

THE MARITAL SELF-DISCLOSURE QUESTIONNAIRE:
A VALIDATION STUDY

by

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Abstract

The purpose of this study was to assess the reliability and validity of a new measure of self-disclosure: The Marital Self-Disclosure Questionnaire (MSDQ: Waring, Holden, & Wesley, 1998). Test-retest reliability of the MSDQ was examined in a sample of 41 participants over a two-week period ($r=.86$, $p<.01$). The criterion validity of the MSDQ was examined in a sample of 119 married individuals. The MSDQ was found to have a significant correlation with the Affective Self-Disclosure Questionnaire for Couples, $r=.53$, $p<.01$ (ASDC: Balswick, 1988). It also had a modest significant relationship with the Kansas Marital Satisfaction Scale, $r=.23$, $p<.05$. (KMSS: Schumm, Jurich, & Bollman, 1986). Internal consistency reliability of the four subscales on the MSDQ was examined. It was discovered that the Imbalance scale (alpha .32) and the Total scale (alpha .64) have low internal consistency reliability. The MSDQ was found to be contaminated by a marital conventionalisation response set ($r=.18$, $p<.05$) as measured by the Marital Conventionalization Scale (MCS: Edmonds, 1967). Women were found to disclose more than men on the MSDQ Total scale. Recommendations for future development of the MSDQ are discussed. Implications of gaining a clearer understanding of the role of self-disclosure in the development of marital satisfaction is discussed in regards to research, theory, and marital counselling.

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CHAPTER I

INTRODUCTION

Few areas of psychological investigation have attracted people from as many different disciplines as the study of self-disclosure. Social psychologists, clinical and counselling psychologists, specialists in interpersonal communication, and others have all been drawn to some extent to this topic (Berg & Derlega, 1987; Derlega, Metts, Petronio, & Margulis, 1993; Prager, 1995; Waring, 1988). Self-disclosure is the process of revealing one's inner thoughts, feelings, and past experiences to another person (Jourard, 1971). The role of self-disclosure in the development, maintenance, and dissolution of relationships, and in the etiology and treatment of psychological distress has been the focus of much research (Derlega et al., 1993; Jourard, 1971; Waring, 1988; Waring, Schaefer, & Fry, 1994).

Recently, the Marital Self-Disclosure Questionnaire (MSDQ) has been developed as a measure of self-disclosure between spouses (MSDQ; Waring, Holden, & Wesley, 1998). Self-disclosure is an important component of interpersonal relationships (Waring et al., 1998). The purpose of this study was to assess whether the MSDQ is a reliable and valid measure of marital self-disclosure.

Rationale

A variety of self-report measures have evolved in the area of self-disclosure (Chelune, 1979; Miller, Berg, & Archer, 1983). These measures vary in terms of (a) whether they ask about past disclosure or willingness to disclose, (b) recipients (same-sex vs. opposite-sex, strangers vs. intimates, peers vs. parents), and (c) topics. As an interpersonal behaviour, self-disclosure is thought to include at least five basic parameters: (1) amount or breadth of personal information disclosed, (2) intimacy or depth of the information revealed, (3) duration or rate of disclosure, (4) affective manner of presentation, and (5) self-disclosure reciprocity. Unfortunately, researchers are seldom in a position to examine all dimensions in a given study unless they are obtaining behavioral samples of self-disclosure (Chelune, 1979).

Of currently available measures, only the Jourard Self-Disclosure Questionnaire (JSDQ: Jourard & Lasakow, 1958) and the Tolstedt Self-Disclosure Questionnaire (TSDQ: Tolstedt & Stokes, 1983) adequately cover breadth of self-disclosure (Boland & Follingstad, 1987). The JSDQ asks participants to think about past disclosures to specific target persons (mother, father, male friend, female friend, and spouse) regarding six different categories: attitudes and opinions; tastes and interests; work; money; personality; and body. The unit of past time is not specified; participants are left to determine the length of time on which to base their responses. The researcher has no way of telling

whether the participant's responses are based on disclosures that occurred during the past ten minutes, week, year, or ten years.

Furthermore, the JSDQ is primarily trait-based. It presupposes that individuals have relatively stable patterns of self-disclosure across situations. Such a paradigm minimizes the effects of social-situational variables which have been shown to be powerful determinants of self-disclosure (see review by Goodstein & Reinecker, 1974). Another concern regarding the JSDQ is the finding in early studies that scores on the JSDQ did not predict actual self-disclosure (Cozby, 1973).

Although the Self-Disclosure Ratings (SDR; Tolstedt & Stokes, 1983) is the only questionnaire available for rating the depth of disclosure, only the JSDQ has gained support for its validity and reliability (Boland & Follingstad, 1987). Another measure that assesses affective self-disclosure is the Affective Self-Disclosure Scale for Couples (ASDC; Balswick, 1988). The ASDC has been used in various studies investigating disclosure between couples and has support for its validity and reliability (Davidson, Balswick, & Halverson, 1983). Although this is a promising measure, the concept of emotional expressiveness on which it is based is slightly different than that of self-disclosure of thoughts regarding specific issues, as in the MSDQ.

As well as being psychometrically weak, previous self-disclosure measures have focussed on general self-disclosure with an emphasis on relationship development rather than specifically on disclosure in marital

relationships (Miller et al., 1983; Waring et al., 1998). The MSDQ was developed to address the need for a measure that is specifically relevant to the marital relationship. Hence, it implicitly suggests a state-based approach to self-disclosure, investigating disclosure within a committed relationship. It stands apart from previous measures because it assesses four aspects of disclosure that are frequently identified in distressed couples: (a) we can't talk about our relationship, (b) we can't talk about our sex life, (c) we never discuss money, and (d) we don't equally disclose to each other (Waring et al.).

Although research has indicated that self-disclosure is related to intimacy and marital satisfaction, the nature and direction of this relationship requires further study (Derlega et al., 1993; Waring et al., 1994). An obstacle to such a study has been the lack of appropriate, psychometrically sound measurements of marital self-disclosure. Due to the previous lack of validated self-report measures for couples, this construct has often been investigated using behavioural content analysis systems designed to provide a microanalysis of the basic parameters of self-disclosure (Waring et al., 1994). Such systems, which are used to code communication patterns, involve several methodological problems. They require videotape and audiotape equipment, a staff to train observers, extensive coding, and the need for inter-rater reliability (Boland & Follingstad, 1987). For these reasons, it is important to investigate the reliability and validity of the MSDQ. A sound measure of

marital self-disclosure would facilitate the examination of this construct and open up several research and clinical possibilities.

It is imperative that measures be subjected to critical and multiple tests of their validity before their widespread adoption and use can be advocated (Sabatelli, 1988). Evidence for the construct validity of a measure requires that its performance be examined within a theoretical framework where the relationship of the measure to other conceptually and operationally distinct measures is specified and empirically verified (Sabatelli, 1988). This study examined the validity of MSDQ under the broad theoretical framework of social penetration theory (Altman & Taylor, 1973). According to this theory, self-disclosure is crucial to the development of intimacy and marital satisfaction.

The test-retest reliability of the MSDQ over a two-week period was examined. The relationship between the MSDQ and marital satisfaction was investigated in order to explore the validity of this new measure. The concurrent validity of the MSDQ was examined by comparing its relationship to another self-report measure of disclosure, the Affective Self-Disclosure Scale for Couples (ASDC: Balswick, 1988). The susceptibility of the MSDQ to social desirability bias was examined by investigating the correlation between the MSDQ and a short form of Edmonds Marital Conventionalization Scale (Edmonds, 1967). Finally, several exploratory questions were investigated that are discussed in the Literature Review of this paper.

Approach to the research

The current study employed a correlational design to examine the relationship between an individual's score on each of four measures. The measures used in this research were the MSDQ (Waring et al., 1998), the Kansas Marital Satisfaction Scale (KMSS: Schumm, Jurich, & Bollman, 1986), the Affective Self-Disclosure Scale for Couples (ASDC: Balswick, 1988) and the Marital Conventionalization Scale (MCS: Edmonds, 1967). Additionally, the internal validity of the MSDQ was investigated by looking at the internal consistency reliability of the four subscales. Test-retest reliability was assessed in a subset of participants ($n=41$) over a two-week period. The measures used in this study are discussed in the literature review and evidence for their reliability and validity is provided in the methods section.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

In order to examine the construct validity of the MSDQ, it was necessary to investigate the relationship of self-disclosure to theoretically related constructs. The following literature provides a brief review of research and measurement on communication, self-disclosure, and marital satisfaction. In an attempt to bring clarity of focus to the literature review, each construct is discussed primarily in terms of its relevance to married couples. The relationship between self-disclosure and marital satisfaction is then discussed in more detail in order to illuminate the nomological network in which the MSDQ should relate to marital satisfaction.

Marital Communication

Over the last twenty years, there has been a strong emphasis on the relationship between communication and marital satisfaction (Noller & Fitzpatrick, 1990). In general, the findings suggest that couples who engage in a high frequency of negative communication behaviours and patterns are substantially more likely to be maritally distressed (Gottman & Krokoff, 1989; Noller & Fitzpatrick, 1990). Existing research on couple typologies supports the hypothesis that the importance of communication varies between couples (Gottman, 1993). Furthermore, cognitive factors influence the role that communication plays in marital

satisfaction (Christensen & Shenk, 1991). Studies have indicated that an individual's relationship satisfaction is influenced by such communication variables as: the perception of the partner's love attitudes, perceived empathy, and perceived relational competence (Gordon, Baucom, Epstein, Burnett, & Rankin, 1999).

While communication is undeniably linked to intimacy and marital satisfaction, numerous inconsistencies regarding constructs selected for study, as well as their definition and operationalization, make meaningful interpretations of research in this area difficult (Noller & Fitzpatrick, 1990). The absence of agreement concerning definitions of key constructs creates an incongruous collection of variables and findings in the communication literature (O'Donohue & Crouch, 1996). Such conceptual and methodological problems make it difficult to draw any firm conclusions about the relationship of communication to intimacy and marital satisfaction.

One way of tackling this obstacle is to select more specific, targeted variables for study. Marital communication has been frequently divided into two general subareas: content and process communication (Boland & Follingstad, 1987). Content communication itself has been traditionally viewed as being composed of two major aspects: self-disclosure and conflict resolution. Focussing on self-disclosure is one way to bring clarity to investigations regarding communication (Boland & Follingstad, 1987).

Self-Disclosure

Self-disclosure refers to the process by which one person verbally reveals information about himself or herself to another (Jourard, 1971). Self-disclosure can be viewed as a personality trait or an interaction process (Derlega et al., 1993). As a personality trait the propensity for self-disclosure is defined as a characteristic of an individual.

Researchers have explored individual differences in self-disclosure and the relationship between self-disclosure and other stable aspects of personality (Berg & Derlega, 1987). Viewed as an interaction process, self-disclosure is governed by social exchange principles or norms of reciprocity, or both. This perspective assumes that people change when they are in different contexts and that it is the process that occurs when individuals interact with each other, rather than the characteristics of either or both participants, that affects self-disclosure (Dindia, Fitzpatrick, & Kenny, 1997). These levels of analysis are in no way mutually exclusive but need to be considered together for a comprehensive understanding of self-disclosure (Derlega et al.).

Empirical research has demonstrated that a lack of self-disclosure correlates with spousal depression (Biglan, Hops, Sherman, Friedman, Arthur, & Osteen, 1985.) An imbalance in spousal self-disclosure is associated with the presence of spouse abuse (Waring et al., 1996).

Cultural heritage has been found to influence the amount and type of disclosure. McGoldrick (1982) found that Jewish families exhibit

verbal skill and a willingness to talk about feelings while Irish families find themselves at a loss to describe feelings. In another study, a Mexican-American society was found to be more open than an Anglo-American society (Falicov & Karrer, 1980). Thus, spouses may have different expectations regarding disclosure depending on what they were exposed to in their family of origin and culture.

Elements of self-disclosure such as duration of speaking and congruence between verbal content and affective manner of presentation have been found to discriminate between clinical and non-clinical couples (Chelune, Vosk, Sultan, Ogden, & Waring, 1984). Furthermore, research has indicated that the level of a relationship affects self-disclosure. For example, women disclose more intimate thoughts and feelings to their husbands than to male strangers (Dindia et al., 1997).

A perennial question in the literature has been whether women self-disclose more than men. Dindia and Allen (1992) conducted a meta-analysis of sex differences in self-disclosure and found that, overall, women tend to disclose more extensively and personally than men in a variety of relationship contexts. For example, female pairs have been seen as more disclosing than male pairs (Cline, 1989). Other research suggests that women disclose more negative information; they provide less honest information; and they disclose more intimate information than men (Pearson, 1989). Contrary to some of these findings, Merves-Okin, Amidon, and Bernt (1991) found that husbands and wives gave

similar responses to instruments measuring attitudes toward self-disclosure and verbal expression of feelings. Likewise, Antill and Cotton (1987) reported that husbands and wives generally disclosed the same amount of information.

Prager (1995) cites several theories to address these sex differences such as: sex differences in self-disclosure stem from personality traits that differ systematically between women and men; sex typing predicts lower levels of self-disclosure; people's responsiveness to situational pressures that call for gender differences in self-disclosure may explain why gender differences in self-disclosure occur; motives and goals that individuals bring to self-disclosing interactions vary by gender, and to the extent that women and men seek intimate interactions for different purposes, they may reveal information that is more or less personal. Each of these theories has inconsistent supporting evidence (Prager, 1995). Obviously, more research is needed in this area to learn whether these hypotheses have merit.

In addition to gender differences, age, number of years married, and number of children may show an effect in relation to self-disclosure. Waterman (1979) reported that the research is unclear regarding the effect of age or length of marriage on spousal self-disclosure since the content of discussion might vary over a period of time. More recently, Antill and cotton (1987) reported that disclosure levels decreased with length of the marriage and number of children.

Altman and Taylor (1973) proposed that the exchange of information about one's inner self is the major process through which relationships between people develop. They introduced social penetration theory, which is based on the assumption that relationships intensify gradually and in an orderly fashion, paralleling the development in message exchange from superficial to intimate topics and from a narrow to a broad range of topics. According to this theory, being willing to reciprocate disclosure allows people to test successively deeper levels of intimacy and thereby to build trust in incremental steps over time. Altman and Taylor (1973) maintained that self-disclosure is not a unidimensional construct. Breadth and depth are two dimensions of self-disclosure that are important in social penetration theory. Breadth of self-disclosure refers to the range of topics about which an individual discloses. Depth of self-disclosure is the extent to which the disclosure is personal or private. Another essential dimension is valence, which is defined as whether the communication is positive or negative (Derlega et al., 1993).

A positive relationship between amount of self-disclosure, intimacy, and marital satisfaction has consistently been demonstrated (Davidson, Balswick, & Halverson, 1983; Waring & Chelune, 1983).

Similarly, reciprocity of self-disclosure between spouses has also been found to be positively associated with marital adjustment (Davidson et al., 1983; Hansen & Schuldt, 1984). Other research has found self-

disclosure to be less strictly reciprocal, but more flexible, in well-established relationships (Fitzpatrick, 1988). Although breadth of self-disclosure is typically greater in the initial stage of a relationship, depth of self-disclosure increases as the relationship continues (Fitzpatrick). These findings, as well as alternate positions regarding the relationship between these constructs, are discussed in more depth in the review of the relationship between self-disclosure and marital satisfaction.

Measurement of Self-Disclosure

As problems with previous self-disclosure questionnaires have been briefly addressed in the introduction and rationale of this proposal, only measures that were considered for the present study will be reviewed. For the purpose of this research it was necessary to use a well-established measure in order to examine the concurrent validity of the MSDQ. Given the flaws in the available self-report measures combined with serious inconsistencies in conceptual definitions used in self-disclosure research, choosing a measure becomes difficult (Fincham & Bradbury, 1987). Problems in measurement likely contribute to some of the contradictory findings in the self-disclosure literature (Chelune, 1979).

As mentioned, the sixty item Jourard Self-Disclosure Questionnaire (JSDQ) has evidence for its validity and reliability (Jourard, 1971). However, the JSDQ implicitly defines self-disclosure as past disclosure to specific target persons on a given set of topics (Chelune, 1979). In

contrast, the MSDQ implies a definition of self-disclosure that is current and unique to the target person (spouse) involved (Waring et al., 1998). Several studies have reported significant positive correlations with other measures of self-disclosure when the instruction set or target persons of the JSDQ have been modified so that the underlying operational definition of self-disclosure implied by the JSDQ is more similar to those of the independent measures (Boland & Follingstad, 1987). Four fairly recent studies have adapted the JSDQ for use with dating couples and spouses (Hansen & Schuldt, 1984; Prager & Buhrmester, 1999; Tolstedt & Stokes, 1984; Waring, Carver, Stalker, & Fry, 1990); however, little mention is made of validity, reliability or the nature of the modifications. Using the JSDQ as a concurrent measure in the present study would have been problematic as ten of the forty items on the MSDQ are identical to those on the JSDQ. This would lead to inflated correlations due to item overlap.

Another measure that was considered comes from the communication literature. The Primary Communication Inventory (PCI: Locke, Sabagh, & Thomes, 1956) appraises a range of communication behaviours including verbal and nonverbal cues, self-disclosure, conflict resolution, and frequency of conversation while remaining brief and easy to administer (Boland & Follingstad, 1987). The PCI has established validity and reliability. Beach and Arias (1983), Navran (1963), and Yelsma (1984) all partially replicated the PCI findings of Locke et al.

However, as this test measures communication in general rather than self-disclosure, it was obviously not an ideal comparison especially in light of the fact that the communication literature has significant problems.

For this particular study the ASDC, an adapted form of the Expression of Emotions Scale was chosen as the concurrent validity measure (EOE: Balswick, 1975). While the EOE was originally designed for disclosure to: father, mother, female friend, male friend, female stranger, and male stranger, it has subsequently been revised for use with couples. Davidson et al. (1983) used this scale as a basis for the construction of the Affective Self-Disclosure Scale (ASDC). Individuals in their study were asked to respond to a series of 4-point likert scales, which sought to measure the output of 16 different types of emotions. As with the EOE, these 16 emotions were collapsed into four subscales, each consisting of four items. The four subscales yielded scores measuring the affective self-disclosure of Love, Happiness, Sadness, and Anger and were summed to produce a Total score of affective self-disclosure. Davidson et al. state that the ASDC has demonstrated utility, since there have been 11 published research articles in which it was used to assess affective self-disclosure. Furthermore, a key advantage of using the ASDC in the present study was the fact that the four subscales can be divided in to positive and negative affective disclosure. Given that valence of disclosure has been shown to be an important predictor of

marital satisfaction and that the MSDQ does not explicitly address this aspect of self-disclosure, it was hoped that this measure might help to shed some light on the importance of including valence in the design of self-disclosure measures. Test-retest reliability of the scale is adequate, with coefficients of .83 at one week for adults and .72 at 6 weeks for college students (Dosser, Balswick, & Halverson, 1983).

One significant problem with this scale that was identified involves differential wording of questions on the husband and wife forms. Balswick (1988) reports that the wife's form contains similar questions. However, he does not provide a rationale for this difference and treats the two forms as though they are the same when exploring the factor analytic structure of the scale. Compounding this problem, subsequent researchers who have used this scale in their research do not address the differential wording on the husband and wife forms. This issue will be further addressed in the Discussion section of this thesis.

Marital Satisfaction

Marital difficulties are the most common problem for which people seek psychological help (Waring, 1988). Perhaps as a consequence, the most frequently studied topic in marital research concerns what has been variously labelled marital success, adjustment, happiness, satisfaction, consensus, companionship, integration, or some synonym reflecting the quality of marriage (Fincham & Bradbury, 1987). The literature on marital quality is immense and has for several decades been

characterized by considerable theoretical and conceptual confusion and disagreement about measurement (Glenn, 1990). Some researchers have viewed marital quality as being a matter of how couples feel about their marriages, and they have favoured such indicators of marital quality as self-reports of marital satisfaction or happiness. On the other hand, some researchers have viewed marital quality as being a characteristic of the relationship between spouses instead of, or in addition to, a matter of the separate feelings of the two spouses (Fincham & Bradbury, 1987).

Regardless of definitional problems in the research literature, some trends regarding factors affecting marital quality have emerged. Marital satisfaction may be influenced by demographic variables such as: culture, SES, education, gender, age, number of years married, and number of children. Hurvitz and Komarovsky (1977) reported that, in a comparison of studies, middle-class respondents were more likely to view spouses as companions, with expectations of sharing activities, leisure time, and thoughts. In contrast, working-class respondents viewed marriages as including sexual union, complementary duties, and mutual devotion, but not friendship. Crohan and Veroff (1989) conducted a study and found a positive association between family income and marital quality. However, somewhat contradicting this result, Moore and Waite (1981) found a negative association between wife's income (as a component of total family income) and marital quality. More recently,

McGonagle, Kessler, and Schilling (1992) found no association between SES and frequency of marital disagreements.

In addition, education (which is a rough index of SES) has been positively correlated with marital satisfaction (Spanier & Lewis, 1980), although Sutor and Pillemer (1987) found a positive relationship between education level and verbal aggression. On the other hand, Bowman (1990) reported that education had no effect with regards to the use of five different coping efforts in her study on marital satisfaction.

Numerous cross-sectional studies have found a curvilinear relationship between family stage and marital quality, whereby the average quality is higher in the pre-parental and post-parental stages (Brehm, 1985). The meaning of this relationship has been attributed to presence-absence of children (Belsky, Lang, & Spanier, 1985), and duration of marriage (McHale & Huston, 1985) as factors influencing marital satisfaction but the meaning of this curvilinear relationship requires further study (Glenn, 1990).

Gender differences in marital satisfaction have also been reported in the literature over the past 20 years (Schumm, Farrell, Webb, & Bollman, 1998). A recent survey of families and households assessed the relationship of gender with marital satisfaction and found that wives were less satisfied with their marriages than husbands and that, when substantial within-couple differences occurred with respect to marital

satisfaction, the wife was usually the less satisfied spouse (Schumm et al., 1998).

Gove et al. (1983) found that happiness in women is more related to the emotional quality of the relationship while happiness in men is related more to status. In unhappy marriages, women feel that their husbands are too withdrawn while the men state that their wives are too conflict engaging (Locke, 1951). Roberts and Krokoff (1990) and Sayers et al. (1991) suggested that husbands' withdrawal was often followed by wives' increasing hostility and that such a pattern was detrimental to the couples' satisfaction.

Age and number of years married may show an effect in relation to marital satisfaction. Older couples have been found to experience less marital conflict so it is reasonable to hypothesize that older couples may experience more marital satisfaction (Argyle & Furnham, 1983). On the other hand, Swensen et al. (1984) found that as length of marriage increases, intimacy and expression of love decreases. These authors suggest that satisfaction will remain as long as couples actively cope with problems and are personally committed. Researchers (Johnson, White, Edwards & Booth, 1986; McGonagle et al., 1992) have identified a negative relationship between marriage length and frequency of disagreements. However, in contradiction to this finding, Gottman and Krokoff (1989) found no difference in marital satisfaction between an

older sample of couples married an average of 23.9 years and another younger sample of couples married an average of 4.2 years.

Finally, number of children is also an important demographic consideration when assessing marital satisfaction. Recently Antill and Cotton (1987) reported that disclosure levels between husbands and wives decreased with the number of children. Previously, Spanier and Lewis (1980) found that the presence of children was negatively associated with marital quality. Johnson et al. (1986) reported that couples with children living at home disagree more often than couples without children in the home. Overall, the relationship between number of children and marital satisfaction has shown mixed results (Spanier & Lewis, 1980).

Given the inconclusive nature of the literature regarding demographic predictors of marital satisfaction, it was decided that it would be beyond the scope and purpose of the present study to investigate whether these various demographics demonstrate/confound a relationship with self-disclosure and marital satisfaction. A relationship between marital satisfaction and self-disclosure is well established but it is not clear whether these demographics have an influence on this relationship. Since the core purpose of this study is to investigate the MSDQ, rather than the conceptual relationships themselves it was decided that specific predictions regarding relationships between

demographic variables and responses on key measures would not be addressed.

Measurement of Marital Satisfaction

Choosing among the numerous available measures of marital satisfaction is a daunting task. The literature on marital quality shows that researchers have attempted to measure and explain variance in a construct that is itself little understood (Fincham & Bradbury, 1987). There have been three basic approaches to the measurement of marital quality (Touliatos, Perlmutter, & Straus, 1990). The first approach is to use "composite" measures. The best known such measure is the Locke-Wallace Marital Adjustment Test (MAT: Locke & Wallace, 1959). A second approach has been to assess marital quality by using several clearly defined sub-concepts. The most popular instrument using this second approach is Spanier's (1976) Dyadic Adjustment Scale which includes subscales of satisfaction, consensus, cohesion, and affectional expression.

The third approach, recommended by Fincham and Bradbury (1987) and Sabatelli (1988), is to assess global perception of marital quality, using related, more specific concepts as predictor variables of global perception. Fincham and Bradbury (1987) cite Norton's (1983) Quality of Marriage Index (QMI), and Schumm, Jurich, and Bollman's (1986) Kansas Marital Satisfaction Scale (KMSS) as examples of global assessment measures. At this point in time the QMI lacks data

supporting its validity while the KMSS has considerable support for its reliability and validity (Sabatelli, 1988). For this reason, the KMSS was chosen as the measure of marital satisfaction for this research.

Evaluating an individual's global assessment of marital quality is one way to minimize conceptual overlap between marital satisfaction and other closely related constructs. When measures of satisfaction include scale items that deal with such relational characteristics as communication and conflict, it becomes difficult to evaluate how these variables might affect or be affected by, the global evaluations (Sabatelli, 1988). The global evaluation of marital quality increases conceptual clarity and at the same time avoids some of the construct overlap evident in the empirical literature (Fincham & Bradbury, 1987). Perhaps the most critical reason for conceptualising marital satisfaction in terms of global evaluation is that it facilitates research on the correlates of marital quality (Fincham & Bradbury). Using a composite or multidimensional measure of relationship quality in the present research would cloud conceptual boundaries with the measures of self-disclosure.

Self-Disclosure and Marital Satisfaction

Research indicates that there is an association between self-disclosure and marital satisfaction (Burke & Weir, 1976; Hendrick, 1981; Jorgensen & Gandy, 1980; Shapiro & Swensen, 1969; Tolstedt & Stokes, 1983). Self-disclosure has been conceptualized in terms of frequency, breath, depth, and valence. Three competing models of frequency,

breadth, and depth of disclosure in marital satisfaction have been proposed (Boland & Follingstad, 1987). First, the linear model espoused by social penetration theory proposes a continuing increase in happiness for couples as they self-disclose more frequently across a wider breath of topic areas and with greater depth (Altman & Taylor, 1973, Waring, 1988). A second model proposes that a curvilinear relationship exists, whereby marital satisfaction may increase as self-disclosure increases, but beyond a certain point, satisfaction may actually decrease (Cozby, 1973). Finally, a third model states that there is no relationship between these two variables. Rather, social desirability is purported to account for the spurious relationship sometimes found between marital disclosure and satisfaction (Jorgensen & Gandy, 1980). This third model is discussed at length in the discussion section of this thesis.

A number of studies have found a positive linear relationship of self-disclosure with satisfaction (Hendrick, 1981; Shapiro & Swensen, 1969; Tolstedt & Stokes, 1984). However, these studies suffer from the failure either to choose an existing standardized measure of self-disclosure or to standardize their new measure before the investigation (Boland & Follingstad, 1987). Other research has avoided the pitfalls of non-validated measures of self-disclosure. Davidson et al. (1983) added to the self-disclosure picture by finding that a reciprocal pattern of disclosure between partners was associated with marital satisfaction. In this study, 162 university married-housing couples completed the

Affective Self-disclosure Scale for Couples (ASDC) and the DAS (Spanier, 1976). Results indicated that the greater the discrepancy in partners' affective self-disclosure, the less the individual's marital adjustment.

The importance of reciprocity was also demonstrated in research by Hansen and Schuldt (1984) who found that couples with discrepancies in amount of self-disclosure reported less marital satisfaction.

These researchers studied 50 couples and found that on self-report measures of self-disclosure (JSDQ: Jourard & Lasakow, 1958) husbands' disclosure to wives was positively related to and predictive of husbands' marital satisfaction (DAS: Spanier, 1976); wives disclosure to husbands was a positive predictor of husbands marital satisfaction; wives disclosure to husbands was positively related to, and predictive of, wives marital satisfaction; and the amount of discrepancy between disclosure of husbands and wives was negatively related to, and a negative predictor of, husbands' marital satisfaction. These two studies highlight the importance of reciprocity as an important variable to consider when investigating the relationship between self-disclosure and marital satisfaction.

Depth of self-disclosure is also an important determinant of marital satisfaction. Research by Rosenfeld and Bowen (1991), in a study of married couples, found that regardless of the level of disclosure by one's spouse, individuals who reported the highest levels of self-disclosure also experienced the greatest relationship satisfaction, whereas individuals

who reported the lowest levels of self-disclosure were the least satisfied. According to Rosenfeld and Bowen (1991), the linear model was supported. Pittman, Price-Bonham, and McKenry (1983) have produced one of the best designed self-disclosure studies to date, with adequately validated and reliable questionnaires (MCI: Bienvenue, 1968; DAS: Spanier, 1976), and found that the more negative a spouse's communication, the less likely participants were to self-disclose or report high marital satisfaction. These studies support the idea of reciprocal influence and point to the importance of depth and valence of information as important factors to consider when examining the relationship between self-disclosure and marital satisfaction.

Recent research by Meeks, Hendrick, and Hendrick (1998) also supports the linear model. One hundred and forty dating couples were studied and it was discovered that both own and partner perceived self-disclosure as measured by the Self-Disclosure Index (SDI: Miller, Berg, & Archer, 1983) were significantly and similarly correlated with satisfaction (RAS: Hendrick, 1988). The finding that one's perceptions of one's partner are extremely important in predicting marital satisfaction is consistent with previous research (Murray, Holmes, & Griffin, 1996). Meeks et al. (1998) also discovered that a partner's actual disclosure is considerably less predictive of relationship satisfaction than perceptions of such disclosure. Such findings support the need for continued investigations of perceptions of partners as important influences on

relationship satisfaction. Unfortunately, this research was limited by sample homogeneity and the exclusion of various important relationship variables. Furthermore, disclosures during dating are different in quality and quantity than disclosure in established marital relationships (Derlega et al., 1993).

Other researchers have argued for a curvilinear model to describe the relationship between self-disclosure and marital satisfaction. According to this model, a moderate level of self-disclosure is associated with a high level of marital satisfaction, while both low and high levels of self-disclosure are associated with low levels of marital satisfaction (Cozby, 1973; Gilbert, 1976). Cozby (1973) and Gilbert (1976) argued that, while low self-disclosure should be associated with low marital satisfaction, as self-disclosure increased past a certain level, it might begin to involve the sharing of more negative material, which would have the effect of reducing marital satisfaction from the levels reached at moderate amounts of self-disclosure.

Schumm, Barnes, Bollman, Jurich, and Bugaighis, (1985) argue that the curvilinear model actually involved a third variable-the valence of self-disclosure. Furthermore, the model implied an interaction effect between valence and quantity, since quantity of self-disclosure was negatively related to marital satisfaction for negative valence but positively related to marital satisfaction for positive valence. Therefore, Schumm et al. (1985) have reinterpreted the curvilinear model of marital

satisfaction and self-disclosure in terms of an interaction effect between quantity and quality of self-disclosure. These researchers found that especially for wives, combinations of low quantity and low quality were found to be extremely detrimental for marital satisfaction.

The linear model of the disclosure-satisfaction relationship has received the most substantive support, especially from the more reliable, empirically sound studies (Boland & Follingstad, 1987). One question yet to be answered in this area is the temporal sequencing of these two variables, as the causal direction has significant implications for whether to include self-disclosure exercises in therapeutic interventions for married couples (Waring et al., 1994). Overall, research indicates that, for both males and females, self-disclosure is positively correlated with satisfaction in friendship, dating and marital relationships (Jones, 1991). Thus the ability to self-disclose personal facts and feelings plays a key role in a successful relationship (Derlega et al., 1993).

Marital Self-Disclosure Questionnaire Development

Development of the MSDQ used a sequential strategy based on Jackson's (1971) fundamental principles of scale construction. The first step in MSDQ construction was to define the various dimensions of marital self-disclosure behaviour and to create pools of items representative of those underlying dimensions. Based on clinical judgement of a number of marital therapists and on a review of the relevant literature, 11 dimensions of self-disclosure relevant to marital

relations were theorized to exist. These dimensions were: feelings; thought; amount; needs; consequences; exclusivity; relationship awareness; valence; sexuality; motivation; and influence. For a more detailed description of MSDQ development see Waring et al. (1998).

Initially, 240 true-false items were written to conform to the 11 dimensions. In addition, 40 items from the JSDQ (Jourard, 1971) were also included as a general measure of personal self-disclosure. Next, a sample of 31 married individuals completed the 280 items. Item-total correlations were calculated between each item and its hypothesized scale. Items were deleted if they failed to correlate significantly with their hypothesized scales at a .01 alpha level. This stage of scale development reduced the item pool from 280 to 113 items. Reliability analyses were then performed on the remaining items and their corresponding scales. Alpha coefficients for motivation and influence were below .60 and so items on these scales were removed, reducing the item pool to 102 items and 10 scales. Next, items were further selected for their potential power to discriminate. As the sample was small, a liberal criterion selected items with endorsement frequencies between .20 and .80. This resulted in the loss of one item.

The final stage in the construction of the MSDQ was to identify, in a sample of married individuals, a set of self-disclosure dimensions contained in the variance of the remaining items. One hundred and twenty individuals completed the remaining 101 items. These

individuals were comprised of 32 couples referred clinically for marital distress and 28 non-clinical couples. Item responses were inter-correlated and a principal components analysis was performed. Based both on a scree test and on consideration of the clarity of structure for solutions with alternative numbers of components, four factors accounting for 43.09% of the variance were extracted and rotated to a varimax criterion.

Item component loadings were then reviewed to identify the 10 best items on each of the four factors, based on the Item Efficiency Index (IEI: Jackson, 1989). In this application of the IEI, selection considered an item's loadings on its hypothesized factor as well as loadings on non-corresponding components. Factor scales were interpreted based on the items associated with each of the underlying dimensions of marital self-disclosing behaviour. These scales were designated as follows:

Relationship: reflects disclosure of one's thoughts and feelings directly regarding the relationship; Sex: reflects disclosure of thoughts and feelings pertaining to sexuality; Money: reflects disclosure of information directly regarding financial matters; and Imbalance: reflects nonreciprocal disclosure where disclosure is dominated by the reporting spouse.

Scale coefficient alpha reliabilities ranged between .68 (Imbalance) and .91 (Relationship). Waring et al. (1998) suggest that the lower coefficient alpha for the Imbalance scale may reflect its measuring two

distinct yet related aspects of self-disclosure: both the perception of one's disclosing behaviour and the perception of one's listening behaviour.

Preliminary Validation

For the 120 respondents an analysis of variance was undertaken using group (clinical versus non-clinical) as a between-subjects factor and gender as a within-subjects factor. Significant effects emerged for gender, with wives scoring higher than husbands for Relationship, $F(1, 58) = 6.23, p < .05$, Imbalance, $F(1, 58) = 7.13, p < .05$, and Total MSDQ, $F(1, 58) = 4.33, p < .05$. The finding that women disclose more than men is consistent with previous research on self-disclosure (Dindia & Allen, 1992). Significant differences as a function of clinical status emerged with maritally distressed men reporting less disclosure to their spouses than the non-clinical group for the Sex and Total scales of the MSDQ. Therefore, there is encouraging initial data for the MSDQ. Waring et al. (1998) call for research to examine the construct validity of the MSDQ by examining its criterion validity using other self-report measures of disclosure and examining the relationship of marital self-disclosing behaviour to marital satisfaction, intimacy, and stability. Further evaluation of the MSDQ is necessary in order to establish the generalizability of the inventory's clinical and research utility.

The Research Question

Given the evidence to support a relationship between self-disclosure and marital satisfaction and the inadequacies of current marital self-disclosure instruments, this research sought to answer the following research question: Is the MSDQ a reliable and valid measure of marital self-disclosure? Based on what is known regarding the relationship between self-disclosure and marital satisfaction, several predictions were made in regards to how the MSDQ should correlate with marital satisfaction (KMSS) and affective self-disclosure (ASDC).

Hypotheses and Research Questions

Reliability

RQ1. The internal consistency reliability for this sample was predicted to range between .68 (Imbalance) and .91 (Relationship) +/- 5 points for the MSDQ-Total and the four subscales

H1. The MSDQ-Total and the four subscales were predicted to have moderate stability over a two-week period ($r > .70$)

Validity

H2. Relationship, Sex, and Money Subscales of the MSDQ were expected to be significantly positively correlated with marital satisfaction as measured by the KMSS (between $r = .15$ and $r = .50$)

H3. Total scores on the MSDQ were expected to be significantly positively correlated with Total scores on the ASDC (between $r = .50$ and $r = .90$).

Construct Investigation Questions

Question 1: Do scores on the Imbalance scale of the MSDQ have a negative correlation with the KMSS?

Question 2: Do women disclose significantly more than men on the Relationship, Imbalance, and Total scale of the MSDQ?

Question 3: Are Total scales on the MSDQ positively related to scores on the KMSS?

Question 4: Is the MSDQ susceptible to social desirability bias?

Question 5: Is valence an important dimension to include in a self-disclosure measure?

This last question was explored by investigating the relationship between the 4 scales of the ASDQ and the KMSS and also by selecting individual questions from the MSDQ that ask about disclosure of negative/positive emotions and looking at their relationship to the KMSS. It was predicted that ASDC-Love and ASDC-Happiness would have a positive relationship with the KMSS. It was also predicted that ASDC-Sadness and ASDC-Anger would have a negative relationship with the KMSS.

Several individual questions from the MSDQ were selected that had clear negative/positive valence in order to explore their relationship with the KMSS. To select the questions, 10 individuals were asked to look at the MSDQ and asked to select questions on this measure that they felt were clearly positive/negative. Questions that all 10 individuals

selected were chosen for investigation. Items 4, 8, 16, 24, and 36 were unanimously chosen as negative disclosures. For this reason, it was predicted that item #4 (I disclose to my spouse what I find to be the most boring and unenjoyable aspects of my work or studies), #8 (I disclose to my spouse a lot of sad things), #16 (There are some times when I do not listen to my spouse), #24 (I often criticize my spouse's opinion), and # 36 (I sometimes refuse to listen when my spouse wants to talk), would have a negative correlation with the KMSS.

Conversely, items 11, 20, 30, and 34 were all unanimously selected as positive disclosures. It was predicted that item #11 (I disclose to my spouse my happy feelings), # 20 (I will listen any time if my spouse wants to talk to me), #30 (I tell my spouse when I am satisfied sexually), and # 34 (I let my spouse know what turns me on sexually) would have a significant positive correlation with the KMSS.

CHAPTER III

METHOD

Design

A correlational design was used in which each individual's score was used to predict their own score on each of the four measures. Individual scores were chosen for comparison as there is often limited agreement between couples on self-report measures (Brehm, 1985). Furthermore, recruiting couples rather than individuals would have been considerably more difficult logistically and would create a dependency between husbands and wives scores in the data.

Participants

The 160 participants in this study consisted of 53 men and 102 women. One hundred and nineteen participants (76 women, 43 men) took part in the validation portion of the study. Inclusion criteria for the validation sample were as follows: participants were required to be married or living in a common-law heterosexual relationship for at least one year. Forty-one participants (26 women, 10 men) took part in the test-retest reliability of the MSDQ. Five participants did not indicate their sex. For this portion of the study participants were required to be married or currently dating.

Although a random sample would have been ideal, it was not feasible in this study due to financial and time constraints. Data collection difficulties were encountered such as refusal to participate,

incomplete questionnaires, and poor response rates. These problems made it necessary to utilize a convenience sample drawn from 10 different sources. This issue will be discussed in further detail in the section on data collection. See Table 1 for the frequency of participants from the various locations.

Table 1. Frequency of participants from various locations

Location	Frequency	Valid Percent
Surrey Memorial Hospital	11	6.9
Family Student Housing	21	13.1
Miscellaneous professionals	41	25.6
Marriage Project	7	4.4
Waterloo, ON	20	12.5
Scarborough, ON	16	10
CNPS 532	17	10.6
EPSE 592	13	8.1
EPSE 528	11	6.9
Kingston, ON	3	1.9
Total	160	100

The following descriptive data is for the entire sample of respondents ($N=160$). Separate descriptive data for the reliability ($n=41$) and validation samples ($n=119$) will be provided in the Results section of this paper. According to the demographics questionnaire, the mean age for the sample was 38.84 for men (range of 23-65), and 38.18 for women (range of 22-84). Mean length of marriage was 10.74 years for men (range of 1 years to 41 years) and 10 years for women (range of 0 to 57 years). The average number of children was 1.29 for men (range of 0 to 4) and 1.26 for women (range of 0 to 4).

Of the men who indicated their level of education, 14% had a high school certificate, 7% had a trade certificate or diploma, and 79.1% had a university degree. For women, 1.1% had less than a grade 9 education, 4.3% had gone to high school without receiving a diploma, 11.7% obtained a high school diploma, 14.9% had a trade degree or certificate, and 68.1% had a university degree. For men who indicated their religion, 35.7% were Protestant, 23.8% were Catholic, 7.1% were Jewish, and 33.3% indicated "other." For women, 39.8% were Protestant, 21.6% were Catholic, 4.5% were Jewish and 34.1% indicated "other." For men, ethnicity was indicated as follows: 92.9% Caucasian, 2.4% East Asian, and 4.8% Asian. For women, 94.7% were Caucasian, 4.3% were Asian, and 1.1% indicated "other" as their ethnicity. Nationality for men was as follows: 88.1% Canadian, 7.1% landed immigrant, 2.4% "other" For women, 86% were Canadian, 6.5% were landed immigrants, and 7.5% responded "other."

In terms of family income for men, 7.1% indicated earning less than \$24, 999, 11.9% earned between \$25,000-34,999, 14.3% earned between \$35,000-44,999, 7.1% earned between \$45,000-54,999, 11.9% earned between \$55,000-64,999, and 47.6% earned greater than \$65,000. For women, 8.7% earned less than \$24,999, 6.5% earned between \$25,000-34,999, 8.7% earned between \$35,000-44,999, 12% earned between \$45,000-54,999, 8.7% earned between \$55,000-64,999, and 55.4% indicated earned greater than \$65,000.

Data Collection

Reliability Sample

Data collection commenced once approval was obtained from the University of British Columbia's Behavioural Sciences Screening Committee for Research Involving Human Subjects (see appendix A). Data for the test-retest reliability of the MSDQ was collected from three separate Educational and Counselling Psychology and Special Education classes. Before carrying out this portion of the study, this research was approved by the Advisory Committee of the department (see Appendix B: Proposal Submission to the Advisory Committee). The students who participated were recruited from 3 different classes (CNPS 532, EPSE 528, and EPSE 592). These particular classes were chosen because the topic was relevant to the content of the coursework. In each class, students were provided with an explanatory letter (see appendix C). Those who agreed to participate completed the MSDQ and then completed it again two-weeks later.

It was emphasized that participation was voluntary and confidential and that non-participation would in no way affect their performance in their course. In this sample, the inclusion criteria were more lenient and included those who were married or currently dating. Interested students were asked to stay for approximately 15 minutes after their class ended.

Confidentiality for all participants was accomplished by using a symbol, rather than a name or id number, to match the Time 1 and Time 2 answer sheets. At the Time 1 administration, 2 MSDQ answer sheets were distributed and participants were asked to select a symbol to mark on both answer sheets. Next, students placed a "sticky note" with their name over the symbol on the Time 2 answer sheet, and placed this in an envelope. This envelope was sealed until the administration of the Time 2 answer sheets, two weeks later. After this procedure, participants completed the Time 1 answer sheet, which were also placed in a separate sealed envelope. Two-weeks later, the questionnaires were handed back to the students and they removed their name, completed them and placed them in a sealed envelope.

The participants in this sample consisted of 17 students from CNPS 532, 11 from EPSE 528, and 13 from EPSE 592. In each class, there were a number of participants who completed Time 1 but not Time 2 and therefore their results could not be used. There were 2 students from CNPS 532, 2 from EPSE 528, and 8 from EPSE 592. Several of these students wrote comments on their Time 1 questionnaire. These comments are addressed in the Discussion of this paper as they may shed some light on possibilities for further questionnaire development.

Validation Sample

For the validation sample ($n=119$) the procedure for data collection differed slightly at the various sites. Each Questionnaire package

contained Informed Consent and Instructions for Questionnaire Completion (see Appendix D). The order of the four measures was counterbalanced. Participants were asked not to discuss their responses with others as the questionnaires were being completed.

Originally, the primary recruitment sites for the validation portion of the study were Surrey Memorial Hospital and Family Student Housing at the University of British Columbia. At Family Student Housing, advertisements were posted around campus (see Appendix E) as well as in the Family Student Housing Newsletter (see Appendix F). At this location, a booth was set-up during specified advertised times for participants to come and pick up a questionnaire package. They were given the option to either complete and drop-off the package or to return it in a stamped, self-addressed envelope. Sixty individuals took questionnaire packages and 21 completed and returned their questionnaires for a response rate of 35%.

At Surrey Memorial Hospital, this research project was discussed with head nurses representing various departments during research rounds. Approval was obtained to distribute the questionnaire packages to the nursing staff, consisting of 100 nurses. At this location, participants were asked to seal their envelopes and return them care of Pat Colgan, a health administrator at the hospital. Of the 100 questionnaires distributed, 11 were returned for a response rate of 11%.

Given that the two primary locations yielded a sample of only 32 participants, it became necessary to look elsewhere for recruitment. Numerous counselling locations and busy doctors offices were contacted and were unable to support the research for various reasons. A location called the Marriage Project was interested in the research and was added as a recruitment site. At this location, couples attend pre-marital counselling workshops. The consent of the marriage project administration and facilitator was obtained to introduce the study at the end of their various workshops (see Appendix G: Letter of Approval from the Marriage Project). A brief description of the research was provided and participants who were living together for at least one year in a common law relationship were asked if they would be willing to participate. Of 50 questionnaires given to the project facilitator, 7 questionnaires were returned in a self-addressed stamped envelope that was provided. After 5 months passed, it was decided that a convenience sample would be necessary in order to complete the study.

In order to gain a larger sample size and in an attempt to maximize the variability of responses, three groups of participants were recruited from outside British Columbia. Twenty participants came from a convenience sample in Waterloo, ON. These participants were provided with the questionnaire package and then returned them in the mail in the provided self-addressed stamped envelope. Sixteen participants were recruited from a busy doctors office in Scarborough, ON. At this

location, an advertisement was posted at the reception desk (see Appendix H). Participants returned the questionnaires to a receptionist in a sealed envelope and they were then mailed. Three participants were recruited from Kingston, ON. These participants were interested in the study and participated by mailing their questionnaires in a self-addressed, stamped envelope. Additionally, 41 various professionals were recruited at different locations in Vancouver by word of mouth. These participants completed the questionnaires and mailed them in.

Following administration of questionnaires, results were not discussed with any of the participants as I am not trained to give interpretive feedback. Participants were asked not to discuss their responses with their partner in order to minimize the danger that, through these discussions, they might come to feel better or worse about their relationship. Potential risks to participants were that they might have arrived at a new awareness of and a new judgment about their relationship by virtue of completing the questionnaires.

Measures

Demographic Variables (Appendix I) In addition to the standardized measures, demographic information was collected in order to have descriptive data on the sample. The following information was collected on the back of the MSDQ answer sheet: age, gender, number of years married, number of children, religious orientation, education level, and annual family income.

Marital Self-Disclosure Questionnaire (MSDQ: Waring et al., 1998)(Appendix J)

The MSDQ is a 40-item, true-false, self-report questionnaire assessing the quantity and quality of self-disclosure in marriage. The MSDQ provides a global index of marital self-disclosure as well as assesses four facets of self-disclosure between spouses; Relationship, Sex, Money, and Imbalance. Initial results reported by Waring et al. (1998) indicate that the MSDQ scales are reliable, with the coefficient alpha reliabilities for the scales of: Imbalance (.68), Money (.85), Sex (.92), Relationship (.91), and Total (.91). The preliminary data of Waring et al. (1998) suggest that the MSDQ may have validity for distinguishing among groups hypothesized to differ in terms of marital distress and self-disclosure. ANOVA revealed significant effects for gender, with wives scoring higher than husbands for Relationship, $F(1, 58) = 6.23, p < .05$, Imbalance, $F(1, 58) = 7.13, p < .05$, and Total MSDQ, $F(1, 58) = 4.33, p < .05$. T-tests revealed differences as a function of clinical status. Significant differences as a function of clinical status emerged with the maritally distressed men reporting less disclosure to their spouses than the non-clinical group for the Sex and Total scales of the MSDQ.

Affective Self-Disclosure Scale for Couples (ASDC: Balswick, 1975)

This scale provides a measure of affective self-disclosure. Individuals are asked to respond to a series of 4-point Likert scales by selecting one of the four forced categories of never, seldom, often, or very

often, scored from 1 (never) to 4 (very often). Potential scores for the scale range from a low of 16 to a high of 64. This scale measures the output of 16 different types of emotions to one's spouse. These 16 emotions are collapsed into four subscales, each consisting of four items. The four subscales yield scores measuring the affective self-disclosure of Love, Happiness, Sadness, and Anger and are summed to produce a Total score of affective self-disclosure. Test-retest reliability coefficients are .83 at 1 week for adults and .72 at 6 weeks for college students (Davidson & Dosser, 1982). Balswick states that the Expression of Emotion Scale (on which the ASDC is based) has demonstrated utility, since there have been 11 published research articles in which it was used to operationalize emotional expressiveness (Dosser et al., 1983). Evidence for its validity comes from the fact that females show greater emotional expressiveness on all of the scales (Balswick, 1988).

Kansas Marital Satisfaction Scale (KMSS: Schumm, Jurich, & Bollman, 1986)

This 3-item Likert-type questionnaire provides a global assessment of marital satisfaction. A 7-point scale, with responses ranging from extremely dissatisfied to extremely satisfied is included. Test items include: (a) How satisfied are you with your marriage? (b) How satisfied are you with your relationship with your husband? (c) How satisfied are you with your husband as a spouse? In the present study, responses to the three questions were summed to yield a total marital satisfaction

score (with a possible range of 3-21) such that higher scores indicate greater satisfaction. These items reflect the notion that there are conceptual differences between questions on spouses, marriage and the relationship. It appears that the differences in norm means for each item would contradict the possibility that these items are the same item worded in three different ways (Schumm et al., 1986).

The KMSS has been used in numerous studies. Cronbach's alpha is reported by the authors to range from .81 to .98 with most studies reporting alphas in the .90 and above range. Most recently, the following alpha values were reported: .96 for wives (Jeong, Bollman, & Schumm, 1992); .96 for husbands (Hendrix & Anelli, 1993); .98 for wives (Chang, Schumm, Coulson, Bollman, & Jurich, 1994); and .94 for husbands and .96 for wives (White, Stahmann, & Furrow, 1994).

It has been found to correlate with marital social desirability (.42 to .54), positive regard (.42 to .70), individual social desirability (.05 to .39), locus of control (.18 to .31), church attendance (.22 to .24), total family income (.30), personal depression (.33), and several other constructs. The scale has also been used to differentiate couples in therapy from non-therapy couples while controlling for marital social desirability, income, age, education, duration of marriage, and number of children.

Test-retest reliability is reported to have been .71 over a 10-week period and to have ranged from .62 to .72 over 6 months (Touliatos, Perlmutter, & Strauss, 1990).

Marital Conventionalization Scale (MCS: Edmonds, 1967)

In the current study, the short form of the MCS was used. It consists of 10 items and has a true/false response format. Edmonds defines conventionalisation as “the extent to which appraisal of a phenomenon is distorted in the direction of social desirability.” Edmonds argues that marital conventionalisation is both extensive and intensive and that it is necessary to control for its effect in any study of highly ego-involved areas, particularly the area of marital adjustment (Edmonds, 1967). The MCS has been found to correlate with various measures of marital satisfaction (Hansen, 1981). Edmonds and colleagues (1972) found correlations between marital conventionalisation and adjustment of .63, .53, and .70. It has received wide acceptance as a valid measure of the tendency to describe marriage in socially desirable but impossibly perfect terms (Schumm, Bollman, & Jurich, 1980). However, this conceptualisation has been challenged and is addressed in the Discussion section of this paper. Primary support for its validity comes from a study in which Edmonds and colleagues found moderate correlations between the MCS and various measures of conservatism and religiosity, as predicted (Edmonds et al., 1972).

CHAPTER IV

RESULTS

Several hypothesis and research questions were investigated in this study. The internal consistency reliability of the MSDQ-Total and its four subscales for the test-retest sample was predicted to range between .68 (Imbalance) and .91 (Relationship)+/- 5 points. In the investigation of the test-retest reliability of the MSDQ it was hypothesized that the MSDQ and its 4 scales would have moderate stability over a two-week period ($r > .70$).

In terms of the investigation regarding the validity of the MSDQ, it was predicted that the Relationship, Sex, and Money subscales would be positively correlated with marital satisfaction on the KMSS. It was predicted that the Imbalance scale of the MSDQ would have a negative correlation with the KMSS. It was also predicted that the Total scores on the MSDQ would be positively correlated with Total scores on the ASDC, the concurrent measure of self-disclosure. This relationship was predicted to be stronger than that between the MSDQ and the KMSS as the MSDQ and ASDC are measuring different aspects of the same construct. Sex differences on the MSDQ were expected with higher disclosure scores for women on the Relationship, Imbalance, and Total scale of the MSDQ. The susceptibility of the MSDQ to social desirability bias was investigated by examining the relationship between the MSDQ and the MCS. Several exploratory questions were investigated as it was

hoped that this study would shed some light on the importance of valence of self-disclosure and generate new questions for future test development of the MSDQ.

Descriptive Statistics for the Reliability Sample

Forty-one participants took part in the test-retest reliability investigation of the MSDQ. There were 10 men and 26 women and 5 individuals did not indicate their sex. The average age was 33.76 (range of 23-55). The average number of years married was 6.54 (range of .20-29). The average number of children was .73 (range of 0-3). All participants had completed a university degree. In terms of religion, 15 were Protestant, 6 were Catholic, 3 were Jewish, 14 indicated "other," and 3 did not indicate their response. For reported ethnicity, 38 were Caucasian, 2 were Asian, and 1 did not indicate their ethnicity. For nationality, 36 were Canadian, 2 were landed immigrants, and 3 indicated "other." Reported family income was as follows: 5 indicated earning less than \$24,999; 6 reported between \$25,999-34,999; 7 reported between \$35,000-44,999; 3 indicated between \$45,000-54,999; 3 indicated between \$55,000-64,999; and 17 reported earning greater than \$65,000. See Appendix K for the means and standard deviations of the MSDQ-Total and the four subscales.

Internal Consistency Reliability of the MSDQ-Reliability Sample

Coefficient alpha was computed for each of the four scales of the MSDQ at Time 1 and Time 2 administrations with the reliability sample

($n=41$). See Table 2 for the alpha, mean, variance, and standard deviation of each scale at Time 1 and Time 2 administrations. Research Question 1 was supported for the Relationship, Sex, and Money scales at Time 1 administration, and for the Sex, and Money scales at Time 2 administration. In contrast, at Time 1 administration, the Imbalance scale had low internal consistency reliability as did the Relationship and Imbalance Scale at Time 2 administration.

Additionally, coefficient alpha was computed for MSDQ-Total (sum of 4 scales) at Time 1 and Time 2 administrations with the reliability sample ($n=41$). Alpha for MSDQ-Total at Time 1 and Time 2 failed to support Research Question 1, indicating low internal consistency reliability. The alpha for MSDQ-Total at Time 1 was .43. The statistics for the Total scale were as follows: mean 31.93, variance 25.97, and standard deviation 5.10. Alpha for MSDQ-Total at Time 2 was .24. The statistics for the scale were: mean 32.54, variance 18.50, and standard deviation 4.30.

Table 2. Internal Consistency Reliability for the MSDQ Scales ($n=41$)

Time 1	Relationship	Sex	Money	Imbalance
alpha	.73	.87	.81	.61
mean	9.17	7.71	8.53	6.51
std dev	1.46	2.70	2.11	1.93
Time 2				
alpha	.55	.90	.81	.40
mean	9.39	7.92	8.78	6.46
std dev	1.05	2.85	1.93	1.52

Test-Retest Reliability of the MSDQ

The MSDQ was predicted to have moderate stability over a two-week period ($r > .70$). In order to investigate the test-retest reliability of the MSDQ over a two-week period, Pearson correlations for each scale and the Total score were computed. For the Sex, Money, and Total scales, Hypothesis 1 was supported ($r > .70$). The correlations were as follows: Sex scale, $r = .89$, $p < .01$; Money scale, $r = .78$, $p < .01$; Total score, $r = .86$, $p < .01$. Hypothesis 1 was not supported for the Relationship scale $r = .69$, $p < .01$; and the Imbalance scale $r = .66$, $p < .01$.

Descriptive Statistics for the Validation Sample

One hundred and nineteen participants took part in the validation portion of this study (43 men and 76 women). The average age was 40.1 (range from 22-84). The average number of years married was 11.28 (range from 0-57). The average number of children was 1.37 (range from 0-4).

Frequencies for education, religion, ethnicity, nationality, and family income were computed. The level of reported education was as follows: 1 participant completed less than grade 9; 4 completed grade 9-13 without obtaining a certificate; 17 obtained a high school certificate; 17 had a trade certificate or diploma; 62 had a university degree; and 18 did not indicate their level of educational attainment. In terms of religion, 38 were Protestant, 23 were Catholic, 4 were Jewish, 31 reported "other," and 23 did not indicate their religion. Ethnicity was as

follows: 95 were Caucasian, 1 was East Asian, 4 were Asian, 1 reported "other," and 18 did not indicate their ethnicity. The data for reported nationality was 86 Canadians, 7 landed immigrants, 5 "other," and 21 participants did not indicate their nationality. Finally, for family income, 7 indicated earning less than \$24,999; 6 earned between \$25,000-34,999; 10 earned between \$35,000-44,999; 11 earned between \$45,000-54,999; 10 earned between \$55,000-64,999; 54 earned greater than \$65,000; and 21 did not indicate their annual family income. See Appendix L for the means and standard deviations of primary measures for the Validation Sample.

Comparison of Local to "Out of Town" Participants

Descriptive statistics were tallied separately for the British Columbia ($n=80$) and Ontario ($n=39$) samples. For each demographic, the numbers will be reported for the British Columbia and Ontario samples consecutively. Average age was 38.91/43.42, number of years married was 10.1/14.10, number of children was 1.11/1.93. The B.C. sample consisted of 28 men and 52 women, whereas the Ontario sample consisted of 15 men and 24 women. The frequencies for education were as follows: less than grade 9, 0%/2.6% grade 9-13 without certificate 1.3%/7.7%; high school certificate 3.8%/35.9%; trade certificate/diploma 17.5%/7.7%; university degree 66.3%/23.1%; and missing data 11.3%/23.1%. Religious affiliation was reported as follows: Protestant 27.5%/41%; Catholic 21.3%/15.4%; Jewish 3.8%/2.6%;

“other” 31.3%/15.4%; and missing data 16.3%/25.6%. For ethnicity, 81.3%/76.9% were Caucasian and 1.3%/23.1% did not report their ethnicity. The B.C. sample also included 1 East Asian, 4 Asian, and 1 “other” reported ethnicity. For nationality 70%/76.9% were Canadian and 13.8%/23.1% did not report their nationality. The B.C. sample also included 7 landed immigrants, and 5 “other” nationalities. Finally, for family income the frequencies were as follows; 7.5%/2.6% earned less than \$24,999; 3.8%/7.7% earned between \$25,000-34,999; 8.8%/7.7% earned between \$35,000-44,999; 7.5%/12.8% earned between \$45,000-54,999; 8.8%/7.7% earned between \$55,000-64,999; 51.3%/33.3% earned greater than \$65,000; and finally 12.5%/28.2% did not report their income.

Internal Consistency Reliability of the MSDQ-Validation Sample

The internal consistency reliability of the MSDQ was computed for the validation sample ($n=119$) using Cronbach’s alpha. The alphas for the Relationship (.89), Sex (.89), and Money scales (.72) were all within the predicted range. In contrast, the alphas for the Imbalance (.32) and Total scales (.64) indicated low internal consistency reliability. See Table 3 for the correlation matrices and reliability analyses for the scales of the MSDQ. For the Relationship scale, only 1 of the 45 item intercorrelations is below .30, indicating that most items are modestly related on this scale. Similarly, on the Sex scale, most items are related with only 3 of 45 item intercorrelations below .30. In contrast, on the Money scale, 28

of the 45 correlations are below .30 and on the Imbalance scale, only 2 of the 45 correlations are above .30, indicating that the items on these two scales are minimally related.

The internal consistency reliability of the MSDQ-Total was also computed for the 4 scales. See Table 4 MSDQ Scale Inter-correlations. The association between the Relationship and Sex scales is substantial (.60). The other correlations among scales are low, indicating the relative statistical independence of these dimensions of disclosure.

Table 3. Correlation Matrices and Reliability Analyses for the Scales of the MSDQ

Correlation Matrix for the Relationship Scale

	MSDQ1	MSDQ5	MSDQ9	MSDQ13	MSDQ17	MSDQ21	MSDQ25	MSDQ29	MSDQ33	MSDQ37
MSDQ1	1.0000									
MSDQ5	.5269	1.0000								
MSDQ9	.5104	.4491	1.0000							
MSDQ13	.5364	.4214	.3092	1.0000						
MSDQ17	.5007	.3809	.2640	.6198	1.0000					
MSDQ21	.4561	.3404	.3279	.5177	.4602	1.0000				
MSDQ25	.5051	.3019	.2422	.4816	.3802	.3954	1.0000			
MSDQ29	.6352	.5269	.4658	.5364	.5007	.5588	.4104	1.0000		
MSDQ33	.4599	.3197	.3735	.4875	.3873	.5770	.4983	.5250	1.0000	
MSDQ37	.5250	.3840	.3735	.5594	.5397	.5038	.5658	.5250	.6293	1.0000

Alpha = .8911

Standardized item alpha = .8957

Correlation Matrix for the Sex Scale

	MSDQ2	MSDQ6	MSDQ10	MSDQ14	MSDQ18	MSDQ22	MSDQ26	MSDQ30	MSDQ34	MSDQ38
MSDQ2	1.0000									
MSDQ6	.6129	1.0000								
MSDQ10	.4684	.5637	1.0000							
MSDQ14	.5810	.5732	.6395	1.0000						
MSDQ18	.5709	.6720	.5823	.6719	1.0000					
MSDQ22	.3592	.4368	.3644	.4099	.4626	1.0000				
MSDQ26	.3518	.4100	.4292	.3563	.3312	.2723	1.0000			
MSDQ30	.3506	.3514	.3304	.5000	.4265	.3912	.3123	1.0000		
MSDQ34	.2411	.3697	.3854	.3904	.3960	.6026	.3279	.5663	1.0000	
MSDQ38	.3207	.3753	.4896	.4356	.3608	.3308	.7186	.2909	.3416	1.0000

Alpha = .8858

Standardized item alpha = .8864

Correlation Matrix for the Money Scale

	MSDQ3	MSDQ7	MSDQ11	MSDQ15	MSDQ19	MSDQ23	MSDQ27	MSDQ31	MSDQ35	MSDQ39
MSDQ3	1.0000									
MSDQ7	.3413	1.0000								
MSDQ11	.1004	-.0487	1.0000							
MSDQ15	.4033	.3216	-.0513	1.0000						
MSDQ19	.3443	-.0396	-.0210	-.0417	1.0000					
MSDQ23	.5423	.3413	-.0611	.3159	.3443	1.0000				
MSDQ27	-.0350	-.0279	-.0148	-.0294	-.0120	.2424	1.0000			
MSDQ31	.3506	.4477	-.0300	.4234	-.0244	.3506	-.0172	1.0000		
MSDQ35	.1587	.2358	-.0487	.2171	-.0396	.2500	-.0279	.2796	1.0000	
MSDQ39	.2728	.4765	-.0563	.4463	-.0458	.3540	-.0322	.3831	.1852	1.0000

Alpha = .7222

Standardized item alpha = .6639

Correlation Matrix for the Imbalance Scale

	MSDQ4	MSDQ8	MSDQ12	MSDQ16	MSDQ20	MSDQ24	MSDQ28	MSDQ32	MSDQ36	MSDQ40
MSDQ4	1.0000									
MSDQ8	.2885	1.0000								
MSDQ12	.0052	.0061	1.0000							
MSDQ16	.0118	-.1500	.0410	1.0000						
MSDQ20	-.1412	-.0536	.0435	.2456	1.0000					
MSDQ24	-.0039	.0745	-.0110	.0699	.1651	1.0000				
MSDQ28	.0981	.0891	.2200	-.1069	-.0859	-.1850	1.0000			
MSDQ32	.2353	.0922	-.0779	-.0686	-.0088	-.1044	.2758	1.0000		
MSDQ36	-.0334	-.0447	.0881	.1768	.3657	.3898	-.1374	-.0589	1.0000	
MSDQ40	.1470	.2560	-.0681	-.0608	-.0991	-.0159	.2053	.0566	-.1115	1.0000

Alpha = .3161

Standardized item alpha = .3197

Table 4. MSDQ Scale Intercorrelations

	REL1	SEX1	MON1	IMB1
REL1	1.0000			
SEX1	.5961	1.0000		
MON1	.3156	.3067	1.0000	
IMB1	.2085	.2283	.2008	1.0000
Reliability Coefficients		4 items		
Alpha = .6423		Standardized item alpha = .6418		

Internal Consistency Reliability of the ASDC

To check the ASDC's reliability in the validation sample, the internal consistency reliability of the ASDQ was computed for the four scales of the ASDC using Cronbach's alpha. Each scale consisted of 4 items. Coefficient alpha for each scale is reported in Table 5. See Table 6 for the ASDC scale intercorrelations.

Table 5. Internal Consistency Reliability of the ASDC

Scale	Love	Happiness	Anger	Sadness	Total
Alpha	.89	.84	.76	.84	.75

Table 6. Affective Self-Disclosure Questionnaire for Couples Scale Intercorrelations

	ASDCLOVE	ASDCHAP	ASDCANG	ASDCSAD
ASDCLOVE	1.0000			
ASDCHAP	.6763	1.0000		
ASDCANG	.2905	.3363	1.0000	
ASDCSAD	.3380	.3414	.6462	1.0000

Relationship between the MSDQ and the KMSS

It was predicted that the Relationship, Sex, and Money scales of the MSDQ would be significantly positively correlated with marital satisfaction (between $r=.15$ and $r=.50$). Pearson correlations were computed for the relationships between each of these three scales and their relationship to the KMSS. As predicted, each of these scales had significant positive correlations with the KMSS. The correlation between MSDQ-Relationship and the KMSS was $r=.23$, $p<.05$. The correlation between MSDQ-Sex and the KMSS was $r=.24$, $p<.05$. The correlation between MSDQ-Money and the KMSS was $r=.23$, $p<.05$.

Relationship between the MSDQ and the ASDC

It was predicted that there would be a significant relationship between the MSDQ-Total and the ASDC of a magnitude between $r=.50$ - $r=.90$. A significant correlation was found with $r=.53$, $p<.01$. Due to the differential wording on the ASDQ for men and women, the relationship between the MSDQ-Total and the ASDC was also investigated separately for men and women. A significant relationship was found for men ($r=.43$, $p<.01$) and for women ($r=.58$, $p<.01$). Due to the low alpha of the Imbalance scale ($\alpha=.32$), the relationship of the MSDQ-Total and the ASDC was examined with the Imbalance scores removed. The removal of the Imbalance scale led to a significant relationship of $r=.52$, $p<.01$.

Although no specific predictions were made, a post-hoc investigation of the relationship of the subscales of the MSDQ and the

ASDC was conducted. This was partially done due to the modest alpha of the MSDQ-Total (.64), which indicated that the Total score may not be a valid indicator of global disclosure. Rather, the MSDQ may be better viewed as measuring four different aspects of self-disclosure. First, the relationship of the scales of MSDQ and the ASDC-Total scores were examined. A significant relationship was found for each subscale and was as follows: Relationship $r=.48$, $p<.01$, Sex $r=.47$, $p<.01$, Money $r=.21$, $p<.05$, and Imbalance $r=.24$, $p<.01$. The relationship of the MSDQ-Imbalance and each scale of the ASDC was also explored. No relationship was found between the Imbalance scale and ASDC-Love ($r=.10$), or ASDC-Happiness ($r=.15$). A significant relationship was found between MSDQ-Imbalance and ASDC-Sadness ($r=.26$, $p<.01$), and ASDC-Anger ($r=.20$, $p<.05$).

Relationship between MSDQ-Imbalance and the KMSS

One question that was explored was whether the Imbalance scale would have a negative correlation with the KMSS. Contrary to expectations, no relationship was found between MSDQ-Imbalance and the KMSS ($r=-.08$).

Sex differences on the MSDQ

It was predicted that there would be sex differences on the MSDQ-Total, Relationship, and Imbalance scale with women disclosing significantly more than men. Significant sex differences in the predicted direction were found on the Total scale. Non-significant differences in

the expected direction were found on the Relationship and Imbalance scale. See Table 7 for the means and standard deviations for men and women on these 3 scales.

Table 7. Descriptive Statistics for the Total, Relationship, and Imbalance scales

Scale	Women (n=76)		Men (n=43)	
	M	SD	M	SD
Total	31.67	5.37	28.65	7.99
Relationship	8.67	2.00	6.98	3.59
Imbalance	6.53	1.42	6.30	2.22

Responses on each scale were explored for departure from normality and analysed separately for the sample of husbands and wives. For the sample of wives ($n=76$), the results were as follows: MSDQ-Total (skewness=-4.46, kurtosis=2.43); MSDQ-Relationship (skewness=-6.78, kurtosis=5.14); and MSDQ-Imbalance (skewness=-3.04, kurtosis=2.27). For the sample of husbands ($n=43$) the results were: MSDQ-Total (skewness=-2.30, kurtosis=-.74); MSDQ-Relationship (skewness=-2.29, kurtosis=-1.29); and MSDQ-Imbalance (skewness=0.64, kurtosis=0.53).

As each scale appeared to depart from normality, a Lilliefors Test of Normality was performed. The Lilliefors test is a commonly used test that is derived from the Kolmogorov-Smirnov test (SPSS for Windows, 1999). For the sample of husbands and wives, the null hypothesis (assumption that the variable showed normality) was rejected and the

distribution was found to depart from normality for each scale. For husbands, the results were: MSDQ-Total ($K-S = .22, p=.000$); MSDQ-Relationship ($K-S = .25, p=.000$), and MSDQ-Imbalance ($K-S = .23, p=.000$). For wives, the results were: MSDQ-Total ($K-S = .18, p=.000$); MSDQ-Relationship ($K-S = .29, p=.000$), and MSDQ-Imbalance ($K-S = .18, p=.000$).

As the variables departed from normality, a non-parametric test, the Mann-Whitney U test was used to compare sex differences on these three scales (SPSS for Windows, 1999). A Bonferroni correction (.05 divided by 3) was used for a significance level of $p<.02$. For the MSDQ-Total, sex differences were significant ($U=1228.5, p<.02$, two-tailed), with women disclosing significantly more than men. The difference between men and women on the MSDQ-Relationship scale ($U=1269, p<.03$, two-tailed) and the MSDQ-Imbalance scale ($U=1304, p<.06$) was not statistically significant. However, on both of these scales, differences were in the expected direction with women disclosing more than men. See Table 8 for the Mean Rank and Sum of Ranks for husbands and wives.

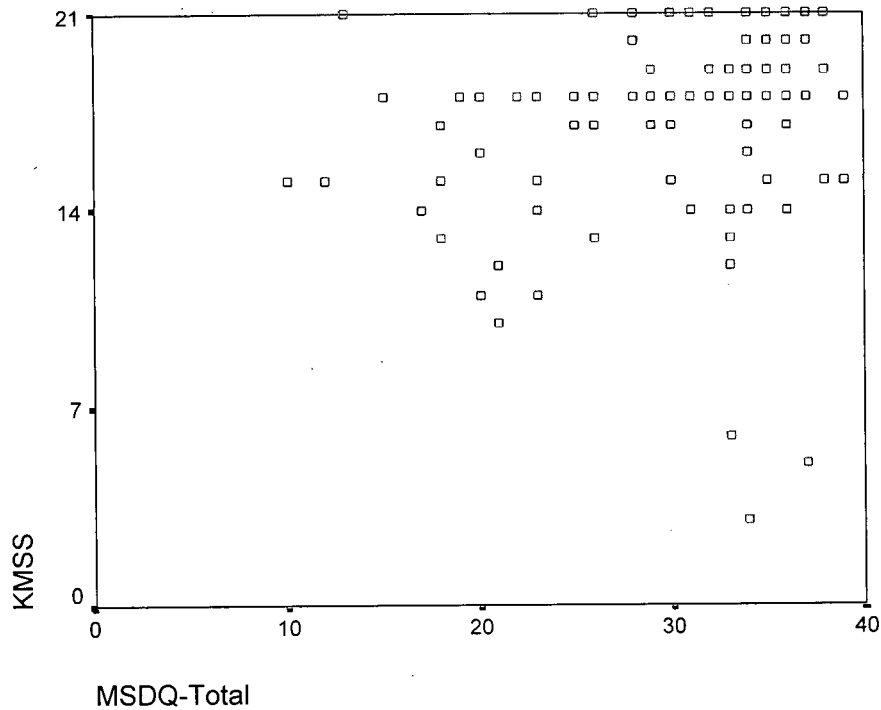
Table 8. Mean Rank and Sum of Ranks for Women and Men on the Total, Relationship, and Imbalance Scale

Scale	Women (n=76)		Men (n=43)	
	Mean Rank	Sum of Ranks	Mean Rank	Sum of Ranks
Total	65.34	4965.50	50.57	2174.50
Relationship	64.80	4925.00	51.51	2215.00
Imbalance	64.34	4890.00	52.33	2250.00

Relationship between MSDQ-Total and the KMSS

The relationship between the MSDQ-Total and the KMSS was investigated. The Pearson correlation between the MSDQ-Total and the KMSS was $r=.23$, $p<.05$. A scatter plot was created in order to examine the data for a curvilinear relationship between the MSDQ-Total and the KMSS (See Figure 1). Inspection of the data indicates a restricted range of responses on these two measures with the majority of participants scoring above 10 on the KMSS and above 20 on the MSDQ. The KMSS has a possible range of 3-21, while the MSDQ has a range of 0-40.

Figure 1. Scatterplot of the Relationship between the MSDQ and the KMSS



Relationship between the MSDQ and the Marital Conventionalization Scale

In order to investigate whether the MSDQ was susceptible to social desirability bias, the relationship between the MSDQ-Total and the MCS was investigated. The Pearson correlation was $r=.18$, $p<.05$. As the MSDQ-Total score had low internal consistency, the relationship of the four MSDQ scales and the MCS were investigated to determine whether a different relationship would appear on the subscales. The Relationship and Sex scales indicated a similar relationship with the MCS ($r=.22$,

$r=.20$, $p<.05$), while the Money ($r=.05$) and Imbalance scales ($r=-.10$) had no relationship with the MCS.

Valence of Self-Disclosure

In order to explore the effect of valence of disclosure (whether disclosure is positive or negative), several post-hoc tests were conducted. First, the relationship between each scale on the ASDC and marital satisfaction, as measured by the KMSS, were explored. Contrary to expectations, a significant negative relationship was not found between ASDC-Anger and the KMSS, $r=-.02$, or for ASDC-Sadness and the KMSS $r=.04$. As predicted, a significant positive relationship was found between ASDC-Love and the KMSS, $r=.40$, $p<.01$, and for ASDC-Happiness and the KMSS, $r=.34$, $p<.01$.

As previously discussed, individual questions from the MSDQ were selected that had clear negative/positive valence in order to explore their relationship with the KMSS. To select the questions, 10 individuals were asked to look at the MSDQ and asked to select questions on this measure that they felt were clearly positive/negative. Questions that all 10 individuals selected were chosen for investigation. Items 4, 8, 16, 24, and 36 were unanimously chosen as negative disclosures.

A modest significant negative correlation was found for item #24 (I often criticize my spouses opinion) and the KMSS, $r=-.31$, $p<.01$, and for item #36 (I sometimes refuse to listen when my spouse wants to talk) $r=-.20$, $p<.05$. No relationship was found between items # 4, 8, and 16 and

the KMSS. Conversely, it was predicted that items # 11, 20, 30, and 34 would have a significant positive correlation with the KMSS. Contrary to expectations, none of these questions had a significant relationship with the KMSS.

CHAPTER V

DISCUSSION

In this section of the paper, the major research findings are discussed as they relate to each hypothesis and research question that was posed. Recommendations for further instrument development, limitations of the current study and, finally, implications for counselling and research are also addressed.

Overall findings indicate that the MSDQ shows some promise as a measure of Marital Self-Disclosure. However, the results must be interpreted with caution because of the use of a non-random sample and the restricted range on the primary measures under investigation. There are some problem areas with this measure that will require further development and investigation. The major findings that support the reliability and validity of the MSDQ were that the Relationship, Sex, and Money scales indicated high internal consistency in the validation sample. The Sex, Money, and Total scales showed moderate stability over a two-week period. The Relationship, Sex, Money, and Total scales of the MSDQ were all modestly related to marital satisfaction as measured by the KMSS. The MSDQ was significantly related to the ASDC, supporting the concurrent validity of the MSDQ. The finding that this correlation was stronger in magnitude than that between the MSDQ and the KMSS further supports the construct validity of the MSDQ.

As stated, there are also areas that will require further development in order to strengthen the reliability and validity of the MSDQ. The Imbalance scale currently lacks reliability and validity. The current study also indicates that the use of a Total self-disclosure score on the MSDQ may not be warranted. These findings are discussed in greater detail in this section of the paper.

Internal Consistency Reliability of the MSDQ

RQ1. The internal consistency reliability for this sample was predicted to range between .68 (Imbalance) and .91 (Relationship) +/- 5 points for the MSDQ-Total and the four subscales.

For the sample of test-retest participants ($n=41$) the Relationship, Sex, and Money scales had alphas within the predicted range at Time 1 administration. The Imbalance scale ($\alpha = .61$) was lower than expected and did not fall in the predicted range. Also, in contrast to predictions, the MSDQ Total scale had an alpha of .43. At Time 2 administration, the Sex scale ($\alpha = .90$) and Money scale ($\alpha = .81$) were in the expected range but the Relationship ($\alpha = .55$), Imbalance ($\alpha = .40$) and Total score ($\alpha = .24$) were all much lower than expected.

The finding of low reliability on the Imbalance scale suggests that this scale is problematic and as Waring et al. (1998) suggest, the lower coefficient alpha may reflect its measuring two distinct yet related aspects of marital self-disclosing behaviour: both the perception of one's

disclosing behaviour and the perception of one's listening. In examining the item inter-correlation matrix for the Imbalance Scale, 22 out of 45 item inter correlations are below .10, and 19 of the correlations are negative. These relationships indicate that the items on this scale are minimally related to each other. The low alpha suggests that the Imbalance scale is not measuring a unitary construct.

Furthermore, as Waring et al. (1998) suggest, the low alpha found for the MSDQ-Total score calls in to question the use of the Total score as a composite measure of overall self-disclosure. Although the content of the Relationship and Sex scales appear to be distinct, the association between these scales was substantial within this sample (.60) as with the sample of participants in the development of the MSDQ (.61). This suggests the possibility that these two scales may be tapping in to a unidimensional experience of self-disclosure. The other correlations among scales are low, indicating the relative statistical independence of these dimensions of marital self-disclosing behaviour.

Internal consistency reliability was also computed for the validation sample ($n=119$) with similar findings. There was a high alpha for the Relationship ($\alpha = .89$), Sex ($\alpha = .89$) and Money scales ($\alpha = .72$) and low internal consistency reliability for the Imbalance scale ($\alpha = .32$), and MSDQ-Total ($\alpha = .64$). Once again, the low alpha for the Imbalance and MSDQ-Total scales suggests that these scales may not be measuring a unified construct and therefore have

questionable validity in terms of representing the construct they purport to measure.

Test-retest reliability of the MSDQ

H1. The MSDQ-Total and the four subscales were predicted to have moderate stability over a two-week period ($r > .70$).

As hypothesized, the Sex ($r = .89$), Money ($r = .78$), and Total ($r = .86$) scales of the MSDQ indicated moderate stability over a two-week period. However, the stability of the Relationship ($r = .69$) and Imbalance scales ($r = .66$) were lower than expected.

One possible explanation for the low stability of the Imbalance scale is that it had low internal consistency reliability at Time 1 and Time 2 administrations. Similarly, although the Relationship scale indicated stability at Time 1, it had low internal consistency reliability at Time 2. It may be the case that some of the items on these scales are not reflective of the construct they were designed to represent. If the scales are not internally consistent, it follows that they would not show consistency over time. For the Relationship scale, there was also a restricted range of responses with a lack of participants reporting low self-disclosure. On the Relationship scale during Time 1 and Time 2 administrations, scores ranged from 5 to 10 out of a possible 0 to 10. Such restricted range likely depressed the magnitude of correlations for this scale.

Another explanation for this finding is that the test-retest sample consisted of many non-married (dating) participants, which may have

affected the stability of their scores over time. Research indicates that, as relationships develop, self-disclosure increases in breadth, depth, and frequency (Berg & Derlega, 1987; Jourard, 1971). Other research has found self-disclosure to be less strictly reciprocal, but more flexible, in well-established relationships, suggesting that a more consistent pattern is established over time (Fitzpatrick, 1988).

Relationship between the MSDQ and the KMSS

H2. Relationship, Sex, and Money Subscales of the MSDQ were expected to be significantly positively correlated with marital satisfaction as measured by the KMSS (between $r=.15$ and $r=.50$).

Correlations were found between these MSDQ scales and the KMSS that reached statistical significance at $p=.05$ and support the construct validity of the MSDQ. However, these correlations were only modest: MSDQ-Relationship $r=.23$; MSDQ-Sex, $r=.24$; and MSDQ-Money, $r=.23$. On average, scores on these three MSDQ scales account for approximately 5% of the shared variance with marital satisfaction as measured by the KMSS. One reason for the low magnitude of this correlation may be the restricted range of responses on each of these measures.

Although these correlations are lower than expected, they are in the predicted range and consistent with findings from other studies examining the relationship between self-disclosure and marital satisfaction. For example, in previous research examining the

relationship between disclosure by one's spouse and marital satisfaction, Balswick (1988) using the ASDC and the Dyadic Adjustment Scale found a significant positive relationship between the perceived amount of love, happiness, and sadness disclosure by one's spouse and marital adjustment, $r = .14 - .37$, $p < .05$. Similarly, Hendrick (1981), using Altman and Taylor's (1966) Social Penetration scale as a measure of disclosure and the Marriage Adjustment Inventory (Manson & Lerner, 1962) found a relationship of $r = .30$, $p < .01$ in a sample of 51 couples. More recently, Sokolski and Hendrick (1999) examined the relationship between the Self-Disclosure Index (Miller, Berg, & Archer, 1983) and the Relationship Assessment Scale (Hendrick, 1988) and found a slightly stronger magnitude of correlation of $r = .36$, $p < .05$ for women, and $r = .50$, $p < .05$ for men.

Another possible reason that several previous studies indicate a stronger correlation between self-disclosure and marital satisfaction than was found in the current study may be due to the fact that some measures of marital satisfaction include a self-disclosure component in their very definition (Boland & Follingstad, 1987). For example, Spanier's (1976) Dyadic Adjustment Scale includes the concept of "affectional expression," which is similar to the construct of self-disclosure. Some researchers argue that this practice leads to construct overlap and spuriously high correlations between measures (Fincham & Bradbury, 1987).

Relationship between the MSDQ and the ASDC

H3. Total scores on the MSDQ were expected to be significantly positively correlated with Total scores on the ASDC (between $r=.50$ and $r=.90$).

The relationship between the MSDQ and the ASDC was as predicted ($r=.53$, $p<.01$). These two measures have a shared variance of 25%. This finding supports the concurrent validity of the MSDQ. The finding that this correlation was stronger in magnitude than that between the MSDQ and the KMSS further supports the construct validity of the MSDQ. Although in the predicted range, the magnitude of this correlation is slightly lower than was expected. There are several possible reasons for this finding.

First, as previously mentioned, the restricted range of responses may have depressed the correlation between these measures. Another problem is that the Total score of the MSDQ includes the Imbalance scale, which, as previously discussed, is problematic. For this reason, the relationship between the MSDQ-Total minus the Imbalance scale and the ASDC was investigated. The removal of the Imbalance scale did not change the magnitude of the correlation ($r=.52$, $p<.01$). Also, as previously mentioned, the low coefficient alpha (.64) of the MSDQ Total score calls in to question the use of this score as a composite measure of self-disclosure.

The moderate magnitude of the correlation may also reflect the fact that the MSDQ and the ASDC are measuring slightly different underlying constructs. The MSDQ assesses breadth and depth of disclosure regarding Relationship, Sex, Money, and an Imbalance in self-disclosure, while the ASDC measures the emotional expressiveness of Love, Happiness, Sadness, and Anger. Most researchers agree that self-disclosure is a multidimensional construct (Chelune et al., 1979; Derlega et al., 1993; Jourard, 1971).

Several post hoc tests were conducted to explore the proposition that the MSDQ and the ASDC measure variations of self-disclosure. Certain scales on the MSDQ and the ASDC had stronger relationships than others, supporting the notion that each scale is measuring different aspects of self-disclosure. For example, the MSDQ-Relationship and ASDC-Love had a moderate correlation of $r=.46$, $p<.01$. In contrast, the MSDQ-Imbalance and ASDC-Love had a minimal relationship ($r=.10$).

Along similar lines, the Relationship and Sex scales of the MSDQ were found to have a stronger relationship with the ASDC than the Money and Imbalance scales. It is interesting that the MSDQ-Imbalance scale was minimally related to ASDC-Love ($r=.10$), and ASDC-Happiness ($r=.10$) but had a stronger relationship with ASDC-Sadness ($r=.26$, $p<.01$) and ASDC-Anger ($r=.20$, $p<.05$). Although these results must be interpreted with caution due to the low reliability of the Imbalance scale, they highlight findings in previous research that suggest valence of

disclosure is an important dimension to consider when examining the relationship between self-disclosure and other conceptually related measures (Derlega et al., 1993).

Another possible reason for the low magnitude of the correlation between the MSDQ-Total and the ASDC may be attributed to inherent problems with the ASDC. Several participants recorded their comments on the ASDC. Many comments were in reference to the differential wording on the ASDC between men and women. These comments have been included as written in order to highlight some of the potential problems with the ASDC. From women came the following comments; "I don't feel these emotions towards him;" "why is the wording different;" "my husband is not the source of my hate, grief, or rage, so I do not feel these emotions towards him;" "I don't recall ever feeling hate/grief towards my husband but if I ever would, I am sure that I would tell him;" "sorrow and hate questions are not very applicable;" "this is a really weird survey;" "hate and grief questions not applicable;" "I've never felt hatred towards my husband;" "hate questions not applicable." Several men commented as well: "these questions are dumb in a good relationship;" "I don't ever hate;" "assumed frequency of expression, not frequency of emotion."

The developer of this questionnaire (Balswick, 1975) indicates that *similar* questions were developed on the wife form. However, he provides no rationale for this differential wording. While the husband form asks

about expression of emotions to their spouse, the wife form asks about expressing feeling felt *towards* their spouse. Compounding this difficulty is the fact that subsequent researchers who have used the ASDC in their research, also do not comment on the differential wording of the forms or the potential implications of this difference (Davidson et al., 1983; Dosser et al., 1983). Obviously this issue is of concern and needs to be investigated before the ASDC is used in future studies on self-disclosure.

It is interesting to note that although the magnitude of the relationship between the MSDQ and the ASDC is slightly lower than was expected, it fares better than the concurrent validity of other well established self-disclosure measures. Other widely used scales have had serious problems with their concurrent validity (Miller et al., 1983). For example, in its various forms, the classic Jourard Self-Disclosure Questionnaire has been shown to be positively related (Jourard & Resnick, 1970; Pedersen & Breglio, 1968), not at all related (Burhenne & Mirels, 1970; Ehrlich & Graeven, 1971), and even negatively related to self-disclosure (Doster & Strickland, 1971). The Chelune Self-Disclosure "Situations Survey (Chelune, 1976) fares little better: Though this measure has been shown to be positively related to self-disclosure for men in an interview situation, it was negatively related for women in the same situation. Therefore, the overall status of self-disclosure measures indicates the common use of measures with questionable validity.

Viewed within the existing research literature, the finding of a moderate relationship between the MSDQ and the ASDC with the current sample shows promise for its validity. Further research to determine the relationship between the MSDQ and various self-report, observational, and behavioural measures of self-disclosure in other samples will help to provide a more comprehensive picture of how the MSDQ fits in to the self-disclosure literature.

Relationship between the Imbalance Scale and the KMSS

Question 1: Do scores on the Imbalance Scale of the MSDQ have a negative correlation with Total score on the KMSS?

The relationship between the MSDQ-Imbalance scale, intended to measure reciprocity of disclosure, and the KMSS was investigated as previous research has indicated that reciprocity is an important dimension to consider when exploring the relationship between self-disclosure and marital satisfaction (Davidson et al., 1983; Hansen & Schult, 1984; Levinger & Senn, 1967). Reciprocity of self-disclosure between spouses has been found to be positively associated with marital adjustment (Davidson et al., 1983; Hansen & Schuldt, 1984). Other research has found self-disclosure to be less strictly reciprocal, but more flexible, in well-established relationships (Fitzpatrick, 1988).

The construct underlying the MSDQ-Imbalance scale is defined as: a reflection of non-reciprocal disclosure where disclosure is dominated by the reporting spouse (Waring et al., 1998). By this definition, one would

expect a negative correlation between one's score on the Imbalance scale and marital satisfaction. Contrary to this expectation, no relationship was found between MSDQ-Imbalance and the KMSS, $r = -.08$. There are several possible explanations for this finding.

The first problem is that the Imbalance scale has low reliability ($\alpha = .32$). Second, its very definition is problematic for several reasons. When one examines the questions on this scale it becomes apparent that this scale lacks face validity. Intuitively, none of the questions appear to assess reciprocity of disclosure nor whether disclosure is *dominated* by the reporting spouse. The items on this scale have been included in Table 9, for closer inspection. Obviously, changes need to be made to this scale to improve its reliability and validity so that the content reflects the construct that is under investigation. The findings in this study do not support the reliability and validity of the Imbalance scale.

Table 9. MSDQ-Imbalance Scale

1. I disclose to my spouse what I find to be the most boring and unenjoyable aspects of my work or studies
2. I disclose to my spouse a lot of sad things
3. I wouldn't want my close friends to know everything about me that my spouse knows
4. There are some times when I do not listen to my spouse
5. I will listen any time if my spouse wants to talk to me
6. I often criticize my spouse's opinion
7. I disclose to my spouse what I would appreciate most as a present
8. I let my spouse know about my need for privacy
9. I sometimes refuse to listen when my spouse wants to talk
10. I have discussed with my spouse how I feel about myself

Sex Differences on the MSDQ

Question 2: Do women disclose significantly more than men on the Relationship, Imbalance, and Total scale of the MSDQ?

Support for the construct validity of the MSDQ comes through the presence of sex differences in self-disclosure. This finding replicates that found in the development of the MSDQ (Waring et al., 1998) and is consistent with much of the previous research literature on sex differences (Altman & Taylor, 1973; Dindia & Allen, 1992). Sex differences were significant for the MSDQ-Total scale ($U=1228.5$, $p<.02$, two-tailed). Although sex differences were not significant for the Relationship ($U=1269$, $p<.03$, two-tailed), and Imbalance Scale ($U=1304$, $p<.06$), they were in the expected direction with women disclosing more than men. However, these results need to be interpreted with caution. The current study used a non-random sample and it is possible that the participants who chose to take part in the study differed from those who did not, accounting for the significant difference between men and women (Brehm, 1985).

The lack of statistically significant differences on the Imbalance scale, such as that found by Waring et al. (1998), could be due to inherent problems with this scale that have previously been discussed. Another possibility exists that there are no sex differences in reciprocity of self-disclosure. Although this author could find no self-disclosure research that specifically examines sex-differences in *reciprocity*, a

number of studies cast doubt on the general notion of sex differences in self-disclosure (Annicchiarico, 1973; Shapiro & Swensen, 1977).

Rubin et al. (1980) studied the self-disclosure patterns of dating couples and found that gender differences in self-disclosure depend to a great extent on what type of information is being disclosed. Morton (1978) studied self-disclosure in married couples and found that overall, females disclosed more than males. However, he found that when males did self-disclose, most of what they said was factual and non-emotional. Dindia and Allen (1992) conducted a meta-analysis of sex differences in self-disclosure and found that, overall, women tend to disclose more extensively and personally than men in a variety of relationship contexts.

Contrary to some of these findings, Merves-Okin et al. (1991) found that husbands and wives gave similar responses to instruments measuring attitudes toward self-disclosure and verbal expression of feelings. Likewise, Antill and Cotton (1987) reported that husbands and wives generally disclosed the same amount of information. In some circumstances, men have been found to disclose more than women. Research by Derlega, Winstead, Wong, and Hunter (1985) found that men exceed women in self-disclosure. These researchers suggest that men initially disclose in order to control the initial development of a relationship. In their study, males disclosed more intimately than females to an opposite-sex partner. This study indicates the importance

of the social context in understanding gender-related patterns of self-disclosure.

These inconsistencies in the literature regarding sex-differences may partially stem from researchers' failure to specify results in terms of the dimensions of self-disclosure that have been assessed in a particular study (Derlega et al., 1993). Much of this confusion could be reduced if, in the future, investigators would discuss self-disclosure according to its various dimensions rather than in "generic" terms (Berg et al., 1979).

Relationship between MSDQ-Total and the KMSS

Question 3: Are Total scores on the MSDQ positively related to scores on the KMSS?

A relationship of $r = .23$, $p < .05$, was found between the MSDQ-Total and the KMSS. However, given the questionable validity of the Total score, this finding becomes difficult to interpret. As mentioned in the Results section, there was a restricted range of responses on both of these measures that may have depressed the correlation obtained in the current study. When examining the scatterplot on page 61, it does not appear that there is a curvilinear relationship present. However, as a limited number of respondents reported low satisfaction/low disclosure, a curvilinear relationship between these two variables can not be ruled out by this study. It is interesting to note the three data points on the scatterplot that indicate high self-disclosure and low marital satisfaction. Previous research has indicated that distressed couples may engage in

negative self-disclosure during relationship disengagement (Tolstedt & Stokes, 1984), these three responses may reflect this phenomenon.

Relationship between the MSDQ and the MCS

Question 4: Is the MSDQ susceptible to social desirability bias?

The current study indicates that the MSDQ is minimally susceptible to marital conventionalisation. A correlation of $r=.18$, $p<.05$ was found between the MSDQ-Total and the MCS, accounting for about 3% of the shared variance on these two measures. While these results must be interpreted with caution due to the low reliability of the MSDQ-Total score, there are several possible interpretations for this modest relationship. Although the relationship between self-disclosure and marital conventionalisation has not been widely investigated, numerous studies have found a relationship between social desirability and marital satisfaction (Edmonds, 1967; Edmonds et al., 1972; Filsinger & Wison, 1984; Hansen, 1981; Schumm et al., 1986). Such findings have led to a debate over marital conventionalisation and its meaning.

Some researchers argue that a correlation between marital satisfaction and marital social desirability is probable regardless of the validity of the scale used (Schumm et al., 1981; Schumm et al., 1986). According to these researchers, a significant positive correlation would seem unavoidable even if the sample did include participants who describe their marriage as happy but not perfect. Schumm et al. (1986) found a correlation between the MCS and the KMSS of .60. Other

studies have found the correlations between the KMSS and social desirability to be in the .42 - .54 range (Fowers & Applegate, 1995). Therefore, the shared variance between the MCS and the KMSS ranges between 17.6% and 36% in previous studies. Hansen (1981) purports that conventionalisation and adjustment each contaminate the measure of the other, with conventionalisation making a genuine contribution to adjustment scores. These findings suggest that marital satisfaction scales are problematic because they are contaminated by social desirability.

Other researchers have taken a different stance and argue that high correlations between "social desirability" and satisfaction scales occur because Edmond's scale is not a social desirability scale, but rather a poor scale of marital quality (Russell & Wells, 1992). These researchers state that items on this scale are extreme and are examples of a poor mode of "binary alternatives" and that such forced-choice techniques may not capture the true perception of an average person in a good marriage. Qualitative comments on the MCS in the current study support this position. One participant wrote "What does "perfect success" mean?" Another recorded "this seems really black and white." Finally, another wrote "Is it possible to answer these questions any other way?"

Recent research has set out to examine the nature of the relationship between marital conventionalisation and marital

satisfaction. Fowers and Applegate (1995) conducted a study to directly examine whether marital conventionalization scales measure a social desirability response bias. Their study represents the first direct examination of Edmonds' hypothesis. Confirmatory factor analytic results with 101 married participants did not support his conceptualisation. An alternative model that treated marital conventionalisation as another measure of marital satisfaction was supported in the confirmatory factor analysis. These results raise questions about the use of marital conventionalisation scales as validity scales in marital quality measurement.

Though there is mixed empirical evidence regarding the relationship between social desirability and scales used by this study, it is still important to be aware of social desirability as a potential confound. It is interesting to note that in the current study, the magnitude of the correlation between the MSDQ and the MCS ($r=.18$) was very similar to the relationship between the MSDQ and the KMSS ($r=.23$). This finding supports the possibility that the MCS is a poor indicator of marital quality as suggested by Russell and Wells (1992).

Also, in this study, the relationship found between the MSDQ and the MCS ($r=.18$) was more moderate than the relationship between the KMSS and the MCS ($r=.51$). The MCS and the KMSS had 25% shared variance, while the MCS and the MSDQ shared only 3% variance. In terms of the other MSDQ scales, the Relationship ($r=.22$, $p<.05$) and Sex

scales ($r=.20$, $p<.05$) had similar moderate correlations with the MCS, while the Money ($r=.05$) and Imbalance scales ($r=-.10$) had no relationship with the MCS. It is quite promising that the MSDQ is far less susceptible to social desirability than other well-established and respected measures of satisfaction.

Valence of Self-Disclosure

Question 5: Is Valence an important dimension to include in a self-disclosure measure?

It was hoped that this study might help to shed some light on the importance of including valence of disclosure in a marital self-disclosure measure. In their review of the literature on the relationship between communication and marital satisfaction, Boland and Follingstad (1987) write that the valence of self-disclosure has yet to be included in a comprehensive investigation of all the relevant factors of self-disclosure. Although the MSDQ does not explicitly include this dimension, there were several questions that were selected as indicating positive/negative valence of content. The ASDC also includes two scales that assess positive disclosure (Love and Happiness) and two scales that assess negative disclosure (Sadness and Anger).

Although, as expected, a significant positive relationship was found between ASDC-Love/ASDC-Happiness and the KMSS, no relationship was found between ASDC-Anger/ASDC-Sadness and the KMSS. On the MSDQ, the only individual items found to be significantly related to the

KMSS were item #24 (I often criticize my spouses opinion) and item #36 (I sometimes refuse to listen when my spouse wants to talk), which produced negative correlations. These findings highlight an interesting area of debate by marital therapists and researchers in the area of self-disclosure: namely whether negative self-disclosure is detrimental to marital satisfaction.

Although there are exceptions, most research findings suggest that couples who engage in a high frequency of negative communication behaviours and patterns are substantially more likely to be dissatisfied with their marriage (Chelune et al., 1984; Davidson et al., 1983; Gottman & Krokoff, 1989; Noller & Fitzpatrick, 1990; Pittman et al., 1983). The findings in the current study that negative disclosures have either no relationship with marital satisfaction (ASDC-Sadness, ASDC-Anger) or negative relationships with marital satisfaction (MSDQ #24, #36) are consistent with these previous findings.

Recommendations for Further Instrument Development

The current study indicates that the use of a Total self-disclosure score on the MSDQ may not be warranted due to the moderate alpha of the Total score. Rather, the MSDQ is better viewed as a multidimensional measure that assesses four relatively independent topics of self-disclosure to one's spouse. The major finding in terms of MSDQ development is that the Imbalance scale lacks reliability and validity. It needs to be improved so that the item content reflects the

targeted construct. Some of the current items will likely need to be discarded and new ones added that are reflective of the definition of the scale.

Some areas for future exploration and development of the MSDQ came from the participants. Several of those who completed the Time 1 administration of the test-retest reliability of the MSDQ but not the second, indicated their thoughts on the questionnaire. One participant recorded “can’t do true/false on this,” “Perhaps a Likert scale would be better,” “Answer sheet unclear,” “Questions repeat every 4.” This same participant also recorded “bad question” for item 3 and item 7. Another participant wrote, “same questions repeat,” “not interesting to complete,” “confusing.” These comments highlight some possible avenues for further research with the MSDQ. Several participants verbally commented that they found it quite difficult to answer many of the questions in a true/false format.

Another problem with this format is the claim by Waring et al. (1998) that the MSDQ measures depth and breadth of self-disclosure. Although breadth of self-disclosure is reflected across four content areas, one could argue that, given the true/false response format, depth (the intimacy level of disclosure) is not addressed by this measure. It is misleading to suggest that a higher score on a particular scale indicates that disclosure is more private/intimate, as each statement has not been rated according to its intimacy level. Once again, this provides another

possible avenue for clarification and investigation in future research with the MSDQ.

Finally, one issue worth mentioning is whether the MSDQ-Money scale actually represents a new scale. Six of the 10 items on the Money scale are identical to those from the Money scale on the JSDQ (Jourard & Lasakow, 1958) and 2 questions on this scale are from the Tastes and Interests scale of the JSDQ. A further concern with this scale is that some of these particular questions may have been better suited to their original response format of: have told the person nothing, have talked in general terms, have talked in full and complete detail, have lied or misrepresented myself. Using a true/false format becomes particularly difficult for questions including more than one statement. For example, question #35 states "I disclose to my spouse whether or not I gamble and if so, the way I gamble and the extent of it." Several participants commented that they found the answer sheet to be confusing. A Likert response format may make the MSDQ easier to administer and interpret.

Possible Limitations of this Study

The present research involved comparison and correlations of self report data only, and one measure for each construct was used. This approach limits the detail and richness of information obtained (Brehm, 1985). Subjective data from the insider's perspective also has several known problems such as: tenuous relations to behaviour and interaction; social desirability concerns; memory distortions; and

differential use of scale boundaries (Brehm, 1985). For this reason, further study of convergent and discriminant validity of the MSDQ with observer ratings and/or behavioural measures is indicated.

Second, because the current study utilized a convenience sample of a moderate size, replication of results with larger samples sizes and greater statistical power would serve to confirm the generalizability of the present findings. As samples were drawn from various places in order to maximize demographic diversity, the possibility exists that the participants from different sites represented different populations. However, other established tests such as the Strong Interest Inventory (SII; Harmon, Hansen, Borgen, & Hammer, 1994) have also employed similar non-random samples in test construction and validation. When developing their occupational codes, Harmon et al. (1994) used various strategies to target names of people employed in various occupations. Sources of names varied with occupation and included professional directories, mailing lists, lists of employees, registered members of various groups, and firms or agencies.

In regards to the reliability participants, it is difficult to know if there were ramifications as a result of using graduate students. As these participants were currently taking research methodology courses, it is difficult to know how their level of test sophistication may have affected their responses in the current study. Although random sampling in the present study was not possible due to constraints of time and money, a

lack of representativeness in any sample poses a serious threat to the ecological validity of marital research (Boland & Follingstad, 1987). Convenience sampling tends to rely heavily on middle-class respondents. Research indicates that individuals value communication with a spouse differently, depending on such factors as occupation, education, and social class (Brehm, 1985). In addition, the majority of the present sample was Caucasian, and therefore, the findings may not generalize to members of other ethnic cultures. Although attempts were made to utilize a heterogeneous sample, this study suffered from a restricted range of responses on the primary measures used in the study, with a small number of participants reporting low self-disclosure and marital dissatisfaction. This lack of variability likely depressed the correlations under investigation.

As the MSDQ only covers breadth and purportedly depth of self-disclosure, valence and reciprocity of self-disclosure were not effectively addressed by this measure. Although previous research has used correlations between spouses' scores as a measure of reciprocity, this practice is questionable as it confuses reciprocity with base rates of disclosure (Boland & Follingstad, 1987). More specific predictions regarding the interaction of the MSDQ with satisfaction became somewhat difficult given that valence and reciprocity have been established as important predictors of intimacy and satisfaction in

previous literature (Davidson et al., 1983; Tolstedt & Stokes, 1984; Waring et al., 1994).

Finally, the concurrent measure of self-disclosure, the ASDC, turned out to be problematic due to the differential wording on the husband and wife form. It is difficult to know whether the low magnitude of correlation between the MSDQ and the ASDC might have been due to problems inherent in the ASDC. Further research to examine the relationship between the MSDQ and alternate measures of self-disclosure will be necessary in order to gain confidence in the concurrent validity of the MSDQ.

Implications for Counselling

Facilitating communication in therapy as a means to increase marital satisfaction is a strategy employed by many therapists. For example, the traditional Behavioural Marital Therapy (BMT) model holds that couples should be taught how to address negative issues in their relationship as well as how to consistently express positive feelings to each other. As a result, most therapies based on this model have primarily emphasized teaching couples to communicate as their main intervention (Gordon et al., 1999). Despite evidence that these interventions are successful at teaching couples these skills, there is mixed evidence that these skills have a significant impact on marital adjustment (Gordon et al.).

One cognitive marital therapy called Enhancing Marital Intimacy

Therapy specifically targets self-disclosure as a technique to enhance intimacy between spouses (Waring, 1988). Based on findings from the self-disclosure literature as well as clinical experience, Waring et al. (1994) suggest that increasing the amount and depth of self-disclosure in a reciprocal pattern between spouses is a technique that might prove effective in marital therapy designed to increase marital adjustment. This therapy provides a promising avenue for facilitating intimacy and satisfaction yet to date has received inconsistent empirical evidence as to its effectiveness (Waring et al., 1990; Waring et al., 1994).

Emotionally Focussed Therapy (EFT) has also received increased empirical support regarding effectiveness (Dandeneau & Johnson, 1994). A critical component of this therapy is the disclosure of emotion to one's spouse. In EFT, partners are encouraged to interact directly with each other in the sessions and particularly to explore and disclose their feelings. EFT has been found to be generally effective in alleviating marital distress (Johnson & Greenberg, 1985) and some findings have suggested that EFT may enhance certain kinds of intimacy (Dandeneau & Johnson, 1994; Johnson & Greenberg, 1985).

What each of these therapies has in common is the goal to facilitate disclosure to one's spouse with the underlying assumption that this will enhance marital satisfaction. Thus far, the communications field has lacked a reliable and valid measure of marital self-disclosure, which makes this construct difficult to research. This study indicates

that the MSDQ is a promising new measure but still needs some development, particularly with the Imbalance scale. A psychometrically sound instrument is needed in this area in order to address whether therapeutic changes in self-disclosure are associated with improvements in intimacy and marital adjustment. Furthermore, the establishment of a valid measure of self-disclosure is necessary in order to bring conceptual clarity to future research in this area. Several authors have suggested that many of the discrepancies in findings are due to the lack of well-validated measures (Berg & Derlega, 1987; Prager, 1995).

The current study indicates preliminary validity for the Relationship, Sex, and Money scales of the MSDQ. Each of these scales exhibited respectable internal consistency reliability in the current validation sample. Practitioners may find some value in using these scales as qualitative tools for discussing specific problem areas during marital counselling (Waring et al., 1998). For example, one could administer these scales as a starting point for discussion of these topics and whether they are relevant to a couple's marital concerns. However, the use of these three scales for marital assessment is not currently indicated for several reasons. First, as previously mentioned, the assumption that the MSDQ can provide a measure of *depth* of communication in these areas is problematic. Future research will be necessary to see if this is a valid interpretation of the measure. Second, further research with a more representative sample of participants

exhibiting a wider range of variability on the measures of interest will be necessary before the adoption of this questionnaire as an assessment device can be justified. At this time, the use of the Imbalance and Total scales in a counselling setting is not indicated in any capacity.

Modifications will be necessary on these scales, as the current study indicates that they lack reliability and validity.

Implications for Research

The last 20 years have seen great strides in research assessing the link between communication and marital satisfaction (Boland & Follingstad, 1987). However, the continuation of the widespread use of different and often non-standardized assessment devices makes comparisons of results difficult. The MSDQ provides a snapshot of disclosure across four content areas in the marital relationship, yet disclosure is a complex construct that is affected by numerous variables.

Self-disclosure serves different functions or goals in a relationship (Archer, 1987; Miller & Read, 1987). Although the MSDQ was designed to tell us how much an individual discloses regarding their relationship, sex, and money, it does not illuminate why a particular individual is self-disclosing. Some of the various goals of self-disclosure are: relationship development and maintenance, social validation, getting feedback from others, and getting help with problems. Additionally, individuals may consider their own, as well as their partner's, interests in deciding whether to divulge or be the recipient for certain information (Derlega et

al., 1993). In successful relationships, partners negotiate what they talk about with one another (Coupland, Couplan, Giles, & Wieman, 1988).

There are numerous dimensions of self-disclosure (see descriptions by Chelune, Skiffington, & Williams, 1981; Coupland et al., 1988; Holtgraves, 1990), including the valence of information divulged, voluntariness of information disclosed, the reward value the information provided, informativeness of the message, and the reasons or attributions for the disclosure.

Previous research has indicated that self-disclosure is crucial for marital satisfaction. More information is required to identify the types of disclosure that are good for marriage (Boland & Follingstad, 1987). The MSDQ assesses descriptive self-disclosure (information and facts about oneself) rather than evaluative self-disclosure (expressions of personal feelings, opinions, and judgments) (Derlega et al., 1993). A distinction also needs to be made in the research literature between personal self-disclosure (disclosure about oneself) and relational self-disclosure (disclosure that has as its referent one's relationship with another person) (See Baxter, 1987; for further discussion of this distinction). As previously mentioned, increasing specificity regarding the dimensions of disclosure that are addressed in a particular study will help bring conceptual clarity to research in this area (Boland & Follingstad, 1987).

One crucial issue in self-disclosure research concerns the best theoretical stance for self-disclosure. There is no unified theory of self-

disclosure, and indeed several social-psychological theories have been used to explain this behaviour (Hendrick, 1981). From the general norm of reciprocity has come the specific implication that "self disclosure begets self-disclosure" (Jourard, 1971). Within an exchange theory framework, self-disclosure can be seen as something that has both costs and benefits for disclosure and listener (Derlega et al., 1993). Self-disclosure is most likely to be bi-directional in its effects: It influences other variables and is influenced by them. Thus, a multidimensional approach that allows for the possibility of bi-directional causality is most likely to lead to real-world correlations between self-disclosure and variables such as marital satisfaction (Hendrick, 1981).

Altman and Taylor's (1973) social penetration theory is one approach that attempts to go beyond the confines of the issue of reciprocity. This theory deals with the formation of social relationships, and self-disclosure is viewed as an important variable in relationship development and maintenance. In this study, the MSDQ was investigated within this broad framework. Overall, several findings support the reliability and validity of the MSDQ as a measure of marital self-disclosure. The Relationship, Sex, and Money scales indicated high internal consistency. The Sex and Money scales also show consistency over a two-week period. The finding that women disclose more than men on the Total scale further supports the construct validity of this measure. The construct validity of the MSDQ was supported by the finding that the

MSDQ had a significant positive relationship with the ASDC that was of a stronger magnitude than the positive relationship between the MSDQ and the KMSS. Finally, it is only modestly correlated with marital conventionalisation.

With further improvements to the Imbalance scale, and a caution against the use of a Total score, the MSDQ shows promise as a useful tool to guide researchers and clinicians in their decisions and efforts to help couples enrich their marriage. As it currently stands, researchers interested in self-disclosure may find value in using the Relationship, Sex, and Money scales in their research. The current study found that the Imbalance and Total scales were not reliable and valid with this sample and therefore their use is not indicated at this time. Future research is necessary in order to further examine the construct validity of this measure by investigating its relationship to other theoretically related constructs.

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Appendix B
Proposal Submission to the Advisory Committee

September 8, 2000

Proposal Submission to the Advisory Committee

I am writing in order to request approval to recruit students in EPSE 528 and EPSE 592 for participation in my M.A. thesis. As part of my investigation of a new measure of self-disclosure I am examining test-retest reliability over a two-week period. As stated in my explanatory letter (attached) participation is voluntary and confidential. I will also emphasize to the class that participation will in no way affect their performance in the course. Students who are married or currently in a relationship will be asked to participate. Participants will be asked to indicate the nature of their relationship (ie. married, common-law, dating, heterosexual, gay, lesbian etc.) on the demographic information page on the reverse side of their answer sheet. Completion of the questionnaire will take approximately 10-15 minutes for each administration. Students who are interested in participating will be asked to stay for 10 minutes directly after the class has ended. After Dr. Hubley (EPSE 528) and Dr. Zumbo (EPSE 592) introduce me to the class, they will leave the room so that they will not know which students have participated. This will help ensure that participation is truly voluntary.

This procedure was carried out previously in CNPS 532 over the summer session. I view my thesis as being directly relevant to the course content of each of these classes which cover validity and reliability of research instruments. Below is the purpose of the research and plan to ensure confidentiality.

Purpose

This study is an investigation of the reliability and validity of the Marital Self-Disclosure Questionnaire, a new measure of self-disclosure. Eventual benefits of this research are to gain a clearer picture of the relationship between self-disclosure and marital satisfaction.

Confidentiality

Confidentiality for all participants will be accomplished by using a symbol, rather than a name or id number, to match the Time 1 and Time 2 answer sheets.

At time 1 administration, I will hand out 2 answer sheets and ask participants to select a symbol and mark both answer sheets. Next, students will place a "sticky note" with their name over the symbol on the Time 2 answer sheet, and place this in an envelope. This envelope will be sealed until administration of the Time 2 answer sheets, two weeks later. After this procedure, participants will complete the Time 1 answer sheets, which will also be placed in a sealed envelope.

When I return two weeks later, the questionnaires will be handed back to the students and they will remove their name, complete it and place it in a sealed envelope. The data will be destroyed after 5 years and the information will be coded so that no identifying information is available.



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Consent:

I understand that my participation in this study is entirely voluntary and that I may refuse to participate or withdraw from the study at any time. If the questionnaires are completed, it will be assumed that consent has been given.

Instructions for Questionnaire Completion:

You will be provided with a questionnaire and two answer sheets. Please select a symbol and mark it at the top of both answer sheets. Take one answer sheet and place a "sticky note" indicating your name, above your symbol. Place it in the envelope labelled "time 2 administration." Then complete your remaining answer sheet and place it in the envelope labelled "time 1 administration."

Please read the instructions on the cover of the questionnaire booklet. **On the back of the answer sheet is demographic information that needs to be completed in order to use the results.**

If you are interested in marriage counselling you can contact Family Services of Greater Vancouver at: (604) 731-4951. When you have completed the questionnaire please return them in the provided self-addressed, stamped envelope.

Your participation in this research is greatly appreciated.



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Consent:

I understand that my participation in this study is entirely voluntary and that I may refuse to participate or withdraw from the study at any time. If the questionnaires are completed, it will be assumed that consent has been given.

Instructions for Questionnaire Completion:

Enclosed in this package are four questionnaires: The Marital Self-Disclosure Questionnaire, The Kansas Marital Satisfaction Questionnaire, the Expression of Emotion Questionnaire for Couples, and the Marital Conventionalization Scale.

Only the Marital Self-Disclosure Questionnaire has a separate answer sheet for your responses. Please read the instructions on the cover of the questionnaire booklet. **On the back of the answer sheet is demographic information that needs to be completed in order to use the results.**

On the Kansas Marital Satisfaction Questionnaire and the Expression of Emotion Questionnaire for Couples (double-sided), please circle only the responses that apply to you (either husband or wife). Please answer all questions on your own and do not discuss your responses with your partner or others as this will affect the results. If you are interested in marriage counselling you can contact Family Services of Greater Vancouver at: (604) 731-4951. When you have completed the questionnaires please return them in the provided self-addressed, stamped envelope.

Your participation in this research is greatly appreciated.

Appendix E
Advertisement at Family Student Housing

**MARRIED PARTICIPANTS NEEDED
FOR A STUDY ON
SELF-DISCLOSURE IN MARRIAGE**

I, JENNIFER WARING AM A GRADUATE STUDENT IN COUNSELLING PSYCHOLOGY AND AS PART OF MY DEGREE AM INVESTIGATING THE RELIABILITY AND VALIDITY OF A NEW MEASURE OF SELF-DISCLOSURE IN MARRIAGE. PARTICIPATION REQUIRES 15-20 MINUTES OF TIME TO COMPLETE 4 BRIEF QUESTIONNAIRES. ALL QUESTIONNAIRES ARE CONFIDENTIAL.

WHEN: I WILL HAVE A TABLE SET UP IN THE COMMONSBLOCK OF FAMILY STUDENT HOUSING FOR QUESTIONNAIRE PICK-UP AND DROP-OFF BETWEEN 6:00-8:00PM FROM JUNE 12-16, AND BETWEEN 8:00-10:00AM ON MONDAY, JUNE 12 AND FRIDAY, JUNE 16.

Appendix F

Advertisement in Family Student Housing Newsletter

MARRIED PARTICIPANTS NEEDED FOR A STUDY ON SELF-DISCLOSURE IN MARRIAGE

I, Jennifer Waring am a graduate student in Counselling Psychology and as part of my degree am investigating the reliability and validity of a new measure of self-disclosure in marriage. Participation in this research requires 15 minutes of time to complete 4 brief questionnaires.

WHEN: I will have a table set up in the commonsblock for questionnaire pick-up and drop-off:

Between 6:00-8:00pm from June 12 to 16 and,
Between 8:00-10:00am on Monday, June 12, and Friday, June 16.

All questionnaires are confidential.

Appendix HAdvertisement at Scarborough Doctor's Office

MARRIED?

COMMON-LAW?

WOULD YOU BE WILLING TO TAKE 15
MINUTES TO COMPLETE BRIEF,
CONFIDENTIAL QUESTIONNAIRES
REGARDING MARRIAGE?

DON'T HAVE TIME? I HAVE PROVIDED
SELF-ADDRESSED, STAMPED
ENVELOPES SO THAT YOU CAN
COMPLETE THEM AT YOUR
CONVENIENCE

THANK-YOU FOR YOUR PARTICIPATION

*(THIS RESEARCH IS BEING CONDUCTED BY JENNIFER WARING FOR
HER M.A. THESIS IN THE DEPARTMENT OF COUNSELLING
PSYCHOLOGY)*

Appendix I
Demographics Questionnaire

DEMOGRAPHICS QUESTIONNAIRE

HUSBAND _____ WIFE _____

AGE _____

NUMBER OF YEARS MARRIED _____

NUMBER OF CHILDREN _____

EDUCATION: < GRADE 9 _____ GRADE 9-13 (WITHOUT CERTIFICATE) _____

HIGH SCHOOL CERTIFICATE _____ TRADE CERTIFICATE/DIPLOMA _____

UNIVERSITY DEGREE _____

RELIGION: PROTESTANT _____ CATHOLIC _____ JEWISH _____

OTHER _____

RACE: BLACK _____ WHITE _____ EAST ASIAN _____ ASIAN _____

NATIVE/ABORIGINAL _____ OTHER _____

NATIONALITY: CANADIAN _____ LANDED IMMIGRANT _____ OTHER _____

FAMILY INCOME: < \$24,999 _____ \$25,000-34,999 _____ \$35,000-44,999 _____

\$45,000-54,999 _____ \$55,000-64,999 _____ > \$65,000 _____

Appendix JThe Marital Self-Disclosure Questionnaire

1. I seldom disclose my feelings concerning our relationship with my spouse.
2. I don't talk to my spouse about my thoughts on our sexual relationship.
3. I disclose to my spouse whom I owe money to at present or whom I have borrowed from in the past.
4. I disclose to my spouse what I find to be the most boring and unenjoyable aspects of my work or studies.
5. I rarely discuss aspects of our relationship that I would like to change.
6. I tell my spouse how I feel about our sexual relationship.
7. I disclose to my spouse my total financial worth.
8. I disclose to my spouse a lot of sad things.
9. I rarely discuss certain aspects of our relationship.
10. I reveal most of my thoughts on sexuality to my spouse.
11. I disclose to my spouse my happy feelings.
12. I wouldn't want my close friends to know everything about me that my spouse knows.
13. I rarely disclose my need for closeness to my spouse.
14. I disclose my thoughts on sexuality to my spouse.
15. I disclose to my spouse whether or not others owe me money, the amount, and who owes it to me.
16. There are some times when I do not listen to my spouse.
17. I seldom disclose my need for companionship to my spouse.
18. I seldom disclose my thoughts on sexuality to my spouse.
19. I disclose to my spouse the kinds of movies that I like to see and the TV shows that are my favorites.
20. I will listen any time if my spouse wants to talk to me.
21. I rarely tell my spouse how he or she makes me feel.
22. I don't usually let my spouse know what arouses me sexually.
23. I disclose to my spouse whether or not I owe money and if so, how much.
24. I often criticize my spouse's opinion.
25. I let my spouse know my real feelings.
26. I rarely mention my sexual fantasies to my spouse.
27. I disclose to my spouse my likes and dislikes in music.
28. I disclose to my spouse what I would appreciate most as a present.
29. I seldom disclose my thoughts concerning our relationship with my spouse.
30. I tell my spouse when I am satisfied sexually.
31. I reveal most of my thoughts on money to my spouse.
32. I let my spouse know about my need for privacy.
33. I tell my spouse how he or she makes me feel.
34. I let my spouse know what turns me on sexually.
35. I disclose to my spouse whether or not I gamble and if so, the way I gamble and the extent of it.
36. I sometimes refuse to listen when my spouse wants to talk.
37. I talk about my feelings concerning our relationship with my spouse.
38. I often reveal to my spouse my sexual fantasies.
39. I disclose to my spouse how I budget my money for necessities and luxuries.
40. I have discussed with my spouse how I feel about myself.

Appendix KMean and Standard Deviation of MSDQ scales for the Reliability Sample (n=41)

MSDQ scale	Mean	Std Dev
Time 1		
Relationship	9.17	1.46
Sex	7.71	2.70
Money	8.54	2.09
Imbalance	6.51	1.93
Total	31.93	5.10
Time 2		
Relationship	9.39	1.05
Sex	7.93	2.85
Money	8.76	1.91
Imbalance	6.46	1.52
Total	32.54	4.30

Appendix LMean and Standard Deviation of Primary measures for the Validation Sample (n=119)

Measure	Mean	Std Dev
KMSS	17.46	3.27
MCS	3.89	3.09
MSDQ-Relationship	8.06	2.79
MSDQ-Sex	6.78	3.09
MSDQ-Money	9.29	1.36
MSDQ-Imbalance	6.36	1.51
MSDQ-Total	30.50	6.44
ASDC-Love	13.46	2.09
ASDC-Happiness	13.08	2.27
ASDC-Sadness	9.75	2.65
ASDC-Anger	10.52	2.55
ASDC-Total	46.82	7.28