SEXUAL DYSFUNCTION IN JORDANIAN DIABETIC WOMEN

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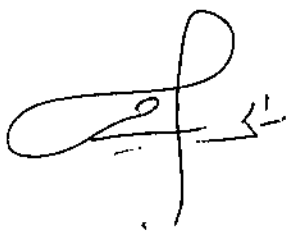
Signature: 

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Dedication

To the soul of my mother in-law for her unconditional love that I keep holding with me, it is the secret power that keeps me motivated all the time.

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List of Abbreviations or Symbols

APA	American Psychiatric Association
AUA	American Urological Association Foundation
BMI	Body Mass Index
FSFI	Female Sexual Function Index
FSAD	Female Sexual Arousal Disorder
HBA1C	Glycosylated hemoglobin level
HR	Hormonal Therapy
HAART	Highly Active Antiretroviral Therapy
NCDEG	National Center for Diabetes, Endocrinology and Genetics
OCP	Oral Contraceptive pills

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ABSTRACT

Objectives

1. To estimate the prevalence and severity of sexual dysfunction and its correlations in Jordanian women with and without Diabetes.
2. To examine the influence of diabetes-related somatic factors on female sexuality
3. To measure the influence of psychological variables on the sexual functioning of both groups.
4. To describe the relationship between descriptive variables, psychological variables, diabetic complications, and sexual dysfunction in women with diabetes.
5. To describe the predictors of sexual dysfunction in women with diabetes.

Setting and sample

During the period from June to December 2007, 600 women with and without diabetes who visited the diabetes and endocrine clinic of the National Center for Diabetes, Endocrinology and Genetics, Amman, Jordan were invited to participate in the study.

Married diabetic and non-diabetic female patients were eligible for the inclusion in the study. Pregnant, Divorced, Widowed or seriously ill patients were excluded from this study.

Results

There was no statistically significant difference in sexual dysfunction between women with and without diabetes who attended the NCDEG (P value= 0.675).

An association was found between sexual dysfunction and glycemic control, presence of hypertension, dyslipedemia with (P value ≤ 0.05).

Women who have longer duration of diabetes and uncontrolled diabetes have high risk for sexual dysfunction.

Conclusion

No statistically significant difference in sexual dysfunction was found between Jordanian women with and without diabetes.

INTRODUCTION

Sexuality is an integral part of human life and general well being [22]. It encompasses feelings that are experienced and expressed in language, thoughts, beliefs, attitudes, values, behaviors, practices, and relationships [7]. Sexual health is an important part of total health [22, 18], as sexual problems can disrupt health, quality of life, and general wellbeing, causing in many instances marital problems or marriage dissolution, and emotional impoverishment [22, 23].

Sexual dysfunction is defined as a disturbance in or pain during, the sexual response [6]. This problem is more difficult to diagnose and treat in women than it is in men because of the intricacy of the female sexual response. In 1998, the Sexual Function Health Council of the American Foundation of Urologic Disease revised preexisting definitions and classifications of FSD [6]. Medical risk factors, etiologies, and psychological aspects were classified into four categories of FSD: desire, arousal, orgasmic disorders, and sexual pain disorders.

- *Hypoactive sexual desire* is the persistent or recurrent deficiency (or absence) of sexual fantasies or thoughts and/or the lack of receptivity to sexual activity.
- *Sexual arousal disorder* is the persistent or recurrent inability to achieve or maintain sufficient sexual excitement, expressed as a lack of excitement or a lack of genital or other somatic responses.
- *Orgasmic disorder* is the persistent or recurrent difficulty, delay, or absence of attaining orgasm after sufficient sexual stimulation and arousal.

- *Sexual pain disorder* includes dyspareunia (genital pain associated with sexual intercourse); vaginismus (involuntary spasm of the vaginal musculature that causes interference with vaginal penetration), and noncoital sexual pain disorder (genital pain induced by noncoital sexual stimulation) [6].

Each of these definitions has three additional subtypes: lifelong versus acquired; generalized versus situational; and of organic, psychogenic, mixed, and unknown etiologic origin [6].

The sexual problems of women who have a chronic illness are often still omitted from the literature. A possible explanation for this is that, in women, sexuality is still often viewed as equal to reproduction, which leaves the issue of sexual pleasure unaddressed [15].

The history of the study of sexual functioning of women with diabetes is prototypical in this respect. Before the advent of insulin in 1921, sexuality in general was simply not addressed in the literature. Not even pregnancy and its potential complications for women with diabetes were discussed. One explanation for this omission is that, before insulin, women with diabetes who could become pregnant were rare [15]. Insulin allowed women with diabetes to be healthy enough to become pregnant and brought with it the problems of pregnancy including pregnancy-induced hypertension, coma, and infant mortality. Thus, for the next few decades, the diabetes literature focused on the devastating effect of diabetes on both women with diabetes and their infants. This made it possible to entirely neglect the influence of diabetes on both male and female sexual functioning [15]. The philosophy regarding both male and female sexual dysfunction seems to have been, "If you don't ask about it, it does not exist" [15].

Beginning in the 1940s, medical textbooks reflected an increasing recognition of the important influence of diabetes on sexuality. However, this attention focused solely on male sexuality. In the 1950s, the focus in research widened from pregnancy in women with diabetes to sexual dysfunction in men with diabetes. The influence of diabetes on sexual functioning in diabetic women was neglected entirely until Kolodny's groundbreaking article in 1971 [19].

Sexuality is an important aspect of quality of life, and contrary to general opinion, women with diabetes are at increased risk for sexual problems [14]. Sexual dysfunction can put a high psychological burden on patients with diabetes, and it can have a negative impact on marital relations already burdened by the presence of a chronic illness. Therefore, the recognition of the existence of sexual problems in women with diabetes should be an invitation for clinicians to address this issue during their consultations [1].

Sexuality is a complex process, coordinated by the neurologic, vascular and endocrine systems. Individually; sexuality incorporates family, social and religious beliefs, and is altered with aging, health status and personal experience. In addition, sexual activity incorporates interpersonal relationships, each partner bringing unique attitudes, needs and responses into the coupling. A breakdown in any of these areas may lead to sexual dysfunction [1].

Clinical and empirical studies, mainly of North American and European adult women without sexual complaints, have clarified sexual response cycles that are different from the linear progression of discrete phases. Women describe overlapping phases of sexual response in a variable sequence that blends the responses of mind and body. Those

women have many reasons for initiating or agreeing to sex with their partners is an important finding. Women's sexual motivation is far more complex than simply the presence or absence of sexual desire (defined as thinking or fantasizing about sex and yearning for sex between actual sexual encounters) [4].

Sex response cycle, showing responsive desire experienced during the sexual experience as well as variable initial (spontaneous) desire [4]. At the "initial" stage there is sexual neutrality, but with positive motivation. A woman's reasons for instigating or agreeing to sex include a desire to express love, to receive and share physical pleasure, to feel emotionally closer, to please the partner and to increase her own well-being. This leads to a willingness to find and consciously focus on sexual stimuli. These stimuli are processed in the mind, influenced by biological and psychological factors [5]. The resulting state is one of subjective sexual arousal. Continued stimulation allows sexual excitement and pleasure to become more intense, triggering desire for sex itself: sexual desire, absent initially. Sexual satisfaction, with or without orgasm, results when the stimulation continues sufficiently long and the woman can stay focused, enjoys the sensation of sexual arousal and is free from any negative outcome such as pain [8]. One of the most enduring and important aspects of Masters and Johnson's work has been the four stage model of sexual response, which they described as the human sexual response cycle. They defined the four stages of this cycle as:

- Excitement phase (initial arousal)
- Plateau phase (at full arousal, but not yet at orgasm)
- Orgasm

- Resolution phase (after orgasm)

This model shows no difference between Freud's purported "vaginal orgasm" and "clitoral orgasm": the physiologic response was identical, even if the stimulation was in a different place [51].

Masters and Johnson's findings also revealed that men undergo a refractory period following orgasm during which they are not able to ejaculate again, whereas there is no refractory period in women: this makes women capable of multiple orgasms. They also were the first to describe the phenomenon of the rhythmic contractions of orgasm in both sexes occurring initially in 0.8 second intervals and then gradually slowing in both speed and intensity [51].

Intimacy based model and circular model of female sexual response emphasize on the important of emotions in the sexual response and stressed on the fact that a female does not have to pass through all the phases of the sexual response cycle mentioned by Masters and Johnson's [51].

Subjects

Diabetes mellitus may afflict men and women equally, but the suffering associated with diabetes when it appears in a woman affects every aspect of her life [12]. As a young child, her growth and development as well as her emotional and intellectual functioning may be impaired. In addition, her puberty may be delayed or premature, and when she is ready for childbearing, her health may preclude a successful pregnancy and/or her chances of bearing a healthy child may be poor to impossible [12]. With the advent of

insulin and treatment programs to improve glucose control, the diabetic woman now has an opportunity to lead a near-normal life. As devices have automated insulin delivery and as the use of self-blood glucose monitoring has assisted in deriving a protocol of safely normalizing blood glucose, the health of a diabetic woman now is equal to her nondiabetic sister [12].

There is limited information on the prevalence, incidence, and antecedents of female sexual dysfunction. Community-based studies indicate that the prevalence of sexual dysfunction among all women is between 25% and 63% [28]. The prevalence of sexual dysfunction in postmenopausal women varies from 68% to 86.5%, depending on the setting in which the study was performed [17, 24]. An analysis of data from the National Health and Social Life Survey found that sexual dysfunction is more prevalent in women (43%) than in men (31%); prevalence varied among women of different racial groups and was associated with a history of traumatic sexual experiences and with deteriorating social position [25]. Sexual dysfunction impacts significantly women's self-esteem and quality of life and causes emotional distress, leading to relationship problems [9].

Relatively little research has focused on factors that are associated with sexual frequency, satisfaction, and dysfunction [26]. Studies suggest that the same disease processes and risk factors that are associated with male erectile dysfunction, such as aging, hypertension, smoking, and pelvic surgery, diabetes are also associated with female sexual dysfunction [26]. Few numbers of studies have been performed regarding the influence of diabetes on female sexual functioning, and only one study of female sexual dysfunction was done in Egypt and it assessed the prevalence and associated factors of

female sexual dysfunction (FSD) in Lower Egypt [54] , and no studies on female sexual dysfunction among diabetic women in Arab countries were found. The prevalence of diabetes mellitus (DM) in Jordan is rising and it has been estimated that 13.4% of the Jordanian population have diabetes[55].

LITERATURE REVIEW

The fact that sexual functioning in women with diabetes still has not gained much attention in the literature is reflected in the small number of publications. There were only 25 articles of which 15 were study reports covered the field of female sexual dysfunction and diabetes. In the following paragraphs, a brief overview of the most notable results of the literature review.

While reviewing the literature two important observations were noted:

1) Small number of studies has been performed regarding the influence of diabetes on female sexual functioning, and no studies on female sexual dysfunction in the Arab countries and Jordan were found.

2) The studies that have been done are plagued with major methodological flaws, (e.g., small samples, absence of control groups, no characterization of diabetes type, and lack of information about presence and extent of diabetes complications).

Moreover, in most research, the psychological adjustment to diabetes was not taken into account as an influential factor in the development of sexual problems.

The 19th century medical attitude to normal female sexuality was cruel, with gynecologists and psychiatrists leading the way in designing operations for the cure of the serious contemporary disorders of masturbation and nymphomania [34]. The

gynecologist Isaac Baker Brown (1811-1873) and the distinguished endocrinologist Charles Brown-Séquard (1817-1894) advocated clitoridectomy to prevent the progression to masturbatory melancholia, paralysis, blindness and even death. Even after the public disgrace of Baker Brown in 1866-7, the operation remained respectable and widely used in other parts of Europe. This medical contempt for normal female sexual development was reflected in public and literary attitudes [34]. Or perhaps it led and encouraged public opinion. There is virtually no novel or opera in the last half of the 19th century where the heroine with 'a past' survives to the end. H. G. Wells's Ann Veronica and Richard Strauss's Der Rosenkavalier, both of which appeared in 1909, broke the mould and are important milestones. In the last 50 years new research into the sociology, psychology and physiology of sexuality has provided an understanding of decreased libido and inadequate sexual response in the form of hypoactive sexual desire disorder. This is now regarded as a disorder worthy of treatment, either by various forms of counseling or by the use of hormones, particularly estrogens and testosterone [34].

In 1971 Kolodny [19] compared 125 hospitalized women with diabetes to 100 hospitalized women without diabetes (control group). The age range of participants was 18–42 years. The women were interviewed about their medical history, clinically examined, and interviewed about their sexual history, with a specific focus on presence or absence of orgasm during coitus. Kolodny [19] found that, among the women with diabetes, 35% did not have orgasm during coitus, compared to 6% in the control group. He did not find an association with age, diabetes duration, or severity of neuropathy, but did link the analgesia to diabetes.

These results inspired Zrustova et al. [28] to perform an anatomo-pathological study in which they studied the clitoral innervations of several women with diabetes. Their study revealed that a large number of anorgastic women had lesions in their clitoral innervations that were comparable to those found in the corpora cavernosa of men with erectile dysfunction. Although the results of both Kolodny [19] and Zrustova et al. [28] brought some evidence for the existence of secondary problems with orgasm in women with diabetes, this has been replicated only once in later studies [28].

Jensen's [17] was the first study to compare women with diabetes to a normal control group. He compared 80 men and 80 women with diabetes to 40 men and 40 women without diabetes. Subjects were asked to fill out a questionnaire and were interviewed. This information was supplemented by data on the development of diabetes, social factors, gynecological history, and psychosocial factors. Jensen's study revealed no differences in the prevalence of sexual problems in women with diabetes (27.5%) and control women (25%). The most-reported problem in both groups was with arousal, as shown in a decreased vaginal lubrication. No association was found between diabetic neuropathy and sexual dysfunction.

In 1983, Schreiner-Engel [25] reported that different types of diabetes can have a different influence on female sexual functioning. In her study, women with type 2 diabetes reported more sexual problems compared to women with type 1 diabetes and control subjects. The differential effect of both types of diabetes could not be explained by different somatic causes. Hence, Schreiner-Engel hypothesized that the difference in the age of onset in both types of diabetes could be a part of the explanation. She

suggested that women who are diagnosed with type 2 diabetes at an older age have more trouble accepting necessary changes in different areas of their lives, including their sexual lives.

Newman and Bertelson's 1986 study [21] was methodologically very good and revealed that 47% of participating women reported sexual dysfunction. In order of importance, these women reported decreased sexual arousal (lubrication) (32%), decreased sexual desire (21%), pain disorders (dyspareunia) (21%), and problems with orgasm (15%). Eighty-nine percent of these women reported that their problems occurred after their diagnosis of diabetes. Again, this study found no association between sexual dysfunction and diabetes complications.

In 1989, Campbell [9] suggested that it was obesity in women with type 2 diabetes rather than psychological or other factors that influenced their sexual functioning.

In the 1990s, studies by Slob et al. [26] and Wincze et al. [27] were important because they supplemented self-reported data on sexual dysfunction with objective measurements. Slob used labiothermometry (assessing the temperature of the labia minora as a measure of arousal) in combination with visual erotic stimulation but could not find any difference in the level of arousal between women with diabetes and control subjects. Wincze et al. [27] used a vaginal plethysmography to objectively measure the level of arousal and did find a significant difference between women with and without diabetes.

Female sexual dysfunction (FSD) is a very common disorder in Germany with a prevalence of approximately 38%. FSD includes persistent or recurrent disorders of sexual desire, disorders of subjective or genital arousal and pain during intercourse [35].

Sexual health is an important but often neglected component of diabetes care. Unlike erectile dysfunction, female sexual dysfunction has not been well studied among Nigerian diabetics. Aims of studying female sexual dysfunction among Nigerian diabetics were to assess the sexual function of women with diabetes, and to determine its clinical correlates [36]. The sexual performances of 51 women with type 2 diabetes mellitus attending the Diabetes Clinic, University of Ilorin Teaching Hospital were assessed using the Female Sexual Function Index (FSFI) questionnaire. The Female Sexual Function (FSF) scores in each domain of sexual function were then compared with those of 39 nondiabetic controls [36]. The associations between the FSF scores and certain clinical variables, as well as some diabetic complications, were also determined.. Sexual performance of the women as measured by the FSF scores using the FSFI questionnaires. The FSF score in the diabetic women was 20.5 (+/-8.3) compared with a score of 31.2 (+/-8.8) in the control (P value = 0.00). The FSF scores in the arousal, pain, orgasm, and overall satisfaction domains were all lower in the diabetic women (P value < 0.05) [36]. There was no significant difference in the scores for "desire" domain in the two groups (P value > 0.05). Women with diabetes attempted sex less frequently (P < 0.05). There was a negative correlation between the ages of the women and all the domains of sexual function (P value < 0.05) [36]. Duration of diabetes correlated negatively with comfort (P value = 0.04), lubrication (P = 0.03), frequency (P value = 0.05), as well as orgasm (P value = 0.04) domains. There was no significant relationship between the FSF score and

body mass index, blood pressure, and glycemic control. There was no significant difference between the FSF scores of diabetic women with complications and those without (P value > 0.05) [36].

Diabetes significantly impairs the sexual performance of the Nigerian women afflicted with the disease. Determinants of FSF include age, duration of diabetes illness, and presence of menopause [36].

Female sexual complaints are common, occurring in approximately 40 percent of women. Decreased desire is the most common complaint. Normal versus abnormal sexual functioning in women is poorly understood, although the concept of normal female sexual function continues to develop. A complete history combined with a physical examination is warranted for the evaluation of women with sexual complaints or concerns [37]. Although laboratory evaluation is rarely helpful in guiding diagnosis or treatment, it may be indicated in women with abnormal physical examination findings or suspected comorbidities. The PLISSIT (Permission, Limited Information, Specific Suggestions, Intensive Therapy) or ALLOW (Ask, Legitimize, Limitations, Open up, Work together) method can be used to facilitate discussions about sexual concerns and initiation of treatment [37].

Female sexual dysfunction is essentially multifactorial and its therapeutic management is accordingly diversified. However, after natural menopause or, even more, surgical menopause, age, climacteric syndrome, progressive loss of endogenous androgens, all facilitate the occurrence of the Hypoactive Sexual Desire Disorder (HSDD), defined by loss of libido and sexual responsiveness leading to sexually related personal distress. In

that prospect, administration of varied medications with androgenic properties has been tried in addition to postmenopausal hormone therapy. Type, dosages, routes of administration of androgens are adapted toward minimizing side effects inasmuch as long-term safety of androgens is not yet clearly established. Recent randomized

Developments in the treatment of male erectile dysfunction have led to investigation of pharmacotherapy for the treatment of female sexual dysfunction. Although sexual therapy and education (e.g., cognitive behavior therapy, individual and couple therapy, physiotherapy) form the basis of treatment, there is limited research demonstrating the benefit of hormonal and nonhormonal drugs [37]. Testosterone improves sexual function in postmenopausal women with hypoactive sexual desire disorder, although data on its long-term safety and effectiveness are lacking. Estrogen improves dyspareunia associated with vulvovaginal atrophy in postmenopausal women. Phosphodiesterase inhibitors have been shown to have limited benefit in small subsets of women with sexual dysfunction [37].

controlled studies appear very promising in terms of efficacy and safety, at least when androgen therapy is limited to 6-12 months in case of HSDD [38].

Sexual dysfunction in females is an important public health problem worldwide. It is suggested that sexual problems among women are more common than the number of diagnosed female sexual dysfunction (FSD) cases indicates. Aim of this study to determine the frequency and causes of sexual problems among premenopausal and married women who attend primary healthcare facilities. This study was conducted at the Mother and Child Health and Family Planning Center. All women who attended this

center during a 3-month period were included in the study. Sexual problems were evaluated via questionnaire and a standardized scale known as the Golombok Rust Inventory of Sexual Satisfaction (GRISS) [39]. Main outcome measures were a cross-sectional study. Results of this study were a total of 422 women aged 19-51 years were eligible for inclusion in the study, the participation rate was 27%. Nearly two-thirds of the women were aged 20-34 years, and of this group, 84.3% were unemployed. According to self-reports, 15.7% (18) of the women had sexual problems, whereas the prevalence of sexual dysfunction using GRISS was 26.1%. Vaginismus (41.7%), infrequent intercourse (39.1%), and nonsensuality (38.3%) were the most common complaints of the women with sexual problems. The rate of sexual dissatisfaction was found to be 7% [39]. Sexual problems among women who had a long-term marriage (more than 11 years) and who were sexually inexperienced at the time of their marriage were significantly higher (P = 0.036, P = 0.034, respectively). It was found that discussing sexual problems with husbands and healthcare professionals did not reduce sexual problems. In conclusion according to GRISS, nearly one-quarter of the women were suffering from sexual problems [39]. The most common sexual problem was vaginismus, followed by infrequent intercourse. It is suggested that inadequate knowledge and the attitudes of spouses and health workers in primary healthcare settings are the important causes of FSD in this population [39].

Sexual dysfunction is more prevalent in postmenopausal women. Prospectively evaluate and compare the effects of hormone therapy (HT) regimens, oral and vaginal estradiol, estradiol + drospirenone and tibolone, on sexual function in healthy postmenopausal women [40]. The study included 169 consecutive healthy postmenopausal women, and

the women were divided into two groups: 111 women received hormone therapy (HT), and 58 women received no treatment and served as a control group [40]. As an hormone therapy (HT), 23 women with surgically induced menopause received oral 17-beta estradiol. The rest of the women with natural menopause were prospectively randomized: 22 received oral 17-beta estradiol + drospirenone daily, 42 received oral tibolone, and 24 received vaginal 17-beta estradiol. Sexual function was evaluated with a detailed 19-item questionnaire, the female sexual function index, including sexual desire, arousal, lubrication, orgasm, satisfaction, and pain [40]. Main outcome measures were the differences in sexual function were compared before and 6 months after the treatment in all women. Results of this study , total sexual function score increased from 19.81 +/- 7.15 to 22.9 +/- 6.44 in the HT group and decreased from 21.6 +/- 8.69 to 17.6 +/- 5.7 in the control group, revealing a significant difference from baseline to post-treatment between the two groups (P = 0.000) [40].

The highest improvement in total score and arousal was achieved with the oral 17-beta estradiol (P = 0.000 and P = 0.000, respectively). The highest improvement in lubrication was achieved with the oral and vaginal 17-beta estradiol groups (P = 0.000) [40]. The highest improvement in orgasm was achieved with the tibolone group (P = 0.000). The highest improvement in pain was achieved with the oral and vaginal 17-beta estradiol groups (P = 0.000).This study concluded that hormone therapy (HT) provided significant improvement in sexual function compared to women receiving no treatment, and therefore, HT regimens should be suggested for improvement in sexual functioning of postmenopausal women [40].

Premature ovarian failure is a common consequence of systemic treatment for premenopausal breast cancer [41]. Vasomotor symptoms and sexual dysfunction occur frequently in women who have an abrupt menopause from chemotherapy or ovarian suppression. However, current fertility may be impaired even in women who are menstruating after chemotherapy, and survivors are at high risk for permanent ovarian failure at a young age. Hot flushes can be managed with venlaxafine, gabapentin, or-potentially-stress management. Providing advice on treating vaginal dryness and brief sexual counseling can often alleviate sexual dysfunction. Options for fertility preservation remain limited but are improving rapidly. Distress about interrupted childbearing has a long-term impact on the quality of life [41].

Despite the high prevalence of both female sexual problems and bladder dysfunction in the premenopausal population, sexual history forms used in primary care offices rarely include questions about the impact of bladder dysfunction on sexual health. The study was to provide a review of the literature that illustrates the relationship between bladder problems and sexual performance of premenopausal women [42]. Main outcome measures were to objectively support by a review of the literature the need for a complete bladder history in when evaluating premenopausal women with female sexual dysfunction. Pubmed was searched for all articles (from November 1980 to June 2007) that reported on the effect bladder dysfunction have on premenopausal female sexual function [42]. Results were the scant literature available strongly suggested that bladder dysfunction is a contributor to sexual dysfunction and that this medical concern should be considered in all women, regardless of age who present with sexual complaints. Conclusion of this study, further studies need to be conducted in order to solidify a direct

causal relationship between bladder dysfunction and premenopausal female sexuality [42]. These studies should include a larger sample size, clearly defined types of sexual dysfunction and bladder dysfunction, and appropriate follow-up of patient responses using validated objective and subjective outcome modalities to confirm that the patient responses are factual [42].

It has been proposed that women's sexual problems/dysfunctions, in the absence of personal and interpersonal distress, may have little clinical importance, as they may not necessarily affect women's sexual satisfaction [43]. However, data are missing to support such interpretation. The objective of the present study was to examine whether the presence of a sexual problem necessary affects women's satisfaction with sexual function [43]. The study included 164 women who visited a general hospital because of symptoms not related to their sexual function and were asked to complete voluntarily and anonymously demographic data and two questionnaires [43]. Main out come measures were women completed the Female Sexual Function Index (FSFI)--an instrument which evaluates women sexual function--and the Symptom Checklist of Sexual Function-women version (SCSF-w), a screening tool of women's self-perception of sexual function. Results of this study were mean patients' age was 43 +/- 12.6 (18-72) years. According to the FSFI, 48.8% of the participants had a sexual dysfunction [43]. However, based on their self-perception of sexual function (SCSF), 80.5% of the sample declared to be satisfied with their sexual function, despite the fact that 69.5% of them reported at least one sexual problem. Of all women, only 26.2% would like to talk about their sexual problem(s) with a doctor (57.4% of those who are "bothered" by their sexual symptoms). Logistic regression analysis revealed no association between any sexual

dysfunction and women's satisfaction from their sexual function [43]. Conclusion of this study was despite the presence of sexual problem(s), women may be satisfied with their sexual function, but half of those who are bothered would like to talk about it with their doctor [43]. The presence of a sexual problem or its severity is not a determinant of women's help-seeking behavior. Such data strongly support current definitions of women's sexual dysfunction, where the presence of personal distress has been included as a crucial dimension [43].

In women with heart failure, however, exact numbers are unknown, in part secondary to under-reporting and under-interrogating by health care providers. A gender-specific questionnaire was modified from established sexual dysfunction questionnaires to correspond to a non-randomized outpatient heart failure population, to assess the prevalence and demographic distribution of sexual dysfunction and potential treatments expectations. One-hundred patients in a stable hemodynamic condition in New York Heart Association classes' I-III participated. Eighty-seven percent of women were diagnosed with female sexual dysfunction compared to 84% of men with erectile dysfunction. Eighty percent of women reported reduced lubrication, which resulted in frequent unsuccessful intercourse in 76%. Thirty-six percent of patients thought that sexual activity could harm their current cardiac condition; 75% of females and 60% of men stated that no physicians ever asked about potential sexual problems. Fifty-two percent of men considered sexual activity in their current condition as an essential aspect of quality of life and 61% were interested in treatment to improve sexual function. Sexual dysfunction appears to be high in prevalence in both men and women with chronic

compensated heart failure and represents a reduction in quality of life for most. Despite the fact that most patients are interested in receiving therapy to improve sexual dysfunction, treatment options are rarely discussed or initiated [44].

Multiple factors converge to cause sexuality and intimacy problems in individuals who have chronic lung disease. It is imperative that clinicians include in their discussions with patients the ways they can maintain their sexual lives in the face of chronic lung diseases such as chronic obstructive pulmonary disease and lung cancer. Providing patients and their partners with information on ways to enhance their overall physical functioning, as well as discussing the many pharmacologic and nonpharmacologic methods available to maintain healthy sexual lives is critical to maintaining quality of life. It is apparent that more research is needed so that we can help these patients and their partners continue to have quality sexual relationships [45].

More than 120 kinds of arthritis exist. Studies focuses on the more common types of musculoskeletal disorders, which are osteoarthritis, rheumatoid arthritis, and osteoporosis [46]. Because of the pain, fatigue, and joint stiffness associated with arthritis, physical intimacy may be difficult. These symptoms can be ameliorated during sexual activity by good communication between the partners, timing medication, and experimenting with different positions. Clients may need to be taught to be creative and to be willing to experiment. Learning the relaxation response, in addition to fantasizing and guided imagery can enhance the sexual experience for people who have arthritis [46].

Female sexuality in women with multiple sclerosis were evaluated 63 newly diagnosed consecutive women affected by definite MS were admitted. Disability and depression

were evaluated with the expanded disability status scale (EDSS) and Beck depression inventory, respectively. Sexual function was evaluated with the female sexual function index (FSFI) [47]. A group of 61 healthy female volunteers with the same baseline characteristics were used as controls. Postmenopausal women and patients with other major concomitant neurological, endocrinological, vascular, gynecological, psychiatric disorders, use of medicines that can cause female sexual dysfunction (FSD) and disease-modifying drugs were excluded from the study. Results All the evaluated patients were ambulant with no major neurological impairment (mean EDSS score 2.5, range 0-3.5). None of the patients were considered clinically depressed, but some of them were sad or worried [47]. According to the sexual history and FSFI scores, sexual dysfunction was diagnosed in 22 (34.9%) out of the 63 patients and in 13 (21.31%) out of the 61 healthy females (P _ 0.05). Conclusions In the newly diagnosed MS patients, FSD represent an important issue even though disability and other concomitant disorders affecting sexual function were excluded [47].

The possible relationship between HAART and the development of sexual disturbances of HIV-infected patients' remains yet unresolved because of the inconsistency of the results of the different studies. To analyze the current knowledge on this topic, MEDLINE files were searched for articles dealing with any manifestation of sexual dysfunction in the HAART era. Selected references from these articles as well as communications to the main HIV meetings were also reviewed. Sexual dysfunction seems to be a very common event after the introduction of HAART. The average prevalences of sexual dysfunction among the different studies was 51%, erectile dysfunction 46%, decreased libido 44%, ejaculatory disturbances 39% and orgasmic

disorders 27%. These disturbances seemed to be more common in patients treated with protease inhibitors [48]. Several relevant questions related to sexual dysfunction in these patients are addressed in this review, including the possible pathogenic mechanisms involved. Despite the inconsistent results among the studies, the data that support a direct or indirect role of HAART in the generation of these disturbances seem to exceed the data that do not support it. A conclusion of this study was, antiretroviral therapy, particularly protease inhibitors, seems to be to some extent directly or indirectly related to sexual dysfunction through different mechanisms [48].

Sexual dysfunction and accompanying depression in patients with neurodermatitis and psoriasis were investigated. Patients with neurodermatitis (n = 31) and psoriasis (n = 24) were compared to control cases (n = 33) with Beck depression scale (BDS) and Arizona Sexual Experience Scale (ASEX) [49]. Beck Depression Scale and ASEX scores varied between three groups. In two group comparisons, the neurodermatitis group had more sexual problems than the psoriasis group and the control group. Patients with neurodermatitis and psoriasis have sexual dysfunction and depression in the course of these chronic diseases and the higher frequency of sexual problems was seen in patients with neurodermatitis [49].

While sexual dysfunctions are closely related to overall well-being, epidemiological data based on population-based surveys remain scant [50]. Aim of this epidemiological study was to investigate the prevalence and correlates for sexual dysfunctions in urban China. A total of 4,157 urbanites sampled nationally, 3,159 participants completed the interview, giving a response rate of 76%. The focus was on 78% of these participants (2,478 adults

aged 20-64) who were sexually active within a stable sexual relationship, typically with the spouse. Main outcome measures were the prevalence and correlates for sexual dysfunctions. Results of this study were that a fully 35% of women and 21% of men had at least one persistent sexual dysfunction [50]. Prevalence by age was similar to the results from Western developed countries. With sharp differences for men and women, the correlates for distress in China were multiple, with aging and physical issues accounting for only a portion of the total set of mental health, stress, relationship, and values and knowledge issues related to reports of sexual dysfunctions. Conclusion of this study was both the prevalence and correlates for sexual dysfunctions in urban China were similar to those in other societies. Mental distress, age, and poor communication (producing the report that "my partner does not understand my sexual needs") were the correlates shared by both men and women. Other correlates were more distinct by gender. The multiplicity of correlates for men and women suggests a need for a holistic approach to sexual dysfunctions [50].

A new Hypothesis

At first sight, these studies revealed very different results and gave the overall impression that diabetes does not have a significant influence on female sexual functioning. However, an in-depth analysis revealed important evidence that women with diabetes are at increased risk for sexual problems [14]. This evidence suggested that women with diabetes not only are prone to experience a decrease in sexual desire and more dyspareunia during sexual intercourse, but also are more likely to experience a decrease

in sexual arousal involving slow or inadequate vaginal lubrication. Problems with orgasm were not found to be more frequent in diabetic women than in women without diabetes.

Given these findings, help in formulated a new hypothesis that, just as diabetic men are at higher risk for erectile dysfunction, so too are diabetic women at higher risk for sexual dysfunction in which the arousal phase is predominantly affected [14].

Literature searches provided some researches that aimed to [16]:

1. Examine the prevalence of sexual problems in women with type 1 diabetes;
2. Compare the prevalence of sexual dysfunction in women with diabetes to that of an age-matched control group;
3. Examine the influence of diabetes-related somatic factors on female sexuality;
4. Measure the influence of psychological variables on the sexual functioning of both groups;
5. Describe the relationship between descriptive variables, psychological variables, diabetic complications, and sexual dysfunction in women and men with diabetes.
6. Describe the predictors of sexual dysfunction in women with diabetes.

A total of 240 adult patients with type 1 diabetes who visited the outpatient diabetes clinic of a university hospital completed questionnaires evaluating psychological adjustment to diabetes, marital satisfaction, depression, and sexual functioning], Data on hemoglobin A1c, medication use, BMI, and early-onset micro vascular complications were obtained from medical records. An age-matched control group of 180 healthy

women attending an outpatient gynecological clinic for preventive routine gynecological assessment also completed the non–diabetes-related questionnaires.

The study revealed that the prevalence rates of sexual dysfunction in diabetic men, diabetic women, and control women were 22, 27, and 15%, respectively. Taking into account the young age (< 40 years) of the sample, these prevalence rates are high but comparable to previously reported data on sexual dysfunction in the general population and in patients with type 1 diabetes [15].

These results confirm the hypothesis that compared to women in the general population, diabetic women are at increased risk for sexual dysfunction (22 vs. 15%; $P = 0.04$). Diabetic women have this increased risk in common with diabetic men. Of note, this study revealed no significant differences between the number of sexual problems found in men and the number found in women with diabetes complications. A comparison of men and women without diabetes complications showed that diabetic women reported significantly more sexual problems than do diabetic men because of a higher prevalence of decreased sexual desire in the women [15].

Eight hundred eighty-seven consecutive gynecologic outpatients were screened for sexual concerns and dysfunctions by the inclusion in the medical history of two questions concerning sexual function. Only 29 women (3%) spontaneously offered sexual complaints without direct inquiry. An additional 142 women (16%) acknowledged sexual problems upon questioning. The most common sexual complaint was dyspareunia (48%), followed by decreased sexual desire (21%), partner problem(s) or dysfunction(s) (8%), vaginismus (6%), anorgasmia (4%), and other problems (13%), eg, arousal problems,

decreased lubrication, sexual anxiety, etc. Sexual complaints were more prevalent in those 50 years of age or older. [33]

Although statistical significance was found only for decreased sexual arousal ($P = 0.05$), this study's findings suggest that diabetes also can affect sexual desire ($P = 0.09$) and dyspareunia ($P = 0.15$) in women with diabetes. This confirms the hypothesis concerning the specific pattern of sexual dysfunction in diabetic women, with the arousal phase most at risk [15]. Although significantly more women with diabetes than control women reported sexual dysfunction in their study, this seems not to be due to a dramatic increase of one problem. As described above, several phases of the sexual response cycle seem to be affected (decrease of libido, arousal, and dyspareunia), but due to the small numbers studied, only the difference in arousal problems reached statistical significance. The prevalence rates they found for the specific sexual dysfunctions are also in accordance with previously reported data. In the present study, decreased sexual desire was reported by 17% of the women with diabetes and 9% of the control women. These numbers are concordant with previous studies with prevalence rates varying between 11 and 45% in diabetic women and between 10 and 31% in control subjects [17, 30, 31, and 32]. Reduced vaginal lubrication was reported by 14% of women with diabetes and 6% of the control women in their study. Prevalence rates found in the literature vary between 10 and 34% of the women with diabetes and between 5 and 24% of the control women [17, 30, 31, 32]. Only Tyrer's and their study showed a significant difference between diabetic and control women. A total of 14% of the women with diabetes and 10% of the control subjects in the present study reported problems with orgasm. These prevalence rates are almost identical to those found in the literature, which vary between 11 and 14% of the

women with diabetes and between 8 and 12% of the control women [17, 30, 31, and 32]. In the present study, dyspareunia was reported by 12% of women with diabetes and 6% of control women, again comparable to previously reported numbers. Dyspareunia (pain or discomfort during coitus) was reported by 10–12% of women with diabetes and by 4–8% of control subjects [17, 30, 31, 32]. A major problem with the analysis of all these prevalence rates are the small numbers studied, making statistical significance hard to reach. Even in their study, the largest one ever done, when comparing women with and without sexual problems, only 26 women with diabetes and 24 control women could be included in some analyses.

Although there is growing consensus about the etiological factors of sexual dysfunction in diabetic men, it remains unclear whether the same factors are involved in diabetic women. In this study, the investigators attempted to provide insight into the correlates and predictors of sexual dysfunction in women and men with type 1 diabetes.

This study revealed that in diabetic women, sexual dysfunction was related to lower marital satisfaction, more symptoms of depression, negative appraisal of diabetes, poorer emotional adjustment to diabetes, higher impact of diabetes treatment on daily life, and low satisfaction with treatment [11]. In general, the findings suggest that in diabetic women, "disease acceptance" is a crucial factor related to sexual functioning. However, no association was found between sexual dysfunction and age, BMI, menopausal status, medication use (i.e., birth control pills, hormone replacement therapy), glycemic control, duration of diabetes, or diabetes complications. In a statistical prediction model, depression was the only significant predictor of self-reported sexual dysfunction in

diabetic women. Given the cross-sectional design of the study, researchers could not infer the causal relationship from the data. The overall impression emerging from this study's findings is that sexual dysfunction in diabetic women seems to be more related to psychological than to somatic factors [15].

Prevalence of FSD among Jordanian females was found to be significantly higher in diabetic women compared to non diabetic women[56].

In diabetic men, the study revealed that sexual dysfunction was also related to symptoms of depression, in addition to negative appraisal of diabetes, poorer emotional adjustment to diabetes, and a higher treatment impact on daily life. However, sexual dysfunction was not related to treatment satisfaction or marital satisfaction. In general, these findings suggest that, as with diabetic women, the "disease acceptance" of diabetic men is related to sexual functioning. Perhaps not surprisingly, important associations were found in men between sexual dysfunction and older age, higher BMI, poor glycemic control, longer duration of diabetes, and presence of complications. In a statistical prediction model, the predictors of sexual dysfunction in diabetic men were older age and the presence of complications, two factors known to be associated with erectile dysfunction. In diabetic men, overall, sexual dysfunction seems to be more related to somatic than to psychological factors [11]. In accordance with findings from the general population, diabetic women reported more symptoms of depression than did men, and more women than men (25 vs. 7%) reached a depression questionnaire score that was suggestive of clinical depression. However, sexual problems were related to symptoms of depression in both men and women with diabetes [10].

Objectives of the Study

1. To estimate the prevalence and severity of sexual dysfunction and its correlations among Jordanian women with and without Diabetes.
2. To examine the influence of diabetes-related somatic factors on female sexuality
3. To measure the influence of psychological variables on the sexual functioning of both groups.
4. To describe the relationship between descriptive variables, psychological variables, diabetic complications, and sexual dysfunction in women with diabetes
5. To describe the predictors of sexual dysfunction in women with diabetes.

Ethical considerations

The study was approved by NCDEG ethics committee. Data for this study were based on routinely collected data and interview done for female diabetic and non diabetic subjects who attended NCDEG clinics in Jordan. Therefore, the study involved no harm or discomfort to the patients. Confidentiality was strictly adhered to throughout the study and the data were only used for scientific purposes.

DATA COLLECTION AND METHODS

This cross sectional study was conducted at the National Center for Diabetes, Endocrinology and Genetics, Amman, Jordan between June and December 2007 with a sample size of 600 women.

The diabetes service in the National Center for Diabetes, Endocrinology and Genetics, is the largest in the country. The centre is located in Amman and attracts diabetic patients from all over the Kingdom. It is a specialized facility for diabetes in Jordan.

The subjects were invited to attend a face to face interview, which was held in privacy and was started by explaining the study. Patients were assured that the collected information will remain confidential and will not be included in their hospital medical records. The option to participate or to refrain from the participation has been given to the patients. Married Diabetes female patients were eligible for inclusion in the study. Pregnant, Divorced, Widowed or seriously ill patients were excluded.

Instruments

The structured interviews were based on a health questionnaire; the female sexual function index questionnaire. The questionnaire included questions regarding age, education level, employment status, use of OCPs or other means of contraception, whether currently lactating or not, the type and duration of diabetes, and the presence of complications of diabetes. Control of diabetes was determined by the mean glycosylated

hemoglobin level (HbA1c) of the last 4 consecutive visits, which spanned one year. Patients were categorized according to their mean HbA1c to 4 groups: <7%, 7-7.9%, 8-8.9%, and ≥ 9%. Medication for diabetes will be recorded.

A detailed history of smoking was taken, and patients were categorized as smokers, non-smokers and ex-smokers. Subject weight was taken barefooted in light clothing, using a Detectco ® scale with an accuracy of ±100 g. Standing height was measured without shoes to the nearest cm using a stadiometer with the shoulders in a relaxed position and the arms hanging freely.

Body mass index (BMI) was calculated by dividing the weight in Kg by the squared height in meters. Patients were categorized as of normal weight (BMI<25), overweight (BMI= 25-29.9) or obese (BMI≥ 30).

An Arabic translation of female sexual function Index (FSFI) was used to assess the female sexual dysfunction. FSFI had been chosen despite having several questionnaires for female sexual dysfunction, as (FSFI) is a reliable and valid measure of sexual functioning, initial face validity testing of questionnaire items, identified by an expert panel, was followed by a study which aimed at further refining the questionnaire [52]. It was administered to 131 normal controls and 128 age-matched subjects with female sexual arousal disorder (FSAD) at five research centers. Based on clinical interpretations of principal components analysis, a 6-domain structure was identified, which included desire, subjective arousal, lubrication, orgasm, satisfaction, and pain [52]. Overall test-

retest reliability coefficients were high for each of the individual domains (r = 0.79 to 0.86) and a high degree of internal consistency was observed (Cronbach's alpha values of 0.82 and higher) Good construct validity was demonstrated by highly significant mean difference scores between the FSAD and control groups for each of the domains (p < or = 0.001). Additionally, divergent validity with a scale of marital satisfaction was observed. These results support the reliability and psychometric (as well as clinical) validity of the Female Sexual Function Index (FSFI) in the assessment of key dimensions of female sexual function in clinical and nonclinical samples [52].

The questionnaire consists of 19 questions from (Arabic translation of female sexual function index) grouped in to 6 domains that assess Sexual desire (questions 1and 2), sexual arousal (questions 3, 4 and 5), intercourse satisfaction (question 6 and 13), orgasmic function (questions 7-12), and overall satisfaction question (14, 15 and 16), sex pain before, during and after sexual intercourse (questions 17-19). The responses to questions 1 and 2 were rated on a 5 point scale (1-5) and the responses to the last 17 questions were rated on 6 point scale (0-5). Also some items were added which measured the effects of the availability of water, privacy, presence of more than one wife, number of children and the most important person in terms of priority, the woman's knowledge about sexual and marital life before getting married and source of the knowledge that she received, type of the marriage be it by love or traditional, was her marriage consanguineous, her weight before marriage, sexual stimulation (pre and post coital fore play).

Data analysis

Data was analyzed using the software package SPSS for windows version 10 (SPSS Inc., Chicago, IL, USA). The x test was used to evaluate the association of prevalence and the severity of sexual dysfunction in relation to different risk factors. The odds ratio for individual factors was obtained as a measure of the association with sexual dysfunction. Significant factors were subjected to multivariate logistic regression analysis to assess the independent effect of each factor after controlling for potential confounders. P value of ≤ 0.05 was considered statistically significant.

Results

Demographics of the sample population in Jordan are presented in (Table I). Totals for each group and the entire group are presented for each variable; included are percentages for individual entries. Of the total sample of 600 respondents of diabetic and non diabetics women, 323(54%) were diabetic women and 277 (46%) were non diabetic females. Majority of women their age group were less than fifty years old.

There were no differences in employment between diabetic and non diabetic women. In assessing body mass index, overweight and obesity were obviously noticed in women with and without diabetes. Data on the educational level of respondents were also requested. As indicated in the table listing for both women with and without diabetes.

There was no significant difference between diabetic and non diabetic women In assessing the effects of the availability of water, privacy, presence of more than one wife, number of children and the most important person in terms of priority , the woman's knowledge about sexual and marital life before getting married and source of the knowledge, type of the marriage be it by love or traditional, is her marriage consanguineous, weight before marriage, her stimulation of her husband for initiation of sexual activity, also pre and post coitus foreplay.

Table1: Demographics of Sample Population

(N=600)

Factor	Number	%	Factor	Number	%
Non Diabetics n (%)			**Diabetics n (%)**		
Total number	277	46%	Total number	323	54%
Age					
<50 years	176	47%	<50 years	196	53%
≥ 50 years	101	44%	≥ 50 years	127	56%
Education level					
illiterate	29	11%	illiterate	38	12%
primary	33	12%	primary	29	9%
preparatory	52	19%	preparatory	60	19%
secondary	88	32%	secondary	110	34%
diploma	49	18%	diploma	54	17%
university	26	9%	university	32	10%
Employment					
employer	50	18%	employer	66	20%
Non - employer	227	82%	Non - employer	257	80%
Body Mass Index (BMI)					
normal	54	55%	normal	44	45%
Over weight	83	45%	Over weight	103	55%
obese	140	44%	obese	176	56%

Sexual dysfunction in diabetic and non diabetic women:

There was no statistically significant difference in sexual dysfunction between women with and without diabetes in total score and all domains p value = (0.675) (Table2).

Sexual dysfunction and descriptive variables:

There was no statistically significant difference in sexual dysfunction between women age groups, women with the age group ≤ 50 years old had sexual dysfunction by 72% while women ≥ 50 years old had sexual dysfunction by 48% (Table3) . Women who used birth control methods were found to have sexual dysfunction in a higher percentage in those who used IUCD by 79% with P value (0.527) (Table7). However, no association was found between sexual dysfunction and education level and BMI (Table5) (Table4).

Sexual dysfunction and risk factors variables:

Diabetic women with risk factors (hypertension and dyslipedemia) had a high risk to develop sexual dysfunction by (64%) in presence of hypertension and by (55%) in presence of dyslipedemia with P value (≤0.05) (Table11).

Sexual dysfunction and glysemic control:

There was an association between sexual dysfunction and glycemic control, women with uncontrolled diabetes had sexual dysfunction by 66% P value (<0.05) (Table10).

Relation of Sexual dysfunction to duration and complications of diabetes:

(Table9) and (Table12).

Sexual dysfunction and availability of water, privacy, number of children, pre marital knowledge and relationship satisfaction:

Associations between availability of water, privacy, number of children, pre marital knowledge and relationship satisfaction were explored.

It was found that in diabetic and non diabetic women, 12% of women with sexual dysfunction their husbands had another wife, (26%) of diabetic women with sexual dysfunction versus 23% in non diabetic women complained of lack of availability of water and privacy in their sexual activity, number of children was found to effect women sexual function which was reported by (38% vs. 42%) in diabetic and non diabetic women. In evaluation of receiving sexual education and knowledge in diabetic and non diabetic women before their marriage, it was found that (74% vs. 67%) who had sexual dysfunction did not receive sexual and marital knowledge before marriage. In assessment practicing of husband pre and post coitus foreplay and its impact on women sexual function , (50% vs. 46%) of diabetic and non diabetic women with sexual dysfunction complained that their husband did not practice post coitus foreplay e.g. (Kissing after sexual intercourse).

TABLES AND FIGURES

Table 2: Prevalence and types of FSD in diabetic and non diabetic female NCDEG, Amman, Jordan

Table 3: Correlation between sexual dysfunction and age group in diabetic and non diabetic women

SEXUAL DYSFUNCTION	NON DIABETIC N (%)	DIABETIC N (%)	P VALUE
Desire	89 (32%)	118 (36%)	0.264
Arousal	87 (31%)	110 (34%)	0.542
Lubrication	68 (25%)	79 (25%)	1.000
Orgasm	65 (24%)	91 (28%)	0.193
Satisfaction	103 (37%)	124 (38%)	0.800
Pain	154 (56%)	165 (51%)	0.287
Total sexual score	171 (62%)	193 (60%)	0.675

Age group	Sexual dysfunction Non diabetic's n (%)	Sexual dysfunction Diabetic's n(%)	P value
<50 years old	127 (72%)	132 (67%)	0.366

≥ 50 years old	44 (44%)	61 (48%)	0.507

Table 4: Correlation between sexual dysfunction and body mass index (BMI) in diabetic and non diabetic women

BMI	Sexual dysfunction Non diabetic n (%)	Sexual dysfunction Diabetic n (%)	P value
Normal weight	33 (61%)	28 (64%)	0.837
Over weight	50 (60%)	61 (59%)	1.000
Obese	88 (63%)	104 (59%)	0.562

Table 5: Correlation between sexual dysfunction and education level in diabetic and non diabetic women

Education level	Sexual dysfunction Non diabetic n (%)	Sexual dysfunction Diabetic n (%)	P value

Illiterate	17 (59%)	24 (63%)	0.802
Primary	19 (58%)	15 (52%)	0.799
preparatory	34 (65%)	36 (60%)	0.696
Secondary	55 (63%)	64 (58%)	0.562
Diploma	31 (63%)	37 (69%)	0.678
University	15 ((58%)	17 (53%)	0.794

Table 6: Correlation between sexual dysfunction and employment in diabetic and non diabetic women

Employment	**Sexual dysfunction Non diabetic n (%)**	**Sexual dysfunction Diabetic n (%)**	**P value**

employed	32 (64%)	36(55%)	0.345
Non employed	139(61%)	157(61%)	1.000

Table 7: Correlations between sexual dysfunction and uses of birth control methods in diabetic and non diabetic women

Birth control methods	**Sexual dysfunction Non diabetic n (%)**	**Sexual dysfunction Diabetic n (%)**	**P value**

OCP	18 (69%)	13 (65%)	0.764
IUCD	44 (79%)	46 (72%)	0.527
Tubal ligation	25 (61%)	30 (59%)	1.000
Coitus interruptus	34 (67%)	39 (58%)	0.444
Rhythmic birth control	11(61%)	8 (67%)	1.000
Lactation	1(100%)	0 (0%)	0.333
Post menopausal	38 (45%)	57 (53%)	0.309

Table 8: Correlations between sexual dysfunction and smoking in diabetic and non diabetic women

Smoking	Sexual dysfunction Non diabetic n (%)	Sexual dysfunction Diabetic n (%)	P value

Yes	2 (40%)	0 (0%)	1.000
No	169 (62%)	193 (60%)	0.673

Table 9: Correlations between sexual dysfunction and duration of diabetes in diabetic women

Duration of Diabetes	Sexual dysfunction diabetic n (%)	P value
≤ 5 years	72 (62%)	0.917
5-10 years	62 (55%)	
> 10 years	59 (63%)	

Table 10: Correlations between sexual dysfunction and control of diabetes in diabetic women

HbA1c Control diabetes	Sexual dysfunction diabetic n (%)	P value
control diabetes	83 (48%)	
Non control diabetes	281(66%)	**<0.05**

There was an association between sexual dysfunction and glycemic control with P value <0.05.

Table 11: Correlations between sexual dysfunction and presence of risk factors (hypertension, Dyslipedemia , Coronary arterial disease) in diabetic women.

Risk factors	Sexual dysfunction diabetic n (%)	P value
HTN	131 (64%)	0.059
Dyslipidemia	107 (55%)	0.020
CAD	23(62%)	0.859

There was association between sexual dysfunction and presence of risk factors Hypertension and Dyslipidemia in diabetic women.

Table 12: Correlations between sexual dysfunction and presence of Diabetic complications (Diabetic Peripheral neuropathy, Diabetic Retinopathy, Diabetic Autonomic neuropathy, Diabetic nephropathy, diabetic foot)

Diabetic complications	Sexual dysfunction diabetic n (%)	P value
Diabetic Peripheral neuropathy	84 (65%)	0.165
Diabetic Retinopathy	26 (55%)	0.523
Diabetic Autonomic neuropathy	8 (40%)	0.097
Diabetic nephropathy	3 (50%)	0.688
diabetic foot	10 (71%)	0.417

There was no association between sexual dysfunction and presence of Diabetic complications.

DISCUSSION

In Various studies Current definitions of sexual dysfunction in women reflect a change in our understanding of normal sexual response rather than the traditional view of a sexual response progressing through discrete phases in sequence (desire, arousal, orgasm, and resolution), it is now recognized that these phases overlap and that the sequence can vary [2].

Also recognized is the importance to sexual satisfaction of the subjective experience and of an environment and stimuli that are conducive to sexual feelings [2].

The prevalence rates of sexual dysfunction in diabetic men, diabetic women, and control women were 22, 27, and 15%, respectively. Taking into account the young age (< 40 years) of the sample, these prevalence rates are high but comparable to previously reported data on sexual dysfunction in the general population and in patients with type 1 diabetes [2].

Our study demonstrated surprisingly high prevalence of sexual dysfunction in diabetic women, and non diabetic women were (60%, 62%) respectively with no statistically significant difference in sexual dysfunction between women with and without diabetes in Jordan (Table2).

Collecting data by self-administered questionnaires or interviews can lead to different results. Underreporting and a lower response rate are expected if a self- administered questionnaire is used, especially when dealing with a sensitive issue such as sexual dysfunction. In our study the response rate was high, participation was 100%. Patients

were assured that the collected information will remain confidential and will not be included in their hospital medical records. The option to participate or to refrain from participation was given to the patients.

Having too little sexual desire is the most common sexual issue among women, reported by 10 to 51 percent of women surveyed in various countries. Data from these surveys, as well as from other sources, indicate that a low level of desire is usually accompanied by low levels of arousal and sexual excitement and infrequent orgasms and is frequently associated with sexual dissatisfaction [23].

In our study there was no statistically significant difference in sexual desire and arousal disorder between women with and without diabetes in Jordanian women.

On the basis of survey data several factors have been closely linked to women's sexual satisfaction and desire. These include stable past and current mental health, positive emotional well-being and self-image,[23] rewarding past sexual experiences, [21] positive feelings for the partner, [21] and positive expectations for the relationship. The partner's sexual dysfunction, [23] increased perceived stress, a history of infertility especially after extensive investigation,[22] fear of getting pregnant and increased duration of the relationship are all linked with reduced desire.

In our study associations between availability of water, privacy, number of children, pre marital knowledge and relationship satisfaction were explored in Jordanian women.

It was found that in diabetic and non diabetic women, 12% of women with sexual dysfunction their husbands had another wife, (26%) of diabetic women with sexual

dysfunction versus 23% in non diabetic women complained of lack of availability of water and privacy in their sexual activity, number of children had a determinental effect on female sexual function which was reported by (38% vs. 42%) in diabetic and non diabetic women. In evaluation of receiving sexual education and knowledge in diabetic and non diabetic women before their marriage, it was found that (74%vs67%) who had sexual dysfunction did not receive sexual and marital knowledge before they got married. In assessment practicing of husband pre and post coitus foreplay and its impact in women sexual function , was found that there was (50%vs46%) of diabetic and non diabetic women with sexual dysfunction complained that their husband did not practice post coitus foreplay .

Certain diseases such as multiple sclerosis, renal failure, and premature menopause induced by chemotherapy are associated with a high incidence of sexual dysfunction. In women, unlike men, vascular disease related to age does not appear to correlate with reduced sexual satisfaction [5].

Arousal disorders are categorized according to whether there is a lack of subjective arousal alone or a lack of both subjective arousal and awareness of genital congestion No objective measurements are used to establish diagnosis [6]. Arousal disorders also have an uncertain prevalence; most studies focus only on vaginal lubrication. In a survey of 979 British women who were 18 to 70 years of age, 17 percent identified problems with arousal (defined as distinct from vaginal dryness) [6, 11].

On the basis of survey data several factors have been associated with reduced subjective arousal, these include distractions, expectations of a negative experience (e.g., as a result of dyspareunia, the partner's sexual dysfunction, or negative experiences in the past), sexual anxiety, fatigue, and depression [16].

Newman and Bertelson's [21]1986 study was methodologically very good and revealed that pain disorders (dyspareunia) constituted (21%), and problems with orgasm constituted (15%). Eighty-nine percent of these women reported that their problems occurred after their diagnosis of diabetes. Again, this study found no association between sexual dysfunction and diabetes complications [21].

A comparison of men and women without diabetes complications showed that diabetic women reported significantly more sexual problems than do diabetic men because of a higher prevalence of decreased sexual desire in the women [21].

In our study there was no association between sexual dysfunction, duration of diabetes and presence of diabetic complications (Table9) (Table12) in Jordanian women with diabetes.

CONCLUSION

No statistically significant difference in sexual dysfunction was found between women with and without diabetes in Jordan.

Sexual problems are frequent in women with diabetes. They affect the overall quality of life and deserve more attention in clinical practice and research. Sexuality is an important aspect of quality of life, and contrary to general opinion, women with diabetes are at increased risk for sexual problems. Sexual dysfunction can put a high psychological burden on patients with diabetes, and it can have a negative impact on marital relations already burdened by the presence of a chronic illness. Therefore, the recognition of the existence of sexual problems in women with diabetes should be an invitation for clinicians to address this issue during their consultation.

RECOMMENDATIONS

- There is strong association between sexual dysfunction and Diabetes, so a common approach to the prevention and control of diabetes is helpful.

- Association of Hypertension, dyslipedemia and obesity with sexual dysfunction should form the basis of immediate intervention programs to encourage exercise programs to prevent these conditions.

- Open and honest communication with the partner can enhance the emotional and sexual intimacy.

- Educate women how to cope with the stress to maintain her quality of life.

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Female Sexual Function Index (FSFI)

Subject Identifier _____ Date _____

INSTRUCTIONS: These questions ask about your sexual feelings and responses during the past 4 weeks. Please answer the following questions as honestly and clearly as possible. Your responses will be kept completely confidential. In answering these questions the following definitions apply:

Sexual activity can include caressing, foreplay, masturbation and vaginal intercourse.

Sexual intercourse is defined as penile penetration (entry) of the vagina.

Sexual stimulation includes situations like foreplay with a partner, self-stimulation (masturbation), or sexual fantasy.

CHECK ONLY ONE BOX PER QUESTION.

Sexual desire or interest is a feeling that includes wanting to have a sexual experience, feeling receptive to a partner's sexual initiation, and thinking or fantasizing about having sex.

1. Over the past 4 weeks, how **often** did you feel sexual desire or interest?

- Almost always or always
- Most times (more than half the time)
- Sometimes (about half the time)
- A few times (less than half the time)
- Almost never or never

2. Over the past 4 weeks, how would you rate your **level** (degree) of sexual desire or interest?

- Very high
- High
- Moderate
- Low
- Very low or none at all

Sexual arousal is a feeling that includes both physical and mental aspects of sexual excitement. It may include feelings of warmth or tingling in the genitals, lubrication (wetness), or muscle contractions.

3. Over the past 4 weeks, how **often** did you feel sexually aroused ("turned on") during sexual activity or intercourse?

- No sexual activity
- Almost always or always

- Most times (more than half the time)
- Sometimes (about half the time)
- A few times (less than half the time)
- Almost never or never

4. Over the past 4 weeks, how would you rate your **level** of sexual arousal ("turn on") during sexual activity or intercourse?

- No sexual activity
- Very high
- High
- Moderate
- Low
- Very low or none at all

5. Over the past 4 weeks, how **confident** were you about becoming sexually aroused during sexual activity or intercourse?

- No sexual activity
- Very high confidence
- High confidence
- Moderate confidence
- Low confidence
- Very low or no confidence

6. Over the past 4 weeks, how **often** have you been satisfied with your arousal (excitement) during sexual activity or intercourse?

- No sexual activity
- Almost always or always
- Most times (more than half the time)
- Sometimes (about half the time)
- A few times (less than half the time)
- Almost never or never
-

7. Over the past 4 weeks, how **often** did you become lubricated ("wet") during sexual activity or intercourse?

- No sexual activity
- Almost always or always
- Most times (more than half the time)
- Sometimes (about half the time)
- A few times (less than half the time)
- Almost never or never

8. Over the past 4 weeks, how **difficult** was it to become lubricated ("wet") during sexual activity or intercourse?

- No sexual activity
- Extremely difficult or impossible
- Very difficult
- Difficult

- Slightly difficult
- Not difficult

9. Over the past 4 weeks, how often did you **maintain** your lubrication ("wetness") until completion of sexual activity or intercourse?

- No sexual activity
- Almost always or always
- Most times (more than half the time)
- Sometimes (about half the time)
- A few times (less than half the time)
- Almost never or never

10. Over the past 4 weeks, how **difficult** was it to maintain your lubrication ("wetness") until completion of sexual activity or intercourse?

- No sexual activity
- Extremely difficult or impossible
- Very difficult
- Difficult
- Slightly difficult
- Not difficult

11. Over the past 4 weeks, when you had sexual stimulation or intercourse, how

often did you reach orgasm (climax)?

- No sexual activity
- Almost always or always
- Most times (more than half the time)
- Sometimes (about half the time)
- A few times (less than half the time)
- Almost never or never

12. Over the past 4 weeks, when you had sexual stimulation or intercourse, how **difficult** was it for you to reach orgasm (climax)?

- No sexual activity
- Extremely difficult or impossible
- Very difficult
- Difficult
- Slightly difficult
- Not difficult

13. Over the past 4 weeks, how **satisfied** were you with your ability to reach orgasm (climax) during sexual activity or intercourse?

- No sexual activity
- Very satisfied
- Moderately satisfied
- About equally satisfied and dissatisfied
- Moderately dissatisfied
- Very dissatisfied

14. Over the past 4 weeks, how **satisfied** have you been with the amount of emotional closeness during sexual activity between you and your partner?

- No sexual activity
- Very satisfied
- Moderately satisfied
- About equally satisfied and dissatisfied
- Moderately dissatisfied
- Very dissatisfied

15. Over the past 4 weeks, how **satisfied** have you been with your sexual relationship with your partner?

- Very satisfied
- Moderately satisfied
- About equally satisfied and dissatisfied

- Moderately dissatisfied
- Very dissatisfied

16. Over the past 4 weeks, how **satisfied** have you been with your overall sexual life?

- Very satisfied
- Moderately satisfied
- About equally satisfied and dissatisfied
- Moderately dissatisfied
- Very dissatisfied

17. Over the past 4 weeks, how **often** did you experience discomfort or pain during vaginal penetration?

- Did not attempt intercourse
- Almost always or always
- Most times (more than half the time)
- Sometimes (about half the time)
- A few times (less than half the time)
- Almost never or never

18. Over the past 4 weeks, how **often** did you experience discomfort or pain following vaginal penetration?

- Did not attempt intercourse

- Almost always or always
- Most times (more than half the time)
- Sometimes (about half the time)
- A few times (less than half the time)
- Almost never or never

19.Over the past 4 weeks, how would you rate your **level** (degree) of discomfort or pain during or following vaginal penetration?

- Did not attempt intercourse
- Very high
- High
- Moderate
- Low
- Very low or none at all

Thank you for completing this questionnaire

الأخت العزيزة:

قال الله تعالى:" ومن آياته ان خلق لكم من أنفسكم أزواجا لتسكنوا إليها وجعل بينكم مودة ورحمة"
وقال:" ولهن مثل الذي عليهن بالمعروف" بما يضمن المساواة بين الرجل والمرأة.
وقال:" نساؤكم حرث لكم فأتوا حرثكم أنى شئتم وقدموا لأنفسكم"

وقد خلقنا الله تعالى لعبادته وأمرنا بالتكاثر من خلال الزواج،بحيث يكون الزواج هو العلاقة الشرعية الوحيدة بين الرجل والمرأة لضمان السعادة وتكوين الأسرة المحترمة الصالحة. وحين تقوم العلاقة الزوجية على هذه الأسس الصحيحة،يجد الزوجان السعادة والسكينة والراحة النفسية. وبغير ذلك يكون الشقاق والفراق والتعاسة. وكثيرا ما يكون ذلك بسبب عدم فهم الطرف الآخر وحقوقه التي شرعها الإسلام ونظمها.
وكم من أسرة تفككت وزواج فشل بسبب عدم وجود الفهم المتبادل.

إن الغرض من هذا الاستبيان هو فهم الواقع في مجتمعنا المحافظ الذي يمنع المرأة من البوح بمشاكلها، رغم منافاة ذلك للإسلام.
وهدفنا هو وضع خطة تتناسب مع أخلاقنا ومبادئنا لتوضيح بعض الأمور للنساء والرجال. وقد قمنا بدراسة ألف حالة بين الرجال،وبما أن المرأة تشكل نصف المجتمع،فقد جاءت هذه الدراسة لخدمتك.

وقد اخترنا لهذا العمل مجموعة من الطبيبات الملتزمات؛ فإن أحببت الإجابة فلك الشكر والتقدير وجزاك الله خيرا، وإلا فلك كل الحرية في عدم الإجابة. علما أن الاسم ولشخصية لن تظهر مطلقا على الاستبيان،ولن يعلم أي شخص من كاتب هذا الاستبيان ولا المجيب.
والله على ما نقول شهيد.

مؤشر الوظيفة الجنسية لدى الإناث

رقم الملف:

التاريخ:

الإرشادات:

الأسئلة التالية تستفهم عن أحاسيسك الجنسية واستجاباتك خلال الأسابيع الأربع الماضيات.الرجاء الإجابة بصدق ووضوح قدر المستطاع، علما بأن إجاباتك ستبقى سرية تماما.

عند الإجابة يرجى مراعاة التعاريف التالية:

- النشاط الجنسي يتضمن الحضن، المداعبة، الاستمناء والإيلاج.
- الجماع هو ولوج القضيب في المهبل.
- الإثارة الجنسية تتضمن المداعبة مع الزوج، إثارة وتحفيز الرغبة الجنسية والاستمناء أو الخيال الجنسي.

** الرغبة الجنسية أو الاهتمام هو شعور يتضمن الرغبة في ممارسة العملية جنسية، الاستجابة لمبادرة زوجك الجنسية، التفكير في ممارسة الجنس أو تخيله.

**اليقظة (التهيج الجنسي): شعور يتضمن النواحي الجسدية والعقلية للإثارة الجنسية. وقد يشمل أحاسيس بالدفء، أو تهيجا في الأعضاء الجنسية،البلل أو الانقباضات العضلية.

***يرجى مراعاة أنه لكل سؤال إجابة واحدة فقط.

Female Sexual Function Index questionnaire

1.Wife's Age 2. Husband's Age:

3.File #

4.Height 5. Weight 6. BMI

7. Employment

1.Employed 2. non employed

8. Education level

0) illiterate

1) Primary

2) Intermediate

3) Secondary

4) Diploma

5) University

9. On any birth control method

0) OCP

1) IUCD

2) Tubal ligation

3) Goitus interrupts

4) Rhythmic birth control

5) Lactation

6)postmenapousal

10.**Type of DM**

1. Type1 2. Type2

11. Duration of DM 1. <5Years 2. 5-10 3. >10 years

12 . **Risk Factors**

1.Hypertension

2. Dyslipidemia

3.CAD

4.Smoking Amount/d Duration

13.**HBA1C (last 4 readings):**

14. **Diabetic complications**

1. D.peripheral neuropathy

2. D.autonomic neuropathy

3. D.retinopathy

4. D.nephropathy

5. Foot (previous or now)

#1:خلال الاربعة أسابيع الماضية، كم مرة أحسست بالرغبة الجنسية أو الاهتمام؟

1. تقريبا أبدا أو أبدا
2. مرات قليلة
3. أحيانا
4. معظم الاوقات
5. تقريبا دائما أو دائما

#2: خلال الأربعة أسابيع الماضية، كيف تقيمين مستوي (درجة) رغبتك الجنسية أو اهتمامك؟

1. منخفضة جدا أو معدومة
2. منخفضة
3. متوسطة
4. عالية
5. عالية جدا

#3: خلال الأربعة أسابيع الماضية،كم مرة أحسست أنك يقظة (متهيجة) جنسيا خلال النشاط الجنسي أو الجماع؟

0 لا يوجد نشاط جنسي

1. تقريبا أبدا أو أبدا
2. مرات قليلة
3. أحيانا
4. معظم الأوقات
5. تقريبا دائما أو دائما

#4: خلال الأربعة أسابيع الماضية، كيف تقيمين مستوي اليقظة الجنسية خلال النشاط الجنسي أو الجماع؟

0 لا يوجد نشاط جنسي

1. منخفض جدا أو معدوم
2. منخفض
3. متوسط
4. عال

5. عال جدا

#5: خلال الأربعة أسابيع الماضية،ما مدى ثقتك بحصول التهيج الجنسي لديك خلال النشاط الجنسي أو الجماع؟

0 لا يوجد نشاط جنسي

1. منخفضة جدا أو معدومة
2. منخفضة
3. متوسطة
4. عالية
5. عالية جدا

#6: خلال الأربعة أسابيع الماضية، كم مرة شعرت بالرضا بمدى إثارتك الجنسية خلال النشاط الجنسي أو الجماع؟

0 لا يوجد نشاط جنسي

1. تقريبا أبدا أو أبدا
2. مرات قليلة
3. أحيانا
4. معظم الأوقات
5. تقريبا دائما أو دائما

#7 : خلال الأربعة أسابيع الماضية، كم مرة أحسست بالرطوبة (البلل) خلال النشاط الجنسي أو الجماع؟

0 لا يوجد نشاط جنسي

1. تقريبا أبدا أو أبدا
2. مرات قليلة
3. أحيانا
4. معظم الأوقات
5. تقريبا دائما أو دائما

#8: خلال الأربعة أسابيع الماضية، ما مدى صعوبة حصول البلل اثناء النشاط الجنسي أو الجماع؟

0 لا يوجد نشاط جنسي

1. مستحيل
2. صعب جدا
3. صعب
4. قليل الصعوبة
5. ليس صعبا

#9: خلال الأربعة أسابيع الماضية، كم مرة حافظت على البلل حتى انتهاء النشاط الجنسي أو الجماع؟

0 لا يوجد نشاط جنسي

1. تقريبا أبدا أو أبدا
2. مرات قليلة
3. أحيانا
4. معظم الأوقات
5. تقريبا دائما أو دائما

#10: خلال الأربعة أسابيع الماضية، ما مدى صعوبة الحفاظ على البلل حتى انتهاء النشاط الجنسي أو الجماع؟

0 لا يوجد نشاط جنسي

1. مستحيل
2. صعب جدا
3. صعب
4. قليل الصعوبة
5. ليس صعبا

#11: خلال الأربعة أسابيع الماضية، عند حصول الإثارة الجنسية أو الجماع، كم مرة وصلت للنشوة الجنسية (الذروة)؟

0 لا يوجد نشاط جنسي
1. تقريبا ابدا أو أبدا
2. مرات قليلة
3. أحيانا
4. معظم الأوقات
5. تقريبا دائما أو دائما

12#: خلال الأربعة أسابيع الماضية، عند حصول الإثارة الجنسية أو الجماع، ما مدى صعوبة الوصول إلى النشوة الجنسية؟

0 لا يوجد نشاط جنسي
1. مستحيل
2. صعب جدا
3. صعب
4. قليل الصعوبة
5. ليس صعبا

13#: خلال الأربعة أسابيع الماضية، كم كنت راضية عن قدرتك على الوصول إلى النشوة الجنسية خلال النشاط الجنسي أو الجماع؟

0 لا يوجد نشاط جنسي
1. غير راضية أبدا
2. غير راضية بشكل متوسط
3. راضية وغير راضية بشكل متساو
4. متوسطة الرضا
5. راضية جدا

14#: خلال الأربعة أسابيع الماضية، كم كنت راضية عن مدى التقارب العاطفي مع زوجك خلال النشاط الجنسي أو الجماع؟

0 لا يوجد نشاط جنسي

1. غير راضية أبدا
2. غير راضية بشكل متوسط
3. راضية وغير راضية بشكل متساو
4. متوسطة الرضا
5. راضية جدا

15#: خلال الأربعة أسابيع الماضية، كم كنت راضية عن علاقتك الجنسية مع زوجك؟

1. غير راضية أبدا
2. غير راضية بشكل متوسط
3. راضية وغير راضية بشكل متساو
4. متوسطة الرضا
5. راضية جدا

16#: خلال الأربعة أسابيع الماضية، كم كنت راضية عن علاقتك الجنسية ككل؟

1. غير راضية أبدا
2. غير راضية بشكل متوسط
3. راضية وغير راضية بشكل متساو
4. متوسطة الرضا
5. راضية جدا

17#: خلال الأربعة أسابيع الماضية، كم مرة أحسست بعدم الارتياح أو الألم أثناء الإيلاج؟

0لم يحصل جماع
1. تقريبا أبدا أو أبدا
2. مرات قليلة
3. أحيانا
4. معظم الأوقات
5. تقريبا دائما أو دائما

18#: خلال الأربعة أسابيع الماضية، كم مرة أحسست بعدم الارتياح أو الألم بعد الإيلاج؟

0 لم يحصل جماع
1. تقريبا أبدا أو أبدا
2. مرات قليلة
3. أحيانا
4. معظم الأوقات
5. تقريبا دائما أو دائما

19#: خلال الأربعة أسابيع الماضية، كيف تقيمين مستوى (درجة) عدم الارتياح أو الألم أثناء أو بعد الإيلاج؟

0 لم يحصل جماع
1. منخفض جدا أو معدوم
2. منخفض
3. متوسط
4. عال
5. عال جدا

#20 : لو أخترت لتضعي سلم أولويات أهتمامك في الحياة

1. نفسك
2. زوجك
3. والديك الام الاب كلاهما
4. أولادك ذكور اناث لا فرق
5. اخرين اخوتك أخواتك غيرهم

#21 : هل زوجك متزوج باخرى ؟؟

1. نعم 2. لا

#22 : هل يشكل عدم وجود الماء بشكل عام / عدم وجود الماء الساخن بشكل خاص مشكلة؟؟

1. نعم 2. لا

#23 : هل يشكل انعدام الخصوصية مشكلة وعائق للجنس ؟؟

1. نعم 2. لا

#24 : هل يشكل وجود الاولاد وعدد الاولاد (وبخاصة سهر هم ليلا للدراسة) مشكلة؟؟

1. نعم 2. لا

الثقافة

#25 : هل حصلت على ثقافة عن الحياة الزوجية؟

1. نعم 2. لا

#26 : إن كان الجواب نعم؟ هل مصدر الثقافة هو؟

1.من الوالدة

2.من الصديقات

3.من كتب

4.من مجلات

5.من أفلام

#27 :هل كان زواجك :

1. تقليدي 2. عن حب

#28 :هل زواجك من أقاربك؟

1.ابن عم أو خال

2.قريب وليس ابن عم أو خال

3.لا توجد قرابة

#29 :هل تذكرين وزنك عند الزواج

1. نعم 2. لا

كم كان الوزن الطول

#30 :متى بدأ وزنك بالزيادة ؟

1. بعد الزواج 2. بعد المولود الأول

الزينة

#31 : هل تتزينين وأنت في البيت بشكل يومي؟

1. نعم 2. لا

#32 : هل تتزينين اذا أخبرك زوجك بالقدوم والبقاء في البيت؟

1. نعم 2. لا

#33 :هل تتزينين اذا أخبرك بالقدوم ليأخذك لزيارة خارج البيت؟

1. نعم 2. لا

#34 :هل تتزينين اذا كنت ذاهبة لاجتماع نسائي؟

1. نعم 2. لا

#35 : هل تتزينين اذا كانت لديك رغبة في العلاقة الزوجية؟

1. نعم 2. لا

#36 :هل تتزينين بألبسة خاصة اذا كانت لديك رغبة في العلاقة الزوجية ؟

1. نعم 2. لا

#37 :هل تتزينين اذا شعرت بأن زوجك يريد إقامة علاقة زوجية؟

1. نعم 2. لا

#38 : هل ترتدين ملابس خاصة لإغراء الزوج لإقامة علاقة زوجية إذا شعرت بالرغبة؟

1. نعم 2. لا

#39 :هل تعتبر ليلة الجمعة/ مساء الخميس يوماً خاصاً؟ اذا كان نعم:

#40 :هل ترتدين ملابس خاصة؟

1. نعم 2. لا

#41 : هل تتزينين زينة خاصة؟

1. نعم 2. لا

#42 : هل تستعملين عطراً خاصاً؟

1. نعم 2. لا

#43 : هل كان زوجك أكثر لطفاً؟

1.عندما كان في العشرينات

2.عندما كان في الثلاثينات

3.عندما كان في الأربعينات

4.عندما كان في الخمسينات

5.عندما كان في الستينات

6.أو أكثر

#44 : هل يمكن الطلب من زوجك أي اثارة خاصة- كما سمح الإسلام بذلك؟

1. نعم 2. لا

#45 : هل يمكن الطلب من زوجك أي وضع خاص – كما جاء في السنة النبوية؟

1. نعم 2. لا

#46 : هل يقبلك زوجك؟

1. نعم 2. لا

اذا كان نعم:

1.كلما يدخل البيت	1. نعم	2. لا
2.كلما جاء من السفر	1. نعم	2. لا
3.قبل العلاقة الزوجية	1. نعم	2. لا
4.أثناء العلاقة الزوجية	1. نعم	2. لا
5. بعد انتهاء العلاقة الزوجية	1. نعم	2.

الاعتلالات الجنسية لدى النساء الأردنيات المصابات بالسكري

إعداد

رابعة محمد عبدالله الهاجري

المشرف:

الإستاذالدكتور كامل العجلوني

ملخص

الاهداف

1-تحديد نسبة الاعتلال الجنسي عند المرأة الاردنية المصابة وغير المصابة بمرض السكري .

2- دراسة مدى التأثير والارتباط بين مرض السكري والنشاط الجنسي عند المرأةالأردنية.

3- معرفة الأثر النفسي على النشاط الجنسي عند المرأة المصابة وغير المصابة بمرض السكري .

4- تحديد مدى وجود ارتباط بين بعض العوامل الوصفية مثل (العوامل النفسية،مضاعفات مرض السكري) والضعف الجنسي عند المرأة المصابة بمرض السكري .

5- تحديد المعايير المتعلقة بالضعف الجنسي لدى المرأة المصابة بمرض السكري ووصفها.

طريقة الدراسة :

تم إجراء الدراسه في المركز الوطني للسكري والغدد الصم والوراثة عمان-الاردن في الفتره الزمنية ما بين شهري حزيران- كانون الاول 2007 ، حيث تم مقابلة 600امرأةمتزوجه مصابة وغير مصابة بداء السكري.

ولقد تم أستبعاد المرأةغير المتزوجه،المرأة الحامل،المطلقة،الارملة،والمصابة بمرض خطير من هذه الدراسة .

النتائج :

تبين من نتائج الدراسة بأنه لا يوجد أختلاف في نسبة الضعف الجنسي بين المرأة المصابة بداء السكري وغير المصابة به بعامل تباين (0.675

كذلك تبين بأن هناك ارتباطاً بين الاعتلال الجنسي عند المرأة وعدم انتظام داء السكري،وجود ارتفاع الضغط الشرياني وارتفاع دهون الدم .

المرأه المصابة بداء السكري لفترة زمنية طويلة مع عدم أنتظام سكر الدم معرضة لاعتلال جنسي كبير .

الخاتمة:

لا يوجد أختلاف في الاعتلال الجنسي بين المرأةالاردنيه المصابة وغير المصابة بداءالسكري بعامل تباين (0.675