Assessing Marital Quality with Distressed and Nondistressed Couples: A Comparison and Equivalency Table for Three Frequently Used Measures

Three of the most popular marital adjustment measures are the Dyadic Adjustment Scale (DAS), the Marital Adjustment Test (MAT), and the Revised Marital Adjustment Test (RMAT). While these measures assess similar dimensions, individual items on the tests are weighted differently and the scales have different ranges, all of which make direct comparisons of the scales impractical. This study sought to identify the similarities and differences of the various measures with a large sample (N = 302) of clinical and nonclinical couples. Across both sample groups, each test was found to be significantly different from the other two, with differences of up to 14 points between measures. The results of this study are important in showing that scores on the DAS, MAT, and RMAT are not equivalent. Consequently, studies of marital adjustment that have used different measures cannot be compared directly. This study proposes a solution to this problem. By using multiple regression, formulas were developed to translate scores easily from one measure into equivalent scores on another measure.

Marital quality, a frequently used construct, is beset with problems of definition and measurement. Spanier and Cole (1976) claim that marital adjustment is a general term, typically defined as the functioning and success of the marital partnership, and it encompasses the concepts of marital satisfaction and happiness.

Others argue that the usual measurement of marital quality is typically confounded with other relevant concepts (e.g., communication) and that measurement of quality should focus on a single, nonconfounded dimension (Fincham and Bradbury, 1987). Definition issues aside, marital quality has most often been assessed with a single
global self-report measure of marital quality, adjustment, or happiness. Three of these global measures are of interest in this study.

One of the first measures of the concept was the Marital Adjustment Test (MAT; Locke and Wallace, 1959). Over the years, this measure has been used in countless studies, and according to Cohen (1985), it has the greatest number of validity and reliability studies of all of the self-report measures of marital adjustment.

Another measure is the Revised Marital Adjustment Test (RMAT; Kimmel and Van Der Veen, 1974). This measure was developed by reanalyzing Locke and Wallace’s original question pool with factor analysis. The resulting test may have some advantages over the MAT because of the use of additional items.

Probably the strongest competition to the MAT comes from the Dyadic Adjustment Scale (DAS; Spanier, 1976). Spanier claims that the DAS is an important improvement over the earlier measures such as the MAT and is better suited for research and clinical diagnosis. Since its development, the DAS has been widely used in treatment and research. Spanier (1985) reports that over 1,000 studies have used the DAS.

Disagreement about the “best” marital quality measure has led to researchers working in the same area and using different instruments. For example, the RMAT (Azrin et al., 1980; O’Leary and Turkewitz, 1981), the DAS (Jacobson and Follette, 1985), and the MAT have been used to assess the effectiveness of marital therapy (Baucom, 1982; Baucom and Mehlmam, 1984; Jacobson, 1977; Jacobson, 1978; O’Farrell, Cutter, and Floyd, 1985).

A similar problem has occurred in the marriage enrichment literature. Some authors (e.g., Garland, 1981; Powell and Wampler, 1982) have used the MAT, and others (e.g., Brock and Joanning, 1983; Davis, Hovestadt, Piercy, and Cochran, 1982) have used the DAS.

The problem is that different authors writing in similar content areas (e.g., marital therapy treatment outcome, marital enrichment, marital interaction [e.g., Griffin and Crane, 1986] etc.) have used a variety of instruments to measure the same concept. Direct comparisons are not possible unless the instruments are essentially the same.

An additional problem has developed in previous research in that some authors have assumed, without empirical evidence, that these scales are equivalent. For example, Hepworth, Ryder, and Dreyer (1984) and Margolin (1981) both compared two populations—one was assessed with the MAT and the other, the DAS. In both studies, group data comparisons were conducted on the assumption of instrument equivalency. Obviously, the generalizability of the results of studies (of this type) must be considered limited until equivalency is demonstrated.

Similarly, several studies have assumed that the MAT and RMAT are equivalent (see e.g., Clingempeel, 1981; O’Leary and Turkewitz, 1981; Williams, 1979). From their writings, it appears that these authors assume that the two instruments are the same. In each case, the MAT was described, but the psychometric data cited were related to the RMAT.

Finally, because these instruments are used to measure marital satisfaction, they are often the single criterion for discriminating distressed from nondistressed relationships. For many types of data-intensive, small-group dyadic research (e.g., marital interaction and marital therapy), this dichotomy is necessary for statistical and conceptual clarity. Researchers using this dichotomization have traditionally depended on a cutpoint of 100 on the MAT; couples below 100 were considered distressed, and those above were considered nondistressed. Recently, and without empirical validation, Baucom and Hoffman (1986) and Jacobson, Schmaling, and Holtzworth-Munroe (1987) recommended using DAS scores of 92 and 97 as an equivalent (MAT = 100) cutpoint. The equivalency of these scores should be verified before such suggestions are incorporated into the literature.

The purpose of this study is to compare these three commonly used measures with clinical and nonclinical couples and to develop an equivalency table where scores from one measure can be translated to scores on another. This will allow for more direct comparisons between studies in given content areas, provide a check for equivalency of measures, and address the issue of cutpoints for distressed and nondistressed couples.

Method

Subjects

Data were collected from clinical programs in marriage and family therapy at Brigham Young
Table 1. Subject Characteristics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Clinical</th>
<th>Nonclinical</th>
<th>Total Sample</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>SE</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Husband</td>
<td>30.34</td>
<td>7.21</td>
<td>.69</td>
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<td>Wife</td>
<td>28.60</td>
<td>6.63</td>
<td>.64</td>
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<tr>
<td>Education</td>
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<td></td>
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<tr>
<td>Wife</td>
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<td>2.42</td>
<td>.23</td>
</tr>
<tr>
<td>Number of marriages</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Husband</td>
<td>1.15</td>
<td>.39</td>
<td>.04</td>
</tr>
<tr>
<td>Wife</td>
<td>1.23</td>
<td>.60</td>
<td>.06</td>
</tr>
<tr>
<td>Children</td>
<td>1.92</td>
<td>1.79</td>
<td>.17</td>
</tr>
<tr>
<td>Years married</td>
<td>6.24</td>
<td>6.44</td>
<td>.61</td>
</tr>
<tr>
<td>Income</td>
<td>$16,942</td>
<td>$12,129</td>
<td>$1,244</td>
</tr>
</tbody>
</table>
University (n = 155), Montana State University (n = 88), and Auburn University (n = 59). Of the 302 couples involved in the study, 192 were nonclinical volunteers and the other 110 were clients seeking marital therapy at one of the clinical facilities. The total sample was composed of predominantly young, Caucasian (95%), middle-income, and first-married couples (see Table 1).

A one-way analysis of variance was done to determine differences between the clinical and nonclinical groups. The nonclinical sample was somewhat more educated, had higher incomes, and had been married longer, and the wives were older and had been married less often than the clinical group. This is not surprising in that the clinical training programs that collected the clinical sample service a large number of student couples. While these variables showed differences between the clinical and nonclinical couples, an examination of the means reveals that the differences are not large enough to cause concern.

Another analysis was conducted to see if the samples differed by geographical location. A one-way analysis of variance revealed no significant differences between any site by any adjustment scale, meaning that the couples scored the same on marital quality regardless of the geographical location of the sample's origin.

**Instruments**

The Marital Adjustment Test (Locke and Wallace, 1959) has been broadly used in research, especially to distinguish distressed from non-distressed couples and in determining therapy effectiveness (e.g., Baucom, 1982; Jacobson, 1977; O'Leary and Turkewitz, 1981). Possible scores range from a low of 2 to a high of 158. The cutoff score for distressed persons has been generally assumed to be 100 (or a total couple score of 200).

The Revised Marital Adjustment Test (Kimmel and Van Der Veen, 1974) is reported by the authors to be statistically more valid than the MAT. Though there have been other attempts to revise the MAT (e.g., Doherty, 1981), The RMAT is the only version that has been used in subsequent studies (e.g., Azrin et al., 1980; O'Leary and Turkewitz, 1981). Possible scores for the test range from 48 to 138 for women and from 50 to 138 for men.

The Dyadic Adjustment Scale (Spanier, 1976) yields an overall score and can be divided into four subscales—marital satisfaction, dyadic consensus, dyadic cohesion, and affectional expression. This scale has a range of 0 to 151 for both sexes. The cutoff score (to distinguished distressed from nondistressed couples) recommended by Jacobson, Schmaling, and Holtzworth-Munroe (1987) for the DAS has been 97 (194 total score) or 92 (184 total score; Baucom and Hoffman, 1986).

**Procedure**

Graduate students in family therapy and family relations classes at each of the universities were asked to administer the inventories to nonclinical couples (not currently in treatment for marital problems) as part of class assignments. Although the sample was one of convenience, there is no gross evidence that it is not typical of the average marital dyad that would respond to a study of this type. Of course, a broader-based, probability sample would be preferable.

The clinical couple sample was obtained by having practicum students in the marital and family therapy training programs administer the MAT, DAS, and RMAT during couples' initial therapy sessions. Spouses were asked to complete the measures independently and not to discuss their responses with one another. The order of the tests was randomized to control for possible bias caused by the similarities of the measures.

**Results**

The first analysis was to compare the tests by clinical versus nonclinical couples (Table 2). The MANOVA procedure revealed significant differences in the mean scores for the three instruments for the total sample, the clinical sample, and the nonclinical sample. While the differences in the scores for the nonclinical sample across measures were significant, the actual scores were not divergent enough to be considered important. However, the scores for the clinical sample were very different, depending on which instrument the individuals completed. While intuitively it is not surprising that different scales, with different ranges, should produce significantly different scores, these results provide a simple demonstration that the assumption of equivalency is not valid.
The equivalency table for translating scores for one measure to equivalent scores on another. This was done by using each of the tests as the dependent measure and the other test scores as independent variables in a multiple regression equation. The generally high $R^2$ values (about .76) in this study were expected because all of the measures are assessing the same general domain and are highly correlated ($r = .65$ to .91). The statistical importance of the high $R^2$ values is that they allow the scores on one measure to predict the scores for the other measures with a fair degree of confidence. The $R^2$ values also show that more than 50% of the variance for a given test is explained by one or both of the other test scores. By using the $R^2$ values, it was possible to predict one test score on the basis of the results of one of the other test scores.

The specific formulas for transforming the scores from one test to another are given in Table 3 and are based on the following equation:

$$Y = a + bX$$

where $a$ represents the intercept. The value $bX$ is determined by multiplying the slope ($b$) by the given test score.

**Discussion**

This study is important in the area of marital assessment for several reasons. These include the lack of equivalency of scores for the measures for clinical couples and the previous inability to translate scores from one measure to another. A limitation of the study is that the sample may not necessarily be representative of the general population. Consequently our results need to be interpreted conservatively.

The results of this study show that the assumption that the MAT and DAS are equivalent, which has been made by some authors (e.g., Hepworth et al., 1984; Margolin, 1981; Margolin, Talovic, and Weinstein, 1983) may not be valid. Although the tests are similar, these data show that the DAS and MAT can produce very different scores, especially for clinical couples. This result is not surprising in that the scales have different ranges. Authors should not assume that the scales are the same.

Another important contribution of this study is that for nonclinical couples, the scores on the MAT, DAS, and RMAT are probably interchangeable. Results of research in which these different measures have been used with nonclinical couples can be compared directly. However, when the research subjects are clinical couples, the measures are not the same. This causes some practical problems. For example, a score of 100 on the MAT is commonly used as the cutoff point to distinguish distressed and nondistressed couples (Abramowitz and Sewell, 1980; Jacobson, 1978).
An equivalent score on the DAS would be 107, and 104 on the RMAT. On the basis of the regression weights we found, our recommendation is that investigators use MAT scores of 100 (or 200 total score), DAS scores of 107 (or 214 total score), and RMAT scores of 104 (208 total score) as criteria for distinguishing distressed from nondistressed couples.

The prediction formulas will be valuable to researchers in several disciplines that study the family. For example, a study reports results based on the RMAT and some readers of that study prefer the DAS equivalent score, they can use the appropriate equivalency table formula to translate the results from one measure to the one they prefer.

The debate about the "best" measure of marital quality remains. However, with the results of this study, researchers can make them comparable.

**Note**

Support for this article was provided by a grant from the College of Family, Home, and Social Sciences of Brigham Young University, Provo, UT, and by NIMH Grant No. MH 18262-02 to William Griffin. An earlier version was presented at the annual meeting of the National Council on Family Relations, Atlanta, Georgia, November 1987.

**References**


