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Validation of Uzbek version of the pelvic organ prolapse/urinary incontinence sexual questionnaire PISQ-IR.

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Annotation: Pelvic floor disease can have a negative impact on women's quality of life, reducing social, psychological, occupational, physical and sexual well-being. Sexual dysfunction has a high prevalence among women with pelvic organ prolapse. To assess the severity of pelvic organ prolapse, its impact on quality of life, therapy planning, analysis of the impact of surgical treatment of urogynecological patients on their sexual life, all this is displayed in the Pelvic Floor Anxiety Questionnaire (PFBQ), it is an independent tool for determining pelvic floor dysfunction (PFD). PFBQ has been approved in many languages of the world. However, the Uzbek version is not installed. To fill this gap, we developed the Pelvic Organ Prolapse/Incontinence Sexual Questionnaire (PISQ-IR) in Uzbek.

Key words: pelvic organ prolapse; reliability; sexual life; urinary incontinence; the quality of life.

Introduction. Pelvic floor disorders (PFD) that include urinary incontinence, pelvic organ prolapse and fecal incontinence are one of the most prevalent gynecological conditions affecting various aspects of female health, quality of life (QoL) and body image (BI), which can decrease social, psychological, occupational, physical and sexual well- being. Pelvic organ prolapse (POP) results in anatomical changes to the urogenital tract [1,2]. The prevalence of PFD has been estimated to be around 20% and increases with age. Moreover, the number of women in general population suffering for POP is expected to increase by 45% in the next 30 years as a result of a longer life expectancy among women aged 50 years and more [3,4]. For an individual patient, the most important outcome of treatment, including anatomical restoration, is relief in symptoms and improvement in QoL.

Reconstructive surgery aims not only to restore correct anatomy, but also to recover functionality. Anatomic evaluation does not provide information regarding the degree of symptom relief after surgery or worsening or emerging of the new symptoms [5–7]. There is a growing recognition that psychometrical instruments for measuring health-related quality of life (HRQOL) are essential during evaluation of women with PFD, assessing severity of POP, its impact on QoL and therapy planning [6–8]. Urinary and fecal incontinence have been associated with low libido, dyspareunia and avoidance of sexual activity for fear of losing urine or stool. POP itself, its treatment and complications related to it, may cause discomfort and have a significant effect on a patients' quality of life [1,8,9].

As is commonly known, the elderly are at great risk for pelvic organ prolapse and urinary incontinence, both of which can negatively affect sexual health. Furthermore, besides a postmenopausal decrease in libido, bothersome symptoms such as prolapse, incontinence, dryness and dyspareunia can lead to the avoidance of sexual relations [4,5]. It is difficult for patients to express their shame and fear

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of sexual activity due to worsening PFD, especially in conservative and traditional cultures, let alone to openly seek medical help and care [6].

For this purpose, condition-specific quality of-life instruments were developed and published in English 2001 [10, 11]. The Pelvic Floor Distress Inventory (PFDI), the Pelvic Floor Impact Questionnaire (PFIQ), and the Prolapse/Urinary Incontinence Sexual Questionnaire (PISQ) have shown to be psychometrically valid and reliable instruments for measuring the extent to which pelvic floor disorders affect quality of life [10, 11]. PISQ investigates the sexual function of heterosexual women suffering from POP and/or urinary incontinence. The short version of PISQ contains 12 questions about sexual activity, satisfaction and problems caused by POP or urinary incontinence. PISQ-12 are widely used and help investigators to evaluate the efficacy of a particular therapy for POP or to compare symptom severity between patients or groups. These disease-specific instruments have been translated and validated in several different countries and in more than ten languages [15–20]. Validated tools for measuring the severity of discomfort of pelvic prolapse and assessing the effectiveness of therapy are not currently available in Uzbek. In English version of PISQ-12, three domains of sexual function are described, but it is not designed for women without a partner or for those who do not consider themselves sexually active; that is, it mainly focuses on sexually active women [8]. The FSFI, on the other hand, was designed with the option for patients to respond that they were not sexually active or did not attempt intercourse, but it cannot represent the impact of disease such as PFD on sexual function [12, 13]. The Pelvic Organ Prolapse/Urinary Incontinence Sexual Questionnaire IUGA–Revised (PISQ-IR) [11] was developed to overcome the above shortcomings by assessing sexual function in women with urinary incontinence and/or pelvic organ prolapse across multiple dimensions, there by allowing clinicians to evaluate outcome in women who are not sexually active when they require urogynecological care.

The aim of this study. The aim of this study was to translate PISQ-IR into Uzbek and validate these translations among women with symptomatic POP.

Materials and methods. Questionnaires and scoring A valid and reliable original English version of the PISQ-IR has been published. The first step in validating the Uzbek version involved translation, which was performed in three steps [3]: (1) forward translation by two bilingual urogynecologists; (2) a community review process consisting of one-on-one cognitive interviews with 20 patients conducted by a professional interviewer; and (3) backward translation by a native English speaker, which was discussed with the PISQIR Working Group. Finally, the PISQ-IR Working Group generally approved the translation. The PISQ-IR is a new self-reported multidimensional

condition-specific questionnaire whose result is based on the score for each subscale separately rather than on one single total summary score. Each domain and subscale emerges as a distinct and independent result. We used the mean score of each subscale for analysis [11]. Women with PFD select sexually active or inactive freely as the first question based on their own view and feeling. Thereafter, the main questionnaire is divided into two parts. The sexually active part includes two dimensions, one is sexual response and the other is quality, satisfaction and desire. Each of these dimensions contains different subscales such as arousal and orgasm factor, partner factor, condition specific factor, and global quality. The sexually inactive part includes two dimensions, each of which has two subscales.

The items evaluate different factors such as condition-specific impact, personal health problem, and global quality and satisfaction.

For criterion validation, we used other currently used PFD questionnaires to examine their degree of correlation [3]. The PISQ-12 is a short form of PISQ. It contains 12 items and covers three aspects of

sexual health: physical, emotional, and partner-related. This questionnaire is used in patients who have been sexually active within the last 3 months. The FSFI is another validated Uzbek questionnaire that is self-reported and multidimensional and is used to assess sexual function in the general population [7]. Women who are or are not sexually active complete the FSFI questionnaire. The other questionnaires are the short forms of the Incontinence Impact Questionnaire (IIQ-7) and the Urogenital Distress Inventory-6 (UDI-6), both of which have also been validated[12]; they are disease-specific Uzbek version questionnaires designed to evaluate the impact of PFD on

quality of life. All of the questionnaires used in this study were in Uzbek.

The PISQ-IR was assessed in terms of internal consistency and test–retest reliability. The internal consistency was evaluated using the Cronbach alpha coefficient, and a value greater than 0.6 was considered acceptable [13]. The intraclass correlation coefficient was used to determine the test–retest reliability for two assessments at an interval of 2 weeks, and a value greater than 0.7 was considered acceptable. For the convergent validity, given that the scores for each subscale were not normally distributed as confirmed by the Kolmogorov-Smirnov test, the correlation between the PISQ-IR and other instruments was analyzed using Spearman's ρ [14]. We considered a value of 0.5 a strong correlation [15]. The IIQ-7, UDI6, FSFI and PISQ-12 were used for concurrent validity because they have been used to measure female sexual functioning. Both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were used to analyze the construct structure of the Uzbek version of PISQ-IR. We assessed data extraction by principle component analysis, and confirmed the fit of the factor model using the chi-squared test. The CFA was performed using AMOS 18.0. All the other analyses were performed using SPSS 21.0. A significance level of 0.05 was applied in all analyses.

Results. In total, 106 patients were recruited for the present study, 65 of whom were sexually active, and the remaining 41 sexually inactive. All the patients completed the following questionnaires: the PISQ-IR, PISQ-12, IIQ-7, UDI-6 and FSFI. The mean age of the patients was 52±10.6 years, and their mean parity was three. A majority of the patients (63, 59.4 %) were menopausal. Data from the original English version of the PISQ-IR show that the underlying structure and nature of this construct is distinct for these two groups, and pooling is not possible. Thus, the results for the sexually active group and the inactive group are presented separately.

Discussion. This study demonstrated that the Uzbek version of PISQ-IR is a reliable and valid instrument for assessing sexual function in women with a PFD. Of the 106 women in this study, 41 (38.7 %) considered themselves sexually inactive. In the past, no reliable questionnaire was available to evaluate the sexual health of such patients, and those with this type of issue had to cope alone and in silence. In our study, EFA revealed that the subscale of global quality was the most heavily weighted factor contributing to the sexual health of these patients, explaining 21.8 % of the variance. The questions in this subscale indicate how sexual inactivity affects quality of life and causes worry. The PISQ-IR is currently the only questionnaire to take into account this psychometric condition. Other questionnaires treated this issue with only a score of zero, or patients may not even have had a chance to answer this type of question because they did not fit the inclusion criteria. This study confirmed the ability of the PISQ-IR to evaluate disease impact in not only sexually active patients but also sexually inactive patients, who accounted for over one-third of those surveyed in the study. In the elderly or sexual minority women, these factors can easily be conflated, making it difficult to determine the reasons for the sexual inactivity or dysfunction [10]. Understanding the reasons for sexual inactivity or dysfunction can reveal whether the functional changes are secondary to disease or surgery. According to demographic character analysis, sexually inactive women tend to be older, menopausal, and prone to

more severe prolapse. These conditions are known to be risk factors for sexual dysfunction [16, 17]. For this reason, sexually inactive patients should be taken into consideration when discussing the impact of disease on sexual function. Among the sexually inactive patients in this study, there were more with stage III and stage IV prolapse than among the sexually active patients, and they met the conditions for pelvic reconstructive surgery. Therefore, this valid Uzbek version PISQ-IR could become a useful tool to evaluate the impact of surgical outcome on sexual function, and to compare international studies. Reconstructive surgery aims not only to restore the correct anatomy, but also to recover functionality. Sexual function is an important field that we should pay more attention to [18]. However, many studies have shown the high prevalence of sexual dysfunction in women in the general population, but few of these women seek help [19]. The reason most commonly cited by patients and clinicians is that seeking help is time-consuming and there is no effective problem-oriented interview [20]. Therefore, an organized multidimensional questionnaire may serve as an efficient and quick modality for use in clinical practice to identify problems related to sexual dysfunction [3]. The present study had some limitations. There were no patients who complained of fecal incontinence, and therefore the impact of fecal incontinence could not be assessed.

Furthermore, although evaluating sexual function may be particularly important in women who have undergone surgery or conservative therapy, we did not specifically address this issue in our study. As a rule of thumb in many validation studies, ten subjects are included per item to be validated, but this rule was not applied in this study, and is a possible weakness of the study. The merit of this study is that all results reached a level of statistical significance with the sample size used. We thus showed that the Uzbek version of the PISQ-IR is a valid, reliable instrument for evaluating sexual function in women with urogynecological complaints.

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