



Health Care in Patients with Sexual Dysfunctions

Katja Elisa Schmidtke*

HMU Health and Medical University, Potsdam, Germany

Abstract

Objective: Previous studies have confirmed the high prevalence of sexual dysfunction and its impact on quality of life. However, this factor has not yet been properly recognized in medical care. Our aim was to inquire about occurrence of sexual dysfunctions and sexual anamnesis in primary care patients.

Methods: 801 patients aged between 18 and 40 were included in the study. Female sexual dysfunction was measured by the FSFI, erectile dysfunction by the IIEF-5. Health-related quality of life was measured by the SF12, sexual satisfaction by the NSSS-SD, partnership satisfaction and health by the VAS and depression by the PHQ-9. Patients were also asked about their health care experiences.

Results: The study indicates that 35.6% of the women reported sexual dysfunction and 28.2% of the men erectile dysfunction. Patients with sexual dysfunction reported lower levels of quality of life, sexual satisfaction, partnership satisfaction and health, but higher levels of depression than patients without sexual dysfunction. In case of 85.1% of the women and 98.1% of the men, no complete sexual anamnesis was conducted. Only 10.3% of women and 7.2% of men received the offer to talk about sexual problems. 66.7% of women and 53.1% of men would like their doctor to initiate such talks. 84.8% of the women and 93.2% of the men with sexual dysfunction described themselves as untreated.

Conclusion: Sexual disorders influence the quality of life and should have greater priority in medical care. Questions regarding sexual health and sexual counselling ought to be integrated into routine medical examinations.

Keywords: Sexual dysfunctions; Quality of life; Sexual satisfaction; Sexual anamnesis; Medical care

Introduction

The sexual dysfunctions encompass a variety of disorders that are characterized by disturbances in the various phases of the sexual response cycle of desire, arousal, orgasm and resolution, as well as sex-related pain disorders [1,2]. Reviews and studies have shown that sexual dysfunction can arise as a result of physical or mental illness [3-6], or through the effects of medication [7]. Sexual dysfunctions have a major impact on life satisfaction, sexual satisfaction, mental health and partnership [8-11]. Female sexual function disorders are very prevalent, with a prevalence of over 40% [5,11]. In international studies in which standardized screenings were applied, such as the Female Sexual Function Index (FSFI) [12], the estimated prevalence is between 24% and 43% [13,14]. An American study among female students reported 63% [15]. The prevalence of sexual desire dysfunctions in women is reported to be between 17% and 55%; for dyspareunia the determined values are 14-27%, for orgasm disorders 16-25% and for excitement and lubrication problems 8-15%, that for sexually active women lies between 21-28% [5]. The prevalence of male sexual dysfunction is reported as 20-30%, with the strongest evidence-based results for erectile dysfunction. Using the cut-off values of the International Index of Erectile Function (IIEF-5) a prevalence of 21% in men between the ages 40-80 years has been determined. The incidence of erectile dysfunction increases steadily according to age. In European studies, prevalence rates of up to 10% are reported among the under 40-year-olds, 20-30% in the age group of 40-59, 20-40% aged between 60-69 and 50-75% aged between 70-80 [5]. The differences in prevalence are based on the fact that, on the one hand, operationalization is not always easy and, on the other, various forms of sexual dysfunctions can overlap. In clinical practice, there should be a distinction made between sexual problems and sexual dysfunction. Sexual dysfunctions are characterized by an impairment of the sexual function, psychological stress or serious relationship problems. The first signs of sexual dysfunction should also be taken seriously because they can be the indicators of an underlying chronic disease [5,16,17]. Nevertheless, the issue of sexuality is rarely addressed

by physicians and often neglected in medical care [18,19]. The aim of our study was to determine the occurrence of sexual dysfunction in women and erectile dysfunction in men between the ages of 18 and 40, by applying the FSFI and IIEF. Furthermore, the objective was to examine the connection between sexual dysfunction and health-related quality of life, sexual satisfaction, relationship satisfaction, health status and depression, as this is of great relevance to medical care. Finally, the intent was to assess whether and if so, when and in what form, sexual anamneses and the treatment of sexual problems have already been implemented in medical care.

Methods

The survey was carried out among 801 patients aged between 18-40. All patients were in primary care and received at least some form of medical treatment, such as for minor illnesses or infections, or having had a routine check-up or vaccinations. It was conducted as an empirical online study on sexual attitudes, behavior and disorders, using SoSci-Survey software. The software SoSci-Survey [20] ensured a high level of data protection, while also guaranteeing a reliable dissemination of the survey information. In addition to social-demographic data, sexual disorders, health-related quality of life, sexual satisfaction, partnership satisfaction, health and depression and individually experienced health care were also assessed. Sexual dysfunctions should be examined in patients aged between 18-40 and the medical health care from the patient's perspective. For patients in this age group,

***Corresponding author:** Dr. Katja Elisa Schmidtke, Ph.D., HMU Health and Medical University, Potsdam, Germany, Tel: +49-3641 9 35490; E-mail: katja.brenk-franz@med.uni-jena.de

Received: February 21, 2018; **Accepted:** June 20, 2018; **Published:** June 27, 2018

Citation: Schmidtke KE (2018) Health Care in Patients with Sexual Dysfunctions. Prim Health Care 8: 300. doi: [10.4172/2167-1079.1000300](https://doi.org/10.4172/2167-1079.1000300)

Copyright: © 2018 Schmidtke KE. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

it is less likely to experience the effects of multimorbidity [21]. In female sexual dysfunction it is often difficult to view the individual sexual dysfunctions separately from each other. Consequently, it was essential to choose a valid instrument for identifying the various sexual impairments, which would provide a cut-off value to measure a sexual dysfunction. Recruitment and data collection took place from September 2014 to February 2015. The study was conducted in accordance with the "Declaration of Helsinki", the guidelines of Good Clinical Practice and was approved by the institutional review board of the University Hospital Jena.

Measure

Sociodemography, health status and partnership satisfaction: The socio-demographic data was collected in accordance with the recommendations of the Working Group "Epidemiological Methods" in the German Working Community Epidemiology of the GMDs and the DGSM [22]. The assessment of health and the partnership satisfaction was based on a visual analogue scale of 0 to 100 in accordance with the EuroQuol [23].

Sexual dysfunction: The Female Sexual Function Index (FSFI) [12,24] is an internationally validated 19-item self-assessment questionnaire with six subscales: desire, subjective arousal, lubrication, orgasm, satisfaction and pain. The model explained 78.43% of the variance and the subscales showed good internal constancy values (Cronbach's alpha: 0.75-0.95). The FSFI has been validated in women with sexual arousal disorders, libido problems and orgasm disorders. The cut-off value is 26.55 [25].

The International Index of Erectile Function (IIEF-5) [26] is a short 5-item self-description tool to measure erectile dysfunction. The internal consistency values are very good (Cronbach's alpha: 0.73-0.99). The total sum of the IIEF-5 is between 5 and 25. The clinical cut-off is 21.

Health-related quality of life: The SF-12 [27] is an established short measuring instrument for recording the health-related quality of life. The two subscales "mental health" and "physical health" can be reliably evaluated with the 12 items on the eight subscales, role physical, role

emotional, physical function, social function, mental health, vitality, pain and general health.

Sexual satisfaction: The NSSS-SD [28], German version: New Sexual Satisfaction Scale - Short is a 12-item short instrument for measuring sexual satisfaction on a 5-stage Likert scale [29]. The total value is between 12 and 60. The value for the internal consistency is 0.92.

Depression: The PHQ-9 (Patient Health Questionnaire-9) [30,31] is one of the best screening tools for a reliably measuring the severity of depression by means of 9 items on a 4-point rating scale. The range is between 0 and 27. PHQ-9 scores between 5 and 9 represent a mild, between 10-14 a moderate and between 15-27 a severe depression [32].

Questions about sexual anamnesis and treatment: The patients' experiences with the health care system were measured with the help of individual items. They were asked whether a complete sexual anamnesis had been carried out with regard to their sex history, use of contraceptives and sexual dysfunctions and if so, which medical specialists had done this.

Data analysis: The patient characteristics were analysed descriptively and the group differences were analysed by means of variance analyses, indicating the confidence intervals. For data analysis, SPSS 21.0 was used at a fixed level of significance of alpha=0.05.

Results

The socio-demographic variables of the total sample of 801 patients are shown in Table 1. Patients between the ages of 18 and 40 were included in the analysis; the average age was 66.3 (SD=8.3). All patients reported to have received at least some form of medical treatment, such as for minor illnesses or infections, or having had a routine check-up or vaccinations.

On the basis of the FSFI values (MW=25.9, SD=8.2) a sexual dysfunction was found in 211 (35.6%) women, 351 (59.3%) had no clinically relevant values and 30 values were missing (5.1%). In the group of men who participated, clinically relevant erectile dysfunction was found in 59 subjects (28.2%) with respect to IIEF-5 (MW=21.1; SD=6.2). 150 (71.8%) had no clinically relevant values. There were

Variables	Categories		Frequency	Percentage
Age M=66.4 SD=8.3	Under 21		162	20.2
	21-30		561	70.0
	31-40		78	9.8
Sex	Female		592	73.9
Education	Middle school		4	0.5
	Secondary modern school		36	4.5
	High school		759	94.8
	Missing		2	0.2
In a Partnership	Yes		560	69.9
	Min	Max	Mean	SD
FSFI	2	36	25.93	8.18
IIEF-5	2	25	21.09	6.16
Health-related quality of life SF12 "physical health"	18.48	65.38	53.49	6.05
Health-related quality of life SF12 "mental health"	10.83	61.00	44.50	9.95
Sexual Satisfaction NSSS-SD	12	60	45.16	10.03
Relationship satisfaction (VAS)	0	100	74.81	25.60
Health (VAS)	17	100	82.45	14.86
Depression PHQ-9	0	23	5.86	4.62

Table 1: Characteristics of the sample (N=801).

highly significant differences between the groups with and without male or female sexual dysfunction in terms of health-related quality of life, sexual satisfaction, relationship satisfaction, health status and depression. The mean values, standard deviations and confidence intervals with regard to the presence of a sexual dysfunction are shown in Tables 2 and 3. The surveyed women and men with sexual dysfunction stated they have significantly lower values of health-related quality of life, sexual satisfaction, partnership satisfaction and health and a significantly higher level of depression.

Sexual anamnesis and medical care from the patient's perspective

85.1% of women (n=504) stated that they had never had a complete sexual anamnesis (questions regarding the date of their first menstruation, contraceptives and possible problems during sexual intercourse). In the cases of female patients with a complete sexual anamnesis (14.9%, n=88), the anamnesis had been performed in 85 (14.4%) of the women by a gynecologist, in two women by the general

	Woman	Mean (SD)	95% CI	F	Significance
Health-related quality of life SF12 "physical health"	with Sexual Dysfunction	52.87 (6.97)	51.92 - 53.81	1.50	0.22
	without Sexual Dysfunction	53.55 (5.98)	52.92-54.17		
Health-related quality of life SF12 "mental health"	with Sexual Dysfunction	41.78 (10.90)	40.30 - 43.25	15.80	p<0.001
	without Sexual Dysfunction	45.28 (9.61)	44.27 - 46.28		
Sexual satisfaction NSSS-SD	with Sexual Dysfunction	37.03 (10.31)	35.64 - 38.44	396.57	p<0.001
	without Sexual Dysfunction	50.51 (5.73)	49.91 - 51.12		
Relationship satisfaction (VAS)	with Sexual Dysfunction	63.25 (28.58)	59.37-67.13	99.19	p<0.001
	without Sexual Dysfunction	83.13 (18.74)	81.16-85.10		
Health (VAS)	with Sexual Dysfunction	78.87 (15.78)	76.73 - 81.01	21.06	p<0.001
	without Sexual Dysfunction	84.55 (13.20)	83.17-85.94		
Depression PHQ-9	with Sexual Dysfunction	7.39 (5.26)	6.67-8.10	33.11	p<0.001
	without Sexual Dysfunction	5.13 (3.98)	4.71-5.55		

Table 2: Differences between the groups calculated according to the FSFI (sexual dysfunction) in women in terms of health-related quality of life, sexual satisfaction, relationship satisfaction, health and depression.

	Man	Mean (SD)	95% CI	F	Significance
Health-related quality of life SF12 "physical health"	with Erectile Dysfunction	53.54 (6.26)	51.90-55.17	0.51	0.48
	without Erectile Dysfunction	54.12 (4.84)	53.34-54.90		
Health-related quality of life SF12 "mental health"	with Erectile Dysfunction	41.19 (10.64)	38.42-43.97	23.51	p<0.01
	without Erectile Dysfunction	47.81 (8,10)	46.51-49.12		
Sexual satisfaction NSSS-SD	with Erectile Dysfunction	40.10 (11.64)	37.07-43.13	14.94	p<0.001
	without Erectile Dysfunction	45.93 (8.99)	44.48-47.38		
Relationship satisfaction (VAS)	with Erectile Dysfunction	58.32 (35.79)	48.99-67.65	21.75	p<0.001
	without Erectile Dysfunction	77.76 (22.88)	74.07 -. 81.45		
Health (VAS)	with Erectile Dysfunction	80.02 (17.61)	75.43-84.61	3,09	0.08
	without Erectile Dysfunction	84.12 (14.15)	81.84-86.40		
Depression PHQ-9	with Erectile Dysfunction	7.93 (6.16)	6.33-9.53	22,67	p<0.001
	without Erectile Dysfunction	4.62 (3.68)	4.03-5.22		

Table 3: Group differences calculated according to the IIEF-5 (erectile dysfunction) in men in terms of health-related quality of life, sexual satisfaction, relationship satisfaction, health status and depression.

Sexual Anamnesis in primary care	Physicians	Woman N (Percent)	Men N (Percent)
The first menstruation	Gynecologist	401 (67.7%)	
	GP	49 (8.3%)	
	Urologist	0 (0.0%)	
	Psychotherapist	24 (4.1%)	
Contraceptive	Gynecologist	517 (87.3%)	
	GP	88 (12.0%)	12 (5.7%)
	Psychotherapist	22 (3.7%)	0 (0%)
	Urologist	3 (0.5%)	5 (2.4%)
Sexual problems or dysfunctions	Gynecologist	83 (14.0%)	
	GP	4 (0.7%)	7 (3.3%)
	Psychotherapist	36 (6.1%)	13 (6.2%)
	Urologist	2 (0.3%)	7 (3.3%)
Offer to talk about sexual concerns during their medical consultation	All	61 (10.3%)	15 (7.2%)
The doctor should initiate the conversation about sex issues	All	395 (66.7%)	111 (53.1%)

Table 4: Questions asked during sexual anamnesis in primary care.

practitioner (0.3%) and in one case by the psychotherapist (0.2%). In the cases of 205 men (98.1%) a complete sexual anamnesis had never been performed. In three cases the sexual anamnesis had been performed by a general practitioner (1.4%) and in one case by an urologist (0.5%). 91.4% (n=191) of the men had never been questioned about contraception in primary care. 81.8% (n=484) of women and 87.6% (n=183) of the men had never been asked about sexual problems or dysfunctions. Table 4 provides information about questions asked during sexual anamnesis in primary care.

13.7% (n=81) of women and 7.7% (n=16) of men were previously treated for sexual problems. Among the women with a sexual dysfunction according to FSFI, 84.8% (n=179) were not treated. And 93.2% (n=55) of men with clinically relevant erectile dysfunction are also untreated.

Discussion

Sexual dysfunctions are not uncommon in early adulthood and have a significant influence on the patients' sexual satisfaction and quality of life. Nevertheless, this is often disregarded in medical care. The results of this present study correspond with the figures of other studies [5,11], in that they show high levels of sexual dysfunction, even though the prevalence differences and standard deviation are great [33]. Many studies set the starting age for measuring sexual dysfunction at 40 [5], although the increase in sexual dysfunction in elderly patients is more the result of age-related morbidity rather than of normal aging processes [34]. Sexual dysfunctions often have a negative impact on the quality of life and result in a high level of suffering for the patient. In the present study, men and women with sexual dysfunction reported significantly lower values in health-related quality of life (mental health), sexual satisfaction, partnership satisfaction and health status on the one hand, as well as higher levels in depression on the other. These results are consistent with recent studies [8-11], but some of the relationships may be bidirectional [35]. Depression is often associated with sexual dysfunction and sexual dysfunction can also lead to depression [35]. The results of the sexual anamnestic questions are also consistent with references in specialist literature, according to which sexuality is rarely addressed by doctors [18,19,36]. The reasons for this are: first of all, coyness or modesty; secondly, the feeling of not being adequately prepared or trained for a "sex talk"; thirdly, the assumption that a person's sexual history is irrelevant in relation to the patient's major medical problems; and last of all, time issues [19]. Moreover, less than 20% of men and 15% of women discuss their sexual problems with their doctor, which is partly due to lack of awareness and a sense of shame [37]. This situation can become problematic when physicians

feel just as uneasy about the matter and do not initiate the conversation about sexuality. As a result of these factors, sexual dysfunctions often go undiagnosed. In the present study 84.8% of women and 91.2% of men with a sexual dysfunction are untreated. There is confirmation of this in specialist literature, according to which sexual dysfunctions are generally underdiagnosed and are treated either with delay or not at all [38]. However, many patients want to talk to the doctor about sexual problems [39]. In our study, more than half of the patients said that they wished their doctor would instigate such a conversation. This is in line with the results of a German study, in which 54% of women and almost 45% of men think the doctor should routinely screen some aspects of sexual function [37]. On an international level, recommendations are increasingly being made to GPs (doctors in general and family medicine), who are routinely responsible as key gatekeepers in the health care system, to address the main issues concerning sexual health [19]. The questions related to the patients' sex history could be efficiently integrated into their general check-up routine, when asking questions about their current complaints or prescribed medication. It would be easy to say, e.g. "Many people with diabetes notice a change in their sexual function. Have you noticed any of these changes yourself?" A straightforward approach and a common-sense attitude when it comes to sexual anamnesis and routine screening would be of great advantage to both patient and doctor.

Limitations

Online surveys are sometimes criticized for allegedly posing the danger of misrepresentation, although they do have the advantage of reaching a diverse group of people, especially adolescents and young adults. The sometimes-feared risk of distortion of facts has so far never been ascertained in any comparative study [40]. This type of study is even considered to be particularly suitable for research studies in the area of sexual research [41] since it reduces social inhibitions and promotes openness in sensitive topics [42]. Often online surveys are not considered to be representative, as Internet users nowadays can still differ from the non-users. However, the age effect described in scientific publications could be reduced to a minimum since the present age group also corresponds to the main user group of the 18-to-40-year-olds. Nevertheless, there is the restriction that it is not a representative study. In next studies data on medications and chronic diseases should be asked. Another limitation of the study is that, while for men there is a specific sexual dysfunction (erectile dysfunction), for women there is only a score for probability calculation to diagnose a sexual dysfunction. This is due to the fact that, particularly in women, individual sexual functional disorders are often not clearly identifiable, though the classification systems [43] increasingly make allowances for

this. Furthermore, we only have the subjective patient information to evaluate the health care services. With the aid of representative surveys and the back-up of health care data (supplied by doctors and health insurances) we will obtain a more insightful representation, as well as a more comprehensive assessment of the kind of health care situations of patients with sexual dysfunctions.

Conclusion

Sexual concerns and dysfunctions have a major impact on our quality of life. Therefore, they should be routinely queried in the context of medical examinations. For example, when prescribing medicines, side effects may be referred to sexuality. And the GP should see himself as a conversation partner for sexual health.

References

- Masters W, Johnson V (1966) *Human sexual response*, Boston. Little, Brown and Company.
- Schmidtke KE (2018) Sexuelle Funktionsstörungen. In: Kohlmann CWS, Christel W, Markus A (Eds). *Psychologie in der Gesundheitsförderung*: Hogrefe.
- Nascimento ER, Maia ACO, Pereira V, Soares-Filho G, Nardi AE, et al. (2013) Sexual dysfunction and cardiovascular diseases: A systematic review of prevalence. *Clinics* 68: 1462-1468.
- Enzlin P, Mathieu C, Van Den Bruel A, Vanderschueren D, Demyttenaere K (2003) Prevalence and predictors of sexual dysfunction in patients with type 1 diabetes. *Diabetes Care* 26: 409-414.
- Lewis RW, Fugl-Meyer KS, Corona G, Hayes RD, Laumann EO, et al. (2010) Definitions/epidemiology/risk factors for sexual dysfunction. *J Sex Med* 7: 1598-1607.
- Clayton AH, Croft HA, Handiwala L (2014) Antidepressants and sexual dysfunction: Mechanisms and clinical implications. *Postgrad Med* 126: 91-99.
- Conaglen HM, Conaglen JV (2013) Drug-induced sexual dysfunction in men and women. *Aust Prescr* 36: 42-45.
- McCabe M, Althof SE, Assalian P, Chevret-Measson M, Leiblum SR, et al. (2010) Psychological and interpersonal dimensions of sexual function and dysfunction. *J Sex Med* 7: 327-336.
- Sánchez-Fuentes MdM, Santos-Iglesias P, Sierra JC (2014) A systematic review of sexual satisfaction. *Int J Clin Health Psychol* 14: 67-75.
- Litwin MS, Nied RJ, Dhanani N (1998) Health-related quality of life in men with erectile dysfunction. *J Gen Intern Med* 13: 159-166.
- Laumann EO, Paik A, Rosen RC (1999) Sexual dysfunction in the United States: Prevalence and predictors. *JAMA* 281: 537-544.
- Rosen R, Brown C, Heiman J, Leiblum S, Meston C, et al. (2000) The Female sexual function index (FSFI): A multidimensional self-report instrument for the assessment of female sexual function. *J Sex Marital Ther* 26: 191-208.
- Nappi RE, Albani F, Vaccaro P, Gardella B, Salonia A, et al. (2008) Use of the Italian translation of the Female Sexual Function Index (FSFI) in routine gynecological practice. *Gynecol Endocrinol* 24: 214-219.
- Aslan G, Köseo H, Sadik Ö, Gimen S, Cihan A, et al. (2005) Sexual function in women with urinary incontinence. *Int J Impot Res* 17: 248-251.
- Shindel AW, Ferguson GG2, Nelson CJ3, Brandes SB2 (2008) The sexual lives of medical students: a single institution survey. *J Sex Med* 5: 796-803.
- Pozzo MJ, Mociulsky J, Martinez ET, Senatore G, Farias JM, et al. (2016) Diabetes and quality of life: Initial approach to depression, physical activity and sexual dysfunction. *Am J Ther* 23: e159-e171.
- Gandaglia G, Briganti A, Jackson G, Kloner RA, Montorsi F, et al. (2014) A systematic review of the association between erectile dysfunction and cardiovascular disease. *Eur Urol* 65: 968-978.
- Metz ME, Seifert MH Jr (1990) Men's expectations of physicians in sexual health concerns. *J Sex Marital Ther* 16: 79-88.
- Nusbaum MR, Hamilton CD (2002) The proactive sexual health history. *Am Fam Physician* 66: 1705-1712.
- Leiner DJ (2014) SoSci survey.
- Van den Akker M, Buntinx F, Metsemakers JF, Roos S, Knottnerus JA (1998) Multimorbidity in general practice: Prevalence, incidence and determinants of co-occurring chronic and recurrent diseases. *J Clin Epidemiol* 51: 367-375.
- Jöckel K, Babitsch B, Bellach B, Bloomfield K, Hoffmeyer-Zlotnik J, et al. (1998) Empfehlungen der Arbeitsgruppe "Epidemiologische Methoden" in der Deutschen Arbeitsgemeinschaft Epidemiologie der Gesellschaft für Medizinische Informatik, Biometrie und Epidemiologie (GMDS) und der Deutschen Gesellschaft für Sozialmedizin und Prävention (DGSM) zur Messung und Quantifizierung soziodemographischer Merkmale in epidemiologischen Studien. *Messung soziodemographischer Merkmale in der Epidemiologie RKI-Schriften* 1: 7-38.
- Schulenburg JM, Graf VD, Claes C, Greiner W, Über A (1998) Die deutsche Version des EuroQoL-Fragebogens. *J Public Health* 6: 3-20.
- Berner M, Kriston L, Zahradnik H-P, Härter M, Rohde A (2004) Überprüfung der Gültigkeit und Zuverlässigkeit des deutschen Female Sexual Function Index (FSFI-d). *Geburtshilfe und Frauenheilkunde* 64: 293-303.
- Wiegel M, Meston C, Rosen R (2005) The female sexual function index (FSFI): Cross-validation and development of clinical cutoff scores. *J Sex Marital Ther* 31: 1-20.
- Rosen RC, Cappelleri J, Smith M, Lipsky J, Pena B (1999) Development and evaluation of an abridged, 5-item version of the International Index of Erectile Function (IIEF-5) as a diagnostic tool for erectile dysfunction. *International journal of impotence research* 11: 319-326.
- Bullinger M, Kirchberger I (1998) SF-36 Fragebogen zum Gesundheitszustand Handanweisung Horgrefe Verlag für Psychologie Göttingen. Bern: Toronto.
- Stulhofer A, Busko V, Brouillard P (2010) Development and bicultural validation of the new sexual satisfaction scale. *J Sex Res* 47: 257-268.
- Schmidtke KE, Strauß B (2018) Validation of the German version of the new sexual satisfaction scale. *J Sex Med* 3: 1-10.
- Spitzer RL, Kroenke K, Williams JB (1999) Validation and utility of a self-report version of PRIME-MD: The PHQ primary care study. Primary care evaluation of mental disorders. Patient health questionnaire. *JAMA* 282: 1737-1744.
- Löwe B, Spitzer R, Zipfel S, Herzog W (2002) Gesundheitsfragebogen für Patienten (PHQ-D). Kompletteversion und Kurzform. Testmappe mit Manual, Fragebögen, Schablonen. Karlsruhe: Pfizer.
- Kroenke K, Spitzer RL, Williams JB (2001) The PHQ-9: validity of a brief depression severity measure. *J Gen Intern Med* 16: 606-613.
- West SL, Vinikoor LC, Zolnoun D (2004) A systematic review of the literature on female sexual dysfunction prevalence and predictors. *Annu Rev Sex Res* 15: 40-172.
- Mulligan T, Retchin SM, Chinchilli VM, Bettinger CB (1988) The role of aging and chronic disease in sexual dysfunction. *J Am Geriatr Soc* 36: 520-524.
- Atlantis E, Sullivan T (2012) Bidirectional association between depression and sexual dysfunction: A systematic review and meta-analysis. *J Sex Med* 9: 1497-507.
- Zweifler J, Padilla A, Schafer S (1998) Barriers to recognition of erectile dysfunction among diabetic Mexican-American men. *J Am Board Fam Pract* 11: 259-263.
- Moreira E, Hartmann U, Glasser D, Gingell C (2005) A population survey of sexual activity, sexual dysfunction and associated helpseeking behavior in middle-aged and older adults in Germany. *Eur J Med Res* 10: 434.
- Reinecke A, Schöps D, Hoyer J (2006) Sexuelle Dysfunktionen bei Patienten einer verhaltenstherapeutischen Hochschulambulanz: Häufigkeit, Erkennen, Behandlung. *Verhaltenstherapie* 16: 166-172.
- Nusbaum MR, Gamble GR, Pathman DE (2002) Seeking medical help for sexual concerns: Frequency, barriers and missed opportunities. *J Fam Pract* 51: 706-708.
- Bortz J (2006) *Statistik: Für Human-und Sozialwissenschaftler*. Springer-Verlag.
- Gribble JN, Miller HG, Rogers SM, Turner CF (1999) Interview mode and measurement of sexual behaviors: Methodological issues. *J Sex Res* 36: 16-24.

42. Taddicken M (2009) Die Bedeutung von Methodeneffekten der Online-Befragung: Zusammenhänge zwischen computervermittelter Kommunikation und erreichbarer Datengüte. *Sozialforschung im Internet* 1: 91-107.
43. Association AP (2013) Diagnostic and statistical manual of mental disorders (DSM-5®). American Psychiatric Pub.