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Full length article

Responsiveness of the Golombok Rust Inventory of Sexual Satisfaction in couples with incontinent partners

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ABSTRACT

Objective: In order for a measure to reliably evaluate treatment efficacy, it is important that the measure used has adequate responsiveness. However, the responsiveness of the Golombok Rust Inventory of Sexual Satisfaction (GRISS) questionnaire, a highly recommended questionnaire by the International Consultation of Incontinence to assess sexual function in patients with incontinence, has not been established. To enable the use of GRISS to measure change in sexual function following incontinence treatment, we evaluated the short- and long-term responsiveness of the GRISS in couples with female stress urinary incontinence partners.

Study design: Forty-eight couples with female stress urinary incontinence partners were included in the study. The GRISS, a 28-item multidimensional measure, comprises two sets of questionnaires to assess sexual function in both male and female partners. Responsiveness was investigated using data from our recent randomized controlled trials evaluating efficacy of pulsed magnetic stimulation for treatment of female patients with stress urinary incontinence. Effect size index and standardized response mean were used to measure responsiveness of the English and Chinese versions of GRISS.

Results: For short-term responsiveness, the overall female and male GRISS scores had effect sizes and standardized response means ranging from 0.60 to 0.83 and 0.44 to 0.78 respectively. For long-term responsiveness, the overall female and male GRISS scores had effect sizes and standardized response means ranging from 0.59 to 0.77 and 0.48 to 0.79 respectively.

Conclusion: In conclusion, the English and Chinese versions of GRISS had adequate responsiveness for use in couples with incontinent partners. The GRISS can be a useful measure to detect change in sexual function of couples following treatment of females with stress urinary incontinence.

Introduction

Stress urinary incontinence (SUI) is defined by the International Urogynecological Association (IUGA)/International Continence Society (ICS) as the *"complaint of involuntary loss of urine on effort or physical exertion (e.g., sporting activities), or on sneezing or coughing"* [1]. SUI has significant detrimental effects on quality of life, mental well-bring and sexual function [2–5]. The Golombok Rust Inventory of Sexual Satisfaction (GRISS) is one of the three measures highly recommended by the International Consultation of Incontinence to assess sexual function in people with urinary incontinence [6]. Two other measures, the International Index of Erectile Function [7] and Female Sexual Function Index [8], are gender-specific questionnaires. The GRISS has two separate sets of questionnaires for both males and females, allowing evaluation of sexual function as individuals and as a couple [9].

In order for a measure to be clinically useful, it is important that the measure used has adequate validity, reliability and responsiveness [10]. Cross-cultural translation, adaptation and validation of health measures are often needed to allow for use in a new country or in a different culture [11]. Malaysia is a multicultural country with three major ethnicities; Malay, Chinese and Indian; English is regarded as the second language. We have previously translated the English version of GRISS into Chinese and Malay to enable use in the Malaysian population [12]. We have also demonstrated the validity (content validity) and reliability (internal consistency and test-retest reliability) of the GRISS in the local population [12].

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Responsiveness means the ability of a measure to detect small but meaningful underlying changes of an intervention [10]. A measurement would have limited use for patient evaluation if it is unable to reflect changes in the patient's condition [10]. Many recent studies have incorporated the GRISS as part of the outcome measures in their research studies, recognizing the importance of acknowledging sexual function in patients and their partners [13–17]. However, the use of GRISS in measuring change in patients following an intervention is limited because its responsiveness has not yet been established. Thus, the aim of this study is to explore the short- and long-term responsiveness of the GRISS in couples with female stress urinary incontinence partners.

Materials and methods

The study has been approved by the Joint Ethics Committee of the School of Pharmaceutical Sciences, USM-HLWE on Clinical Studies [USM-HLWE/IEC/2013(0006)]. Written informed consent was obtained from all participants.

Potential participants were recruited from patients attending the urology or gynecology clinics in hospitals in Penang, as well as from among the general population through advertisements in posters, brochures, newspapers and websites. Females aged 21 years old and above, diagnosed with stress urinary incontinence (SUI), sexually active, and their partners were recruited. The diagnosis of SUI was made by the consultant urologist or gynaecologist based on demonstration of urine leak on coughing at a bladder volume of approximately 200–250 ml [1]. Subjects were excluded if they had other types of incontinence (e.g. urge urinary incontinence), acute severe infections (e.g. pneumonia), significant co-morbidities that may affect sexual function (e.g. uncontrolled diabetes, stroke, major psychological disorder such as depression), were taking medications that could affect lower urinary tract or sexual function, had recently undergone pelvic floor surgery over the past three months or were pregnant.

All couples self-administered the GRISS questionnaires. The GRISS is a 28-item questionnaire comprising twelve subscales of four items each: erectile dysfunction, premature ejaculation, male and female non-sensuality, male and female avoidance, male and female dissatisfaction, infrequency, non-communication, vaginismus and anorgasmia [9]. In accordance with the final subscale structure of the English version of the GRISS, only 48 items of the total of 56 items of the questionnaire were used to calculate the overall score (range 0–96). A high score on a particular item or subscale indicates higher endorsement of the problem being measured. Permission to use the GRISS was obtained from Professor John Rust [9].

Effect size index and standardized response means, the two most widely used measures for responsiveness [10], were utilized in this study. Values of effect size index and standardized response means of less than 0.5 were considered a small effect, 0.5 or greater but less than 0.8 a moderate effect while 0.8 or greater a large effect [18]. Responsiveness was investigated using data from our recent trial evaluating efficacy of pulsed magnetic stimulation for treatment of female patients with stress urinary incontinence. Details and results of the study have been published previously [17,19]. Short-term responsiveness was assessed immediately after treatment with pulsed magnetic stimulation while long-term responsiveness was evaluated during follow-up at 6-months post-treatment.

All questionnaires were self-administered although guidance was available (R.L.) on-site to facilitate the subjects when necessary. Data entry was performed using Excel 2007 (Microsoft, Redmond, WA, USA). Data were analyzed using SAS version 9.4 (SAS Institute Inc., Cary, NC, USA).

Results

From September 2013 to December 2014, a total of 66 sexually active couples were recruited. Fifty-three couples completed reassessment at the six-month follow-up. Mean ages (standard deviation) for females and their partners were 49.5 (7.8) and 54.2 (9.9) years respectively (Table 1). Twenty-one (40%) couples took the GRISS in English, 27 (51%) in Chinese and 5 (9%) in Malay. Since there were only five patients who answered in Malay, the responsiveness of the Malay version of the GRISS could not be assessed.

Short-term responsiveness

For the female GRISS questionnaire, most subscales had small to moderate effect size and standardized response mean (Table 2). The overall GRISS score had high effect size (0.83) and moderate standardized response mean (0.72) for the English version, and moderate effect size (0.60) and standardized response mean (0.64) for the Chinese version. For the male GRISS questionnaire, the effect size and standardized response mean ranged from low to high for each subscale. The overall male GRISS score had low effect size (0.46) and standardized response mean (0.44) for the English version, and moderate effect size (0.58) and standardized response mean (0.78) for the Chinese version.

Long-term responsiveness

For the female GRISS questionnaire, most subscales had small to moderate effect size and standardized response mean (Table 3). The overall GRISS score had moderate effect sizes (0.59–0.77) and standardized response means (0.65–0.67) for both English and Chinese versions. For the male GRISS questionnaire, the effect size and standardized response mean ranged from low to high for each subscale. The overall GRISS score had moderate effect size (0.50) and low standardized response mean (0.48) for the English version. The Chinese version had moderate effect size (0.57) and standardized response mean (0.79) for the overall score.

Table 1
Demographic characteristics of female patients and their partners.

Characteristics	Female	Male
Mean (SD) Length of relationship	23.8 (10.9)	
Mean (SD) Age	49.5 (7.8)	54.2 (9.9)
Mean (SD) BMI	24.9 (4.0)	24.7 (3.9)
No. co-morbidities, frequency (%)		
1 or more	12 (22.6)	23 (43.4)
None	41 (77.4)	30 (56.6)
Prolapse, frequency (%)		
Stage 0	6 (10.0)	NA
Stage 1	34 (56.7)	
Stage 2	20 (33.3)	
No. menopausal status, frequency (%)		
Pre	30 (56.6)	NA
Post	23 (43.4)	
No. parity, frequency (%)		
0	2 (3.8)	NA
1 to 3	43 (81.1)	
≥4	8 (15.1)	
No. hysterectomy, frequency (%)		
Yes	5 (9.4)	NA
No	48 (90.6)	
No. circumcision, frequency (%)		
Yes	NA	1 (1.9)
No		52 (98.1)

BMI: body mass index; NA: Not applicable; SD: standard deviation.