Assessment of the Relational Factor in Male Patients Consulting for Sexual Dysfunction: The Concept of Couple Sexual Dysfunction

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ABSTRACT: In a consecutive series of 1140 male subjects reporting a stable couple relationship and different degrees of sexual dysfunction, we evaluated the impact of relational factors, as assessed by the Structured Interview on Erectile Dysfunction (SIEDY) Scale 2 (exploring, as reported by the patient, menopausal symptoms, partner’s medical illness interfering with sexual activity, and reduced partner desire and climax). We found that the SIEDY Scale 2 is significantly and independently associated with erectile dysfunction (ED), delayed ejaculation, hypoactive sexual desire, and decreased frequency of intercourse. SIEDY Scale 2 scores are associated with an advanced age of the partner and a long couple relationship, independently from patient’s age. In addition, an increased relational factor correlates with increased extramarital affairs, conflicts in the couple, alcohol abuse, and presence of depressive symptoms, as assessed by the Middlesex Hospital Questionnaire. Our results should encourage the andrologist to consider the context in which sexual symptoms develop, analyzing the relationship and partner’s behaviors and diseases. Resolving, or at least ameliorating, the relational background and the sexual framework might help in treating male sexual dysfunction.

Key words: Erectile dysfunction, SIEDY, structured interview, delayed ejaculation, hypoactive sexual desire, couple sexual dysfunction.

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Introduction

The male sexual response results from the integration of a functioning physical system (cardiovascular, hormonal, neuronal), a psychologic system (the individual’s sexual identity and sense of well-being), and a relationship system (the context for a sexual relationship) (Petrone et al, 2003; Giommi et al, 2005). Therefore, male sexual dysfunction can be considered a symptom of physical illness (organic component), reaction to life stresses (intrapsychic component) or result of an unhappy couple relationship (relational component). The first two components of male sexual dysfunctions definitely have received more attention than the relational one, which is the object of the present study.

Any sexual dysfunction originating from either of the couple’s members may become shortly thereafter a disorder that affects the entire couple. In other words, sexual dysfunction in one member of the couple may induce a marked distress in the relative partner, which in turn can generate partner avoidance and antipathy, further exacerbating the original difficulties and leading to an overt couple sexual dysfunction (Althof et al, 2005). Since the early 1970s it has been suggested that female partners of men with sexual dysfunction have significantly lower sex drives than other women (Master and Johnson, 1970, Derogatis et al, 1977). More recently studies from Sweden and Israel showed that women reporting sexual dysfunction were often partners of men with erectile problems (Oberg et al, 2004; Greenstein et al, 2006). Female partners of men with erectile dysfunction (ED) after radical prostatectomy and altered International Index of Erectile Function have a significantly associated altered Female Sexual Function Index (Shindel et al, 2005). Accordingly, treating ED in the male with a phosphodiesterase type 5 inhibitor, vardenafil, improved female sexual quality of life and overall couple well-being (Fisher et al, 2005, Goldstein et al, 2005). To date it is not clear to what extent a clinical, or even a subclinical, sexual dysfunction in the female partner might be associated with ED in the male partner. It is conceivable that impaired sexual fitness in the female


Sociodemographic characteristics of the sample*

<table>
<thead>
<tr>
<th>Category</th>
<th>Value (± SD)</th>
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<tr>
<td>Patient’s age (years)</td>
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</tr>
<tr>
<td>Partner’s age (years)</td>
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</tr>
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<td>Marital status (%)</td>
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<td>Secondary school</td>
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<tr>
<td>University</td>
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<td>Employment (%)</td>
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<tr>
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<td>Employed</td>
<td>52.3</td>
</tr>
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</table>

* Data are expressed as mean ± SD when normally distributed and percentage when categorical.

partner (eg, dry vagina) might precipitate a subclinical erectile problem leading to an overt couple sexual dysfunction. Accordingly, in a series of men presenting with ED in which their partners were also examined, clinical evidence of urogenital atrophy was found in 33.3% of women (Riley and Riley, 2000).

The present study is aimed at the assessment of clinical features of ED associated with relational disturbances. The relational component of male sexual dysfunction was explored using the Structured Interview on Erectile Dysfunction (SIEDY) (Petrone et al, 2003; Corona et al, 2006a [review]). SIEDY is an easy to administer instrument for the first screening of ED patients, providing scores for the relational, organic, and intrapsychic components.

Patients and Methods

A consecutive series of 1140 patients attending for the first time the outpatient clinic for ED sexual problems of the Andrology Unit of the University of Florence at Careggi Hospital and reporting a stable (more than 3 months) couple relationship was studied. Patients with mental retardation or intrapsychic components in relationship with partner, and Scale 3 with psychologic traits (Petrone et al, 2003). SIEDY Scale 2 questions are reported in Appendix A. They essentially include questions on the presence of partner’s diseases impairing her sexual response, the presence of menopausal symptoms, and the partner’s inability to achieve climax and express sexual interest.

The characteristics of ED were assessed using SIEDY Appendix A as previously described (Petrone et al, 2003). In particular, severe ED was defined when patients reported erections sufficient for penetration in less than 25% of occasions. Hypoactive sexual desire (HSD) was assessed with question #14 of SIEDY as previously described (Corona et al, 2004a; Corona et al, 2005). Premature ejaculation (PE) was defined as ejaculation within 1 minute of vaginal intromission (as reported by the patient) according to previously described criteria (Corona et al, 2004b; Jannini and Lenzi, 2005). Delayed ejaculation (DE) was defined as “slowness to ejaculate” (as reported by the patient) according to previously described criteria (Corona et al, 2006b). The severity of DE was categorized on a 3-point scale using a standard question, “In the last three months is it difficult to ejaculate during sexual intercourse?”, and rating 0 (no DE), 1 (mild/moderate DE [MMDE]), or 2 (anejaculation/severe DE). The presence of extramarital affairs was evaluated using question #12 of SIEDY. Men were defined as alcohol abusers when they reported more than 4 drinks per day. Relationship span was assessed using a specific question, “How long is the relationship with your partner?”, and rating 0 (<1 year), 1 (1 to 5 years), 2 (6 to 10 years), or 3 (>10 years). Frequency of sexual intercourse was investigated using a standard question, “During the last three months how many sexual attempts per month did you have?”, and rating 0 (no attempts), 1 (1 to 2 attempts), 2 (3 to 7 attempts), or 3 (≥8 attempts).

Patients were asked to specify any current pharmacologic treatment for any reason (including infertility); drugs listed in Broderick and Foremann (1999) were considered capable of interfering with sexual function. Patients were asked to complete the Middlesex Hospital Questionnaire, modified (MHQ) (Crown and Crisp, 1966), in the Italian version (Dioguardi et al, 1984), a brief self-reported questionnaire for the screening of mental disorders in a nonsympathetic setting, which provides scores for free-floating anxiety (MHQ-A), phobic anxiety (MHQ-F), obsessive-compulsive traits and symptoms (MHQ-O), somatization (MHQ-S), depressive symptoms (MHQ-D), and hysteric traits and symptoms (MHQ-H).

All patients underwent a complete physical and andrologic examination, with measurement of blood pressure (mean of 3 measurements 5 minutes apart, in a sitting position, with a standard sphygmanomanometer), height, weight, and testis volume (Prader orchidometer). Blood samples were drawn in the morning, after an overnight fast, for determination of blood glucose (by a glucose oxidase method; Aeraset Abbott, Rome, Italy); total cholesterol, high-density lipoprotein cholesterol, and triglycerides (by an automated enzymatic colorimetric method; Aeraset Abbott); total testosterone, prolactin, follicle-stimulating hormone, luteinizing hormone,
thryroid-stimulating hormone, and prostate-specific antigen (by an electrochemiluminescent method; Modular Roche, Milan, Italy). Penile Doppler ultrasound examination was performed as previously described (Mancini et al, 2000).

Data were expressed as mean ± SD when normally distributed and as median (quartiles) for parameters with nonnormal distribution, unless otherwise specified. Differences among more than 2 groups were assessed with 1-way analysis of variance (ANOVA) or the Kruskal-Wallis test when appropriate. Correlations were assessed using Spearman’s or Pearson’s method when appropriate. Unpaired 2-sided Student’s t tests were used for comparison of means of normally distributed parameters. In all other cases, the Mann-Whitney U test was used for comparison between groups. Regression linear or logistic multivariate analysis was applied when appropriate. All statistical analysis was performed on SPSS for Windows 12.1.

Results

The presence of severe ED (inability to obtain an erection sufficient for intercourse in >75% of occasions) was significantly (P < .0001) associated with Scale 1 (r = .376), Scale 2 (r = .200), and Scale 3 (r = .172) scores. Accordingly, the prevalence of ED increased as a function of SIEDY scale score quartiles (Figure 1). The significant association between SIEDY Scale 2 and ED was confirmed at logistic multivariate analysis after adjustment for other SIEDY scales and patient’s and partner’s ages; in fact, the chance of being affected by severe ED increased by 10% (1–10) for each increment of SIEDY Scale 2 score (P < .05). Considering sexual dysfunctions other than ED, we found that SIEDY Scale 2 scores were higher in patients with MMDE when compared with patients without DE (2.97 ± 0.51 vs 1.97 ± 0.07; P < .01), while no difference was observed between patients with or without PE. The association between MMDE and SIEDY Scale 2 score was confirmed at multivariate analysis after adjustment for partner’s age (Adj. r = .98; P < .01).

SIEDY Scale 2 score significantly (P < .0001 at ANOVA) increased as a function of patient and partner ages. At multivariate regression analysis, only partner’s age was significantly associated with the SIEDY Scale 2 score (Adj. r = .270; P < .0001; see Figure 2A). No difference in SIEDY Scale 2 score was observed between patients with stable relationships living or not living together (data not shown). Patients reporting a relationship span longer than 10 years (Figure 2B), as well as those with the presence of any degree of relationship conflict (Figure 2C) showed higher SIEDY Scale 2 scores than the rest of the sample. SIEDY Scale 2 score was significantly higher in patients reporting a higher prevalence of stable extramarital affairs, when compared with the rest of the sample (Figure 2D). Moreover, SIEDY Scale 2 scores were significantly higher in patients reporting a higher prevalence of alcohol abuse (2.94 ± 2.45 vs 1.90 ± 2.06; P < .0001). All these differences were confirmed at multivariate analysis after adjustment for partner’s age (data not shown).

Considering psychologic factors, patients with psychiatric syndromes at medical history showed higher SIEDY Scale 2 scores when compared with the rest of the sample (2.94 ± 2.72 vs 2.04 ± 2.13, P < .001). Accordingly, SIEDY Scale 2 scores were higher in patients reporting a higher prevalence of depressive symptoms as expressed by MHQ-D quartiles (Figure 3). The association between depressive symptoms and SIEDY Scale 2 was confirmed at multivariate regression analysis after adjustment for psychiatric diseases, patient’s age, and the sum of MHQ score (Adj. r for MHQ-D = .253; P < .0001). Furthermore, SIEDY Scale 2 score increases as function of the reduction in the frequency of sexual intercourse and in patients reporting a progressively severe HSD (Figure 4). All these differences were confirmed at multivariate analysis after adjustment for partner’s age and depressive symptoms (data not shown).

Finally, SIEDY Scale 2 did not show any correlations with pharmacologic, biochemical, hormonal, and instrumental parameters assessed (data not shown).

Discussion

In the present study we demonstrate for the first time that different degrees of disturbance in the relational
domain, as measured by SIEDY Scale 2, are associated with a more severe form of ED independently from other pathogenetic domains (i.e., organic or intrapsychic factors as explored by SIEDY Scales 1 and 3, respectively).

SIEDY Scale 2 score is tightly associated with partner’s age and relationship duration. In couple relationships lasting more than 10 years, a sudden increase in Scale 2 score was observed. Interestingly, this association retains significance even after correction for confounding factors such as patient’s and partner’s chronologic ages. This finding is in good agreement with the speculation that humans are not strictly monogamous but can be included in the category of polygamous primates with a special kind of partnership, called “serial monogamy” by Potts and Short (1999). Interestingly, when extramarital affairs are not occasional, Scale 2 score significantly rises. In fact, it can be speculated that conflicts between partners can sometimes increase over time, possibly leading to interruption of the relationship. When cultural and/or religion factors represent an obstacle for divorce, conflicts can become unbearable in some couples with long-lasting relationships. Accordingly, men of couples with extramarital affairs reported less enjoyment in time spent together, more steps taken toward separation and divorce, and problems with trust and dishonesty and, more importantly, more sexual dissatisfaction and
alcohol abuse (Atkins et al, 2005). Hence, both prolonged monogamy and stable polygamy are associated with an impaired quality of relationship, as measured by Scale 2, and might be involved in the pathogenesis of ED. An increase in Scale 2 score is associated also with any kind of intracouple hostility, alcohol abuse, and depressive symptoms. Obviously, interpersonal problems, such as sexual problems, may be the cause or the result of dysfunctional or unsatisfactory relationships (Althof et al, 2005). Although a causal relationship between relational determinants of ED and the presence of a long, hostile, and most probably dissatisfying couple bounding cannot be drawn, it is interesting to note that negative feelings and behaviors, as depressed mood and alcohol abuse, are associated with them. A decrease in patient’s sexual desire and intercourse frequency can be viewed as the obvious result of elevated SIEDY Scale 2 score, but again the reverse should also be considered. Finally, the previously described association between MMDE and SIEDY Scale 2 score is confirmed in this study (Corona et al, 2006b).

In this paper, data on female sexual fitness are not directly derived from female interviews but from the male reports. Although this is an obvious bias, patient’s perception of partner sexual performance closely represents the setting in which the couple is interacting and therefore where the dysfunction is originating, at least as perceived by the patient (Corona et al, 2005). In fact, men with ED and their female partners appear to overestimate the importance their respective partners put on sexual intercourse. Although only 20.2% of women considered sexual intercourse to be somewhat or

![Figure 3](image-url)

Figure 3. Structured Interview on Erectile Dysfunction (SIEDY) Scale 2 score (mean and 95% CI) as a function of depressive symptoms (Middlesex Hospital Questionnaire-D [MHQ-D] score quartiles). $^*P < .05$, $^{**}P < .0001$.

![Figure 4](image-url)

Figure 4. Structured Interview on Erectile Dysfunction (SIEDY) Scale 2 score (mean and 95% CI) as a function of the frequency of sexual intercourse per month (A) and the severity of patient hypoactive sexual desire (as assessed by question #14 of SIEDY) (B). $^*P < .05$, $^{**}P < .005$, $^{***}P < .0001$. 
very important to them, 47.6% of their male partners considered this to be the case (Riley and Riley, 2000).

It should be recognized that these results are derived from patients consulting an Italian andrologic clinic for sexual dysfunction; these patients may have different characteristics than those consulting general practitioners or not seeking medical care. In particular, Lau (2006) recently reported that in rural China women's lack of interest in sex or inability to achieve climax did not predict any male partner sexual dysfunction. The same authors suggested the possible role of cultural context of gender inequality in which a man's well being is seen to be more important than a woman's fitness. It is reasonable that possible cultural influences and features may play an important role in our findings.

Overall, the take-home message derived from this study is that physicians should consider the context in which sexual symptoms develop, analyzing the relationship and partner's behaviors and diseases. Resolving, or at least ameliorating, the relational background and the sexual framework might help in treating ED, although well-controlled studies on this topic are needed (Althof et al, 2005). Nonetheless, investigation, diagnosis and, eventually treatment of female sexual dysfunction should be considered in patients consulting for ED or DE raised in the contest of couple sexual dysfunction. Successful treatment of male sexual symptoms may, in this case, aid the overall sexual fitness of the couple (Fisher et al, 2005; Goldstein et al, 2005).

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References

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**Appendix**

**SIEDY Scale 2 Questions**

*From Petrone et al, 2003*

#7 Does your partner have any major illness?

Which diseases? Do these diseases affect the quality of your partner’s life? Do these diseases make your sexual intercourse more difficult?

*Saying important diseases, we mean those that affect in a considerable way the quality of the patient’s life. Some of these diseases can affect sexual activity in a considerable manner; the obstacle to sexual activity has to be considered as an objective obstacle and not as a subjective one. For example, the patient may have subjective difficulties in making love with a woman affected by breast cancer and who underwent mastectomy, even if she is healthy at the moment, while the objective obstacle can be represented by the partner’s advanced disease stage or by the side effects of treatment.*

0. No
1. Yes, but not compromising sexual activity
2. Yes, compromising sexual activity
3. Yes, so that sexual intercourse is impossible

#8 Does your partner have more or less desire to make love than in the past?

Rank 0 when the partner’s desire is unmodified or increased; 1 if desire is moderately reduced but the frequency of sexual intercourse is not reduced in a relevant manner; 2 if desire is reduced in such a way as to reduce considerably the frequency of sexual intercourse; 3 if the partner has never showed a real desire to make love. The question investigates only the partner’s, and not the patient’s, desire. If the frequency of sexual intercourse is reduced due to impairment of the patient’s (and not the partner’s) desire, rank 0. The last 3 months should be considered.

0. Unmodified or increased desire
1. Desire present but moderately reduced
2. Desire remarkably reduced
3. Desire never present

#9 Does your partner reach climax?

How often?

0 if the partner reaches climax in all occasions of intercourse; 1 if climax is reached in more than half of occasions but not always; 2 if less than half of occasions; 3 if climax has never been reached.

0. Always
1. Most of the time
2. Sometimes
3. Never

#10 Is your partner in menopause?

Does she have any problems due to menopause? Do these problems make sexual activity more difficult? Does your partner have vaginal dryness? Does she have pain during penetration?

*If the partner is a male, or if the partner is a premenopausal woman, the score is 0. If the partner is in menopause but she has no menopause-related disturbances or she has disturbances which do not interfere with sexual intercourse (eg, flushing), the score is 1. The score is 2 when there is sporadic vaginal dryness and/or dyspareunia; the score is 3 when menopause-related symptoms are such as to make sexual intercourse impossible.*

0. Not in menopause
1. In menopause with no problems or with problems not interfering with sexual intercourse
2. Problems which moderately interfere with sexual intercourse
3. Problems which remarkably interfere with sexual life