

The Assessment of Marital Quality: A Reevaluation

FRANK D. FINCHAM
THOMAS N. BRADBURY
University of Illinois at Urbana-Champaign

This article examines a fundamental problem in research using self-report measures of marriage: attempts have been made to measure and explain variance in marital quality without adequate understanding and specification of the construct of "marital quality." A specific consequence of this shortcoming is that marital quality is not readily distinguished from other relevant constructs (e.g., communication). This, in turn, results in measures that have a great deal of overlap in item content, thus preventing clear interpretation of the empirical relationship between the constructs. The inability to establish unambiguous empirical relationships among relevant constructs severely limits theory development in this research domain. One means of avoiding these problems is to treat marital quality solely as the global evaluation of one's marriage. The implications of this strategy are examined in regard to three issues that have received insufficient attention in marital research: (a) the association between empirical and conceptual dependence; (b) the interpretation of responses to self-report inventories; and (c) the consideration of the purpose for which marital quality is measured. The advantages of adopting this approach, and the conditions under which it is most appropriate to do so, are also outlined.

Marital difficulties are the most common problem for which people seek psychological help (Veroff, Kulka, and Douvan, 1981), and their deleterious effects on physical and psychological well-being are reliably documented (Bloom, Asher, and

White, 1978; Segraves, 1982). Perhaps as a consequence of these effects, the most frequently studied topic in marital research concerns what has been variously labeled marital success, adjustment, happiness, satisfaction, consensus, companionship, integration, or some synonym reflective of the quality of marriage (Spanier and Lewis, 1980).¹ Despite an extensive literature, however, "deriving reliable conclusions or a functional synthesis remains an elusive goal and formidable task" (Snyder, 1982: 190). The present article therefore outlines one approach to the construct of marital quality that increases conceptual clarity and at the same time avoids some of the confounds evident in the empirical literature.

In the first section, the current status of self-report measures of marital quality are examined and the problems to which they give rise are noted. A definition of marital quality is then offered and it is shown how this conceptualization avoids these problems. The second section discusses some implications of this analysis for marital research. Finally, the major themes of the article are summarized.

We thank Steve Beach, Bill Chaplin, Bob Emery, David Gilbert, Anne Gilles, Karen Glickman, and Randy Larsen for their valuable comments on an earlier version of this article. We are especially indebted to Gregory Miller for his critical evaluations of several drafts of the manuscript. The paper was written while the first author was a fellow at the Center for Advanced Study, University of Illinois, and was supported as a Faculty Scholar by the W. T. Grant Foundation. The writing of the paper was also supported, in part, by National Institute of Child Health and Human Development Grant No. 1-5-32169, awarded to the first author. Correspondence should be addressed to Frank D. Fincham.

Psychology Department, University of Illinois, 603 E. Daniel Street, Champaign, IL 61820.

EXPLAINING VARIANCE IN "MARITAL QUALITY"

The literature on marital quality shows that researchers have attempted to measure and explain variance in a construct that is itself little understood. Stated another way, we have failed to specify adequately the subject of our inquiries while at the same time proceeding as though the referents for our terms are clear. Not surprisingly, Lively's (1969: 109) original call to eliminate terms such as *marital adjustment* and *marital satisfaction* from the literature continues to be voiced (e.g., Donohue and Ryder, 1982; Trost, 1985). Perhaps reflective of this conceptual confusion is the empirical problem that marital quality continues to be assessed with measures that are acknowledged to be inadequate (cf. Cromwell, Olson, and Fournier, 1976; Donohue and Ryder, 1982; Newcomb and Bentler, 1981; Sabatelli, 1984; Snyder, 1979; Snyder, Wills, and Keiser, 1981; Spanier, 1976; Spanier and Cole, 1976; Straus, 1964).

Commentaries on the status of assessment in marital and family research provide attempts to account for this less-than-ideal state of affairs. Straus (1969: 337), for example, has suggested that the problem is not a conceptual one but one of "primitive" measurement technology. Cromwell and colleagues (1976: 6), in contrast, discredit conceptual or technological problems and point "rather to the failure to expend sufficient time and thought on the problems at hand." Other explanations range from too great a willingness to adopt convenient and popular measures (e.g., Snyder, 1982) to the contingencies and resources found in research settings (e.g., Cromwell et al., 1976). Nonetheless, there has been little attempt to determine, in any detail, whether a more complete understanding of marital quality and its etymological kin is critical to the advancement of research on marriage. Do imprecise and varied referents for the numerous terms reflecting marital quality make a practical difference at the levels of conceptual understanding and empirical research?

The paucity of theoretical models regarding marital quality and the confusion evident in the empirical literature on this topic suggest an affirmative answer to this question. A general and pervasive problem is that attempts to account for variance in marital quality are often tautological. This happens because the construct used to "explain" variance in marital quality is measured by items that tap the same content as a subset of the items used to measure marital quality. The overlap in item content often reflects an overlap in the definition of the constructs evaluated.

One example of the above problem is found in a recent examination of the effects of interpersonal resource exchange on marital quality (Rettig and Bubolz, 1983). Although these authors concluded that relationship satisfaction was significantly predicted by exchanged resources, close inspection of the items used to define these constructs operationally suggests a different interpretation. Because the items used to assess interpersonal resources (e.g., "How do you feel about your husband/wife?") overlap in their content with the items used to assess perceived marital quality (e.g., "How do you feel about your own family life if you considered only your marriage?"), it is questionable whether these measures assess distinct constructs. Similarly, Banmen and Vogel (1985) report a significant association between communication (Marital Communication Inventory, Bienvu, 1970; e.g., "Do the two of you argue a lot over money?"; "Do you and your spouse engage in outside interests and activities together?") and dyadic adjustment (Dyadic Adjustment Scale, Spanier, 1976; e.g., "Indicate the approximate extent of agreement or disagreement between you and your partner on: handling family finances"; "Do you and your mate engage in outside interests together?").

Unjustified conclusions based on evidence of this sort are not uncommon in the marital literature and can be found when attempts are made to account for marital quality with, for example, measures of "power" (e.g., Gray-Little and Burks, 1983), "affective intimacy" (e.g., Tolsted and Stokes, 1983), "sexual satisfaction" (e.g., Eysenck and Wakefield, 1981; see Gilbert, 1985), "relationship rewards" (e.g., Rusbult, 1983) and "self-disclosure" (e.g., Franzoi, Davis, and Young, 1985; Hendrick, 1981). As a result of these spurious associations, important conceptual distinctions sometimes receive insufficient attention. Despite the obviousness of this problem it is, unfortunately, ubiquitous. Consequently, a detailed examination of the problem posed by overlap in items used to assess ostensibly different constructs is offered later.

It is likely that the confusion at the empirical level stems from the fact that measures of marital quality comprise a variety of items ranging from reports of specific behaviors that occur in marriage to evaluative inferences regarding the marriage as a whole (Huston and Robins, 1982). The inclusion of a particular category of item and the number of items used to assess the category vary across measures of marital quality. This fact, together with an unclear description of the construct being measured and the absence of actuarial data regarding the measure, makes it difficult to

interpret precisely the summary indices of marital quality yielded by these inventories. Moreover, researchers often interpret responses as simply reflective of a spouse's sentiment toward the marriage, thus suggesting that it would be more appropriate to use items assessing global evaluations of the marriage in the first place.

The uncertainty resulting from using a polyglot of items lacking a clear conceptual foundation hinders theory construction and severely affects the comparability, generalizability, and even the credibility of research findings. In order to address the problem outlined above, a clear referent for marital quality is needed. Some researchers have recently advocated such a criterion for the construct (e.g., Huston, McHale, and Crouter, 1986; Norton, 1983; Weiss and Margolin, 1977), namely, global evaluative judgments of the marriage/spouse (e.g., "All things considered, how happy are you with your marriage?"; "How happy are you with your husband as a spouse?"). Orden and Bradburn's (1968) work suggests that at least two kinds of global evaluation exist independently of each other, namely, happiness and tension (conflict). In fact, there may be a number of different sorts of global evaluations of the marriage. As our goal is to clarify the central dependent variable used in marital research, we limit ourselves to making the general case for conceptualizing marital quality as a spouse's global evaluation of his or her marriage and do not discuss different possible kinds of evaluations.

The major advantage of an index based on global judgments is that it can be interpreted clearly because items are semantically similar and do not overlap with descriptive or domain-specific assessments of the marriage (for an alternative approach, see Sabatelli, 1984). Recognition of such advantages has recently resulted in the emergence of new measures of marital quality. For example, Norton (1983) has developed the Marital Quality Index (MQI), an instrument based on "self-report data that exclusively evaluate the relationship as a whole" (p. 143). Similarly, the Kansas Marital Satisfaction Scale (KMS) is also based on such data (Schumm, Paff-Bergen, Hatch, Obiorah, Copeland, Meens, and Bugaighais, 1986). What distinguishes these instruments from more traditional measures of marital quality, such as the Marital Adjustment Test (Locke and Wallace, 1959) and the Dyadic Adjustment Scale (Spanier, 1976) is that they are limited to evaluative, global judgments. Thus, unlike the traditional tests, they do not confound description of the marriage with its evaluation. In addition, the MQI and KMS are considerably shorter than their predecessors. Despite the conceptual and practical advantages

conferred by measures such as the MQI and KMS, this approach to assessing marital quality has not been widely adopted. We therefore demonstrate the advantages of the definition of marital quality outlined above and explore its implications for several issues that have received insufficient attention in the study of marriage. To enhance further the acceptability of this approach, we begin by showing that it represents the dominant position implicitly adopted in the marital literature.

Marital Quality as Global Evaluation of the Marriage

A recent and sophisticated attempt to construct a measure of marital satisfaction hints at a long-standing assumption in the marital literature that needs to be addressed explicitly. Snyder (1979, 1981) designed a measure of marital satisfaction, the Marital Satisfaction Inventory, that includes a validity subscale and ten dimensions that provide a profile of marital satisfaction (conflict over childrearing, dissatisfaction with children, time together, role-orientation, problem-solving communication, affective communication, sexual dissatisfaction, family history of distress, disagreements about finances, and global distress). It is noteworthy that one of these dimensions, global distress (e.g., items such as "Frankly, our marriage has not been successful," "I have known very little unhappiness in my marriage"), occupies a special status, as it is a criterion against which the remaining dimensions are validated. That is, items thought to reflect a global evaluation of the marriage are used to interpret the validity of items that assess various domains of the marriage.

Close examination of the literature shows that this procedure demonstrates a pervasive tendency on the part of marital researchers to favor global evaluations of marriage in the measurement of marital quality. This is seen clearly in earlier research where single items requesting reports of happiness, satisfaction, and so on were used to measure the variable under investigation. However, it is also evident, explicitly and implicitly, in instruments that include many items. The widely used Marital Adjustment Test (Locke and Wallace, 1959), for example, heavily weights a single item assessing marital "happiness," which thus comprises 22% of the total possible test score. This figure contrasts with 6.6% of the total score that would be expected if all items were weighted equally. Similarly, though less obviously, differential treatment of global, evaluative items is evident in Kimmel and van der Veen's (1974) classic factor-analytic study of the Marital Adjustment Test. These researchers use the factor

loadings associated with the items "degree of marital happiness" and "no marital difficulties" to interpret the overall factors found for husbands and wives, once again according evaluative items regarding satisfaction a special status.

The importance of judgments of overall satisfaction in marital research is perhaps best exemplified in the work of behaviorally oriented psychologists. Since Wills, Weiss, and Patterson's (1974) seminal study, a number of investigators have sought to uncover the specific categories of behavior that give rise to reports of satisfaction with the marriage (e.g., Barnett and Nietzel, 1979; Birchler, Weiss, and Vincent, 1975; Broderick and O'Leary, 1986; Jacobson, Follette, and McDonald, 1982; Jacobson, Waldron, and Moore, 1980). Typically, spouses complete a daily checklist of activities and also provide a single rating of marital satisfaction each day over a period of several days. It is then argued that these data allow the specific behavioral correlates of changes in satisfaction to be determined (see Bradbury and Fincham, 1987, and Jacobson, Elwood, and Dallas, 1981, for critical reviews). Thus, marital satisfaction is again equated with a global, evaluative response.

In view of the above observations, it is perhaps not surprising to find that the heavy weighting given to global evaluations of the marriage in empirical research is also evident in recent theoretical writings and reviews. For example, Burr (1973; Burr, Leigh, Day, and Constantine, 1979), following careful analysis of the various terms related to marital quality, develops his theory around the "subjectively experienced reaction" to one's marriage. Spanier and Lewis (1980) criticize this decision on the grounds that there is more to marriage than subjective feelings about the relationship, yet they define marital quality in terms of subjective evaluation of the marriage for the purpose of their research review.

Is the practice outlined above a legitimate one? Yes, provided it is made explicit and provided that measurement strategies mirror this practice. To date, the practice has not been acknowledged widely, and because they contain both descriptive and evaluative items, current measures of marital quality are inconsistent with their interpretation as simply overall indices of sentiment toward the marriage. In our judgment the construct of marital quality is best limited to overall, evaluative judgments regarding the relationship. One reason for adopting this viewpoint is that global evaluations of the marriage, rather than self-reports of any behavior or cluster of behaviors, are likely to represent the final common pathway through which marital maladjustment is expressed (Brad-

bury and Fincham, 1987; Jacobson, 1985). That is, couples seeking therapy may or may not differ in reports of behavior, yet their satisfaction can be assessed by a common measure of overall satisfaction. Thus, at a practical level, there is a rationale for defining and assessing marital quality in terms of an individual's global evaluation of his or her marriage.

A further reason for adopting this approach is that it provides continuity with existing research that either implicitly weights global evaluations so heavily that they account for most of the variance in the measure of marital quality or uses only a few such items to assess marital quality. When we realize that these items often take the format of a bipolar rating scale similar to that used in the semantic differential (Osgood, Suci, and Tannenbaum, 1957), and that three items are usually sufficient to assess dimensions (in this case, the evaluative dimension) of a concept, it appears that even such limited indices of marital quality meet at least minimal standards of measurement. This contrasts with the psychometric inadequacy of many of the traditional inventories of marital quality, as noted earlier.

Perhaps the most critical reason for conceptualizing marital quality in terms of global evaluation is that it facilitates research on the correlates of marital quality. The purpose of such research, in part, is to establish whether the empirical relationships found with other measures are consistent with the meaning accorded marital quality. This process of choosing a construct and establishing a network of theoretical propositions or a nomological network within which it is embedded is undertaken "to organize experience into general law-like statements" (Cronbach, 1971: 462).

This is an important task, because marital quality has been treated as a hypothetical construct. However, in performing this task, insufficient attention has been paid to the interpretation of scores on current measures of marital quality: is it valid to infer that consistent responses on such instruments reflect the characteristics associated with the construct they measure? Answering this question is extremely difficult because of the tenuous relationship between the construct and the empirical measures employed to assess it. Normally, more precise specification of a construct and refinement of measures of the construct occur together, as there is a dialectic relationship between these two processes (Messick, 1980; Nunally, 1978). However, the loose association, and in some cases virtual independence, between constructs and measures in this domain impedes this interplay. Rather than

TABLE 1. SELECTED ITEMS FROM WIDELY USED MEASURES OF MARITAL ADJUSTMENT AND COMMUNICATION

Marital Adjustment Test ^a	Dyadic Adjustment Scale ^b	Primary Communication Inventory ^c
State the extent of agreement or disagreement between you and your mate on: friends, sex relations, matters of recreation, demonstrations of affection, ways of dealing with inlaws, conventionality, philosophy of life.	State the extent of agreement or disagreement between you and your mate on: career decisions, making major decisions, religious matters, aim, goals, household tasks, leisure time interests and activities, friends, sex relations, etc.	How often do you and your spouse talk over pleasant/unpleasant things that happened during the day, ^d difficulties or disagreements, personal problems?
Do you confide in your mate?		Do you discuss things together before making an important decision?
When disagreements arise, do they usually result in husband/wife giving in, or agreement by mutual give and take? ^d	How often do you and your partner: quarrel, "get on each other's nerves," have a stimulating exchange of ideas, calmly discuss something, laugh together?	Does your spouse discuss matters of sex with you?
		During marriage have you talked most things over together?

^aLocke and Wallace (1959).

^bSpanier (1976).

^cNavran (1967).

^dItems or response options combined for clarity of presentation.

providing valid measures of marital quality, instruments are often endowed with all the meanings associated with the construct they purportedly measure, a practice that has been labeled "operationism in reverse" (Coombs, 1954: 476).

Thus, current attempts to establish the correlates of marital quality (i.e., its nomological network), and thereby to specify the "meaning" that is to be accorded this construct, are often beset with problems. As noted earlier, these attempts tend to be tautological because items that assess the correlate are often included in the measure of marital quality. That is, the empirical relationship is a "built-in" feature of the measures used to produce it. Can this problem be addressed with existing measures of marital quality? We discuss this possibility in turning to a detailed examination of the problem.

Avoiding the Dilemma of Overlapping Item Content

As mentioned above, many current measures of marital quality include items that sample various domains of the marital relationship. For example, the Marital Adjustment Test (Locke and Wallace, 1959) contains items ranging from an evaluation of marital happiness to reports of behavior (e.g., engagement in joint activities). Scores on such a test are typically used to form criterion groups (e.g., distressed vs. nondistressed couples) in order to examine differences in some other self-report measure regarding the marriage (e.g., communication). Alternately, Marital Adjustment Test scores are simply correlated with a measure of the second construct. These practices seem reasonable until the items used in the scales are examined closely (see Table 1).

Considerable overlap in item content can be seen between either of the two scales relating to marital adjustment and the measure of communication. When we realize that the items depicted constitute approximately two-thirds of those in the marital inventories, finding 67% shared variance ($r = .82$) between communication and marital adjustment (Navran, 1967) is perhaps not surprising. To establish that two meaningfully distinct constructs are empirically associated, an a priori conceptual distinction between the two concepts must be articulated, followed by an explicit demonstration that the two scales tap them separately. Thus, the overlapping content of items across inventories, combined with consistency in self-presentation, could account for a substantial portion of the above correlation. Nicholls, Licht, and Pearl (1982), noting such a possibility in the domain of personality assessment, point out that recognition of this alternative hypothesis results in a dilemma: either the constructs are called into question or the inventories cannot be used to measure the constructs. The nature of this dilemma in measuring marital quality is examined below.

To test the hypothesis that communication is indeed related to marital adjustment, the overlapping items could be removed from the scale of marital adjustment and the correlation recomputed. If the correlation is not significantly affected, the implication is that the characteristics reflected in the items omitted from the marital adjustment scale do not contribute to the relationship between communication and marital adjustment. However, these characteristics are presumably integral to the construct of marital adjustment, a viewpoint that led to their initial in-

clusion in a measure of this construct. Given that these characteristics do not contribute to an association of theoretical interest, there is reason to doubt the appropriateness of the construct of marital adjustment. Why bother with such a construct if the association found can be understood without reference to characteristics that are integral to it? Of course, there is the alternative possibility that the construct of marital adjustment is indeed appropriate but that the measure of it is inadequate. In any event, if overlapping item content does not contribute significantly to the correlation of interest, this raises questions about the appropriateness of the construct of marital adjustment or about the measure that is used to assess it.

Should the removal of overlapping item content decrease the correlation, another problem arises. Such an outcome would indicate that, to avoid spuriously high correlations, one must remove overlapping item content when calculating correlations between marital adjustment and constructs of theoretical interest. This may be permissible when only a very small portion of the items overlap, because it can be argued that their removal from the scale is unlikely to alter its validity as a measure of the construct in any fundamental way. However, to the extent that the removed items reflect characteristics essential to the construct of marital adjustment or constitute more than a very small proportion of the items, their removal makes the scale less valid and hence less useful for investigating the correlates of marital adjustment. Thus, either the appropriateness of the construct is called into question or the measure cannot be utilized to examine the hypothesis in question.

It can be argued that the use of observational measures for one of the constructs does not alter the dilemma in any fundamental way (Nicholls et al., 1982). For example, if observational analysis shows that spouses with high marital adjustment scores exhibit effective communication skills, the most parsimonious interpretation is that the empirical association reflects subjects' ability to describe their behavior. That is, subjects have indicated on an inventory of "marital quality" that they do not communicate well, and the accuracy of this verbal report is confirmed via observational methods.² To defend against this interpretation, it must be shown that the relationship is not affected by the "communication" items in the measure of marital adjustment. Once again, the dilemma emerges. A unique contribution of these items to the relationship makes the scale less than optimal for examining the hypothesis at hand, whereas the appropriateness

of the construct or the scale is open to question if the recomputed correlation is unaffected.

The significance of this general problem is emphasized by the fact that under certain conditions (e.g., homogenous item-total correlations, equal weighting of items), the obtained correlation may be a direct function of the number of overlapping items between marital adjustment and the other construct of interest. In most cases, the number of overlapping items is likely to increase observed correlations. This bears mention because the number of items used to measure different dimensions of marital adjustment varies widely (Spanier and Thompson, 1982). The point is simply that one cannot determine whether one construct (e.g., communication, self-disclosure, power, affective intimacy, sexual satisfaction, companionship, interpersonal exchange, relationship rewards) is related empirically to a second construct (e.g., marital adjustment) if the scale used to measure the first construct comprises a subset of the content used to assess the second construct. This problem is most difficult to rectify when the definitions of the constructs investigated overlap. Unfortunately, the broad-band definitions of marital quality used in the literature make this a pervasive problem.

In sum, it is difficult to address the dilemma of overlapping item content with existing measures of marital quality. However, this dilemma can be easily avoided by limiting measures of marital quality to global evaluations of the marriage. Such items do not require responses regarding any particular content domain of the marriage, and thus there would not be any overlap in test items when its relationship to aspects of marital functioning (e.g., communication) is examined. Moreover, this approach has the desirable property that systematic variance in responses can be described by a single theoretical term, namely, marital quality. This characteristic, combined with the fact that items comprising such a test are likely to reflect a single, underlying dimension, provides the necessary conditions for establishing the validity of the measure (Lumsden and Ross, 1973).³

Comment

We conclude this section by anticipating six responses that the above proposal may evoke. *First*, it might be suggested that marital quality is already well understood at a conceptual level and that measures of the construct are essentially equivalent. These issues receive further attention in the next section, but for the present it suffices to note that two concerns lead us to reject this suggestion: (a) the inconsistencies in conceptions

of marital quality both within and between researchers; and (b) the ambiguity that often prevents clear interpretation of empirical correlations that involve measures of marital quality (Huston and Robins, 1982). A *second*, related point is that existing measures of marital quality are already viewed by researchers as measures of global satisfaction and hence the solution proposed has already been adopted by the field. The fact that researchers interpret a measure in a particular manner does not, ipso facto, render the content of the measure consistent with that interpretation. It is simply not known, for example, whether questions about marital behavior are indeed equivalent to those that ask for a global evaluation of the marriage. Further, evidence for equivalence of this sort cannot be derived solely from item-total correlations or measures of internal consistency. External correlates of the two classes of items must also be examined.

Third, it might be claimed that the approach outlined is not entirely original. Indeed, it is not intended to be. Instead the goal is to provide a more detailed discussion of the problem it addresses, to demonstrate how it resolves the problem, and to outline its implications for research. Regardless of any recognition the approach has received to date, its impact has been minimal. This is evidenced clearly by the lack of acceptance of measures that focus on global evaluations of the marriage. *Fourth*, the case is not being made for a unidimensional measure of marital quality per se. We simply wish to ensure conceptual clarity, and we see the assessment of global evaluations of the marriage as a means of doing so, given the current level of theoretical development in the field. *Fifth*, our approach should not be interpreted as justification for the use of single-item measures. Rather, global, evaluative measures must meet the rigorous psychometric standards necessary for reliable and valid measurement. *Sixth*, the desirability of assessing constructs via multiple modalities (e.g., self-report, behavioral observation) and methods (e.g., paper-and-pencil questionnaires, interviews) is in no way diminished by a decision to analyze exclusively self-report measures of marital quality. In fact, as noted above for behavioral observation, the present proposal actually enhances the interpretation of research involving multimodal assessment.

MARITAL QUALITY AS GLOBAL EVALUATION: IMPLICATIONS FOR RESEARCH

The above proposal emphasizes several important issues that have received insufficient attention in the marital literature. First, it highlights

the distinction between conceptual and empirical discourse, a distinction that is often blurred. Second, the "meaning" or interpretation accorded responses to self-report inventories of marital quality becomes salient. Finally, it raises concerns regarding the purpose for which marital quality is assessed. Each of these issues is discussed in turn.

Empirical Dependence versus Conceptual Dependence

It is important to note that the status of measurement in the marital domain is not universally considered inadequate. For instance, Gottman and Levenson (1984: 71) argue that in regard to marital satisfaction the "psychometric foundation is reasonably solid and need not be redone." The basis for this position rests on the observation that measures of marital satisfaction intercorrelate very highly and that differences in item phrasing and administration tend to be relatively unimportant. As a consequence, Gottman (1979: 5) concludes that "different operations designed to measure marital satisfaction converge and form one dimension."

The problem with concluding that current measures of marital quality are adequate on the basis of existing data is the implicit assumption that constructs that are strongly related at the empirical level are necessarily equivalent at the conceptual level. This assumption is problematic because the *empirical* (in)dependence of tests is orthogonal to their *conceptual* (in)dependence. The utilization of empirical correlations alone can be misleading in establishing the validity of a test. For example, the correlation between height and weight is of the same magnitude as that between different measures of marital quality, yet much is gained from retaining height and weight as conceptually distinct measures. However, retaining two highly correlated measures as conceptually independent requires a demonstration that: (a) judges can reliably and correctly categorize the measures on the basis of the constructs' definitions; (b) their retention remains useful in terms of the information they provide; and (c) there is evidence of differential correlations with other variables—that is, each construct is a component of two different nomological networks (Kroger, 1968). From this perspective, "validation" is intrinsic to the compilation of a test and does not rest simply on observed relationships with other variables.

There is much to be gained from distinguishing between conceptual and empirical levels of analysis. First, it forces the researcher to articulate the nature of the construct and the domain of observables to which it relates *before*

developing measures of the construct. Despite its psychometric importance (Nunally, 1978), this practice is seldom followed in marital research. The resulting conceptual confusion in the marital literature was discussed above. Second, such a distinction also facilitates clarity at the empirical level. To the extent that measures sample different aspects of marriage, differential correlations with related constructs are difficult to interpret. In this case, the issue of overlapping item content often becomes an important factor, thus obfuscating a necessary component of construct validation, namely, establishing "a network of relationships that would be expected on the basis of sensible theories" (Nunally, 1978: 103).

Adoption of the above precepts is most useful for the goals of constructing adequate measures of "marital quality." It is less critical, however, if the goal is to select groups of "happy" or "satisfied" versus "unhappy" or "dissatisfied" couples, as is often done in observational research (e.g. Gottman, 1979). In the latter case, the precise content of the measure used is less important than its ability to identify correctly the criterion groups of interest. Thus, for Gottman's (1979) purpose, the conclusion he reaches may be an appropriate one. However, this conclusion is less appropriate from the standpoint of explicating the construct of marital quality, because both the content of different measures of marital quality and the constructs they are intended to reflect often differ. It can nonetheless be argued that the utility of research on contrasted groups is enhanced to the extent that the criterion used to form the groups is clear. This suggests that the *purpose* of measuring marital quality is thus important in considering the limiting or boundary conditions under which the approach advocated here is appropriate. Before turning to the issue of purpose in measuring marital quality, we consider a further advantage of using global evaluative items to assess marital quality.

Interpreting Responses to Self-report Inventories

The content of test items determines, in part, the meaning given to systematic responses to them. However, the meaning also reflects the level at which self-report data are interpreted. Limiting marital quality to global evaluations of the marriage can simplify the task of response interpretation. Dahlstrom (1969) describes three levels at which responses to self-report instruments can be interpreted. At the first level, responses are accepted as veridical descriptions of actual behavior. Thus questions regarding frequency of disagreement are seen as reflecting the actual rate

at which the respondent disagrees with his or her spouse when they discuss the rated item. The response comprises a *sample* of behavior that is generalizable to nontest contexts (Goldfried and Kent, 1972). Responses at the second level of interpretation are viewed as potential *reflections of attitudes*. Hence a high frequency of disagreement on a topic such as philosophy of life may reflect a high base rate of disagreement, the fact that the respondent feels undervalued, or even that the spouse is unreasonable. Finally, responses may be viewed as behavioral *signs*, the interpretation of which can only be determined by actuarial data. Here, a response regarding high disagreement may reflect a low frequency of intercourse, little time spent in conjoint activities, or a host of other correlates. At this level, then, scale interpretation requires extensive research on the empirical correlates of scale scores and is independent of the method by which the items were initially derived. From this brief overview it is not clear at which level to interpret responses on existing marital adjustment measures because of their heterogeneous content. Responses to global, evaluative items as a measure of marital quality are, however, best interpreted at the second level, that of attitudes. This does not preclude their interpretation as signs, provided the necessary data to support this level of interpretation exist.

If the observation that distressed spouses tend to rate any item that can be construed to be evaluative as negative (e.g., Gottman and Levenson, 1984) is indeed true, an interesting possibility arises. Recall that measures of marital quality often include items concerning reports of behavior (e.g., "Do you and your mate engage in outside activities together?") as well as global, manifestly evaluative items (e.g., "Indicate the degree of happiness, all things considered, of your relationship"). It can be hypothesized that the responses of distressed spouses to both types of items might reflect their attitude toward the marriage, regardless of item content (i.e., the second level of interpretation). But what of happily married spouses? It seems equally plausible that their responses will mirror the manifest content of items. That is, reports of behavior reflect attempts to recall the behavior in question (i.e., the first level of interpretation) and that global, subjective items reflect evaluative judgments (i.e., the second level of interpretation). Alternatively, it is possible that nondistressed spouses manifest a positive evaluative bias regarding items concerning their marriage whereas distressed spouses' responses are more veridical in terms of manifest item content. Essentially, what is being suggested is an interaction between level of marital distress

and the content of items currently used to assess marital quality. A partial test of this hypothesis entails separate examination of the internal consistency of responses to test items for distressed and happily married groups of couples. Any discrepancy would indicate support for the hypothesis. Unfortunately, the properties of marital quality indices have not been examined separately in distressed and nondistressed groups. We turn next to consider the goals of assessing marital quality.

Purpose in Measuring Marital Quality

The significance of assessment goals is emphasized by the high face validity of indices of marital adjustment, a feature that makes such indices particularly susceptible to faking and social desirability effects (Edmonds, Withers, and Dibatista, 1972; Hawkins, 1966; Snyder et al., 1981). Thus, any interaction between distress level and item content may vary as a function of the purpose (e.g., eligibility for therapy versus research survey) for which, and the conditions (e.g., identified versus anonymous responses) under which, the instrument is completed. We therefore suggest that various conceptual analyses and measures may or may not be appropriate, depending on the context in which they are evaluated. For example, a multidimensional measure that samples many domains of marriage may be more appropriate in a clinical context where the emphasis is on a broad assessment of the marriage for the purpose of planning therapy. On the other hand, a unidimensional measure comprising global, evaluative judgments of the marriage may be more appropriate in determining the correlates of subjectively experienced marital distress. The advantage of determining an appropriate nomological network in this way is that it fosters theory development. As a third possibility, the precise nature of the instrument used to select criterion groups of happy and distressed couples may be less important than in the above two cases when one seeks to investigate behavior where overlap in measurements is unlikely to occur (e.g., self-reports of marital satisfaction and physiological indices; Levenson and Gottman, 1983, 1985).

In the words of the Dodo, it would appear that "everybody has won, and all must have prizes" (*Alice in Wonderland*). We would add, "but only if they are mindful of the restricted domain in which they have played the game." It behooves one to be aware of the fact that a construct cannot, by definition, ever be validated fully and that measures proposed to assess the construct are themselves not actually validated. Strictly speak-

ing, it is only the purpose for which a measure is to be used that is validated (Nunally, 1978). Thus, the validity of a test of marital quality rests not only on the evidence pertaining to the adequacy of inferences drawn from test scores but also on the potential and actual consequences of its proposed use (Messick, 1980).⁴

As Snyder (1982) notes, the absence of naturally occurring criterion groups precludes the use of a criterion-keying or purely empirical approach to establishing the validity of measures of marital quality. The viewpoint that measurement of marital quality is necessarily limited to rational measurement strategies is perhaps arguable, yet its existence provides a further basis for the need to pay careful attention to the content of measures in the marital domain.⁵ Thus, it is necessary to have some way of selecting from the infinite number of items and response patterns that might comprise part of a measure of marital quality. One solution to this problem, the use of global, evaluative measures of marital quality, has been outlined here. It should be noted, however, that a construct in science ideally represents an explicit hypothesis (Nunally, 1978) and is reflective of a theory. The call for descriptive, atheoretical research on marriage (e.g., Gottman, 1979) thus seems antithetical to the development of sound measurement procedures for assessing marital quality. Although our proposal does not embody a clearly articulated theory regarding marital quality, it nonetheless confers several advantages for interpreting existing research and lays the foundation for necessary theoretical development. In actual practice, construct validation often begins in this manner (Messick, 1980; Nunally, 1978).

The importance of theory tends also to have been overlooked when the purpose has been to devise measures of marital quality. Again this has unfortunate consequences. For example, Spanier (1976) eliminated those items from his measure that were highly skewed in a positive direction, thus assuming that those reflective of marital quality are likely to approximate a normal distribution.⁶ As Norton (1983) points out, such items may be less critical indicators or even irrelevant to marital quality if marriage inherently involves skewed data because married persons tend to report "happy" marriages. The elimination of skewed items is appropriate, however, if one's purpose is simply to obtain an instrument that best discriminates between spouses differing in marital quality.

Ideally one's theory should, in turn, be subject to modification as data relating to measurement accumulate. However, this is not always the case.

Again, the Dyadic Adjustment Scale illustrates the problem. The nature of the items on this scale predetermines the outcome of the factor analysis performed to test Spanier's (1976) proposed definition of dyadic adjustment. Because items from each domain are sampled disproportionately (Dyadic Consensus, 41%; Dyadic Satisfaction, 31%; Dyadic Cohesion, 16%; Affectional Expression, 12%), they have unequal probabilities of defining factors. Shared method similarity among the items comprising subscales also increases the possibility that the factors are artifactual (Spanier and Thompson, 1982). Not surprisingly, factor analysis of the scale provides "no chance to falsify the proposition embedded in the suggested definition" (Norton, 1983: 142). Limiting the measurement of marital quality to global evaluations of the marriage again obviates these problems.

In sum, the purpose for which a measure of marital quality is used will, in part, determine its adequacy at a conceptual level. However, the purpose for which a measure is used normally reflects an underlying hypothesis. Refinement of measures on the basis of psychometric considerations alone can thus potentially yield a measure that is not optimal for testing the hypothesis. In other words, it is necessary to pay continued attention to the content of items used in measures, the issue with which we began.

SUMMARY AND CONCLUSION

An extraordinary amount of attention has been devoted to the study of marital quality. Despite this attention, "marital researchers and clinicians have been left without an adequate self-report technology" for assessing marital quality (Snyder, 1982: 190). In an attempt to address this problem it was suggested that the assessment of marital quality be limited to global evaluations of the marriage. The rationale for this suggestion and its implications for research were examined. A major theme concerned the need for explicit conceptual analysis regarding marital quality and the integration of such analysis with measurement operations. It is our contention that subtle changes in how one thinks about marital quality affect what is done at the empirical level. Thus, for instance, conceiving communication as a component of marital quality, rather than as a related but distinct construct, is more likely to necessitate caution in examining empirically the relationship between communication and marital quality. It is too often the case that conceptual analysis and awareness of theoretical assumptions are lacking, a shortcoming that inhibits recognition of the

boundary conditions under which research observations regarding marital quality hold true.

It should be apparent that the present analysis only highlights selected issues integral to the assessment of marital quality. Some that are omitted (e.g., individual versus dyadic levels of analysis) are perhaps as important as those discussed. The analysis offered is therefore necessarily incomplete. Our intention, however, was not to provide comprehensive coverage or to attempt a final resolution of the problems associated with the conceptualization and measurement of "marital quality." Nor was it to offer a "theory" of marital quality. Instead, one conceptualization of marital quality was outlined and distinctions were drawn that we believe will contribute to clarifying some basic problems. We see the attempt to clarify the referent of this term as a precondition for empirically driven theory construction. Unfortunately, it remains true that, relative to the attention devoted to research on marital quality, advances have been slow (Spanier, 1976). The present analysis is based on the view that greater understanding and systematic exploration of the problems in this domain will facilitate their eventual and timely resolution.

FOOTNOTES

1. In this paper the term *marital quality* is used to refer to the essential element reflected in these various terms. It will be argued that global, subjective evaluations of marriage comprise this element as they occupy a special status in the literature. Hence, our choice of terminology reflects this viewpoint.
2. A major finding in observational studies of communication is that the ratio of agreements to disagreements is greater than unity for nondistressed families and less than unity for distressed families (Riskin and Faunce, 1972). This can be explained in part by examination of Table 1, which shows that a substantial number of the items ask respondents to indicate agreement/disagreement in their marriage. It must be acknowledged, however, that the use of observation rather than a second self-report measure does confer advantages. At the very least the observational strategy can demonstrate not only whether individuals accurately report their behavior but whether their reports correspond with behavior at the dyadic level of analysis.
3. It should, however, be noted that the current dilemma can also be avoided by utilizing a set of constructs rather than a single construct relating to marital quality. The use of a single term such as marital quality would, in these circumstances, refer to a pattern of scores rather than to a single, overall score. We favor the use of a unitary construct of marital quality because of its simplicity and because

it is not clear that there is currently sufficient theoretical development to yield a set of meaningful constructs. The lack of ambiguity resulting from the use of global, evaluative items provides the foundation for the development of such theory.

4. One implication of these observations concerns the criterion groups used to establish criterion-related validity. Couples seeking therapy, a frequently used criterion group, are perhaps less than ideal precisely because they are seeking therapy or have just entered therapy. There is often a perceived pressure to report marital distress in this circumstance, in order to emphasize the importance of the problems and ensure that help is forthcoming. In addition, as Jacobson et al. (1981) note, it is a trivial accomplishment for a measure to discriminate between couples in therapy and those in a community control group. Nonetheless, this remains among the most frequent form of "validity" used in the literature. In fact, it is not uncommon for the validity of measures of marital quality to be examined in relation to a group of divorced persons or separated spouses and a community group. Given the nature of existing measures of marital quality, it is difficult to imagine a measure being "invalidated" by this means. Persons' construals of their marriage change as a function of being separated (Fincham, 1985b; Fletcher, 1983; Newman, 1981; Newman and Langer, in press), and in any event, it is difficult to equate a divorced person's responses to a measure of marital quality with those of someone who is married at the time of completing the measure. Yet this represents the major criterion used to evaluate the validity of a recently developed and now widely used measure of marital adjustment, the Dyadic Adjustment Scale (Spanier, 1976).
5. To the extent that the validity of measures is actuarial and less dependent on face validity, we hypothesize that interesting differences are likely to emerge between different subgroups of distressed couples. Supporting evidence for this claim comes from a recent report by Fincham (1985a), in which differences were obtained between a distressed group of couples in therapy and a distressed community group, relative to nondistressed community controls. This difference was found on the dimensions underlying spouses' causal attributions, a measure that is not easily interpreted in terms of evaluative judgments regarding the marriage. The emergence of purely empirically derived, criterion-keyed measures depends in part upon the ingenuity of researchers and, perhaps more importantly, on the large amount of effort needed to achieve such a goal.
6. The Dyadic Adjustment Scale is used to illustrate several problems in the measurement of marital quality. The use of this scale as an example does not reflect its particular weakness. On the contrary, this scale is among the best available and has enjoyed considerable popularity.

REFERENCES

- Banmen, John, and Noelle A. Vogel. 1985. "The relationship between marital quality and interpersonal sexual communication." *Family Therapy* 12: 45-58.
- Barnett, Linda R., and Michael T. Nietzel. 1979. "Relationship of instrumental and affectional behaviors and self-esteem to marital satisfaction in distressed and nondistressed couples." *Journal of Consulting and Clinical Psychology* 47: 946-957.
- Bienvenu, M. J. 1970. "Measurement of marital communication." *Family Coordinator* 19: 26-31.
- Birchler, Gary R., Robert L. Weiss, and John P. Vincent. "Multimethod analysis of social reinforcement exchange between maritally distressed and nondistressed spouse and stranger dyads." *Journal of Personality and Social Psychology* 31: 349-360.
- Bloom, Bernard L., Shirley J. Asher, and Stephen W. White. 1978. "Marital disruption as a stressor: A review and analysis." *Psychological Bulletin* 85: 867-894.
- Bradbury, Thomas N., and Frank D. Fincham. 1987. "The assessment of affect in marriage." Pp. 59-108 in K. D. O'Leary (ed.), *Assessment of Marital Discord*. Hillsdale, NJ: Erlbaum.
- Bradbury, Thomas N., and Frank D. Fincham. 1987. "Assessing the effects of behavioral marital therapy: Assumptions and measurement strategies." *Clinical Psychology Review* 7: 525-538.
- Broderick, Joan E., and K. Daniel O'Leary. 1986. "Contributions of affect, attitudes, and behavior to marital satisfaction." *Journal of Consulting and Clinical Psychology* 54: 514-517.
- Burr, Wesley R. 1973. *Theory Construction and the Sociology of the Family*. New York: Wiley.
- Burr, Wesley R., G. K. Leigh, R. D. Day, and J. Constantine. 1979. "Symbolic interaction and the family." Pp. 42-111 in Wesley R. Burr, Reuben Hill, F. Ivan Nye, and Ira L. Reiss (eds.), *Contemporary Theories about the Family* (Vol. 2). New York: Free Press.
- Coombs, Clyde H. 1954. "Theory and methods of social measurement." Pp. 471-535 in Leon Festinger and D. Katz (eds.), *Research Methods in the Behavioral Sciences*. New York: Holt, Rinehart and Winston.
- Cromwell, Ronald E., Daniel H. Olson, and David G. Fournier. 1976. "Tools and techniques for diagnosis and evaluation in marital and family therapy." *Family Process* 15: 1-49.
- Cronbach, Lee J. 1971. "Test validation." In Robert L. Thorndike (ed.), *Educational Measurement* (2nd ed.). Washington, DC: American Council on Education.
- Dahlstrom, W. G. 1969. "Recurrent issues in the development of the MMPI." Pp. 1-40 in Jim N. Butcher (ed.) *MMPI: Research Developments and Clinical Applications*. New York: McGraw-Hill.
- Donohue, Kevin C., and Robert G. Ryder. 1982. "A methodological note on marital satisfaction and social variables." *Journal of Marriage and the Family* 44: 743-747.
- Edmonds, Vernon H., Glenna Withers, and Beverly Dibatista. 1972. "Adjustment, conservation, and

- marital conventionalization." *Journal of Marriage and the Family* 34: 96-103.
- Eysenck, Hans J., and James A. Wakefield. 1981. "Psychological factors as predictors of marital satisfaction." *Advances in Behavior Research and Therapy* 3: 151-192.
- Fincham, Frank D. 1985a. "Attribution processes in distressed and nondistressed couples: 2. Responsibility for marital problems." *Journal of Abnormal Psychology* 94: 183-190.
- Fincham, Frank D. 1985b. "Attributions in close relationships." Pp. 203-234 in J. H. Harvey and G. Weary (eds.), *Attribution: Basic Issues and Applications*. New York: Academic Press.
- Fletcher, Garth J. 1983. "The analysis of verbal explanations for marital separation: Implications for attribution theory." *Journal of Applied Social Psychology* 13: 245-258.
- Franzoi, Stephen L., Mark H. Davis, and Richard D. Young. 1985. "The effects of private self-consciousness and perspective-taking on satisfaction in close relationships." *Journal of Personality and Social Psychology* 48: 1584-1594.
- Gilbert, David G. 1985. "Marriage and sex: Moving from correlations to dynamic personality by personality interactions—Limits of monocular vision." Pp. 287-299 in S. Modgil and C. Modgil (eds.), *Hans Eysenck: Consensus and Controversy*. London: Falmer.
- Goldfried, Marvin R., and Ronald N. Kent. 1972. "Traditional versus behavioral assessment: A comparison of methodological and theoretical assumptions." *Psychological Bulletin* 72: 409-420.
- Gottman, John M. 1979. *Marital Interaction: Experimental Investigations*. New York: Academic Press.
- Gottman, John M., and Robert W. Levenson. 1984. "Why marriages fail: Affective and physiological patterns in marital interaction." Pp. 67-106 in J. C. Masters and K. Yarkin-Levin (eds.), *Boundary Areas in Social and Developmental Psychology*. New York: Academic Press.
- Gray-Little, Bernadette, and Nancy Burks. 1983. "Power and satisfaction in marriage: A review and critique." *Psychological Bulletin* 93: 513-538.
- Hawkins, James L. 1966. "The Locke Marital Adjustment Test and Social Desirability." *Journal of Marriage and the Family* 28: 193-195.
- Hendrick, Susan S. 1981. "Self-disclosure and marital satisfaction." *Journal of Personality and Social Psychology* 40: 1150-1159.
- Huston, Ted L., and Elliot Robins. 1982. "Conceptual and methodological issues in studying close relationships." *Journal of Marriage and the Family* 44: 901-925.
- Huston, Ted L., Susan M. McHale, and A. C. Crouter. 1986. "When the honeymoon's over: Changes in the marriage relationship over the first year." In Robin Gilmour and Steve Duck (eds.), *The Emerging Field of Personal Relationships*. Hillsdale, NJ: Erlbaum.
- Jacobson, Neil S. 1985. "The role of observational measures in behavior therapy outcome research." *Behavioral Assessment* 7: 297-308.
- Jacobson, Neil S., Richard Elwood, and Mercedes Dallas. 1981. "The behavioral assessment of marital dysfunction." Pp. 439-479 in D. H. Barlow (ed.), *Behavioral Assessment of Adult Dysfunction*. New York: Guilford Press.
- Jacobson, Neil S., William C. Follette, and Debbie W. McDonald. 1982. "Reactivity to positive and negative behavior in distressed and nondistressed married couples." *Journal of Consulting and Clinical Psychology* 50: 706-714.
- Jacobson, Neil S., Holly Waldron, and Danny Moore. 1980. "Toward a behavior profile of marital distress." *Journal of Consulting and Clinical Psychology* 48: 696-703.
- Kimmel, Douglas, and Frederick van der Veen. 1974. "Factors of marital adjustment in Locke's Marital Adjustment Test." *Journal of Marriage and the Family* 36: 57-63.
- Kroger, Rolf O. 1968. "Conceptual and empirical independence in test validation: A note on Campbell and Fiske's 'Discriminant Validity'." *Educational and Psychological Measurement* 28: 383-387.
- Levenson, Robert W., and John M. Gottman. 1983. "Marital interaction: Physiological linkage and affective exchange." *Journal of Personality and Social Psychology* 45: 587-597.
- Levenson, Robert W., and John M. Gottman. 1985. "Physiological and affective predictors of change in relationship satisfaction." *Journal of Personality and Social Psychology* 49: 85-94.
- Lively, Edwin L. 1969. "Toward conceptual clarification: The case of marital interaction." *Journal of Marriage and the Family*, 31: 108-114.
- Locke, Harvey J., and Karl M. Wallace. 1959. "Short marital adjustment prediction tests: Their reliability and validity." *Marriage and Family Living* 21: 251-255.
- Lumsden, James, and John Ross. 1973. "Validity as theoretical equivalence." *Australian Journal of Psychology* 25: 191-197.
- Messick, Samuel. 1980. "Test validity and the ethics of assessment." *American Psychologist* 35: 1012-1027.
- Navran, Leslie. 1967. "Communication and adjustment in marriage." *Family Process* 6: 173-184.
- Newcomb, Michael D., and Peter M. Bentler. 1981. "Marital breakdown." In Steve Duck and Robin Gilmour (eds.), *Personal Relationships: 3. Personal Relationships in Disorder*. London: Academic Press.
- Newman, Helen. 1981. "Post divorce attribution as a function of the attribution of responsibility." *Sex Roles* 7: 223-232.
- Newman, Helen, and Ellen J. Langer. In press. "Investigating the development and courses of intimate relationships: A cognitive model." In L. Y. Abramson (ed.), *Social-Personal Inference in Clinical Psychology*. New York: Guilford Press.
- Nicholls, John G., Barbara G. Licht, and Ruth A. Pearl. 1982. "Some dangers of using personality questionnaires to study personality." *Psychological Bulletin* 92: 572-580.
- Norton, Robert. 1983. "Measuring marital quality: A

- critical look at the dependent variable." *Journal of Marriage and the Family* 45: 141-151.
- Nunally, Jum C. 1978. *Psychometric Theory*. New York: McGraw-Hill.
- Orden, Susan, and Norman Bradburn. 1968. "Dimensions of marriage happiness." *American Journal of Sociology* 73: 715-731.
- Osgood, Charles E., G. J. Suci, and P. H. Tannenbaum. 1957. *Measurement of Meaning*. Urbana: University of Illinois Press.
- Rettig, Kathryn D., and Margaret M. Bubolz. 1983. "Interpersonal resource exchange as indicators of quality of marriage." *Journal of Marriage and the Family* 45: 497-509.
- Riskin, John, and E. E. Faunce. 1972. "An evaluative review of family interaction research." *Family Process* 11: 365-455.
- Rusbult, Caryl E. 1983. "A longitudinal test of the investment model: The development (and deterioration) of satisfaction and commitment in heterosexual involvements." *Journal of Personality and Social Psychology* 45: 101-117.
- Sabatelli, Ronald M. 1984. "The Marital Comparison Level Index: A measure for assessing outcomes relative to expectations." *Journal of Marriage and the Family* 46: 651-662.
- Schumm, Walter R., L. A. Paff-Bergen, R. C. Hatch, F. C. Obiorah, J. M. Copeland, L. D. Meens, and M. A. Bugaighis. 1986. "Concurrent and discriminant validity of the Kansas Marital Satisfaction Scale." *Journal of Marriage and the Family* 48: 381-387.
- Segraves, Taylor R. 1982. *Marital Therapy: A Combined Psychodynamic-Behavioral Approach*. New York: Plenum.
- Snyder, Douglas K. 1979. "Multidimensional assessment of marital satisfaction." *Journal of Marriage and the Family* 41: 813-823.
- Snyder, Douglas K. 1981. *Marital Satisfaction Inventory Manual*. Los Angeles: Western Psychological Service.
- Snyder, Douglas K. 1982. "Advances in marital assessment: Behavioral, communications, and psychometric approaches." Pp. 169-201 in C. D. Spielberger and J. N. Butcher (eds.), *Advances in Personality Assessment* (Vol. 1). Hillsdale, NJ: Erlbaum.
- Snyder, Douglas K., Robert M. Wills, and Thomas W. Keiser. 1981. "Empirical validation of the Marital Satisfaction Inventory: An actuarial approach." *Journal of Consulting and Clinical Psychology* 49: 262-268.
- Spanier, Graham B. 1976. "Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads." *Journal of Marriage and the Family* 38: 15-28.
- Spanier, Graham B., and Charles L. Cole. 1976. "Toward clarification and investigation of marital adjustment." *International Journal of Sociology of the Family* 6: 121-146.
- Spanier, Graham B., and Robert A. Lewis. 1980. "Marital quality: A review of the seventies." *Journal of Marriage and the Family* 42: 825-839.
- Spanier, Graham B., and Linda Thompson. 1982. "A confirmatory analysis of the Dyadic Adjustment Scale." *Journal of Marriage and the Family* 44: 731-738.
- Straus, Murray A. 1964. "Measuring families." Pp. 335-402 in H. Christensen (ed.), *Handbook of Marriage and Family*. Chicago: Rand McNally.
- Straus, Murray A. 1969. *Family Measurement Techniques*. Minneapolis: University of Minnesota Press.
- Tolstedt, Betsy E., and Joseph P. Stokes. 1983. "Relation of verbal, affective and physical intimacy to marital satisfaction." *Journal of Counseling Psychology* 30: 573-580.
- Trost, Jan E. 1985. "Abandon adjustment!" *Journal of Marriage and the Family* 47: 1072-1073.
- Veroff, Joseph, Richard A. Kulka, and Elizabeth Douvan. 1981. *Mental Health in America: Patterns of Help Seeking from 1957 to 1976*. New York: Basic Books.
- Weiss, Robert L., and Gayla Margolin. 1977. "Marital conflict and accord." Pp. 555-602 in A. R. Ciminero, K. S. Calhoun, and H. E. Adams (eds.), *Handbook of Behavioral Assessment*. New York: Wiley.
- Wills, Thomas A., Robert L. Weiss, and Gerald R. Patterson. 1974. "A behavioral analysis of the determinants of marital satisfaction." *Journal of Consulting and Clinical Psychology* 42: 802-811.