

The GRISS: A Psychometric Instrument for the Assessment of Sexual Dysfunction

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The Golombok Rust Inventory of Sexual Satisfaction (GRISS) is a short 28-item questionnaire for assessing the existence and severity of sexual problems. The design, construction, and item analysis of the GRISS are described. The two separate male and female scales are shown to have high split-half reliabilities of 0.94 for women and 0.87 for men. Validation of change scores in the GRISS on 30 clinical couples, before and after therapy, showed correlations with therapists' blind ratings of 0.54 ($p < 0.001$) for men and 0.43 ($p < 0.01$) for women. Discriminatory validity between clinical ($n = 69$) and nonclinical ($n = 59$) groups was $r = 0.63$ for women and $r = 0.37$ for men. The 12 subscales of impotence, premature ejaculation, anorgasmia, vaginismus, noncommunication, infrequency, male and female avoidance, male and female nonsensuality, and male and female dissatisfaction are also shown to have good reliability and validity.

KEY WORDS: sexual dysfunction; sex therapy; evaluation, test; outcome studies; psychometric.

Evaluation of treatment efficacy in sexual dysfunction has been hindered by the use of ad hoc measures. Although objective tests are available (Derogatis and Melisaratos, 1979; Harbison *et al.*, 1974; LoPiccolo and Steger, 1974; Thorne, 1966) these tend to be rather long and difficult to score, or they fail to cover the range of behaviors and attitudes that are of interest to sexual dysfunction clinics. These tests are reviewed by Conte (1983), who points out the need for two types of instrument: reliable and valid single overall scales for use in research, and subscale batteries that specify particular

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subsets of behavior and attitude relevant to more specific interpretations and diagnosis.

The Golombok Rust Inventory of Sexual Satisfaction (GRISS) (Rust and Golombok, 1983, 1985a, 1985b) is a short measure of sexual dysfunction which may be administered to heterosexual couples or individuals who have a current heterosexual relationship. It provides overall scores, for men and women separately, of the quality of sexual functioning within a relationship. In addition subscale scores of impotence, premature ejaculation, anorgasmia, vaginismus, infrequency, noncommunication, male dissatisfaction, female dissatisfaction, male nonsensuality, female nonsensuality, male avoidance, and female avoidance can be obtained and represented as a profile.

TEST SPECIFICATION

The development of the test specification raised the question of how to define the quality of a sexual relationship. Purely objective parameters, such as frequency of sexual intercourse or the incidence of unsuccessful attempts, provide one possibility. But there is a large variety in these measures in the general population, and the majority of this variation is not associated with any dysfunction or dissatisfaction by the partners concerned. A better approach might be to define sexual adjustment in terms of the partners, claimed satisfaction with their relationship, but this too is an insufficient criterion when taken on its own. A couple could claim to be satisfied by having no sexual contact whatever. Or one partner may claim satisfaction and the other dissatisfaction. Fortunately there is now a body of knowledge, initiated by Kinsey, Pomeroy, and Maron (1948) and Kinsey *et al.* (1953) and more recently by Masters and Johnson (1970), about what constitutes the norm for sexual behavior, and about those aspects of a sexual relationship that can become more satisfying. This, as well as experience in the clinic, enables the sex therapist to identify the areas in a couple's sexual relationship that could be improved. It is this body of knowledge that was drawn upon in specifying the blueprint for the GRISS. The test specification was drawn up by a "think tank" of sex therapists at the Sexual Dysfunction Clinic of The Maudsley Hospital, London. It specified seven major areas of interest: frequency, satisfaction, interest, dysfunctions, anxiety, communication, and touching.

Item Analysis

The pilot version contained 96 items (48 for the man and 48 for the woman) covering the area of the specification. Piloting was carried out on

51 client couples at the Maudsley Sexual Dysfunction Clinic and 36 nonclinical couples from the Institute of Education, London, where one of the partners was taking a part-time course as a mature student.

From the psychometric point of view a particular problem arises in looking at the sexual adjustment of a couple because we are measuring not from one person but from two people and their interaction. Intuitively one might feel that the obvious solution would be to treat the couple as a single unit and to elicit a one-dimensional test score, such that a couple with a high score had a problematic relationship and vice versa. However, factor analysis showed that this model was not appropriate for the present test. The factor structure for the GRISS is fairly stable across versions, standardizations, and samples, and is illustrated by that for the standardization sample given in Fig. 1. Two factors, one for men and one for women, are required to adequately describe the data.

The first stage of item analysis eliminated items with extreme scores or with a large amount of response refusal. The second stage involved the identification of stable subscale scores. Promax oblique factor analysis was used to identify subscales in the first instance. The subscale items indicated were then factor analyzed separately for each subscale, using orthogonal rotations. The original subscale length varied between five and nine items. The final subscales had four items each, which were selected to the following criteria: (1) stability of the factor structure, with a common factor accounting for more than 50% of the variance, (2) an equal number of items (four), two with positive and two with negative loadings, (3) content continuity along the full length of the indicated dimension, (4) factorial consistency between the clinical and student samples, and (5) face validity. More details of the item analysis appear in the test handbook (Rust and Golombok, 1985b). Four of the subscales thus generated were about the specific problems of anorgasmia, vaginismus, impotence, and premature ejaculation. All of these diagnostic categories proved to be continuous with minor degrees of disturbance in the normal population. Six other subscales gave separate male and female scores for avoidance, dissatisfaction, and nonsensuality. The remaining two subscales measured infrequency and non-communication about sex within the couple.

In the third stage, overall scales were sought to describe the state of the couple's sexual relationship. This involved an orthogonal factor analysis of the scored subscales, together with all the remaining items from the pilot inventory which had been carried forward into Stage 2 of the item analysis. This factor analysis yielded an orthogonal two-factor solution, and on the basis of this two main scales were constructed. Details of this appear in the GRISS Handbook (Rust and Golombok, 1985b). Eight of the items retained in the questionnaire contribute toward these two main scales but are not included in the subscales. Item dealing with interest in sex generally fall into this category. They did not form a stable subscale but did have high

loadings on the main scale factors. Items that disappeared that the third stage of the analysis, because of low communality, included those dealing with fantasy. These items additionally failed to yield a consistent subscale. Following item analysis the GRISS now contains 56 items (28 for men and 28 for women).

Standardization

The GRISS was standardized on a sample of 88 sex therapy clients from clinics throughout the United Kingdom. A combination of norm referencing and criterion referencing yielded transformed scales that give a good indication of the existence and severity of any problems. Transformations are to a pseudo-stannine scale (area based, from 1 to 9) with a score of 5 or above indicating a problem. Distributions of these transformed scales are approximately normal for the clinical sample but skewed toward the lower end of the scale to facilitate measurement in nonclinical populations. As the pilot study involved more than one level of item selection, the structure of the main scale and the subscales was replicated for the selected

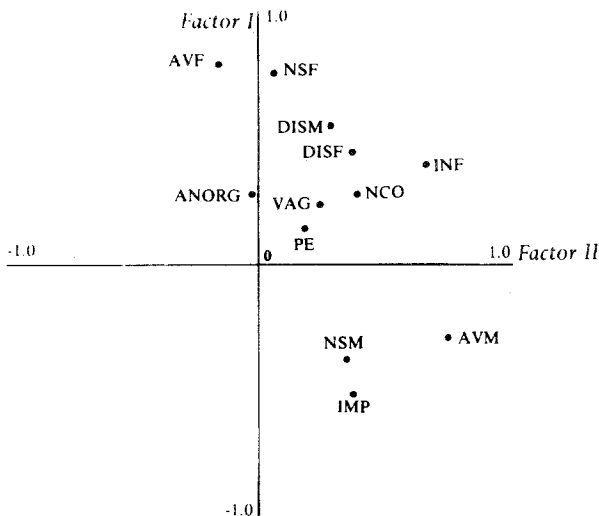


Fig. 1. Factor analysis of the transformed subscales on the standardization sample (88 clinical couples). AVF, female avoidance; NSF, female nonsensuality; DSM, male dissatisfaction; ANORG, anorgasmia; DSF, female dissatisfaction; INF, infrequency; NCO, noncommunication; VAG, vaginismus; PE, premature ejaculation; AVM, male avoidance; NSM, male nonsensuality; IMP, impotence.

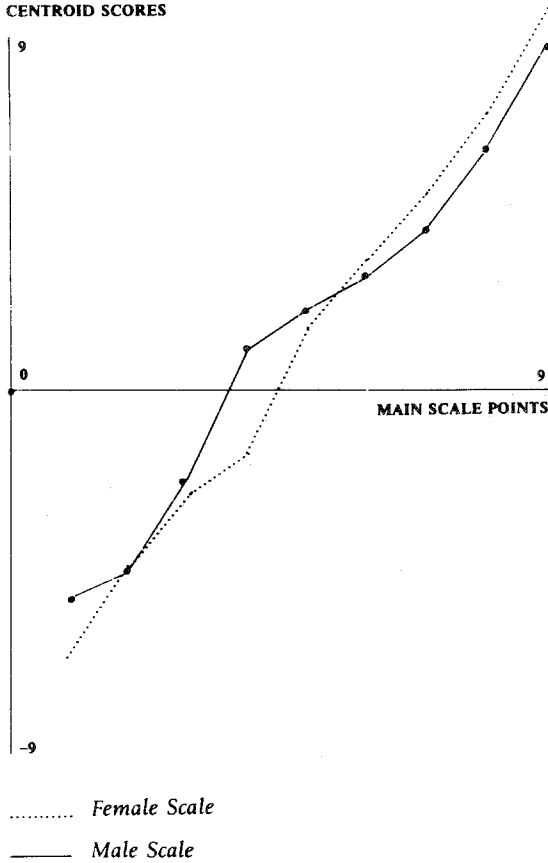


Fig. 2. Discriminant function analysis for the main scales. Discrimination is between the nine transformed scale points. Discriminating variables are the subscale scores.

items. The characteristics of the factor analysis were stable across both the pilot and the standardization samples. The factor analysis for the 88 clinical couples appear in Fig. 1. Discriminant function analyses were carried out to test the linearity of the scales (Fig. 2). The ordering of scale and subscale points was found to be linear, showing only occasional nonlinear discrepancies for some of the subscales.

Reliability

For the main scales the split-half reliabilities were extremely high, 0.94 and 0.87 for the female and the male scales, respectively. The reliabilities of

Table I. Internal Consistencies of the Subscales and Estimated Test-Retest Reliability

Subscale	Internal consistency ^a	Test-retest reliability ^b
Impotence	0.78	0.79
Premature ejaculation	0.78	0.84
Male nonsensuality	0.69	0.57
Male avoidance	0.76	0.64
Male dissatisfaction	0.69	0.61
Infrequency	0.79	0.66
Noncommunication	0.61	0.52
Female dissatisfaction	0.64	0.47
Female avoidance	0.82	0.62
Female nonsensuality	0.78	0.61
Vaginismus	0.73	0.82
Anorgasmia	0.83	0.61

^aCalculated as square root variance of factor 1 for each subscale in the 88-subject standardization sample.

^bCalculated from the pre-post treatment correlation of 42 clinical subjects. This is an underestimate since there was significant improvement overall during therapy.

the subscales are given a minimum value by the internal consistencies, which were obtained from the factor analysis of the items in the standardization sample (square root of percentage variance for Factor 1). The values obtained are high for scales with this number of items, averaging 0.74, and ranging between 0.61 for noncommunication and 0.83 for anorgasmia (see Table I). Test-retest reliabilities were calculated for pre- and posttherapy data on 41 clinical couples, 20 of whom had marital therapy (Bennum, Rust, and Golombok, 1985) and 21 had sex therapy. Both groups showed significant changes with therapy, so that the figures obtained are underestimates. The values obtained were 0.76 for the male scale and 0.65 for the female scale. Subscale test-retest reliabilities ranged from 0.47 for female dissatisfaction to 0.84 for premature ejaculation, and averaged 0.65 (Table I).

Validation

For 68 men and 63 women, of whom 62 were couples, from sexual dysfunction clinics, therapists completed validation questionnaires in which they were asked to define the severity and nature of any sexual problems for men and women separately. Twenty-four men were diagnosed as impotent, 19 as having premature ejaculation, 15 as having low interest in sex, and 10

as having other problems. There was some overlap between the categories, with three of the men having both premature ejaculation and impotence and eight having both impotence and low interest in sex. Those with other problems were subdivided into five with delayed ejaculation, one with lack of sex education, one with fear of sex, one with difficulty in showing affection, one with relationship problems resulting from his interest in cross-dressing, and one with impotence that was considered to be organically based. The remaining men had no problem but accompanied a dysfunctional partner. Of the women, 14 were diagnosed as anorgasmic, 26 as having low interest in sex, 5 as having vaginismus, and 6 as having other problems. Nine women with anorgasmia also had low interest in sex. In the "other problems" category were two women with lack of sex education, one with anxiety about sex, one with preoccupation about her husband's cross-dressing, and one who was unhappy about her husband's interest in watching her make love to other men. The remaining women had no problem but accompanied dysfunctional partners.

Those subjects ($n = 42$ women, $n = 57$ men) in the clinical group who had been diagnosed as having a problem were compared with a control group of 59 subjects (29 men and 30 women) taken from a random sample of general practitioner patients (Golombok, Rust, and Pickard, 1985). Both the overall female scale (point biserial $r = 0.63$, $p < 0.001$) and the overall male scale (point biserial $r = 0.37$, $p < 0.005$) were found to discriminate between the clinical and nonclinical groups. Only four female clinical subjects scored lower than the mean for the control group. Of these, three had specific difficulties coping with their partner's cross-dressing, delayed ejaculation, or anger about premature ejaculation, respectively. Fourteen men had scores less than the mean for the control group; of these, five had severely dysfunctional partners, three had quite severe premature ejaculation (which is known from the factor analysis to have a relatively small loading on the male scale), and three had delayed ejaculation.

The specific dysfunctional groups as diagnosed by the therapists (impotence, premature ejaculation, vaginismus, and anorgasmia) were also compared with the control group. All clinical groups differed from the control group on their target subscale. For impotence ($r = 7.55$, $p < 0.001$) none of the clinical group scored lower than the mean for the control group. For premature ejaculation ($t = 5.37$, $p < 0.001$), only one clinical subject scored lower than the mean of the control group. In this case the subject had a severely dysfunctional partner. For anorgasmia ($t = 3.46$, $p < 0.005$), three clinical subjects scored lower than the mean of the control group. None of these three were having sexual intercourse with their partner. For vaginismus, the five women so diagnosed all obtained higher scores on the vaginismus subscale than any control subject.

T-test comparisons were also carried out between the two groups for the eight subscales that did not measure specific dysfunction. Infrequency, male and female dissatisfaction, and female avoidance were all significant at the 0.001 level, whereas female nonsensuality was significant at the 0.005 level. Noncommunication, male nonsensuality, and male avoidance were not significantly different between the two groups. Male avoidance attained the 0.025 level of significance, however, in a comparison between the 15 men diagnosed as having low interest in sex and the control group.

A further measure of validity was obtained by correlating between the therapists' ratings of severity of problems (ranging from 0 = no problem, 1 = slight problem, 2 = moderate problem and 3 = severe problem) with the overall male and female scales. These were $r = 0.56$, ($n = 63$, $p < 0.001$) for women and $r = 0.53$, ($n = 68$, $p < 0.001$) for men, good for an instrument of this type.

Follow-up validation of the main scales against therapists' estimates of improvement during therapy was carried out on 30 clinical couples after their fifth sex therapy session. The therapists, blind to the GRISS results, rated both the man and the woman separately on a 5-point scale ranging from 0 = improved a great deal, through 1 = improved moderately, 2 = slightly improved, 3 = not improved at all, to 4 = got worse. For the men, the correlation between the therapists' ratings of improvement and the change in the main male score was 0.54 ($p < 0.005$). For the women the equivalent correlation was 0.43 ($p < 0.05$).

DISCUSSION

The GRISS is a reliable measure of sexual dysfunction. It discriminates well between those with and without sexual problems and is a good outcome measure of change during therapy. It relates closely to therapists' ratings of diagnosis and severity of sexual problems and its subscales are successful at identifying impotence, premature ejaculation, anorgasmia, and vaginismus, as well as infrequency, male and female dissatisfaction, female avoidance, and female nonsensuality. The lack of a significant difference in noncommunication between the clinical and nonclinical groups may be an artifact of the clinical situation, in that attending a clinic may select out a group of "communicators" from those in the population with sex problems. The lack of a difference between the groups on male nonsensuality and male avoidance may reflect a difference between the sexes in the nature of sexual dysfunction. Men more often present with specific problems, whereas women tend to present with generalized lack of interest and enjoyment (Bancroft, Tyrer, and Warner,

1982). This may also account for the relatively lower discrimination of the male main scale.

The major application of the GRISS is to assess improvement as a result of sexual or marital therapy and to compare the efficacy of different treatment methods. It can also be used to investigate the relationship between sexual dysfunction and extraneous variables. For most research purposes, scores on the main scales are the most important. Because these have higher reliability and validity, they consequently are more sensitive to differences in sexual functioning. However, even for research, the subscales are of use, once overall effects are found, in identifying modes of operation. The subscales are also helpful in diagnosis. For ease of interpretation they have been scaled to give a profile of the pattern of sexual functioning within the couple, which can be of great benefit in designing a treatment program.

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