Cultural adaptation and preliminary validation of the Qualisex questionnaire for its use in patients with Sjögren's syndrome and fibromyalgia in Italy

Sirs,

Although largely neglected in both clinical trials and clinical practice, sexuality is an important domain of human health from the patient's perspective. This study aimed to adapt and preliminarily validate according to existing guidelines (1) the Qualisex, a new brief 10-question questionnaire originally created in France for patients with rheumatoid arthritis (RA) (2), for sexually active women with isolated Sjögren's syndrome (pSS) (3) and fibromyalgia (FM) in Italy. Forty consecutive female pSS patients (American-European Consensus group criteria) (4) (median age 53; 45.2-57.2) and 40 female FM patients (2016 diagnostic criteria) (5) (48.5; 42.7–56) were enrolled (Table I). In pSS disease activity, damage and reported symptoms were scored using ESSDAI (EULAR Sjögren Syndrome Disease Activity Index) (6), SSDDI (Sjögren Syndrome Disease Damage Index) (7), and ESSPRI (EULAR Sjogren's Syndrome Patient Reported Index) (8). The Fibromyalgia Impact Questionnaire-Revised (FIQ-R) (9) was administered to patients with FM which were also asked to score on a visual analogue scale from 0 to 10 the fatigue, the dryness and the pain perceived along the previous two weeks. The Hospital Anxiety and Depression Scale (HADS) (10) was administered to both groups. All the patients had also to judge the quality (excellent, good, poor, very poor) of their relationship with the partner. To assess the factorial structure of the questionnaire in Italian language (Appendix), an Exploratory Factor Analysis (EFA) was carried out. Moreover, we also assessed the level of redundancy by means of intra-item correlation of the Qualisex and, as a measure of reliability, internal consistency was assessed through Cronbach's alpha coefficient: Cronbach's value >0.7 is generally regarded as satisfactory (11). The feasibility of the scale was indirectly assessed through missing data. In the absence of a gold standard assessment for sexuality in pSS, face and content validity were assessed cross-sectionally by correlations with other aspects previously found associated to a reduced quality of sexual life in pSS such as anxiety and depression, patient-reported symptoms, quality and duration of the relationship. As far as FM was concerned, sexual life quality expressed by the Qualisex was studied in the contest of correlation with the principal aspects of the disease, such as pain, fatigue, anxiety, and depressive disorder. Analyses were carried out with IBM SPSS Statistics for Macintosh, version 22.0 (IBM Corp., Armonk, NY, USA).

Table I. Demographic and clinical features of pSS and FM patients.

Results, variables in study in primary Sjögren's syndrome (n. 40, F) and Fibromyalgia (n. 40, F) patients.

Variable		FM (n=40)	pSS (n=40)	*p*
Age, median (IQR)		48.5 (42.75-56)	53 (45.25-57.25)	ns
Menopause, n%		19 (47.5)	23 (57.5)	ns
Age menopause, median (IQR)		48.5 (45-50)	45.5 (0-51)	ns
Hormonal replacement therapy, n (%)		7 (17.5)	1 (2.5)	ns
Education, n (%):				ns
	• Primary school diploma	0 (0)	0 (0)	
	• Middle school diploma	4 (10)	5 (12.5)	
	• High school diploma	25 (62.5)	18 (45)	
	• Degree	11 (27.5)	17 (42.5)	
Occupation, n (%):				ns
	• Employed	24 (60)	27 (67.5)	
	• Housewife	8 (20)	11 (27.5)	
	• Retired	2 (5)	1 (2.5)	
	• Unemployed	5 (12.5)	1 (2.5)	
	• Student	1 (2.5)	0 (0)	
Marital status, n (%)				ns:
	• Married	30 (75)	36 (90)	
	• Widowed	1 (2.5)	0 (0)	
	• Unmarried	4 (10)	2 (5)	
	• Divorced	5 (12.5)	2 (5)	
Sexual connection, n (%)				ns
	• Excellent	8 (23.5)	10 (31.2)	
	• Good	13 (38.2)	11 (34.8)	
	• Poor	7 (20.6)	8 (25)	
	• Very poor	6 (17.7)	3 (9)	
On pharmacological treatment, n (%)		34 (85)	27 (67.5)	ns
VAS dryness (0-10), median (IQR)		5 (1-8)	7 (5-8)	0,01
VAS pain (0-10), median (IQR)		7 (6-8.5)	5 (1.75-7)	0,001
VAS fatigue (0-10), median (IQR)		8 (7-9)	6 (4-7)	0,01
ESSPRI, median (IQR)		/	5 (4.085-6.67)	/
ESSDAI, median (IQR)		/	0 (0-2)	/
HADS A, median (IQR)		13 (9.75-15.25)	9 (7-12)	0,008
	• normal (0-7), n (%)	4 (10)	12 (30)	
	• borderline (8-10), n (%)	11 (27.5)	14 (35)	
	• anxious (11-21), n (%)	25 (62.5)	14 (35)	
HADS D, median (IQR)		9 (5.75-12)	8 (4-11)	ns
	• normal (0-7), n (%)	13 (32.5)	17 (42.5)	
	• borderline (8-10), n (%)	11 (27.5)	8 (20)	
	• depressed (11-21), n (%)	16 (40)	15 (37.5)	
Qualisex total score, median (IQR)		5.55 (1.475-7.3)	4.65 (2.125-6.2)	ns

FM: fibromyalgia; pSS: primary Sjögren's syndrome; VAS: visual analogue scale; ESSPRI: EULAR Sjogren's Syndrome Patient Reported Index; ESSDAI: EULAR Sjögren's syndrome disease activity index; HADS: Hospital Anxiety and Depression Scale.

The median Qualisex score was 4.65 (2.125-6.2) in pSS and 5.55 (1.475-7.3) in FM patients. EFA showed that the model with a single factor appeared to be highly significant in both diseases (Chi235=2943.10; $p<0.0000001$ for pSS and Chi235=58.73; $p=0.007$ for FM); Cronbach's alpha coefficient resulted to be more than 0.8 for both conditions which indicates an adequate internal consistency. In both pSS and FM, anxiety (HADS-A; Rho=0.38; $p=0.02$ and Rho=0.43; $p=0.006$, respectively) and depression (HADS-D; Rho=0.47; $p=0.002$ and Rho=0.71; $p<0.0000001$ respectively) appeared to be positively correlated with the Qualisex score. The worst was the relationship considered, the higher the Qualisex in both pSS and FM. In pSS ESSDAI did not correlate with the Qualisex which, on the contrary, showed a positive correlation with ESSPRI (Rho=0.43; $p=0.007$). Similarly, in FM higher pain (VAS pain; Rho=0.49; $p<0.001$) and fatigue (VAS fatigue; Rho=0.38; $p=0.01$) were associated with higher scores of the Qualisex.

This is the first study to adapt Qualisex to women with pSS and FM in Italy. This simple tool, even if it was originally developed (2) and subsequently adapted and validated in other languages for other rheumatic musculoskeletal diseases (12, 13), seems to be valid and reliable also in these two conditions. In pSS subjective symptoms and those related to mood disorders seem to play a pivotal role for sexual quality of life (14). In fact, the worse was the score in

HADS, the higher the score in the Qualisex. This feature was demonstrated also in FM patients. As expected, also age, the length of the relationship (at least in FM), and its low perceived quality positively correlated with a worse quality of sexual life. In pSS women the previously known lack of correlation between sexual dysfunction and systemic involvement as assessed by ESSDAI was confirmed (14, 15) also using the Qualisex. The Qualisex confirmed a lower quality of sexual life in both pSS and FM as compared to previous observation in RA (2, 12), while no significant differences were recorded between pSS and FM.

One of the weaknesses of the present study is the small sample size; however, as suggested by Beaton *et al*. (1), 30-40 subjects are required for cross-cultural adaptation and pretesting which were the main outcomes of this study. Further studies are ongoing considering larger cohorts of patients to confirm the results obtained in this preliminary study and definitely validate the questionnaires for pSS and FM. For pSS another limit was the inclusion of patients with low disease activity and for both groups the exclusion of male subjects, however both disorders mainly affect women so, the availability of a specific questionnaire is undoubtedly valuable. In fact, even if the problem of sexual dysfunction has been previously addressed in both pSS and FM with other more general questionnaires, (14-16), the availability of a specific self-questionnaire assessing the quality of sexual life in affected women, once validated in larger international cohorts, may represent a nudge for an improved understanding of a neglected domain of health.

The study was approved by the local bioethics committee (Prot. 0012/2021 – Azienda Ospedaliero-Universitaria Policlinico Umberto I, Rome, Italy) and all patients provided informed consent.

R. Priori[1,2], *MD, PhD*
F. Giardina[1], *MD*
C. Gioia[1], *MD*
C. Iannuccelli[1], *MD, PhD*
M. Villa[1], *MD*
A. Gattamelata[1], *MD*
F. Conti[1], *MD, PhD*
M. Di Franco[1], *MD, PhD*
G. Curcio[3], *PhD*

[1]Division of Rheumatology, Department of Clinical Internal, Anaesthesiologic and Cardiovascular Sciences, Sapienza University, Rome;
[2]Saint Camillus International University of Health Science, UniCamillus, Rome;
[3]Department of Biotechnological and Applied Clinical Sciences, University of L'Aquila, Italy.

Please address correspondence to:
Federico Giardina,
Divisione di Reumatologia,
Sapienza Università di Roma,
Viale del Policlinico,
00161 Roma, Italy.
E-mail: federico.giardina@uniroma1.it

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