

# Erectile Dysfunction and Constructs of Masculinity and Quality of Life in the Multinational Men's Attitudes to Life Events and Sexuality (MALES) Study

Michael S. Sand, PhD, MPH,\* William Fisher, PhD,<sup>†</sup> Raymond Rosen, PhD,<sup>‡</sup> Julia Heiman, PhD,<sup>§</sup> and Ian Eardley, MD<sup>¶</sup>

\*Bayer Schering Pharma AG, Wuppertal, Germany; <sup>†</sup>University of Western Ontario, London, Ontario, Canada;

<sup>‡</sup>New England Research Institutes, Watertown, MA, USA; <sup>§</sup>The Kinsey Institute, Indiana University, Bloomington, IN, USA;

<sup>¶</sup>St James's University Hospital, Leeds, UK

DOI: 10.1111/j.1743-6109.2007.00720.x

## ABSTRACT

**Introduction.** The Men's Attitudes to Life Events and Sexuality (MALES) study assessed the prevalence and correlates of erectile dysfunction, and examined men's attitudes and behavior in relation to this dysfunction.

**Aim.** To report on the attitudes of men, with and without self-reported erectile dysfunction, concerning masculine identity and quality of life.

**Methods.** The MALES Phase I study included 27,839 randomly selected men (aged 20–75 years) from eight countries (United States, United Kingdom, Germany, France, Italy, Spain, Mexico, and Brazil) who responded to a standardized computer-assisted telephone interview.

**Main Outcome Measure.** Perceptions of masculinity and quality of life in men with and without erectile dysfunction.

**Results.** Men's perceptions of masculinity differed substantially from stereotypes in the literature. Men reported that being seen as honorable, self-reliant, and respected by friends were important determinants of self-perceived masculinity. In contrast, factors stereotypically associated with masculinity, such as being physically attractive, sexually active, and successful with women, were deemed to be less important to men's sense of masculinity. These findings appeared consistently across *all* nationalities and *all* age groups studied. For quality of life, factors that men deemed of significant importance included good health, harmonious family life, and a good relationship with their wife/partner. Such factors had significantly greater importance to quality of life than concerns such as having a good job, having a nice home, living life to the full, or having a satisfying sex life. Of note, rankings of constructs of masculinity and quality of life did not meaningfully differ in men with or without erectile dysfunction, and men with erectile dysfunction who did or did not seek treatment for their sexual dysfunction.

**Conclusions.** The present findings highlight the significance of partnered relationships and interpersonal factors in the management of erectile dysfunction, and empirically challenge a number of widely held stereotypes concerning men, masculinity, sex, and quality of life. **Sand MS, Fisher W, Rosen R, Heiman J, and Eardley I. Erectile dysfunction and constructs of masculinity and quality of life in the multinational Men's Attitudes to Life Events and Sexuality (MALES) study. J Sex Med 2008;5:583–594.**

**Key Words.** Erectile Dysfunction; Quality of Life; Masculinity; Gender Identity

## Introduction

Although the epidemiology, risk factors, pathophysiology, and treatment of erectile dysfunction have been rigorously investigated in recent years [1–8], no large-scale studies have investigated the association between men's experience of erectile dysfunction, their perceptions

of masculinity, and their subjective quality of life. In addition, men's help seeking and treatment utilization for erectile dysfunction have only recently been investigated [9–11], and the potential for factors such as masculine identity and quality of life considerations to influence treatment seeking for erectile dysfunction remains to be explored.

Current discourse on help seeking and masculinity has focused largely on differences between the sexes. Available research has highlighted well-recognized sex differences such that men seek professional help less frequently than women of comparable age, nationality, race, and ethnicity; men visit general practitioners and specialists less frequently than women do; and—when they do consult with a physician—men ask fewer questions and play a more passive role in the physician–patient relationship than women do [12–16]. Research has also found that men seek psychiatric and counseling services less often than women with comparable emotional problems [17,18], and demonstrate lower rates of help seeking for such diverse conditions as cancer and depression [19,20]. The male disinclination to seek medical help is not indicative of better health: on average and across most nationalities, men suffer higher mortality from heart disease, higher rates of suicide and trauma, and higher rates of alcohol and substance abuse [21]. Investigators have proposed a number of mechanisms to account for these differences. One such proposition uses a social constructionist/feminist perspective to suggest that health-related beliefs and behaviors are a means of demonstrating masculinity. Men adhere to cultural definitions of masculinity and actively reject what is feminine: in practice, they adopt riskier behaviors (than women) and are less inclined to seek help when health problems are encountered [22]. However, we remain largely uninformed about male-specific within-group variations in psychological and cultural factors that may influence men’s patterns of help-seeking behavior, and we have little understanding of why some men seek treatment for a given condition while others do not.

Models of gender role socialization suggest that men (and women) learn gendered attitudes and behaviors from prevailing societal values and norms—strongly represented and reinforced in popular media—about what it means to be a man or a woman (for a review of psychological concepts and measures of masculinity, see Smiler [23]). As suggested by Addis and Mahalik [16], many of the tasks associated with help seeking—e.g., admission of the need for help and reliance on others—are in conflict with men’s socialization concerning the importance of self-reliance and emotional control. Much research in the area of gender and help seeking has been conducted in convenience samples, often college undergraduates, and has focused on the association between masculine con-

structs and attitudes toward help seeking rather than help-seeking behavior per se [16,24,25].

In the context of sexual dysfunction, it has been estimated that up to 70% of men with erectile dysfunction do not seek treatment [8]. Male gender role socialization theory suggests that men with erectile dysfunction might avoid seeking treatment, because to do so would conflict with or threaten masculine self-concepts, which hold that having an “active sex life” and “success with women” are central to their core sense of masculinity [26–28]. Following this, it may be hypothesized that men with erectile dysfunction who seek treatment for their sexual dysfunction would differ from men with erectile dysfunction who have not sought treatment in their endorsement of the importance of these constructs to their masculine self-concept.

The Men’s Attitudes to Life Events and Sexuality (MALES) study was a large, multinational two-phase investigation that was conducted in part to assess erectile dysfunction-related variations in perceptions of masculinity and quality of life, and to examine the relationship of erectile dysfunction treatment-seeking practices with these factors. The initial MALES research report documented the prevalence of erectile dysfunction and its association with other common comorbid diseases of men [29]. Further studies have established that perceived erectile dysfunction severity, beliefs about erectile dysfunction medication, and referent influences are strongly correlated with erectile dysfunction treatment-seeking behavior [11,30].

### Aims

The current research assessed constructs of masculinity and quality of life in the large, multinational MALES sample in an effort to understand how these constructs may differ between men with and without erectile dysfunction, and to define the relationship between men’s help-seeking behavior for erectile dysfunction and their construction of masculinity and quality of life.

### Methods

The MALES Phase I study sample consisted of 27,839 adult men, aged 20–75 years, from eight countries (United States, United Kingdom, Germany, France, Italy, Spain, Mexico, and Brazil) who participated from February 2001 to April 2001. Men were recruited via random digit dialing (80% of the sample) or via e-mail following a

random selection of names from a list of men who had previously agreed to participate in a study of men's health issues (20%). Reported findings were weighted to represent the general male population by age within each national sample. Weighted N values for each country were as follows: United States, 9,284; United Kingdom, 2,053; Germany, 3,040; France, 2,053; Italy, 2,130; Spain, 1,453; Mexico, 2,735; and Brazil, 5,091.

A standardized questionnaire was administered in the course of the computer-assisted telephone interviews, which lasted for approximately 15 minutes. Interviews were conducted by both female and male interviewers. The questions assessed general demographic information (age, marital/relationship and economic status, size of household) and overall health ratings. The survey also assessed the prevalence of selected diseases and conditions; current use of medication for selected diseases and conditions, and for erectile dysfunction *per se*; attitudes to medical consultation and medical treatment; awareness, trial, and continuing use of several prescription drugs; and attitudes toward male identity and quality of life. Questions on sexual orientation were not asked. The survey gathered self-report information only and no attempt was made to validate responses with medical records, physician or partner reports. Men were considered to have a certain medical condition if they reported being diagnosed and/or receiving treatment for the condition.

As sexual dysfunction is a sensitive topic deemed potentially susceptible to selection factors, an indirect measurement approach was employed in an effort to minimize subject self-selection. Specifically, men were invited to participate in a survey of men's health concerns—not of erectile dysfunction *per se*—and the survey protocol covered a number of men's health content areas prior to the specific question about erectile dysfunction. The questionnaire included the following item among others: "The health conditions I have just mentioned are all very common in men, but some men do something to treat or improve them while others do not. I will read out each of the conditions again. For each one, please tell me if you have: (A) Seen a doctor, pharmacist or therapist about it; (B) Tried any kind of remedy, with or without prescription; (C) Not done anything about it; or (D) Never had it." Men were asked this question for occasional headache, weight problems, rapid hair loss, feeling overstressed, erection difficulties, hemorrhoids, and feelings of anxiety or depression. Thus, our study assessed the proportion of

men who self-reported having or not having erection difficulties, as compared with a wide variety of other common male health-related concerns. Full details of the self-report instrument used to assess erectile dysfunction in the study have been previously published [29].

In the context of the MALES telephone interview, men were also asked for their views of the importance of a number of potential constituents of male identity. Men were asked to rate the importance of each of the following survey items in regard to male identity: having a good job, having financial stability, being seen as a man of honor, having success with women, coping with problems on your own, having an active sex life, being in control of your own life, being physically attractive, and having the respect of friends. Participants were asked to rate each item on a 7-point Likert scale (from 1, not at all important to the male identity, to 7, very important to the male identity) from a personal perspective; they were also asked how they thought the general public would similarly evaluate each construct. Respondents were then asked to cite which of the characteristics of male identity listed was the most important. Only men's personal ratings were reported here; their ratings for what they believed the general public perceives were not reported.

Respondents were subsequently queried about constructs central to their perception of quality of life. Using a 7-point Likert scale (from 1, not at all important, to 7, very important), the following aspects of quality of life were rated: harmonious family life, satisfying work life or career, good relationship with partner/wife, having a nice home, having a satisfying sex life, being in good health, and enjoying life to the fullest. Respondents were then asked to cite which of these constructs of quality of life was the most important. Using a similar scale (from 1, not satisfied at all, to 7, completely satisfied), men were then asked how satisfied they were with each aspect of quality of life. The Appendix contains the exact phrasing of the questions posed to assess constructs of masculinity and quality of life.

### Main Outcome Measures

Perceptions of masculinity and quality of life in men with and without erectile dysfunction were determined. For purposes of this analysis, we grouped men who self-reported erectile dysfunction into two categories on the basis of physician visits and treatment-seeking behavior: treatment

seekers (men who responded “yes” to having erectile dysfunction *and* who sought professional help by either seeing a physician or counselor, or actively sought treatment with either prescription or nonprescription drugs; N = 2,207) and treatment non-seekers (men who reported having erectile dysfunction and who did not seek any form of professional help or treatment; N = 2,215).

## Results

### Demographics of the MALES Phase I Study Population

A total of 27,839 men were recruited for Phase I of the MALES study. The age distribution of the study population in each country was generally representative of the male population; the proportion of men recruited in each age group corresponded with the census-based age breakdown of that country. The demographic data are summarized in Table 1.

### Prevalence of Erectile Dysfunction

The overall prevalence of self-reported erectile dysfunction was 16% in the general MALES Phase I study population, and was highest in men from the United States (22%) and lowest in Spain (10%). Full data for erectile dysfunction prevalence by country in the MALES Phase I study

population have been published previously [29]. The prevalence of self-reported erectile dysfunction increased with increasing age as follows: 20–29 (8%), 30–39 (11%), 40–49 (15%), 50–59 (22%), 60–69 (30%), and 70–75 years (37%). These data are consistent with other community-based studies that report increased erectile dysfunction prevalence with increasing age [1,31–33].

### Constructs of Masculinity as a Function of Nationality

Constructs of masculinity deemed most important varied substantially across countries in the overall sample (Table 2), although mean importance scores were considerably more homogeneous (Table 2). “Being seen as a man of honor” was cited as the most important attribute of masculine identity in Spain, Brazil, Mexico, United States, and France, while “being in control of your own life” was the most important in Germany, the United Kingdom, and Italy. Contrary to popular stereotypes of masculinity and across all countries sampled, attributes involving social respect, e.g., “being seen as a man of honor” and “having the respect of friends,” were overwhelmingly more often cited as the most important constructs of masculinity than were attributes focused solely on sexuality, e.g., “having success with women,” “having an active sex life,” and “being physically attractive.” Although sexuality-focused attributes were not often cited as the most important constructs of masculinity, mean importance scores expressed on the 7-point Likert scale showed that men still considered them important.

### Constructs of Masculinity as a Function of Age and Relationship Status

Stratifying the data regarding the most important constructs of masculinity according to age did not substantially alter the overall pattern of findings (Table 3). The effect of being in a partnered relationship was also negligible, although “being seen as a man of honor” was considered the most important by married men or men with partners, while single men considered “being in control of your own life” the most important construct of masculinity (Table 3).

### Constructs of Masculinity as a Function of Erectile Dysfunction and Treatment Seeking

In contrast to expectations, constructs of masculinity did not vary significantly between men with erectile dysfunction and men without erectile dysfunction (Table 4). In addition, constructs of

**Table 1** Baseline demographic data of study population

Demographic	
Age group (years)	Number (%)*
20–29	6,592 (24)
30–39	6,750 (24)
40–49	5,886 (21)
50–59	4,350 (16)
60–69	3,039 (11)
70–75	1,168 (4)
Marital status	Percentage of study population
Married/living with partner	62
Single	28
Divorced	8
Widowed	2
Type of settlement	Percentage of study population
Large cities (>250,000 population)	48
Small towns/cities	33
Rural area	19
Work status	Percentage of study population
Paid employment	48
Self-employed	18
Retired	15
Temporarily not working	8
Studying	11

\*Weighted to represent the general male population by age within each sample selected.

**Table 2** Constructs of masculinity as a function of nationality

Attribute	Total N = 27,839	United States N = 9,284	Mexico N = 2,735	Brazil N = 5,091	United Kingdom N = 2,053	Germany N = 3,040	France N = 2,053	Italy N = 2,130	Spain N = 1,453
Being seen as a man of honor	<b>33% (6.3)</b>	<b>38% (6.2)</b>	<b>39% (6.7)</b>	<b>41% (6.7)</b>	27% ( <b>6.2</b> )	6% (4.9)	<b>24% (5.9)</b>	24% (5.6)	<b>46% (6.5)</b>
Being in control of your own life	28% ( <b>6.3</b> )	27% ( <b>6.2</b> )	29% (6.5)	27% (6.6)	<b>32% (6.2)</b>	<b>44% (6.2)</b>	17% (5.5)	<b>25% (6.3)</b>	23% (6.2)
Having the respect of friends	13% (6.2)	13% (6.1)	5% (6.2)	9% (6.6)	22% (6.1)	11% (5.6)	15% (5.7)	21% ( <b>6.6</b> )	11% (6.3)
Having a good job	10% (5.9)	10% (5.7)	15% (6.4)	12% (6.5)	5% (5.6)	15% (5.8)	11% (5.3)	10% (6.1)	8% (6.0)
Coping with problems on your own	5% (5.5)	4% (5.6)	5% (5.6)	2% (5.5)	3% (5.3)	10% (5.4)	14% (5.4)	6% (5.6)	2% (4.9)
Having an active sex life	3% (5.6)	3% (5.3)	2% (5.7)	3% (6.3)	3% (5.3)	4% (5.3)	6% (5.3)	4% (6.0)	2% (5.5)
Having financial stability	3% (4.7)	3% (4.6)	2% (4.9)	3% (5.0)	4% (4.6)	3% (4.6)	3% (4.2)	3% (4.8)	2% (4.5)
Being physically attractive	1% (4.9)	1% (4.9)	0% (4.7)	0% (5.3)	1% (4.7)	2% (5.0)	2% (4.7)	1% (5.1)	0% (4.5)
Having success with women	1% (4.9)	1% (4.6)	1% (4.9)	1% (5.0)	1% (4.6)	1% (4.6)	3% (4.2)	1% (4.8)	1% (4.5)

Data shown are the percentage of men citing each construct as the "most important," with the mean importance score shown in parenthesis. A mean score of 1 equals "not at all important to the male identity" and a score of 7 equals "very important to the male identity." Data for the construct(s) cited as the most important and with the highest mean importance scores within each country are highlighted in bold. Where two constructs were cited with the highest mean importance, both are highlighted in bold.

**Table 3** Constructs of masculinity as a function of age and relationship status

Attribute	Total N = 27,839	20–29 years N = 6,592	30–39 years N = 6,750	40–49 years N = 5,886	50–59 years N = 4,350	60–75 years N = 4,261	Married/partner N = 17,260	Single N = 7,795
Being seen as a man of honor	<b>33%</b>	25%	<b>31%</b>	<b>36%</b>	<b>38%</b>	<b>37%</b>	<b>35%</b>	28%
Being in control of your own life	28%	<b>32%</b>	30%	28%	25%	25%	27%	<b>32%</b>
Having the respect of friends	13%	13%	13%	13%	13%	13%	12%	13%
Having a good job	10%	11%	9%	9%	9%	9%	10%	10%
Coping with problems on your own	5%	5%	5%	5%	5%	6%	5%	5%
Having an active sex life	3%	3%	4%	3%	3%	2%	3%	3%
Having financial stability	3%	3%	3%	2%	3%	3%	2%	3%
Being physically attractive	1%	1%	1%	1%	1%	1%	1%	1%
Having success with women	1%	2%	1%	1%	1%	1%	1%	2%

Data shown are the percentage of men citing each attribute as the "most important." Data for the construct cited as the most important within each age and relationship status group are highlighted in bold.

**Table 4** Constructs of masculinity as a function of erectile dysfunction and treatment seeking

Attribute	No erectile dysfunction N = 23,418	Erectile dysfunction N = 4,421	Treatment seekers with erectile dysfunction N = 2,207	Treatment non-seekers with erectile dysfunction N = 2,215
Being seen as a man of honor	<b>31%</b>	<b>32%</b>	<b>32%</b>	<b>31%</b>
Being in control of your own life	28%	27%	27%	27%
Having the respect of friends	13%	13%	13%	13%
Having a good job	10%	10%	9%	10%
Coping with problems on your own	6%	5%	4%	6%
Having an active sex life	3%	3%	4%	3%
Having financial stability	3%	3%	3%	4%
Having success with women	1%	2%	2%	1%
Being physically attractive	1%	1%	1%	1%

Data shown are the percentage of men citing each attribute as the "most important." Data for the construct cited as the most important within each group are highlighted in bold.

masculinity were similar between men with erectile dysfunction who were treatment seekers and men with erectile dysfunction who did not seek treatment (Table 4).

#### *Constructs of Quality of Life as a Function of Nationality*

Across the nationalities sampled, the most important construct of quality of life showed significant variation; mean importance scores, however, were similar across national samples (Table 5). "Having a good relationship with a partner/wife" was cited as the most important by men in the United States (35%) and the United Kingdom (33%), but was ranked third by men in Germany (23%), France (20%), Spain (19%), Mexico (15%), Italy (13%), and Brazil (10%). In contrast, "being in good health" was cited as the most important by men in Brazil (43%), Italy (39%), Germany (33%), Spain (33%), and France (32%); this contrasted with the United States, where it ranked third (19%). Interestingly, a "harmonious family life" was cited as the second most important attribute in all countries except Mexico, where men narrowly rated it as the most important attribute (30%). In addition, the overall study population least often cited "satisfying sex life" (2%) and "having a nice home" (2%) as the most important constructs of quality of life. Although men variously considered factors such as good health, a harmonious family life, and a good relationship with their wife/partner as the *most* important determinants, mean importance scores for all constructs of quality of life—including "satisfying sex life"—were  $\geq 5.3$  across all nationalities, indicating that all measured constructs were deemed important to quality of life.

#### *Constructs of Quality of Life as a Function of Age and Relationship Status*

The most important construct of quality of life among all age groups was "being in good health";

the percentage of men citing this construct increased consistently with increasing age (Table 6). No other factor showed a similar trend. "Being in good health" was also cited as the most important in single men, although subjects who were married/living with partner cited "harmonious family life" and "good relationship with a partner/wife" as being more important.

#### *Constructs of Quality of Life as a Function of Erectile Dysfunction and Treatment Seeking*

As was the case for constructs of masculinity, comparing the cohorts of men with and without erectile dysfunction, men with erectile dysfunction who actively sought treatment, and men with erectile dysfunction who do not seek treatment revealed no meaningful differences in constructs of quality of life (Table 7). However, when men were asked to rate their current levels of satisfaction with these elements of quality of life, a consistent pattern emerged; men with erectile dysfunction described lower rates of personal satisfaction on *all* quality of life attributes compared with men without erectile dysfunction, particularly regarding satisfaction with their sex life and overall health (Figure 1).

#### **Discussion**

The MALES study provides the first large, age-representative, multinational assessment of men's constructs of masculinity and quality of life, and the first examination in this broad population of the relationship between erectile dysfunction, erectile dysfunction treatment seeking, and constructs of masculinity and quality of life. A number of important findings in this regard were observed.

As is often the case, systematic data collection and analysis is inconsistent with widely held but

**Table 5** Constructs of quality of life as a function of nationality

Attribute	Total N = 27,839	United States N = 9,284	Mexico N = 2,735	Brazil N = 5,091	United Kingdom N = 2,053	Germany N = 3,040	France N = 2,053	Italy N = 2,130	Spain N = 1,453
Being in good health	<b>29%</b> (6.5)	19% (6.3)	29% (6.6)	<b>43%</b> (6.8)	22% (6.5)	<b>33%</b> (6.5)	<b>32%</b> (6.6)	<b>39%</b> (6.8)	<b>33%</b> (6.5)
Harmonious family life	25% (6.4)	20% (6.3)	<b>30%</b> (6.6)	30% (6.7)	22% (6.3)	25% (6.0)	26% (6.3)	30% (6.6)	26% (6.3)
Good relationship with a partner/wife	23% (6.5)	<b>35%</b> (6.4)	15% (6.7)	10% (6.7)	<b>33%</b> (6.5)	23% (6.4)	20% (6.4)	13% (6.5)	19% (6.4)
Enjoying life to the fullest	12% (6.1)	16% (6.2)	15% (6.4)	9% (6.4)	14% (6.3)	5% (5.3)	9% (6.0)	9% (6.3)	10% (6.1)
Satisfying work life or career	4% (5.8)	3% (5.6)	4% (6.2)	5% (6.3)	3% (5.5)	3% (5.3)	4% (5.6)	3% (5.9)	4% (6.1)
Having a nice home	2% (5.9)	2% (5.4)	3% (6.3)	2% (6.3)	2% (5.8)	5% (6.3)	1% (6.0)	1% (5.5)	2% (5.9)
Satisfying sex life	2% (6.0)	4% (5.8)	2% (6.3)	2% (6.5)	2% (5.8)	2% (5.7)	2% (6.0)	2% (6.2)	2% (6.0)

Data shown are the percentage of men citing each construct as the "most important," with the mean importance score shown in parenthesis. A mean score of 1 equals "not at all important to me" and a score of 7 equals "very important to me." Data for the construct(s) cited as the most important and with the highest mean importance scores within each country are highlighted in bold. Where two constructs were cited with the highest mean importance, both are highlighted in bold.

**Table 6** Constructs of quality of life as a function of age and relationship status

Attribute	Total N = 27,839	20–29 years N = 6,592	30–39 years N = 6,750	40–49 years N = 5,886	50–59 years N = 4,350	60–75 years N = 4,261	Married/partner N = 17,260	Single N = 7,795
Being in good health	<b>29%</b>	<b>26%</b>	<b>28%</b>	<b>30%</b>	<b>32%</b>	<b>34%</b>	26%	<b>34%</b>
Harmonious family life	25%	21%	27%	29%	26%	23%	29%	18%
Good relationship with a partner/wife	23%	23%	23%	22%	24%	26%	28%	17%
Enjoying life to the fullest	12%	18%	11%	10%	9%	8%	8%	18%
Satisfying work life or career	4%	6%	3%	3%	3%	2%	2%	5%
Having a nice home	2%	2%	2%	2%	2%	3%	2%	3%
Satisfying sex life	2%	3%	3%	2%	2%	1%	2%	3%

Data shown are the percentage of men citing each attribute as the "most important." Data for the construct cited as the most important within each age and relationship status group are highlighted in bold.

**Table 7** Constructs of quality of life as a function of erectile dysfunction and treatment seeking

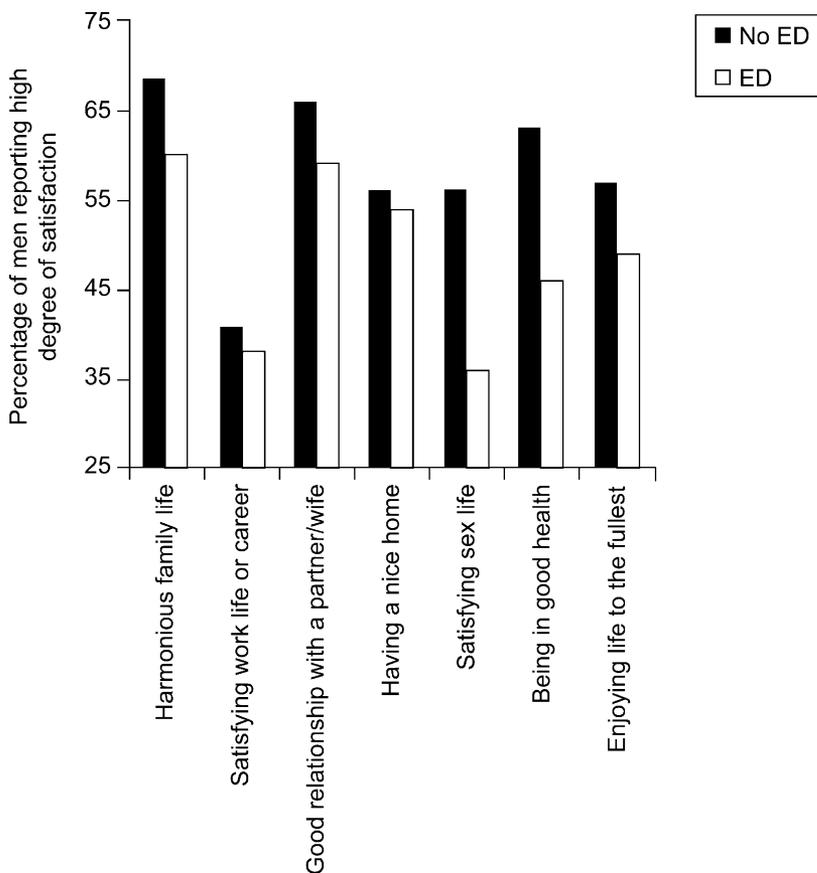
Attribute	No erectile dysfunction N = 23,418	Erectile dysfunction N = 4,421	Treatment seekers with erectile dysfunction N = 2,207	Treatment non-seekers with erectile dysfunction N = 2,215
Being in good health	<b>30%</b>	<b>30%</b>	<b>31%</b>	<b>30%</b>
Harmonious family life	26%	22%	22%	22%
Good relationship with a partner/wife	22%	25%	25%	25%
Enjoying life to the fullest	11%	11%	11%	11%
Satisfying work life or career	4%	4%	4%	3%
Having a nice home	3%	3%	2%	3%
Satisfying sex life	3%	3%	3%	2%

Data shown are the percentage of men citing each attribute as the “most important.” Data for the construct cited as the most important within each group are highlighted in bold.

empirically unexamined stereotypes. Although all constructs of masculinity were considered important (as evidenced by mean importance scores), men of all nationalities in this sample and across all age ranges identified being seen as honorable, self-reliant, and respected as more important to their perception of masculinity than being seen as physically attractive, sexually active, and successful with women.

Overall, being seen as honorable was considered to be the most important construct of

masculinity. Despite the fact that it could be contended that different nationalities perceive “honor” in different ways, placing divergent emphases on component aspects such as honesty, respect (of peers or family), and integrity or fairness, it remains true that across national samples, perceptions of masculinity most often centered on the less sexual aspects of the masculine construct. Similarly, men of all ages and across nationalities far more frequently ranked good health, harmonious family life, and good relationship with their



**Figure 1** Personal satisfaction with constructs of quality of life in men without erectile dysfunction and men with erectile dysfunction. Data shown represent the percentage of men providing a score of 6 or 7 when asked to rate their degree of satisfaction on a 7-point Likert scale (where 1 equals “I am not at all satisfied” and 7 equals “I am perfectly satisfied”). ED = erectile dysfunction.

wife/partner as the most important to their quality of life compared with material (e.g., "satisfying work life or career," "having a nice home"), self-fulfilling (e.g., "enjoying life to the full"), or purely sexual (e.g., "satisfying sex life") concerns.

The MALES study provides several unique contributions to our understanding of masculinity, quality of life, and erectile dysfunction. Specifically, we found that men with and without erectile dysfunction, men with erectile dysfunction who actively sought treatment, and men with erectile dysfunction who do not seek treatment reported identical rankings of the importance of sexual and nonsexual elements of quality of life. We also noted that the experience of erectile dysfunction neither increased nor decreased the importance men placed on "having an active sex life" or "having success with women," compared with the cohort of men without erectile dysfunction, although understandably, men with erectile dysfunction reported less satisfaction with their sex life than did men without erectile dysfunction. These findings question the very widely held view that erectile dysfunction strikes at the very core of men's masculine self-concept. Similarly, these findings do not support the view that men's unwillingness to confront a threat to their masculine identity accounts for avoidance of treatment. These results question the opinion that erectile dysfunction therapies appeal to men with a phallogocentric concern for their own pleasure and/or damaged sense of masculinity.

Along with the strengths of this research come certain limitations that are shared with most large-scale surveys. In particular, the current analysis was based on self-reported identification of erectile dysfunction, and while there is extensive evidence of the validity of self-reports in sexuality research [34–36], direct measurements of erectile function were not undertaken in this study. A number of other factors that may affect how masculinity is constructed were not examined in this survey. Notably, participants were not questioned as to their sexual orientation, and the language used in the survey was implicitly heterosexually oriented. Consistent with a social constructionist theory of men's health, it has been demonstrated that gay and bisexual men hold more traditional beliefs about masculinity than young men who describe themselves as exclusively heterosexual [22,37]. Although it may be assumed that the majority of survey participants were heterosexual, the very nature of the survey may have meant that a disproportional number of nonheterosexual men were

included. As the proportion of gay/bisexual men is unknown (and likely varied across countries and age brackets) and may have influenced survey findings, results have to be taken in the context of this limitation. Similarly, masculine constructs and help-seeking behavior are heavily influenced by occupational and socioeconomic status; indeed, a number of reports suggest that occupational status is a greater predictor of help-seeking behavior than gender alone [14,38,39]. Therefore, future analyses of constructs of masculinity, erectile dysfunction, and help-seeking behavior should include parameters designed to assess the impact of sexual orientation and socioeconomic status. Further avenues of research might also include how body image and the degree of alexithymia (the extent to which individuals have deficiencies in understanding, processing, or describing emotions) exhibited by participants influence their perception of masculinity, the importance attached to various aspects of quality of life, and help-seeking behavior.

Many critics in the current discourse about male sexuality, particularly erectile dysfunction therapy, have legitimately argued that too little attention is paid to the context in which men and their partners experience sexual concerns. The current findings emphasize that men across cultures and ages value couple relationships over purely sexual pleasure, and indicate that men are particularly concerned about their partnered relationships, whether or not they report erectile dysfunction. These findings converge with a body of previously reported research that has indicated the importance of the partner in defining sexual activity functioning and satisfaction [40–42]. Such work has demonstrated that men's experience of erectile dysfunction is associated with the deterioration of female's sexual desire, arousal, orgasm, and satisfaction [40]; and that treatment of men's erectile dysfunction results in the restoration of these erectile dysfunction-induced impairments of female sexual function [41–43].

The current findings have a number of implications for clinical practice. Given that erectile dysfunction is prevalent, inconsistently treated, and has a detrimental impact on sexual quality of life, this and related research underscore the need to develop strategies to encourage men to seek help for this condition. The quality of life aspects of our findings suggest that within the context of treating erectile dysfunction, greater prominence should be placed on the couple's relationship, and that involvement of partners should be encouraged

throughout the process, from initially seeking professional help to participation in physician consultations. The findings that men value their health above other aspects of quality of life, and that being considered honorable, self-reliant, and respected are central to male perceptions of masculinity, could also be harnessed to encourage men to seek medical help with respect to erectile dysfunction. The prevailing paradigm needs to be challenged such that seeking medical help is perceived to be a responsible act undertaken by respected, honorable men who feel empowered to take their health into their own hands for the sake of their families and their relationships with their partners. Once professional help is sought, of course, a formal medical and sexual history should be taken to identify the primary cause of erectile dysfunction. As being of good health is considered to be of central importance, a medical history should not be seen as a catalogue of health "failures" but a means of improving that aspect of life that is held in such esteem. Whether lifestyle changes are advocated, counseling endorsed, or treatment prescribed for the treatment of erectile dysfunction, the support and involvement of the partner is crucial. Finally, and perhaps most importantly, the current findings strongly suggest that clinicians should reconsider conceptualizing erectile dysfunction and other sexual concerns as striking at the core of male identity. These results indicate that sexuality is a relevant factor, but not a paramount concern, and is generally not of greater significance to men with erectile dysfunction than to men without this condition.

### Conclusions

Taken together, this body of research underscores the centrality to men of nonsexual aspects of the male identity, emphasizes the importance of the couple relationship, and strengthens the view that erectile dysfunction may matter to men because of its significant impact on valued partnered relationships. The current findings serve to highlight the need to further develop theoretical models, which can be empirically tested to explain the complex nature of men's sexual concerns and the context in which they and their partners experience them.

**Corresponding Author:** Michael Sand, PhD, MD, Kaiser Friedrich Ring 8, Dusseldorf, 40545, Germany. Tel: (203) 798-5134; Fax: (203) 798-4787; E-mail: mmichaelsand@yahoo.com

*Conflict of Interest:* None declared.

### Statement of Authorship

#### Category 1

##### (a) Conception and Design

Michael S. Sand; Raymond Rosen; William Fisher; Ian Eardley; Julia Heiman

##### (b) Acquisition of Data

Michael S. Sand; Raymond Rosen; William Fisher; Ian Eardley; Julia Heiman

##### (c) Analysis and Interpretation of Data

Michael S. Sand; Raymond Rosen; William Fisher; Ian Eardley; Julia Heiman

#### Category 2

##### (a) Drafting the Article

Michael S. Sand; Raymond Rosen; William Fisher; Ian Eardley; Julia Heiman

##### (b) Revising It for Intellectual Content

Michael S. Sand; Raymond Rosen; William Fisher; Ian Eardley; Julia Heiman

#### Category 3

##### (a) Final Approval of the Completed Article

Michael S. Sand; Raymond Rosen; William Fisher; Ian Eardley; Julia Heiman

### References

- 1 Laumann EO, West S, Glasser D, Carson C, Rosen R, Kang JH. Prevalence and correlates of erectile dysfunction by race and ethnicity among men aged 40 or older in the United States: From the male attitudes regarding sexual health survey. *J Sex Med* 2007;4:57-65.
- 2 Latini DM, Penson DF, Wallace KL, Lubeck DP, Lue TF. Clinical and psychosocial characteristics of men with erectile dysfunction: Baseline data from ExCEED. *J Sex Med* 2006;3:1059-67.
- 3 Mulhall J, Teloken P, Brock G, Kim E. Obesity, dyslipidemias and erectile dysfunction: A report of a subcommittee of the sexual medicine society of North America. *J Sex Med* 2006;3:778-86.
- 4 Dean RC, Lue TF. Physiology of penile erection and pathophysiology of erectile dysfunction. *Urol Clin North Am* 2005;32:379-95.
- 5 Briganti A, Salonia A, Gallina A, Suardi N, Rigatti P, Montorsi F. Emerging oral drugs for erectile dysfunction. *Expert Opin Emerg Drugs* 2004;9:179-89.
- 6 Roth A, Kalter-Leibovici O, Kerbis Y, Tenenbaum-Koren E, Chen J, Sobol T, Raz I. Prevalence and risk factors for erectile dysfunction in men with diabetes, hypertension, or both diseases: A community survey among 1,412 Israeli men. *Clin Cardiol* 2003;26:25-30.
- 7 Nicolosi A, Glasser DB, Moreira ED, Villa M. Prevalence of erectile dysfunction and associated

- factors among men without concomitant diseases: A population study. *Int J Impot Res* 2003;15:253–7.
- 8 Kubin M, Wagner G, Fugl-Meyer AR. Epidemiology of erectile dysfunction. *Int J Impot Res* 2003;15:63–71.
  - 9 Tolra JR, Campana JM, Ciutat LF, Miranda EF. Prospective, randomized, open-label, fixed-dose, crossover study to establish preference of patients with erectile dysfunction after taking the three PDE-5 inhibitors. *J Sex Med* 2006;3:901–9.
  - 10 Haro JM, Beardsworth A, Casariego J, Gavart S, Hatzichristou D, Martin-Morales A, Schmitt H, Mirone V, Needs N, Riley A, Varanese L, von Keitz A, Kontodimas S. Treatment-seeking behavior of erectile dysfunction patients in Europe: Results of the erectile dysfunction observational study. *J Sex Med* 2006;3:530–40.
  - 11 Fisher WA, Rosen RC, Eardley I, Niederberger C, Nadel A, Kaufman J, Sand M. The multinational Men's Attitudes to Life Events and Sexuality (MALES) Study Phase II: Understanding PDE5 inhibitor treatment seeking patterns, among men with erectile dysfunction. *J Sex Med* 2004;1:150–60.
  - 12 Benbassat J, Pilpel D, Tidhar M. Patients' preferences for participation in clinical decision making: A review of published surveys. *Behav Med* 1998;24:81–8.
  - 13 Gabbard-Alley A. Health communication and gender: A review and critique. *Health Commun* 1995;7:35–54.
  - 14 Galdas PM, Cheater F, Marshall P. Men and health help-seeking behaviour: Literature review. *J Adv Nurs* 2005;49:616–23.
  - 15 Tudiver F, Talbot Y. Why don't men seek help? Family physicians on perspectives on help-seeking behavior in men. *J Fam Pract* 1999;48:47–52.
  - 16 Addis ME, Mahalik JR. Men, masculinity, and the contexts of help seeking. *Am Psychol* 2003;58:5–14.
  - 17 Rickwood DJ, Braithwaite VA. Social-psychological factors affecting help-seeking for emotional problems. *Soc Sci Med* 1994;39:563–72.
  - 18 Mackenzie CS, Gekoski WL, Knox VJ. Age, gender, and the underutilization of mental health services: The influence of help-seeking attitudes. *Aging Ment Health* 2006;10:574–82.
  - 19 Nicholas DR. Men, masculinity, and cancer: Risk-factor behaviors, early detection, and psychosocial adaptation. *J Am Coll Health* 2000;49:27–33.
  - 20 Moller-Leimkuhler AM. Barriers to help-seeking by men: A review of sociocultural and clinical literature with particular reference to depression. *J Affect Disord* 2002;71:1–9.
  - 21 Moller-Leimkuhler AM. The gender gap in suicide and premature death or: Why are men so vulnerable? *Eur Arch Psychiatry Clin Neurosci* 2003;253:1–8.
  - 22 Courtenay WH. Constructions of masculinity and their influence on men's well-being: A theory of gender and health. *Soc Sci Med* 2000;50:1385–401.
  - 23 Smiler AP. Thirty years after the discovery of gender: Psychological concepts and measures of masculinity. *Sex Roles* 2004;50:15–26.
  - 24 Forrester DA. Myths of masculinity. Impact upon men's health. *Nurs Clin North Am* 1986;21:15–23.
  - 25 Zeldow PB, Greenberg RP. Who goes where: Sex-role differences in psychological and medical help seeking. *J Pers Assess* 1980;44:433–5.
  - 26 Phillips DA. Masculinity, male development, gender, and identity: Modern and postmodern meanings. *Issues Ment Health Nurs* 2006;27:403–23.
  - 27 Terry DJ, Hogg MA, McKimmie BM. Attitude-behaviour relations: The role of in-group norms and mode of behavioural decision-making. *Br J Soc Psychol* 2000;39:337–61.
  - 28 Hyde JS, DeLamater JD, Byers ES. Understanding human sexuality. Toronto: McGraw-Hill Ryerson; 2006.
  - 29 Rosen R, Fisher W, Eardley I, Niederberger C, Nadel A, Sand M. The multinational Men's Attitudes to Life Events and Sexuality (MALES) study: I. Prevalence of erectile dysfunction and related health concerns in the general population. *Curr Med Res Opin* 2004;20:607–17.
  - 30 McCabe M, Matic H, Severity of ED: Relationship to treatment-seeking and satisfaction with treatment using PDE5 inhibitors. *J Sex Med* 2007;4:145–51.
  - 31 Schouten BW, Bosch JL, Bernsen RM, Blanker MH, Thomas S, Bohnen AM. Incidence rates of erectile dysfunction in the Dutch general population. Effects of definition, clinical relevance and duration of follow-up in the Krimpen Study. *Int J Impot Res* 2005;17:58–62.
  - 32 Mariappan P, Chong WL. Prevalence and correlations of lower urinary tract symptoms, erectile dysfunction and incontinence in men from a multiethnic Asian population: Results of a regional population-based survey and comparison with industrialized nations. *BJU Int* 2006;98:1264–8.
  - 33 Lindau ST, Schumm LP, Laumann EO, Levinson W, O'Muirheartaigh CA, Waite LJ. A study of sexuality and health among older adults in the United States. *N Engl J Med* 2007;357:762–74.
  - 34 Kinsey AC, Pomeroy WB, Martin CE, Gebhard PH. Sexual behavior in the human female. Philadelphia, PA: Saunders; 1953.
  - 35 Seal DW. Interpartner concordance of self-reported sexual behavior among college dating couples. *J Sex Res* 1997;1:39–55.
  - 36 Catania JA, Gibson DR, Chitwood DD, Coates TJ. Methodological problems in AIDS behavioral research: Influences on measurement error and participation bias in studies of sexual behavior. *Psychol Bull* 1990;108:339–62.

- 37 Courtenay WH. Better to die than cry? A longitudinal and constructionist study of masculinity and the health risk behaviour of young American men 1998. Vol. Dissertation Abstracts International University of California at Berkeley, Publication number 9902042.
- 38 Lee COR. The psychology of men's health. Buckingham: Open University Press; 2002.
- 39 Emslie C, Hunt K, Macintyre S. Gender differences in minor morbidity among full time employees of a British university. *J Epidemiol Community Health* 1999;53:465-75.
- 40 Fisher WA, Rosen RC, Eardley I, Sand M, Goldstein I. Sexual experience of female partners of men with erectile dysfunction: The Female Experience of Men's Attitudes to Life Events and Sexuality (FEMALES) study. *J Sex Med* 2005;2:675-84.
- 41 Fisher WA, Rosen RC, Mollen M, Brock G, Karlin G, Pommerville P, Goldstein I, Bangerter K, Bandel TJ, Derogatis LR, Sand M. Improving the sexual quality of life of couples affected by erectile dysfunction: A double-blind, randomized, placebo-controlled trial of vardenafil. *J Sex Med* 2005;2:699-708.
- 42 Goldstein I, Fisher WA, Sand M, Rosen RC, Mollen M, Brock G, Karlin G, Pommerville P, Bangerter K, Bandel TJ, Derogatis LR. Women's sexual function improves when partners are administered vardenafil for erectile dysfunction: A prospective, randomized, double-blind, placebo-controlled trial. *J Sex Med* 2005;2:819-32.
- 43 Edwards D, Hackett G, Collins O, Curram J. Vardenafil improves sexual function and treatment satisfaction in couples affected by erectile dysfunction (ED): A randomized, double-blind, placebo-controlled trial in PDE5 inhibitor-naive men with ED and their partners. *J Sex Med* 2006;3:1028-36.

## Appendix

Extracts from the MALES survey, previously detailed in full [26].

"We are going to talk about the stereotypes people have about the male identity, or, in other words what makes a 'real man'. I will read a list of items, which some people think are important to the male identity. For each one, I'll first ask you about what you feel personally, and then what you believe the general public thinks. From a scale of 1

(not at all important to the male identity) to 7 (very important to the male identity), rate the following as you deem important to the male persona and then for the same items rate what you think is the general public opinion.

- Having a good job.
- Having financial stability.
- Being seen as a man of honor.
- Having success with women.
- Coping with problems on your own.
- Having an active sex life.
- Being in control of your own life.
- Being physically attractive.
- Having the respect of friends."

Respondents were then asked to cite which of the characteristics of male identity listed they considered the most important.

"People place different degrees of importance on different areas of their personal and professional life. Now I would like to ask your views on various aspects of your quality of life. On a scale of 1 (not at all important) to 7 (very important), how important are the following to your quality of life?"

- Harmonious family life.
- Satisfying work life or career.
- Good relationship with a partner/wife.
- Having a nice home.
- Satisfying sex life.
- Being in good health.
- Enjoying life to the fullest."

Respondents were then asked to cite which of these constructs of quality of life was the most important.

"On a scale of 1 (not satisfied at all) to 7 (completely satisfied), how satisfied are you with the following?"

- Your family life.
- Your work life or career.
- Relationship with partner/wife.
- Quality of your home.
- Your sex life.
- Your health.
- Your overall contentment or happiness."