Prevalence of Urinary Incontinence with Sexual Dysfunction in King Faisal Specialist Hospital and Research Center, Saudi Arabia.

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Abstract: Urinary incontinence & sexual Dysfunction is very common among female. It causes social or hygienic problem. It is an embarrassing condition & distressing, that will answer the question why the prevalence and incidence studies of Female Sexual Dysfunction with urinary incontinence is very difficult to be recognized. Community studies that took a place at USA by Sarit & Roger (22) indicated that the prevalence of female sexual dysfunction with urinary incontinence ranges from 25 to 63%. It provides a probability sample among 1749 women and 1410 men living in the USA, aged 18-59 years, and is based on face-to-face interviews conducted by trained interviewers. The study found that sexual dysfunction with Urinary incontinence is more prevalent in women than men (43 vs 31%). Lack of interest was the most frequently reported female sexual complaint.

Objective: The objective of the study was to explore the prevalence of Urinary Incontinence (UI) in females with Sexual Dysfunction (SD) at King Faisal Specialist Hospital and Research Center (KFSH&RC) Saudi Arabia.

Study Design: Quantitative research were chosen using prospective, cross sectional methodology.

Method: randomly distributed survey questionnaires based on the validated Arabic version of the Urinary Distress Inventory UDI-6 and Female Sexual Function Index (FSFI). The total sample 500 female.

Results: Most of the female patients visiting the hospital experienced UI manifested as frequent urination, urine leakage, difficulties emptying their bladder, and lower abdominal pain that resulted in various forms of sexual dysfunction.

Discussion: Using the FSFI with UDI-6 framework, most of the women suffered from UI with FSD in one form or the other, including Female Orgasmic Disorder, Female arousal sexual disorder, Hypoactive sexual disorder, Dyspareunia, poor emotional bonding and sexual pain as well as general dissatisfaction with sexual relations.

Conclusion: The results demonstrate a very strong link between UI and FSD, and shows that UI is one of a direct cause.

Keywords: prevalence study, urinary incontinence, female sexual dysfunction, prospective study.

I. Introduction

It is believed that sexual dysfunctions are among the most prevalent reproductive psychosocial disorders experienced in the general population (28). Research data shows that the sales for sexual enhancement drugs sold over the counter are high and increasing, including in the KSA (7). Despite the prevalence of the condition (11); while it is believed UI leads to FSD, the extent is not known; do all women that suffer from SFD also suffer from UI. Female sexual dysfunction (FSD) is a highly prevalent condition that equally highly underestimated problem in the general population (19). FSD is defined as a sexual desire disorder affecting arousal and orgasm, and causing sexual pain that leads to significant personal distress. Rosen et al. (20) developed an FSFI (female sexual function index) as a 19 item self-report measure for FSD and it has become an international ‘gold’ standard to describe and assess sexual function in females. There are currently four international data sets highlighting prevalence with information about women’s sexual problems with urinary incontinence, five studies in Africa, eleven studies in Asia, eleven studies in Europe and eleven studies in America. However, there is no current data on UI and female sexual dysfunction here in Saudi Arabia.

Furthermore, Aslan, et al. (5) reported that there are limited data exists that addresses the impact of urinary incontinence on sexual function. The authors assessed sexual functions in patients with urinary incontinence and compared with healthy continent subjects by means of Female Sexual Function Index (FSFI) questionnaire. A total of 21 premenopausal continent women (three stress incontinence, nine overactive bladder and nine mixed incontinence) were enrolled in the study, and 18 healthy continent subjects served as controls. All subjects were asked to complete FSFI questionnaire and each FSFI domain scores including desire, arousal, lubrication, orgasm, satisfaction and pain were calculated. The mean scores in each domain were compared between the groups. Mean age of subjects with urinary incontinence and controls were 39.5 ± 6.6 and
32.6±9.1 year, respectively. All domain scores were significantly lower in incontinent women except for pain. Among the incontinence types, no significant difference was determined in all domains of FSFI. Urinary incontinence significantly reduces sexual functions in premenopausal sexually active women.

**Urinary incontinence**: The loss of bladder control is a common and often embarrassing problem. The severity ranges from occasionally leaking urine when you cough or sneeze to having an urge to urinate that’s so sudden and strong you don’t get to a toilet in time (9).

**Female sexual dysfunction** is defined as a disorder of sexual desire, orgasm, arousal and sexual pain that results in significant personal distress (2).

**Rationale of the Study**: As a consultant urologist working as a team with the physiotherapist at KFSH&RC, our main concern is to provide a high quality of care, this concern stimulated our interest in studying the prevalence of Urinary incontinence in females with sexual dysfunction at King Faisal Specialist Hospital and Research Center (KFSH&RC). In order to provide a high quality of care, prevent further complications and introduce proper education programs to females with Urinary incontinence and sexual dysfunction At KFSH&RC. However, to date, no research has been published which has explored the prevalence of Urinary incontinence in females with sexual dysfunction at King Faisal Specialist Hospital and Research Center (KFSH&RC).

**Methodology**: A prospective, cross sectional study.

### II. Methods

The study conducted a survey using a self-reporting validated Arabic version of the Urinary Distress Inventory UDI-6 and Female Sexual Function Index questioners (FSFI). The UDI-6 Arabic questionnaires validated by Altaweel, et al (27), the FSFDI Arabic questionnaires validated by Anis, et al (4) Appendix A & B. Furthermore, the survey included a participant information sheet outlining the nature of the study. The survey was randomly distributed to women of various ages by two Arabic speaking female therapists, who were distributed and collated the survey and information sheet to the participants while waiting for their appointments visit follow up with them in case of any queries. The Physical Therapists assigned to the participants were tasked with collecting the data sheets from the participants and if they have any queries, they should ask the physical therapist assigned to collect the data sheets. The study took a place at King Faisal Specialist Hospital and research center. Data were collected from women in all of the outpatient clinics, satellite clinics and ancillary clinics.

**Sample Size and Statistical Methods Used**

According to Thomas & Conlon (26) the best sample size is about 500 to optimally estimate a single population parameter. This will construe a 95% confidence interval with a Margin of Error of about ±4.4% (for large populations). Descriptive statistics for the continuous variable will be reported as mean±s- standard deviation and categorical variables will be summarized as frequencies and percentages. Continuous variables will be compared by student’s t-test while categorical variables will be compared by Chi-square test. The level of significance for all variables is set at P <0.05.

**Inclusions**: Women who are married, and educated or at least able to read and write Arabic language. Age not specified.

**Exclusion**: Pregnant and single women.

### III. Results

Most the interviewed women suffered from a urinary incontinence, either experienced as frequent urination, urine leakage related to urgency or physical activity such as sneezing, coughing, or laughing accompanied with few drops of leakage, wet under wear or runs between legs, difficulties emptying the bladder, pain in the lower abdomen and these led a majority (78.8%) to experience some form of change in sexual activity, including loss of interest and inability to achieve orgasm. An FSFI analysis of their sexuality show that only 10% had a high desire for sex, 11% said it was high, 23% said it was moderate, 39% said it was low while 17% said it was very low or non-existent. Further, just 12% said they almost always experienced sexual arousal, 18% said most times, 22% said sometimes, 23% said a few times while 20% said almost never while 5% reported no sexual activity. Looking at the other responses based on the FSFI, the results show a high level of sexual dysfunction among the women suffering from any given form of UI and the more serious the UI, such as leakage, the higher the reported sexual dysfunction. 21% of the women almost never experienced any sexual desires in the last four weeks and over half the women rated their sexual activity level as being low or very low. The presence of UI also had other psychosocial effects; 40.2% of the women experienced low or very low confidence during sexual activity and 27% of the women were either dissatisfied or very dissatisfied with their emotional closeness during sexual activity. The level of sexual arousal was also affected, with 27% experiencing...
satisfaction a few ties or never with their arousal during sexual activity. Lubrication was also affected by the UI with 26% of the women experiencing lubrication problems (they lubricated just sometimes during sexual activity). 20% of the women found it very difficult to lubricate during sexual intercourse, 30% found very difficult while an almost similar number found it to be just difficult. 38% of the women were able to maintain their wetness during sexual intercourse to the end just a few times or almost never and 60% found it difficult to maintain wetness during sexual activity until the end. 22% of the women experienced some form of physical pain during sexual intercourse at the time of penetration, with an almost similar number experiencing quite a bit of pain at the end of intercourse. 16% experienced some pain at the beginning and all suffered from UI in one form or the other.

Their ability to achieve orgasm was also affected; 13% of the women found it extremely difficult to reach orgasm, 34% found it very difficult while 20% found it just difficult. 44% of the women were either moderately dissatisfied or very dissatisfied with their ability to reach orgasm during sexual intercourse. Overall sexual satisfaction was also affected with 46% of the women finding their sexual relationship either moderately dissatisfying or very dissatisfying or 22% were either moderately or very dissatisfied with their overall sexual life.

IV. Discussion

The results allude to a high degree of impaired sexual function among the KSA women suffering from UI which was either mild (frequent urination) or serious (leakage). An impaired sexual function among women has adverse effects on self-esteem, interpersonal relationships and a sense of wholeness as shown by the research results (21). Inconsistencies in normal sexual function levels, cultural factors and individual sexual function relevance complicate the determination and classifying of FSD; FSFI is presently considered the global gold standard, and has been validated in several studies involving women around the world (12). This is confirmed in several studies, such as by Filocamo (12), Stephenson et al. (25), Rosen and Heiman (20) and Bartula (8), and has been demonstrated to be effective with excellent psychometric qualities. The results show that the women suffered a form of FSD due to the presence of UI. Female sexual disorders include the Female Orgasmic Disorder that is manifested as an unusually high difficulty for one to attain orgasm and depend on age, adequate sexual stimulation and sexual experience and was found to be as high as 49% (13). In all cases where there was a form of FSD, there was also urinary incontinence and this shows that FSD has clinically significant association with UI. The results show FSD in at least 22% in all cases where the patients had UI in any form and the more serious the UI, the greater the level of FSD manifested as reduced arousal, pain during sex, inability to lubricate or maintain wetness, difficulty reaching orgasm and a general dissatisfaction with their sexual lives. The results are clinically significant, and fairly consistent with past research that show that women with any form of UI report sexual behavior disruption with a median percentage of 28% (6).

Female arousal sexual disorder is another common condition and is characterized by the inability of women to lubricate and swell sufficiently in response to sexual excitement (3), which has been found prevalent among the women at 20%. Hypoactive sexual disorder was also found to be prevalent; it’s characterized by deficient sexual activity desire or sexual fantasies (16) and was found to be prevalent with 21% never experiencing it. Another condition suffered by the women is Dyspareunia, which refers to persistent pain in the vagina during intercourse (15); the prevalence was found to be 38%. In addition, the women were found to have low confidence for sexually enabling functions, such as adequate lubrication and sustaining lubrication until the end of the intercourse. FSD can result from relationship problems or lead to relationship problems such as lack of intimacy (18). A lady's yearning for sex depends on a myriad of factors that affect closeness, including their health, self-esteem, desire for sex, lubrication, and ability to achieve orgasm as well as the current social relationship. In case a lady is encountering an issue in any of the factors, sexual desire can be affected (17).Urinary Incontinence; UI, if severe, has a significant association with FSD symptoms, including diminished libido, inability to lubricate, reduced sexual interest, diminished sexual satisfaction during intercourse and orgasmic dysfunction (6). Women suffering from stress UI have been proven to have problems with sexual desire, lubrication and arousal; with decreased desire being associated with worries on coital incontinence and a dissatisfying relationship with their partner. Most cases of FSD are associated with UI; the more serious the UI, the more prevalent FSD was (23). UI is a condition that is bothersome and stressful that was found to be prevalent among the women visiting the King Faisal medical center in Saudi Arabia with a myriad of urinary problems. Research data from this research shows that the presence of UI has direct and adverse impacts on FSD among the women that participated in this research. This supports other empirical research data that has been done in the past on the role of UI of FSD (10).

Sexual dysfunction includes loss of desire, orgasm, arousal, and sex pain disorders that need to be diagnosed and treated just like any other physiological dysfunction (24). For this reason, it is not treated as a disease or medical condition as it should. It needs to be diagnosed and treatment sought, with physical therapy such as manual therapy and pelvic floor exercises and therapeutic options including increasing blood flow using
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PDE5 inhibitors, Prostaglandins, Nitric Oxide Donor and Combination Therapy, Vasoactive Intestinal Peptide, Hormones, Estrogen and Centrally Mediated Stimulation(1), (6).

V. Conclusion

The study was done on 500 women and the UDI-6 and FSFI used to determine and classify the urinary incontinence with female sexual dysfunction. The results show significantly high and clinically appreciable levels of FSD in the respondents; the common factor in all the women participants is the presence of UI in any form, mild, chronic, or acute. The noted prevalent conditions among the participating women include Female Orgasmic Disorder, Female arousal sexual disorder, Hypoactive sexual disorder and Dyspareunia. These led to further problems such as low self-esteem and sexual confidence, lack of close and emotional intimacy, and pain during intercourse. FSD is prevalent among the Saudi women who also suffer from a given form of UI. This paper concludes that most of the women visitors at King Faisal specialist hospital and research center Saudi Arabia suffering from UI in any form also suffer from female sexual disorders that require medical intervention. However, more empirical research is needed to determine if UI is a precursor or cause for FSD where a control group not suffering from UI is used to validate the results.

References

[9] Christensen J, J. Inkontinens - even curable — for both men and women.”

DOI: 10.9790/1959-050405107112 www.iiosrjournals.org 110 | Page
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### Appendix B (UDI-6 Arabic version)

**ICIQ-UI Short Form (Arabic)**

<table>
<thead>
<tr>
<th>Item</th>
<th>Arabic Form</th>
<th>English Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>تجربة اليوم</td>
<td>Experience of the day</td>
</tr>
<tr>
<td>2.</td>
<td>انا مفعول حركات النصوب البولي</td>
<td>I am triggered by changes in the urinary tract</td>
</tr>
<tr>
<td>3.</td>
<td>ما هو معدل حدوث النصوب البولي؟ (أзд. (3) على مرع وحد نقاط)</td>
<td>What is the frequency of urinary tract? (A point based on every minute)</td>
</tr>
<tr>
<td>4.</td>
<td>ما هي كمية النصوب البولي؟ (مع ملاحظة أن (2) تعني أنها تؤثر على مدى كبير)</td>
<td>What is the volume of the urinary tract? (Note that 2 points indicate a significant impact)</td>
</tr>
<tr>
<td>5.</td>
<td>لا يوجد</td>
<td>No</td>
</tr>
<tr>
<td>6.</td>
<td>كمية صغيرة</td>
<td>Small volume</td>
</tr>
<tr>
<td>7.</td>
<td>كمية متوسطة</td>
<td>Moderate volume</td>
</tr>
<tr>
<td>8.</td>
<td>كمية كبيرة</td>
<td>Large volume</td>
</tr>
</tbody>
</table>

**UDI-6 Arabic version**

<table>
<thead>
<tr>
<th>Category</th>
<th>Arabic Form</th>
<th>English Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>لا يوجد</td>
<td>No</td>
</tr>
<tr>
<td>2.</td>
<td>حوض مرة أو أقل</td>
<td>Once a week or less</td>
</tr>
<tr>
<td>3.</td>
<td>من مرتين إلى ثلاث مرات أسبوعيا</td>
<td>Twice to three times a week</td>
</tr>
<tr>
<td>4.</td>
<td>حوض مرة يوميا</td>
<td>Once a day</td>
</tr>
<tr>
<td>5.</td>
<td>عدة مرات في اليوم</td>
<td>Several times a day</td>
</tr>
<tr>
<td>6.</td>
<td>في كل الأوقات</td>
<td>At all times</td>
</tr>
</tbody>
</table>

**Note:**
- **ICIQ:** International Consultation on Incontinence Questionnaire
- **UDI-6:** Urinary Distress Inventory - 6th Edition