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A Short-Form Scale to Measure Sexual Discord in Dyadic Relationships

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Abstract

This paper presents a new short-form scale for use by clinical workers and researchers in measuring the degree or magnitude of a problem in the sexual component of a dyadic relationship, as seen by the respondent. The scale was designed for use in repeated administrations at periodic intervals in order that therapists might continually monitor and evaluate their clients' response to treatment. Internal consistency and test-retest reliability were found to be in excess of .90, and the scale has a discriminant validity coefficient of .76.

Clinical workers and researchers who are involved in the treatment and study of sexual dysfunction frequently require a global measure of an individual's sexual dissatisfaction for diagnostic, assessment, and outcome purposes. To be useful in both treatment and research efforts, such a measure should be short, easy to administer and score, relevant to treatment outcome, applicable for use in repeated administrations, and possess psychometric characteristics which indicate instrument reliability and validity. Currently, few inventories exist which measure overall satisfication or dissatisfaction within a dyadic relationship, and none fulfill the utility and psychometric characteristics described above.

This article reports on the Index of Sexual Satisfaction (ISS), a 25-item self-report scale that measures the degree or magnitude of sexual discord or dissatisfaction of one's relationship with a partner. The ISS was specifically developed for therapists and researchers to use in repeated administrations in evaluting the quality of the sexual relationship between partners. The scale was designed to meet the criteria of ease of

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administration and scoring, relevance for treatment and research, clinical validity, and high reliability.

The literature reflects a growing proliferation of inventories which purport to measure some aspect of sexual behavior. These range from Thorne's (1966) 200-item Sex Inventory, which assesses sexual psychopathology, to Hoon, Hoon, and Wincze's (1976) Sexual Arousability Inventory, which measures sexual arousability in women. Several scales are available to evaluate satisfaction with specific sexual activities, but they do not relate to overall satisfaction within a dyadic relationship (Foster, 1977; Lo Piccolo & Lobitz, 1973; Whitley & Paulsen, 1975).

Only three instruments have been found which include some measure of global sexual satisfaction: Stuart's (1973) Marital Precounseling Inventory, DeRogatis' (1975) Sexual Functioning Inventory, and Lo Piccolo and Steger's (1974) Sexual Interaction Inventory. Stuart's inventory is an extensive questionnaire which measures numerous aspects of a couple's marital relationship, including a nine-item measure of sexual satisfaction. These satisfaction items, however, focus on how decisions are made and to what extent sexual encounters are considered affectionate. To our knowledge, data concerning validity and reliability have not been made available.

The DeRogatis Sexual Functioning Inventory (DSFI) is a 247-item self-report questionnaire that has eight subscales relating to different dimensions of sexual functioning (e.g., information, experience, gender role definition, and fantasy). There is, in addition, a one-item global self-report rating of sexual satisfaction in which the respondent rates the sexual relationship on an 8-point scale ranging from "could not be better" to "could not be worse." In an updated version of the DSFI (DeRogatis, 1978), 10 items dealing with sexual satisfaction were added in which the respondent indicates "true" or "false" to general statements about the quality of the relationship. While normative data are available for this instrument, its length may be prohibitive for use in repeated administration during treatment.

Lo Piccolo and Steger's (1974) Sexual Interaction Inventory (SII) comes closest to meeting the psychometric and utility criteria described earlier. The SII consists of 17 items related to marital heterosexual behaviors; husbands and wives separately rate actual and preferrred occurrences, actual self and perceived mate pleasure, and ideal pleasure with the behaviors. For treatment and research purposes, the scoring of the SII is time consuming and complicated. Because the SII focuses

exclusively on satisfactions with specific sex acts, it may not provide an assessment of more qualitative aspects of the dyadic sexual relationship that some clinicians and researchers may be seeking.

Because of the problems associated with existing inventories and the continued need for short, reliable, and valid measures of sexual dissatisfaction, the ISS was developed as an additional aid for use in treatment and research application. The remainder of this paper describes the development of the ISS and its clinical utility. Also presented are details concerning its scoring and interpretations, and findings concerning its psychometric characteristics.

The Index of Sexual Satisfaction

The Index of Sexual Satisfaction[1] (ISS) was designed as a 25-item summated category partition scale to measure the magnitude of a problem in the sexual component of a dyadic relationship as seen by the respondent. Approximately half of the items on the ISS were structured as positive statements, and the remainder were negatively worded in as positive statements, and the remainder were negatively worded in order to partially control for any response set by the client. Scale items were ordered by the use of a table of random numbers. A copy of the ISS is shown as Table 1.

It was intended that each of the ISS items be as sexually specific as possible without unduly imposing upon the sensitivities or the right of privacy of the respondent. The hope was that the ISS could then be used with markedly heterogeneous groups of persons with differing moral standards, backgrounds, sexual experiences, and attitudes concerning human sexuality and its expression. Considerable experience in a wide variety of clinical settings and in conducting several research studies indicates the item content is not offensive to clients or research subjects.

A common approach to the development of a new scale is to select or develop a fairly large pool of items that is thought to measure the construct in question and to then select from that pool a subset of items that appears to be best suited for the task. Such an approach was not used in the development of the ISS. Instead, the 25 items were developed on the basis of clinical and personal experience, and they reflect a number of the common complaints that clients provide when they are discussing dissatisfaction with the sexual component of their relationship. In devel-

[1] The scale was conceived and developed by the first author.

Table 1
Index of Sexual Satisfaction (ISS)

Name: _____ Today's Date: _____

This questionnaire is designed to measure the degree of satisfaction you have in the sexual relationship with your partner. It is not a test, so there are no right or wrong answers. Answer each item as carefully and accurately as you can by placing a number beside each one as follows:

1 Rarely or none of the time
2 A little of the time
3 Some of the time
4 Good part of the time
5 Most or all of the time

Please begin:

1. I feel that my partner enjoys our sex life _____
2. My sex life is very exciting _____
3. Sex is fun for my partner and me _____
4. I feel that my partner sees little in me except for the sex I can give _____
5. I feel that sex is dirty and disgusting _____
6. My sex life is monotonous _____
7. When we have sex it is too rushed and hurriedly completed _____
8. I feel that my sex life is lacking in quality _____
9. My partner is sexually very exciting _____
10. I enjoy the sex techniques that my partner likes or uses _____
11. I feel that my partner wants too much sex from me _____
12. I think that sex is wonderful _____
13. My partner dwells on sex too much _____
14. I feel that sex is something that has to be endured in our relationship _____
15. My partner is too rough or brutal when we have sex _____
16. My partner observes good personal hygiene _____
17. I feel that sex is a normal function of our relationship _____
18. My partner does not want sex when I do _____
19. I feel that our sex life really adds a lot to our relationship _____
20. I would like to have sexual contact with someone other than my partner _____
21. It is easy for me to get sexually excited by my partner _____
22. I feel that my partner is sexually pleased with me _____
23. My partner is very sensitive to my sexual needs and desires _____
24. I feel that I should have sex more often _____
25. I feel that my sex life is boring _____

Note. Items 1, 2, 3, 9, 10, 12, 16, 17, 19, 21, 22, 23 must be reverse-scored.

oping the ISS items, a major criterion was that a large majority refer directly to the quality of the sexual relationship with a partner, and the remainder should at least reflect upon that relationship. Inspection of Table 1 shows that 19 of the 25 items refer directly to some aspect of the quality of the sexual relationship, and the remaining six items (2, 5, 6, 8, 12, and 25) reflect positive or negative consequences of the quality of the sexual relationship or are measures that influence its quality.

In order to score the ISS, it is necessary to first reverse-score all the positively worded items; the numbers of all items that must be reverse-scored are listed in Table 1. After all the positively worded items have been reverse-scored, the total score is computed as

$$S = (\sum Y - N)(100)/[(N)(4)] \quad (1)$$

where Y is an item score and N is the total number of items completed by the respondent; an omitted item or one that is scored outside the range from 1 to 5 is given a score of 0. This method of scoring produces a minimum possible score of 0 and a maximum score of 100; a high score indicates the presence of a sexual problem. Another advantage of this scoring procedure is that scores will range from 0 to 100, even though a respondent may fail to complete one or more items.

Although the overwhelming majority of clients do complete all of the ISS items, on rare occasions clients will omit one or two items or fail to use the scale properly. Even though the scoring formula compensates for the loss of a few items, clinical experience indicates that when a client refuses to complete a large number of items, the validity of a resulting score should be challenged. Those instances are usually indicative of a client who is having some sensitivity or difficulty in discussing the sexual relationship problems. In such cases the therapist should ignore any obtained ISS score and explore the reasons for so many items omissions. This can lead to valuable clinical evidence concerning the nature of any difficulty the client may have in working on the sexual relationship problem. For clinical and research purposes, the writers have chosen to disregard any ISS score that is based on fewer than 20 items.

For those persons who properly respond to all 25 items on the ISS, a simpler scoring formula can be used: reverse-score the positively worded items and then compute:

$$S = \sum Y - 25 \quad (2)$$

Methodology and Findings

To investigate the reliability and validity of the ISS, data were used from three separate samples. The first sample consisted of 378 individuals from a multi-ethnic population in Hawaii who were surveyed to study the relationships between affective and interpersonal relationship disorders among persons aged 40 to 80 (Murphy, Hudson, & Cheung, 1980). The respondents were non-institutionalized married persons (189 couples). Caucasians comprised 37.8% of the sample, as compared to 32.8% Japanese, 11.8% Hawaiian or part Hawaiian, 8.7% Chinese, and 8.1% Filipino, Samoan or Korean. The mean age of the sample was 55.2 years, and the annual family income was $23,370. This study sample will be referred to as the Social Problem Survey (SPS) sample (Murphy, 1978).

The second sample used in this study consisted of 689 persons who voluntarily participated in a survey to investigate the relationships among six different types of sexual activities and preferences and a number of problems concerning personal and social functioning (Nurius, 1980; Hudson & Nurius, Note 1). The ethnic composition of this sample was 46.1% Caucasian, 3.1% Hawaiian or part Hawaiian, 30.2% Japanese, 9.2% Chinese, and 11.3% were described as a "mixed or other" ethnic group. The majority of the sample was single (69.9%); 20.3% were married, and 9.8% claimed some other marital status: 70.3% had never married, 24.7% had married once, and 4.9% said they had married two or more times. Two-thirds (67.5%) of the sample was female. The mean age of the sample was 25.0 years, and their average annual income was $16,344. This sample will be referred to as the Sexual Activity and Preference (SAP) sample.

The third sample consisted of 100 persons who were seeking counseling services for one or more personal or interpersonal relationship problems; 49 were selected by experienced therapists who independently determined that the person was having a sexual relationship problem with a spouse or partner, and 51 were selected by therapists who determined that the person did not have a clinically significant sexual relationship problem. Males comprised 34.3% of the sample, which was 78.6% Caucasian, 15.3% Japanese, Chinese, or Korean ancestry, and 6.1% from some other or unknown ethnic background. There were 18.4% who were single, 61.2% were married, 10.2% were divorced, and the remaining 10.2% were separated, widowed, or of unknown marital status. The mean age of the respondents was 32.7 years, and their mean annual income was $14,400. This sample will be referred to as the Clinical Survey (CS) sample.

Reliability

The reliability of the ISS was examined separately for the three study samples using coefficient Alpha, which was selected for several reasons. It produces an internal consistency estimate of reliability that is based on all of the inter-item correlations. It represents an estimate of the correlation between the ISS and some other equally good alternate form measure of sexual discord. When the value of Alpha equals or exceeds .90, it constitutes direct evidence to support the claim that a scale measures only one construct. Finally, Alpha represents the average of all possible split-half reliabilities (Nunnally, 1978).

Coefficient Alpha for the three samples was found to be .925, .906, and .916, respectively. Averaging these three estimates, the best estimate of Alpha is .916. These findings indicate that the ISS has excellent reliability over three different and markedly heterogeneous samples.

Because reliability coefficients that are based on correlations can vary considerably from one sample or population to the next because of differences in the standard deviations, the standard error of measurement (SEM), which is not influenced by such differences (Helmstadter, 1964; Nunnally, 1978), was computed separately for the three samples.[2] The SEM for the SPS sample was 4.08, as compared to 4.13 and 3.27 for the SAP and CS samples, respectively. The average of these three estimates of the SEM is 3.83, which indicates that about 95% of the time a person will obtain an observed score which will be within a range of approximately ± 7.5 points of the "true" score. Since the ISS has a score range from 0 to 100, the reliabilities and SEMs reported above indicate that the ISS is an excellent scale in terms of its measurement error characteristics.

Since the ISS was developed for use in repeated administrations in order to monitor and evaluate the level or severity of sexual relationship problems, it is important to determine whether the scale provides a stable measure of such difficulties. The test-retest reliability of the ISS was evaluated by asking graduate students in social work to complete the scale on two occasions separated by a one-week interval. Students were asked to participate in this test only if they were married or were involved in a stable relationship with a partner. The test-retest reliability was found to be .93 with a sample size of 79.

[2] For the CS sample the SEM was computed by using the pooled within-group variance as an estimate of the population variance.

Discriminant Validity

Although the ISS appears to have excellent measurement error characteristics, it has not yet been shown to be a valid measure of sexual relationship problems. If the ISS is a valid measure of such problems, it should be capable of distinguishing clearly between two or more groups of persons who are known to have different degrees of sexual relationship problems. Moreover, it should do a better job of discriminating among such groups than one or more other scales that measure different constructs or problems within the domain of human sexuality. These issues were studied using only the CS sample.

In addition to completing a social background questionnaire and the ISS, each member of the CS sample also completed a measure of marital discord, the Index of Marital Satisfaction (IMS), (Cheung & Hudson, 1981; Hudson & Glisson, 1976), and a measure of the degree of liberal vs. conservative orientation toward human sexual expression, the Sexual Attitude Scale (SAS), (Hudson & Murphy, Note 2). All three of these scales clearly fall within the domain of human sexuality, but each purportedly measures a different aspect of that domain; both the IMS and SAS have good validities, and their reliabilities are in excess of .90.

In order to examine the discriminant validity of the ISS, the clinical status of the 100 clients from the CS sample (sex problem vs. no sex problem) was treated as the independent variable, and the ISS, IMS, and SAS scores were treated as the dependent variables in three separate one-way analyses of variance. In the psychometric literature this is referred to as a form of concurrent criterion validity, but the procedure is referred to here as a test of discriminant validity, because that more aptly describes the task being performed.

The results of these analyses are shown in Table 2. The difference between the mean scores for the sex problem and no sex problem groups was 26.3 for the ISS, 21.9 for the IMS, and 4.8 for the SAS scales. The difference for the ISS and IMS scales was highly significant, but the one for the SAS was not statistically significant at the .05 level.

Although the means and their differences help to evaluate the ISS in its ability to discriminate between the two criterion groups, a much more useful device is the point-biserial correlation between clinical status and each of the three scales. These point-biserial correlations (and their squared values) are also shown in Table 2, and are the primary discriminant validity coefficients for the three scales.

Table 2
Discriminant Validities for the Index of Sexual Satisfaction, Index of Marital Satisfaction and Sexual Attitude Scale Scales

Dependent Variable	Mean Scores		SD	F-ratio	r	r^2
	Problem Group	No-problem Group				
ISS[a]	41.5	15.2	11.28	136.18*	.7626	.5815
IMS[b]	45.0	23.1	18.13	36.66*	.5217	.2722
SAS[c]	27.4	22.6	15.32	2.51	.1580	.0250

[a] Index of Sexual Satisfaction.
[b] Index of Marital Satisfaction.
[c] Sexual Attitude Scale.
* $p < .001$.

It should be remembered that correlations do not represent an equal interval metric, and direct comparisons of their magnitudes can be very misleading. For this reason it is much better to compare the squared values of the point-biserial correlations. In these comparisons, the ISS scale is about twice as powerful as the IMS in terms of its ability to discriminate between the two criterion groups; the difference[3] between these two discriminant validity coefficients was significant at $p < .0001$. Since the ISS correlates very highly with a criterion it is supposed to be related to (the existence of a sex problem), and the other two scales correlate lower with the same criterion, these data also provide some evidence in support of the claim that the ISS also has good construct validity (Campbell & Fiske, 1959).

Clinical Cutting Point

In developing a scale for use in clinical practice it is important to determine a useful clinical cutting point for the scale, that score at or above which a person would be classified as having a problem in the area being assessed and below which there is little or no evidence of a clinically significant problem. The clinical cutting score for the ISS was evaluated by preparing a separate frequency distribution for the two clinical groups and then determining which score, if used as a cutting point, would minimize the sum of the false positives and false negatives.

[3] The test of this difference was based on a test for non-independent samples (Glass & Stanley, 1970, pp. 313).

From an examination of those frequencies, it was determined that a score of 28 on the ISS scale is the most effective in minimizing the sum of the false positives and false negatives. If a score of 28 is used as the clinical cutting score, the ISS has a misclassification error rate of 11.8% for the "no sex problem" group (false positives) and an error rate of 14.3% for the "sex problem" group (false negatives). This yields an overall error rate of 13.0%. Stated differently, by using a cutting score of 28, the ISS correctly classified 88.2% of those without sex relationship problems, 85.7% of those with such problems, and 87.0 percent of the total CS sample.

It should be recognized that the above cutting score was estimated with the use of a relatively small sample, and future validation studies of the ISS may show that a more precise estimate will be slightly higher or lower. In a number of other studies concerning the validation of seven other similarly structured scales, it was found that the optimal cutting score appeared to fluctuate around a score of 30 (Cheung & Hudson, 1981; Giuli & Hudson, 1977; Hudson, Acklin & Bartosh, 1980; Hudson & Glisson, 1976; Hudson & Proctor, 1977; Hudson, Wung & Borges, 1980). Since these seven scales along with the ISS constitute a convenient clinical assessment package, we were curious to know what would be the consequences of using the cutting score of 30 for the ISS, which seems to be very effective for the other seven scales.

If a cutting score of 30 is used for the ISS, the rate of false positives becomes 7.8%, the false negatives increase to 20.4%, and the classification error rate for the total CS sample increases to 14.0%. That is, by using a clinical cutting score of 30, the ISS correctly classified 92.2% of those in the "no sex problem" group, 79.6% of those in the "sex problem" group, and 86.0% of the total CS sample. On the basis of these findings it appears safe to conclude that the use of 30 as a clinical cutting score for the ISS does not result in important or clinically significant consequences in terms of misclassifying respondents into sex relationship problem and no-problem groups. For those who wish to adhere to the precision of available data, it would be advisable to regard a score of 28 as the proper cutting score for the ISS. However, for those who wish to use the ISS as part of a larger battery of assessment devices (Hudson, Note 3),[4] it is not likely that the use of 30 as a common cutting score will entail serious risks.

Actually, no single score for the ISS (or any other such scale) should be taken too seriously. In clinical applications it would be unwise to

[4] Copies of the other scales can be obtained by writing to the first author.

Table 3
Discriminant Validity of the Index of Sexual Satisfaction in Terms of Classification Frequencies

ISS[a] Groups	Clinical Status	
	Sex Problem	No Sex Problem
30+	39	4
<30	10	47

Note. $\chi^2(1) = 52.49, p < .0001$ Phi = .7245.
[a] Index of Sexual Satisfaction.

presume that someone who obtains an ISS score of 33, for example, definitely has a sexual relationship problem. On the other hand, it is probably equally unwise to regard a score of, say, 27 as representing clear evidence that the client is free of problems in the sexual component of the dyadic relationship. In such ambiguous cases it is probably wise to suspend judgment concerning the presence or absence of a clinically significant sexual relationship problem whenever an obtained ISS score falls within a range of about plus or minus 5.0 points[5] of the cutting score that is being used. In all cases it is important to evaluate the obtained ISS score in relation to all other clinical evidence that is available concerning the presence and severity of difficulties in the sexual component of a dyadic relationship.

While the major focus of the above discussion has been upon the development of a clinical cutting score, this also relates to the discriminant validity of the ISS. If the cutting score of 30 is used, the above rates of correct classification can be regarded as separate discriminant validity coefficients. Thus, the discriminant validity of the ISS could be seen as .92 for the no-problem group, .80 for the problem group, and .86 for the total CS sample. A better way to regard these data is to arrange the frequencies in a two-way table as shown in Table 3, and then compute the Phi coefficient as a discriminant validity coefficient. In this case the obtained value of Phi was .724, which is quite large and significant.

Factorial Validity

If the ISS has good factorial validity, its items should correlate very highly with a sexual discord factor, and they should have lower correla-

[5] This is a bit more than one SEM and a bit less than two. Again, this interval is recommended because it seems to serve well for the other seven scales mentioned earlier, and there is likely to be little practical risk of any serious or clinically significant misclassifications. Those who feel less secure with this recommendation might choose to use an interval of plus or minus two SEMs around the clinical cutting score.

tions with other factors. Since all the subjects in each of the three samples were asked to complete the ISS, IMS, and SAS scales, these can be used to investigate the factorial validity of the ISS items. If the ISS items do have good factorial validity, they should correlate more highly with the ISS total score, and they should not correlate well with the IMS and SAS total scores.

In addition to the ISS, IMS, and SAS scales, members of the SPS and SAP samples also completed a measure of depression, the Generalized Contentment Scale (GCS), (Byerly, 1979; Hudson & Proctor, 1977; Hudson, Hamada, Keech, & Harlan, Note 4), and a measure of self-esteem, the Index of Self-Esteem (ISE), (McIntosh, 1979; Hudson and Proctor, Note 5). The GCS and ISE scales also have good construct and discriminant validities, and they have reliabilities of .90 or greater. These scales, along with age, sex, years of education, and income, were also used to examine the factorial validity of the ISS.

The reader should recall that the simple item-total correlations between the ISS, the total scores for the five scales, and the measures of sex, age, education, and income are precisely equal to the factor loadings one obtains from a multiple group factor analysis (Overall & Klett, 1972) with units on the main diagonal of the inter-item correlation matrix. Although simple in its mathematics and execution, the multiple group method of factor analysis is a very powerful method for testing a large number of a priori hypotheses about the direction and magnitude of factor loadings.

One shortcoming of this factoring method is that the correlation between an ISS item and the ISS total score is a correlation between that item and the sum of 24 items plus itself: It is a part-whole correlation. The presence of this item-self correlation could, in some cases, present an inflated picture of the factorial validity of one or several items. In order to avoid this problem, the ISS item-total correlations were adjusted to remove the effect of all item-self correlations (Nunnally, 1978, p. 281).

Finally, in order to increase the power of this analysis, the three samples were combined into a single sample of 1,167 respondents,[6] and the resulting item-total correlations are shown in Table 4. Since attention

[6] Since members of the CS sample did not complete the GCS and ISE scales, all correlations involving these scales are based on a sample of 1,067 respondents. Because of item omissions or improper responses, the actual sample size for the correlations shown in Tables 4 and 5 will vary for each bivariate correlation. In no case, however, did the effective sample size drop below 850 for any of the bivariate correlations, and the overwhelming majority had an N close to 1,000 or greater.

is focused only upon the factorial validity of the ISS, and in order to conserve space, only the item-total correlations for the ISS scale are shown in Table 4.

Examination of the item-total correlations shown in Table 4 shows that all but four of the ISS items make large contributions to the ISS total score, and they have smaller correlations with the other measures. It is not surprising to find that the ISS items also correlate rather well with the IMS, GCS, and ISE total scores, and for reasons that are discussed below. In general, it appears that the ISS items have excellent factorial validity. Since they correlate highly with the total score they are supposed to correlate with, less highly with the total scores for the other scales, and very low with the measures they should not correlate with, these data clearly suggest that all but four of the ISS items have good convergent and discriminant validity (Campbell & Fiske, 1959).

Close examination of the correlations in Table 4 shows that item 14 appears to do a better job of measuring sexual attitude than discord, and item 16 loads equally well on the ISS, IMS, GCS, and ISE factors. Item 20 loads rather highly on the IMS and better on the SAS than on the ISS, and item 24 loads better on the IMS than on the ISS. What should be done with these items? There are three choices: (a) discard them and regard the ISS as having only 21 items, (b) replace them with new items, or (c) retain them. From a practical point of view it is very likely that selection of any of these three options will not have a dramatic impact on the performance of the ISS. By discarding the items the scale will be shortened, and there may be a very modest improvement in its reliability and validity. However, it will then be necessary to always use Equation 1 to score the ISS if the score range from 0 to 100 is to be retained. In spite of the problems noted above for these four items, they do make a significant contribution to the total ISS score, and that could be used as an argument for their retention.

The writers prefer the second option of replacing the weak items with new ones, despite the lack of currently available data to assess the performance of such new items. Nonetheless, the desire and intent is to seize upon an opportunity to further improve the ISS, and it is therefore suggested that the following items be used as replacements for those shown in Table 1.

14. I try to avoid sexual contact with my partner.
16. My partner is a wonderful sex mate.

Table 4
Index of Sexual Satisfaction Item-Total Correlations for the Combined Sample

ISS[a] Items	ISS[b]	IMS[c]	GCS[d]	ISE[e]	SAS[f]	Sex	Age	SCH[g]	INC[h]
1	.65	.50	.33	.33	.06	−.02	−.01	−.03	−.02
2	.72	.55	.33	.33	.05	.09	−.04	.06	.01
3	.77	.57	.36	.32	.12	.05	.03	−.06	−.04
4	.39	.47	.34	.30	.14	.05	.01	−.14	−.03
5	.38	.23	.25	.32	.18	.05	−.10	−.07	.03
6	.62	.48	.27	.23	.01	.05	−.07	.01	.04
7	.50	.35	.26	.26	.14	.04	−.03	−.13	−.03
8	.71	.55	.29	.31	.06	−.01	−.03	−.02	−.01
9	.71	.52	.26	.25	.12	.01	.09	−.01	−.05
10	.72	.46	.33	.31	.17	−.01	.01	−.07	−.01
11	.42	.33	.26	.31	.14	.11	−.07	−.11	−.03
12	.55	.33	.31	.35	.26	.12	−.01	−.10	−.01
13	.38	.34	.22	.26	.12	.15	−.08	−.05	−.02
14	.19	.08	.14	.13	.32	−.11	.06	−.29	−.01
15	.35	.26	.22	.20	.09	.11	−.04	−.05	.03
16	.24	.21	.24	.20	.08	.01	−.06	−.10	.05
17	.54	.38	.34	.30	.14	.05	−.12	−.12	.03
18	.33	.26	.15	.18	.05	−.18	.03	−.07	.01
19	.61	.48	.31	.26	.08	.05	−.19	−.01	.01
20	.28	.44	.14	.06	−.31	−.22	−.22	.10	.13
21	.67	.44	.29	.26	.15	.14	.01	−.05	−.03
22	.68	.46	.32	.33	.08	−.03	.01	−.02	−.01
23	.65	.45	.31	.25	.10	−.05	.03	−.07	−.04
24	.23	.28	.16	.09	−.09	−.19	−.05	.01	.05
25	.68	.52	.26	.25	.03	.05	−.01	.02	.02

[a] Index of Sexual Satisfaction.
[b] The effect of item-self correlation has been removed.
[c] Index of Marital Satisfaction.
[d] Generalized Contentment Scale.
[e] Index of Self-Esteem.
[f] Sexual Attitude Scale.
[g] Schooling.
[h] Income.

20. My partner seems to avoid sexual contact with me.
24. My partner does not satisfy me sexually.

Construct Validity

In order to examine the construct validity of the ISS it is useful to examine the correlations among the total scale scores and the measures of age, sex, education, and income. This was done by using the pooled sample of 1,167 respondents from the SPS, SAP, and CS samples.

If the ISS is a valid measure of sexual discord, it should obtain correlations with other measures that are consistent with theoretical and clinical predictions. The most important prediction is that the ISS will have a fairly large correlation with the IMS; persons who are having problems in their sexual relationship are very likely to also be having problems in their marital relationship. A second important prediction is that persons who are having marital and sexual relationship problems are very likely to have problems with depression and self-esteem; both the ISS and IMS scales should have at least moderate correlations with the GCS and ISE scales. A third prediction is that the GCS scale will have a fairly high correlation with the ISE scale; persons who are having serious problems with depression are very likely to also be having problems with self-esteem. Substantiation of these predictions will provide some evidence in support of the claim that the ISS has good convergent validity (Campbell & Fiske, 1959).

A final very important set of predictions is that the ISS will have a relatively low correlation with age, sex, education, income and the SAS scale; these latter variables are also predicted to have low or moderate correlations among themselves. That is, there appeares to be no good theoretical or clinical reason to believe that the quality of a person's sexual (or marital) relationship is markedly affected by sex, age, or socioeconomic status, and persons who adhere to either a liberal or conservative stance concerning human sexual expression can have an equally good

Table 5
Construct Validity Correlations for the Combined Samples

	IMS[a]	GCS[b]	ISE[c]	SAS[d]	Sex	Age	SCH[e]	INC[f]
ISS	.68	.47	.44	.14	.01	−.06	−.10	.01
IMS		.45	.39	−.05	.09	−.17	−.01	.07
GCS			.74	.05	.02	−.23	−.10	.12
ISE				.16	.02	−.16	−.15	.09
SAS					−.02	.41	−.38	−.23
SEX						−.18	.02	.04
AGE							−.12	−.45
SCH								.11

Note. All values of $r > .07$ are significant at $p < .05$.

[a] Index of Marital Satisfaction.

[b] Generalized Contentment Scale.

[c] Index of Self-Esteem.

[d] Sexual Attitude Scale.

[e] Schooling.

[f] Income.

or poor sexual and marital relationship with their spouse or partner. Confirmation of these predictions will provide some evidence in support of the claim that the ISS has good discriminant validity (Campbell & Fiske, 1959), and the correlations among these measures are shown in Table 5.

Estimation of the data shown in Table 5 shows that all of the above predictions are very well supported, and, on the basis of these findings,[7] it was concluded that the ISS has good construct validity.

Conclusions

This paper has presented the ISS as a new short-form, self-report measure of the degree or magnitude of problems in the sexual component of a dyadic relationship as seen by the respondent. It must be acknowledged that the task of establishing reliability and validity for a new scale is a long and arduous one that must depend on a series of different investigations that are conducted under different conditions and with different populations. Thus, while the findings reported in this paper seem to provide good evidence in support of the ISS as a reliable and valid measure of sexual discord in dyadic relationships as seen by the respondent, they must be regarded as providing only partial and tentative support for such claims. However, on the basis of the findings it appears safe to recommend the ISS for use in both clinical and research applications.

In using the ISS as an aid to diagnosis or to monitor progress in treatment through repeated administrations, it should be noted that the clinical cutting score was estimated by using a fairly small sample. While it is highly doubtful that future validation studies will produce any large revision in the cutting score, it may be found that a moderate adjustment is necessary. Thus, the optimal cutting score of 28, or the convenience cutting score of 30, should be regarded as useful, but tentative, estimates.

Since a major purpose for developing and testing the ISS was to produce a device for monitoring and assessing progress in treatment

[7] The reader may note that there is a moderate negative correlation between age and income and a moderate positive correlation between age and SAS. The former arises because the sample contains a significant number of older persons who have retired and have reduced incomes as a consequence of their retirement. The latter occurs because the same older persons were socialized in their youth at a time when a more conservative attitude toward human sexual expression was the predominant social norm, and the converse holds for the younger members of the sample.

through the use of regular or periodic administrations to the same client, a major issue is one of determining what constitutes evidence of real change in the level or magnitude of the sexual relationship problem. Because of the measurement error inherent in the ISS, a change of a few score points in one direction or the other cannot be interpreted as evidence of real change in the severity of the problem. Given the SEM of 3.83, it would seem judicious to regard any change of about ±4 points or less as representing noise in the scale, and changes in either direction as producing increasingly stronger evidence of real change as their size exceeds 4 points; changes of 8 or more points are very likely indicators of real change.

A final caution in using the ISS in clinical or research applications concerns its self-report nature. Because the ISS is a self-report measure, it suffers all the weaknesses and threats to validity that are common to self-report instruments (Hersen & Barlow, 1976). The content and measurement intent of the ISS items is quite apparent, and respondents can therefore make themselves appear to be as problem-laden or as problem-free as they wish. In spite of this obvious feature of the ISS, it has been found to be a reliable and valid measure of sexual discord among those who actively seek help for sexual relationship problems; the fairly large validity coefficients reported in this paper suggest that social desirability and impression-management responding may not be a serious problem. Nonetheless, if the ISS is used in clinical or research applications one should make a special effort to reduce any potential for clients or subjects to respond in a socially desirable manner.

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