Questionnaire [CSFQ], Sexual Interest and Desire Inventory-Female [SIDI-F] and Golombok Rust Inventory of Sexual Satisfaction [GRISS]).

### Psychometric studies

- Several psychometric studies (n=8) have established the reliability and validity of the FSFI in women with a wide range of FSD subtypes or general medical conditions (Table 1). The FSFI was initially validated in a clinically diagnosed sample of women with Female Sexual Arousal Disorder. Subsequently, the validation statement was extended to include women with a primary diagnosis of Female Orgasmic Disorder or Hypoactive Sexual Desire Disorder.
- Three further studies used the FSFI as a comparator in the development of new diagnostic tools.

**Table 1. Summary of psychometric studies of the FSFI**

Reference	Population
Rosen et al. J Sex Marital Ther 2000;26:191-208	Women with FSAD or no FSD
Meston. J Sex Marital Ther 2003;29:39-46	Women with FOD, HSDD or no FSD
Wiegel et al. J Sex Marital Ther 2005;31:1-20	Women with FSAD, FOD, HSDD, pain, multiple FSD or no FSD
Ter Kuile et al. J Sex Marital Ther 2006;32:289-304	Dutch women with FSD or no FSD
Sidi et al. J Sex Med 2007;4:1642-54	Malaysian women with FSD or no FSD
Borello-France et al. Urol Nurs 2008;28:30-5	Women with multiple sclerosis
Likes et al. J Sex Marital Ther 2006;32:255-66	Women with vulvar intraepithelial neoplasia and healthy controls
Verit and Verit. J Sex Med 2007;4:1635-41	Women with or without chronic pelvic pain

FSAD: Female Sexual Arousal Disorder; FOD: Female Orgasmic Disorder; HSDD: Hypoactive Sexual Desire Disorder

### Female sexual function and dysfunction research studies

- The FSFI has also been used extensively as a measure of sexual function and dysfunction in epidemiological studies (n=113); in laboratory-based psychophysiological studies (n=6); and in studies investigating the sexual response cycle in normal and dysfunctional women (n=2).

### Treatment studies

- The FSFI has been used to assess the effects of several interventions in women with FSD including pharmacological (n=11), psychological (n=4), physical (n=2) and dietary (n=1) therapy (Table 2).
- The tool has also been used to assess the effects of interventions on sexual function in other populations of women including: gynecological and non-gynecological surgery (n=37); pharmacological (n=10), psychological (n=4) or physical (n=6) therapy; and treatment of erectile dysfunction or prostate cancer biopsy in their partner (n=5).
- These studies demonstrate the instrument’s sensitivity to therapeutically-induced change.

**Table 2. Studies using the FSFI to assess the effects of interventions in women with FSD**

Reference	Population	Intervention
<b>Pharmacological</b>		
Munarriz et al. J Sex Marital Ther 2002;28:165-73	Women with androgen insufficiency and FSD	DHEA
Ferguson et al. J Sex Marital Ther 2003;29:33-44	Women with FSAD or no FSAD	Zestra for Women™
Gittleman et al. Abstract presented at ISSWSH 2003	Women with FSAD	Alprostadil
Padma-Nathan et al. J Sex Marital Ther 2003;29:329-44	Premenopausal women with FSAD	Alprostadil
Kuffel et al. Abstract presented at ISSWSH 2004	Premenopausal women with FSAD	Alprostadil
Ferrara and Zaslou. Int J Urol 2007;14:566-7	Women with FSD due to ruptured intervertebral disk	Sildenafil
Liao et al. J Sex Med 2008;5:1923-31	Chinese women with FSAD	Alprostadil
Meston et al. Arch Sex Behav 2008;37:530-47	Women with FSAD with or without HSDD and/or FOD	Ginkgo biloba extract
Nijland et al. J Sex Med 2008;5:646-56	Naturally postmenopausal women with FSD	Tibolone or transdermal E <sub>2</sub> /NETA
Safarinejad et al. J Sex Med 2008;5:887-97	Women with FSAD	Bremelanotide
Welk et al. Urology 2008;71:67-70	Women with dyspareunia	Lidocaine, bicarbonate or heparin
<b>Psychological</b>		
ter Kuile et al. Behav Res Ther 2007;45:359-73	Women with vaginismus	CBT, group- or biblio-therapy
Brotto et al. Arch Sex Behav 2008;37:317-29	Women with gynecological cancer and FSAD	Psychoeducation
Brotto et al. J Sex Med 2008;5:1646-59	Women with HSDD and/or FSAD	Psychoeducation
Smith et al. Am J Obstet Gynecol 2008;198:697-6	Women with FSD	Psychoeducation
<b>Physical</b>		
Nappi et al. J Sex Marital Ther 2003;29:103-10	Women with dyspareunia or vaginismus	Electrical stimulation
Wurm et al. Med Gen Med 2004;6:47	Women with infertility or abdominopelvic pain and FSD	Manual soft tissue therapy
<b>Diet</b>		
Esposito et al. Int J Impot Res 2007;19:486-91.	Women with metabolic syndrome and FSD	Mediterranean diet

CBT: cognitive behavioural therapy; DHEA: dehydroepiandrosterone; E<sub>2</sub>: estradiol; ISSWSH: International Society for the Study of Women’s Sexual Health; NETA: norethisterone acetate

## CONCLUSIONS

- This review demonstrates that the FSFI has been accepted and utilized by researchers worldwide, becoming the *de facto* “gold standard” in the assessment of female sexual function and dysfunction.
- The FSFI has been shown to be a robust measure, with the sensitivity to detect therapeutically-induced changes in sexual function over time.