GENDER DIFFERENCES IN EMOTIONAL AND SEXUAL INTIMACY:

AN EXAMINATION USING ITEM RESPONSE THEORY

A Thesis

by

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ABSTRACT

The presence and quality of emotional intimacy and sexual intimacy are fundamental to both men's and women's relationship functioning. However, previous studies suggest that gender differences exist in men's and women's experiences sexual and emotional intimacy. Although these differences cannot be presumed to apply to all men and women, acknowledging and understanding their existence can prove useful to appreciating the role and impact of emotional and sexual intimacy in couples. The present study used differential item functioning (DIF), an IRT-based statistical framework, to explore gender differences in dissatisfaction with sexual intimacy and emotional intimacy (1) across the continuum of relationship distress, and (2) within each domain, respectively. Data were provided by husbands and wives (N = 2,038) from a representative sample of community couples who completed the Marital Satisfaction Inventory – Revised (MSI-R).

IRT-based DIF analyses revealed significant gender differences, suggesting that men and women differ in their experience and reports of dissatisfaction with sexual intimacy and emotional intimacy across the continuum of relationship distress, as well within the respective domains of sexual and emotional intimacy. Although nuanced, understanding these differences provides further insight into men's and women's experience of relationship distress across the entire spectrum of relationship distress, and can be used in improving the assessment, prevention, and treatment of sources of couple distress.

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CHAPTER I

INTRODUCTION AND LITERATURE REVIEW

Intimacy and Romantic Relationships

The association between intimacy and relationship satisfaction is well-established in the literature. Feelings of intimacy are linked to overall relationship satisfaction (Greef & Malherbe, 2001; Prager, 2001; Schaefer & Olson, 1981) and positive interactions between partners (Yoo, Bartle-Haring, Day, & Gangamma, 2013). Intimacy also impacts the psychological (Prager, 2001; Prager & Buhrmester, 1998) and physical well-being of individual partners (Holt-Lunstad, Birmingham, & Jones, 2008; Stadler, Snyder, Horn, Shrout, & Bolger, 2012).

Conversely, lack of intimacy has been identified as a common impetus for couples to seek therapy (Doss, Simpson, & Christensen, 2004; Geiss & O'Leary, 1981; Mitchell et al., 2008). Indeed, lack of intimacy has been associated with negative relationship outcomes, such as greater relationship discord (Christensen & Shenk, 1991) and relationship dissolution (Hendrick, Hendrick, & Adler, 1988; Kayser, 1993; Waring, 1988). Simply put, whereas "Intimacy reassures, accepts, and communicates love… Lack of intimacy erodes love" (Prager, 2013, p. 17). Given the documented impact of intimacy on relationship functioning, understanding intimacy within the context of couple relationships is instrumental to assessing and modifying sources of couple distress.

Defining Intimacy

Despite the extant research indicating that intimacy has a significant impact on couples' relationship health and partners' individual well-being, the exact definitions of intimacy, both emotional and sexual, remain somewhat elusive and unclear in the literature (Cordova & Scott, 2001; Prager, 1995, 2001, 2013). The extent to which sexual and emotional intimacy are defined as separate constructs also remains inconsistent, with some researchers conceptualizing sexual intimacy and emotional intimacy as being part of one broad construct, and others defining sexual intimacy and emotional intimacy as distinct phenomena.

Some researchers have defined intimacy as an overarching construct comprised of several dimensions, including self-disclosure and partner responsiveness, and sexual or physical closeness. Kieffer (1977) considered three dimensions in which intimacy occurs: intellectual, emotional, and physical. Hatfield (1984) similarly promoted the idea that intimacy is characterized by cognitive, emotional, and behavioral (comfort in close physical proximity and touch, eye gazing, leaning towards each other) components. Prager (1995, 2001, & 2013) additionally proposed that intimacy encompasses the quality of couples' interactions and feelings of connection in several domains of the relationship, including the recreational, intellectual, emotional, spiritual, and sexual domains. Additional research exploring Prager's theory of intimacy suggests that intimacy in romantic relationships is multidimensional, comprised of self-revealing behavior, positive involvement with partner, and accurate and mutual

understandings of each other (Lippert & Prager, 2001; Prager, 2013; Prager & Roberts, 2004).

Self-revealing behavior, the most defining component of intimate relationships according to Prager (2013), can be achieved via verbal and nonverbal interactions (e.g., self-disclosure, expressions of affection, sexual contact, and other physical closeness). Positive involvement denotes partners' appreciative attitudes towards one another and each other's disclosure, and can be expressed through listening, demonstrating acceptance of expressions, and appreciation for affectionate touch and each other's bodies (Prager, 2013). Lastly, the third feature of intimacy is illustrated by couples' shared and accurate understanding of each other's inner self as revealed via intimate interactions, and refers to couples' deep and thorough knowledge of one another. In a study examining 113 couples' working definitions of intimacy, Prager (2001) obtained empirical support for these three dimensions, and found that interaction pleasantness, disclosure of private information and emotion, the expression of positive feelings, and the perception of being understood by one's partner were particularly important dyad characteristics in partners' perceptions of intimacy. Ultimately, Prager proposed that intimacy is developed through sharing with the other partner exclusive parts of oneself that are not openly accessible to other individuals, through disclosing of secrets and feelings, sexual interactions, or both (Prager, 2013).

Emotional intimacy. The interpersonal process model of intimacy (Reis & Shaver, 1988) identified self-disclosure and partner responsiveness as the cornerstones of emotionally intimate interactions. According to this model, emotional intimacy is

achieved through repeated interactions over time between a speaker and a listener (Reis, 1994). The process of accruing emotional intimacy begins with one person (speaker) communicating private information, verbally or nonverbally (e.g., via factual information, thoughts, feelings, gaze, touch) to another person (listener). For emotional intimacy to continue to develop, the listener must respond to the speaker by also disclosing personal information while conveying that they understand, accept, validate, and feel positively towards the speaker (Laurenceau, Feldman Barrett, & Pietromonaco, 1998; Reis & Patrick, 1996; Reis & Shaver, 1988).

Empirical support exists for the interpersonal process model of intimacy in the context of couple relationships, confirming the importance of self-disclosure and empathic responding in intimate interactions. In a study using event-contingent diary methodology, 104 participants provided information following couple interactions on self- and partner disclosures, perceived partner responsiveness, and degree of intimacy experienced in the interaction over one week. The study's results revealed that self-disclosure and partner disclosure were, in fact, significant predictors of emotional intimacy in couple interactions (Laurenceau, Feldman Barrett, & Pietromonaco, 1998). In a later study of 102 community couples who completed intimacy measures following videotaped discussions about relationship injuries, observational assessments of self-disclosure and empathic responding were also identified as important behavioral determinants of emotionally intimate feelings as measured by post-discussion self-reported ratings of intimacy (Mitchell et al., 2008).

Cordova and Scott (2001), from a different but complementary perspective, offered a behavioral conceptualization of emotional intimacy, positing that intimacy is a process that develops from a sequence of "intimate events" in which partners' vulnerable interpersonal behaviors are reinforced, and not punished by the other partner (Cordova, Gee, & Warren, 2005; Cordova & Scott, 2001). Intimate events therefore increase the likelihood of engaging in behaviors that are vulnerable to interpersonal punishment in the presence of the reinforcing partner (Cordova, Gee, & Warren, 2005; Cordova & Scott, 2001), resulting in "intimate partnership formation" and consequently feelings of emotional intimacy.

Sexual intimacy. Similar to emotional intimacy, the definitions of sexual intimacy found in the literature differ depending on theoretical perspective, and have evolved considerably. Masters and Johnson's (1966) four-stage model of human sexual response, comprised of the excitement, plateau, orgasm, and resolution phases, was the first model to provide a formal conceptualization of sexual intimacy in empirical and clinical settings. Emphasizing the physical and observable aspects of sexual functioning, this medical model exclusively focused on the genital and peripheral physiological changes that occur in the human body during sexual interactions, and provided the basis for classifying sexual dysfunctions in each phase. Despite this model's theoretical and empirical contributions to understanding sexual intimacy, its exclusive focus on biological processes resulted in a restricted and narrow conceptualization of sexual intimacy. In addition to overlooking problems of interest or desire, it assumed that

sexual interest, and the intensity and quality of sexual experiences are correlated solely with physiological processes.

Kaplan (1974) similarly originally offered a bi-phasic model of sexual response cycle, again focusing on the physiological aspects of sexual interactions. The two phases were classified as genital vasocongestive reaction (the excitement phase, characterized by erection or vaginal congestion/lubrication) and reflexive clonic muscular contractions (the orgasm phase); this model presented the same limitations associated with the Masters and Johnson's (1966) four-stage model: overlooking the phenomenological experience of sexual interactions (Schnarch, 1991, p. 16). Kaplan later introduced, however, a third phase of the sexual response cycle that captured the importance of erotic arousal, or libido, prior to reaching the excitement and orgasm phases: the desire phase. Separate from the other phases, which exclusively focused on the physical experience of sex, the desire phase described the "appetitive response preceding sexual behavior" (Schnarch, 1991, p. 18). In contrast to previous models, Kaplan's (1979) Triphasic Model acknowledged that sexual intimacy involves a subjective and conscious experience of sex, and provided a space for considering the impact of eroticism in understanding sexual intimacy.

Even though Kaplan's (1979) Triphasic Model offered a broader definition of sexual intimacy, it implied linearity and exclusivity in how each stage of the sexual response cycle occurs. Within this model, each stage is expected to occur in a specific order, such that desire is conceptually limited to occurring before the excitement and orgasm phases, rather than before *or* during the other phases. In this way, Kaplan's

(1979) Triphasic Model, along with Masters and Johnson's (1966) four-stage model, overlooked the importance of psychological functioning during *all* stages of sexual interactions, and even dichotomized the physiological and psychological experience of sex, thus constraining the understanding of sexual intimacy.

Introducing a systemic framework, and therefore avoiding the linearity problem inherently associated with a stage or phase model, Schnarch's (1991) Quantum Model of Sexual Function and Dysfunction proposed a more comprehensive understanding of sexual intimacy. Fluid and dynamic, this model of sexual intimacy built on previous ones by integrating the physical and psychological components of sexual functioning with four concepts: total stimulus level, physical stimuli, psychological processes, and threshold. Total stimulus level denotes the total amount of sexual stimulation that is less than, equal to, or greater than the threshold level needed for a physiological sexual response (i.e., changes in genital functioning). Physical stimuli refer to the quantity and quality of sensory input (i.e., sexual stimulation, tactile input) along with the body's capacity to process and transmit that input. Psychological processes are the emotional and cognitive processes of the receiver of the physical stimuli (i.e., sensate focus abilities, attribution of meaning to sensory experience, and impact of anxiety). Lastly, threshold is the amount of total stimulation from physical stimuli and psychological processes required to elicit genital vasocongestive responses associated with arousal and orgasm. Schnarch posited that physical stimuli and psychological processes are "additive and reciprocally interactive," such that a decrease in one can be counterbalanced (to an

extent) by the other, or vice versa, resulting in an equal total stimulus level (Schnarch, 1991, pp. 22-23).

Although not explicitly denoted in the four concepts of the Quantum Model of Sexual Function and Dysfunction, Schnarch's (1991) model also emphasized the role of individual differences (e.g., emotional agendas, sexual styles, role expectations or fantasies, and so forth) and context (partner engagement, setting, mood) in understanding sexual intimacy (Schnarch, 1991, p. 79). In contrast to previous models of sexual intimacy, Schnarch's (1991) model drew attention to the importance of increasing personal and interpersonal awareness of the self and the other's sexual needs (physical and psychological), and captured the human capacity for developing and attaching emotional meaning to sexual interactions. Similar to emotional intimacy, Schnarch posited that sexual intimacy ultimately describes the use of sexuality as a modality for disclosing other aspects of the self (Schnarch, 1991, p. 122).

Even though scholars do not agree on one shared, comprehensive theory of emotional and sexual intimacy, there appears to be mutual acknowledgment of specific core elements for each. For the purposes of this paper, emotional intimacy can therefore be understood as a crucial dynamic and reciprocal phenomenon in romantic relationships that is characterized by a perceived sense of closeness between partners, accrued across repeated interactions over time, and encompasses several domains of the couple relationship. Sexual intimacy, also dynamic and reciprocal, can be conceptualized as a mind-body phenomenon that includes a broad range of sensuous activity and sexual

expression beyond sexual intercourse, and is impacted by personal and interpersonal awareness, personal meaning, and context.

Importance of Sexual and Emotional Intimacy

Sexual and emotional interactions have been identified as particularly important components of intimacy. Although often treated as distinct issues in therapy and research, the links between sexual intimacy and relationship functioning (Christopher & Sprecher, 2000; Greef & Malherbe, 2001; Henderson-King & Veroff, 1994; Litzinger & Gordon, 2005; Sprecher, 2002) and emotional intimacy and relationship functioning (Cordova, Gee, & Warren, 2005; Greef & Malherbe, 2001; Prager, 1995, 2001) are well-documented in the literature. Understanding the role and impact of sexual intimacy and emotional intimacy is therefore critical to fostering and enhancing romantic relationships.

Emotional intimacy has been identified repeatedly as a key predictor of relationship satisfaction, and vice versa. Emotional expressiveness and responsiveness skills facilitate the intimacy process (Cordova, Gee, & Warren, 2005), and high levels of verbal self-disclosure and expressions of vulnerability are associated with positive relationship outcomes and a more satisfied outlook on the relationship (Fincham, Stanley, & Beach, 2007; Greef & Malherbe, 2001; Impett & Gordon, 2008; Prager, 1995, 2001; Roberts & Greenberg, 2002). In a study on working definitions of intimacy (Prager, 2001), results revealed that out of three couple characteristics (relationship satisfaction, constructive and dysfunctional conflict, and sexual frequency), only relationship satisfaction uniquely contributed to partners' perceptions of intimacy;

partners in more satisfied relationships perceived their interactions as more intimate. Conversely, a lack of affective or emotional intimacy is linked to poorer relationship outcomes, and is ranked highest among predictors of relationship dissatisfaction (Kayser, 1993). A study comparing communication patterns and conflicts over psychological distance in 62 distressed and nondistressed couples revealed that dissatisfaction with the amount of closeness in romantic relationships was associated with greater relationship discord (Christensen & Shenk, 1991).

The association between sexual intimacy and relationship functioning has also been substantially noted in psychological research. The Interpersonal Exchange Model of Sexual Satisfaction (IEMSS; Lawrence & Byers, 1995), which proposed that relationship satisfaction and sexual satisfaction impact one another, has been empirically supported by several studies. In a study exploring the relation between sexual interactions and relationship satisfaction, two-step hierarchical regressions revealed that IEMSS variables accounted for 40% of the variance in participants' satisfaction with the romantic relationship when entered as step 1 (Lawrence & Byers, 1995). In therapy outcome studies, pre-treatment relationship satisfaction has been identified as a predictor of change in post-treatment sexual satisfaction and distress (Stephenson, Rellini, & Meston, 2012), with lower overall relationship satisfaction prior to treatment predicting lower gains in sex therapy (Hawton & Catalan, 1986), particularly for women (Stephenson, Rellini, & Meston, 2013). Similarly, improving overall relationship satisfaction in therapy has been found to result in increases in sexual satisfaction (O'Leary & Arias, 1983).

Gender Differences in Sexual and Emotional Intimacy

The presence and quality of emotional intimacy and sexual intimacy are fundamental to both men's and women's relationship functioning. However, findings from previous studies suggest that gender differences do exist in men's and women's experiences of the sexual and emotional aspects of intimacy. Although these differences cannot be presumed to (and most likely do not) apply to all men and women, acknowledging and understanding their existence can prove useful to appreciating the role and impact of emotional and sexual intimacy in couples. For example, men, as a group and relative to women, have been found to value sexual activity and sexual intimacy more than emotional intimacy (Hatfield, Sprecher, Pillemer, Greenberger, & Wexler, 1988). Women, as a group and relative to men, have been found to typically value affection and emotional intimacy more than physical intimacy (Hook, Gerstein, Detterich, & Gridley, 2003; Ridley, 1993; Sprecher, 2002; Talmadge & Dabbs, 1990). Scale score analyses of the Marital Satisfaction Inventory – Revised (MSI-R; Snyder, 1997) similarly indicate that men and women differ significantly in terms of their dissatisfaction with the sexual and emotional intimacy in their relationships. Out of the 13 scales of the MSI-R, the largest mean differences between women and men can be observed when comparing their respective raw scores on the Sexual Dissatisfaction (SEX) and Affective Communication (AFC) scales: women were more likely to report concerns about the frequency and quality of emotional intimacy in their relationship, and men were more likely to report concerns about frequency and quality of sexual intimacy in their relationship (Snyder, 1997).

Based on the literature on sexual and emotional intimacy, one might also predict that gender differences exist in how sexual intimacy and emotional intimacy impact relationship functioning overall. That is, dissatisfaction with the sexual relationship may be more closely related to overall relationship satisfaction for men, and emotional intimacy may be more closely related to overall relationship satisfaction for women. Indeed, sexual satisfaction has been shown to negatively predict men's likelihood of ending the relationship, but not women's, such that decreased sexual satisfaction leads to increased risk for relationship dissolution. Relationship satisfaction (not sexual satisfaction), on the other hand, has been shown to negatively predict women's likelihood of terminating the relationship, but not men's, such that decreased relationship satisfaction leads to increased risk for relationship dissolution (Sprecher, 2002). Studies examining the sexual and emotional intimacy across or between partners have also resulted in similar findings. In a study exploring the associations among couple communication, emotional intimacy, sexual satisfaction, and relationship satisfaction in married couples, researchers found that husbands reported higher relationship satisfaction when wives reported higher sexual satisfaction. Findings from the same study also indicated, however, that husbands' sexual satisfaction was not associated with wives' relationship satisfaction (Yoo, Bartle-Haring, Day, & Gangamma, 2013).

Item Response Theory (IRT)

Item response theory (IRT) is a psychometric approach that uses latent manifestations of individuals and items as predictors of observed responses (de Ayala, 2009, p. 4). A newer alternative to classical test theory (CTT), IRT provides information

about individuals, items, and tests, and emphasizes that an individual's response to a test item is influenced by individual qualities and item qualities (Embretson & Reise, 2000). Item response theory was built on the premise that individuals and items are located on the same continuum of a latent variable. An individual's response to an item is determined by their trait level (θ; e.g., relationship discord), the item's difficulty level (β), and the item's discrimination value (α). The item's difficulty level, or β parameter, indicates the point on the latent construct where the probability of endorsing the item equals 0.50. A "difficult" item requires a high trait level in order to be endorsed and will have a higher difficulty value, whereas an "easy" item requires only a low trait level to be endorsed and will have a lower difficulty value. The item's discrimination value, or α parameter, describes the relatedness of the item to the underlying latent trait. By indicating the relevance of the item to the trait being measured, the discrimination parameter reflects how well an item distinguishes among individuals located on different points across the continuum (de Ayala, 2009, p.18). Thus, an item with a high discrimination value will be able to differentiate among individuals who have high trait levels from individuals who have low trait levels within a specified range of θ, the latent or trait variable.

In IRT models, these two parameters ultimately determine the shape of the item characteristic curves. This curve depicts the conditional probability of responding to an item given the individual's location on the latent variable. The β parameter determines the individual's location on the θ axis, and the α parameter determines the steepness of

the curve. The item characteristic curve essentially expresses the probability of an individual endorsing an item as a function of their trait level.

Various forms of IRT exist, including the two-parameter logistic (2PL) model and the graded response model (Samejima, 1969, & 1997). The 2PL model is a binary or dichotomous model of IRT, and provides two item parameters (item difficulty and item discrimination) for each item. The graded response model is an ordered polytomous IRT model, and provides one item discrimination parameter, and N-1 item difficulty parameters for each item (where M is the number of ordered categorical responses; Thissen, 2001). The difficulty parameters in the graded response model compare the cumulative probability for an individual endorsing a specific ordered categorical response or responses above that ordered categorical response. For example, if there are seven ordered categorical responses (0 to 6), the graded response model will yield six difficulty parameters. The first difficulty parameter (β_1) will reflect the cumulative probability of endorsing an ordered categorical response value of 1 to 6 compared to the probability of endorsing an ordered categorical response value of 0. The second difficulty parameter (β_2) will reflect the cumulative probability of endorsing an ordered categorical response value of 2 to 6 compared to endorsing a value of 0 to 1, and so on. Although these 2PL model and the graded response models differ in terms of the response options they can accommodate, they both rely on the same general principles: an individual's response to an item is determined by their trait level (θ) and by item properties, such as difficulty (β) and discrimination (α).

The benefits of IRT and its advantages over CTT have been well documented (Bortolotti, Tezza, Andrade, Bornia, & Sousa Junior, 2013; Thissen, 2001). For example, in CTT, "true scores" depend on specific test forms and their corresponding scoring procedure. As a result, changing the item set will result in different "true scores" even if the items measure the same construct or variable. In order to resolve this problem within CTT, it would be necessary (yet difficult) to equate the test forms before being able to compare scores across different test forms. The latent variable (ability or trait) scale used in IRT is not dependent on the specific set of items in use, such that subsets of items from a set of items that fit an IRT model will all yield comparable scores. As a result, test forms do not need to be identical, and adaptive testing can be used. Furthermore, whereas item statistics are a function of the items *and* the sample used to obtain data in CTT, item parameters in IRT do not necessarily depend entirely on the sample. In IRT, item parameters can be independent from the latent variable scale, and do not need to be contingent on the specific sample being used. This allows for obtaining similar estimates of item parameters among several different sets of examinees. CTT also assumes that standard error of measurement is identical across the continuum of the construct, meaning that test scores are considered to be equally reliable at different ability or trait levels. IRT avoids this psychometric limitation of CTT by predicting standard error estimates across the continuum of interest.

Most notably, CTT is test oriented, inherently limiting the amount of information about each item in a test. IRT, conversely, is item oriented and provides information about how individuals respond to particular items, and about which items are most

useful at specific ability or trait levels. In essence, IRT allows researchers to evaluate items within assessments in a more sophisticate way, examine overall test characteristics, and ultimately identify structural inequalities or non-equivalence (Embretson & Reise, 2000). Furthermore, by using IRT to gain information at the item level, researchers and clinicians are able to understand more fully what determinations can be made based on responses to individual items or sets of items, consequently allowing for more precise and contextual interpretation of scores.

Item response theory has been applied to a variety of psychological measures (e.g., Cole, Kawachi, Maller & Berkman, 2000; Mueller et al., 2014), including existing measures of relationship distress. Balderrama-Durbin, Snyder, and Balsis (2015) used IRT to evaluate the Marital Satisfaction Inventory-Brief form (MSI-B; Whisman, Snyder, & Beach, 2009), an abbreviated version of the Marital Satisfaction Inventory-Revised (MSI-R; Snyder, 1997) with a sample of 1,019 couples and found that individual items on the MSI-B differ in their ability to discriminate among varying levels of underlying distress. Funk and Rogge (2007) used IRT to evaluate eight self-report measures of relationship satisfaction and consequently to develop the Couples Satisfaction Index (CSI) scales using a sample of 5,315 online participants. Results from this study revealed that, compared with the Marital Adjustment Test (MAT; Locke & Wallace, 1959) and the Dyadic Adjustment Scale (DAS; Spanier, 1976), the CSI scales had higher measurement accuracy and power in distinguishing among levels of relationship satisfaction.

Differential item functioning (DIF) within an IRT framework specifically provides a way of identifying differences in item responses for one group versus another group by examining items with respect to their relatedness to a latent construct (θ) such as relationship satisfaction (discrimination or parameter α), and in terms of their likelihood of endorsement at certain levels of that latent construct (difficulty or parameter β), all while controlling for mean differences on the latent continuum (Thissen, 2001). In other words, DIF facilitates identifying items that perform or measure the construct of interest differently for one group versus another group (Thissen, 2001), allowing investigators to make meaningful comparisons between groups.

The process of identifying group differences using differential item functioning (DIF) begins by interpreting G^2 values. The G^2 statistic is an overall test of significance of DIF, considering all item parameters simultaneously, and is interpreted like a chi-square value (Thissen, 2001). A test or test item is labeled as a "DIF" or "candidate" item when G^2 item values exceed a predetermined cutoff value (e.g., $\alpha = 0.05$ critical value of the $\chi 2$ distribution for one degree of freedom), indicating that individuals corresponding to different groups but with equal levels of the latent variable have an unequal probability of endorsing an item. Thus, a measure or item is said to have "DIF" when one group has a higher or lower chance of endorsing an item despite comparable levels of the latent construct between both groups (Karami, 2012; Thissen, 2001). On the contrary, an item does not show DIF if individuals with equal levels of the latent construct have an equal likelihood of endorsing an item, regardless of group affiliation.

To identify anchor items, the item with the highest G^2 value (item demonstrating the greatest DIF) must be removed, and the data must be reanalyzed iteratively by removing items (one at a time) that contain the greatest DIF guided by the G^2 threshold (Cohen, Kim, & Wollack, 1996). Items that remain at the end of this process are deemed "anchor" items, and have G^2 values below the predetermined cutoff value. "Anchor" items ultimately "provide estimates of the population group difference against which each candidate item is tested" (Thissen, 2001). Once anchor and candidate items are identified, DIF analyses are again conducted with the identified anchor items and candidate items. Items with the highest G^2 values in the overall omnibus test obtained from identifying anchor and candidate items are interpreted by looking at the magnitude of the discrimination or slope parameter (α), and the difficulty parameter (β) to identify which parameter is driving the DIF or group differences.

Present Study

The present study sought to examine gender differences in sexual intimacy and emotional intimacy in two distinct yet complementary ways: (1) gender differences in dissatisfaction with sexual intimacy and emotional intimacy across the continuum of relationship distress, and (2) gender differences in dissatisfaction with sexual intimacy and emotional intimacy within each domain, respectively. Using DIF allowed for meaningful comparisons between men and women. The study drew on a nationally representative sample of data on relationship functioning based on the Marital Satisfaction Inventory – Revised (MSI-R; Snyder, 1997).

Dissatisfaction with sexual intimacy and emotional intimacy across the continuum of relationship distress. Given that studies suggest that in romantic relationships, men, collectively, tend to value sexual intimacy over emotional intimacy (relative to women), and women, collectively, tend to value emotional intimacy over sexual intimacy (relative to men) (Hatfield, Sprecher, Pillemer, Greenberger, & Wexler, 1988; Hook, Gerstein, Detterich, & Gridley, 2003), the first part of this study examined gender differences in dissatisfaction with sexual intimacy and with emotional intimacy as they relate to overall relationship distress. Although men and women may differ in their reports of dissatisfaction with sexual intimacy and with emotional intimacy, this does not necessarily imply that the impact of each of these domains on overall relationship satisfaction is different between genders. Indeed, it is possible that both men and women value sexual and emotional intimacy equally. For example, prior correlational analyses (Snyder, 1997) suggest that neither gender has a stronger association between sexual intimacy and relationship functioning, or between emotional intimacy and relationship functioning. However, considering previous literature suggesting that men and women differ in terms of the effects that physical and emotional intimacy have on relationship functioning, for the first part of the study, it was predicted that DIF analyses would reveal significant gender differences in the association between the Sexual Dissatisfaction (SEX) and Affective Communication (AFC) scales of the Marital Satisfaction Inventory – Revised (MSI-R; Snyder, 1997) and overall relationship distress.

Specifically, the first two hypotheses for the present study were as follows:

- Dissatisfaction with sexual intimacy across the continuum of relationship distress will more often be a problem for men than for women when equated for marital distress.
- Dissatisfaction with emotional intimacy across the continuum of relationship distress will more often be a problem for women than for men when equated for marital distress.

Dissatisfaction within domains of sexual intimacy and emotional intimacy. The second part of this study explored whether men and women differ within the domains of emotional intimacy and sexual intimacy by examining gender differences in reports of dissatisfaction with sexual intimacy and emotional intimacy at the item level. In line with the gender differences gleaned from comparing means for men and women on the Sexual Dissatisfaction (SEX) and Affective Communication (AFC) scales of the MSI-R (Snyder, 1997) under the premise of classical test theory as well as and previous literature, it was hypothesized that DIF analyses would also reveal significant gender differences in how men and women report dissatisfaction with sexual intimacy and emotional intimacy. That is, men and women with equivalents levels of dissatisfaction in the respective domains of emotional intimacy and sexual intimacy would have an unequal probability of endorsing items measuring specific facets of emotional intimacy on the Affective Communication (AFC) scale and sexual intimacy on the Sexual Dissatisfaction (SEX) scale.

Specifically, two additional hypotheses for the present study were as follows:

- Women will be more likely to report dissatisfaction with facets of the quality of emotional closeness compared to men with equivalent levels of emotional intimacy dissatisfaction,
- Men will be more likely to report dissatisfaction with facets of the quantity and quality of sexual intimacy compared to women with equivalent levels of sexual intimacy dissatisfaction.

CHAPTER II

METHOD

Participants

MSI–R standardization sample. Participants in the MSI-R standardization sample (Snyder, 1997) included 1,019 community couples (n = 2,038) recruited by the test publisher, Western Psychological Services (WPS), from 53 different sites in the United States. Sites were distributed across different states within each major geographic region and managed by an experienced testing professional. Site directors avoided oversampling by recruiting couples from local school systems, churches, and other community groups with the goal of collecting a representative cross-section of couples in their community. Participants were instructed to complete the measures separately and without collaboration from their partners. They were told they were participating in a national study investigating couples' relationships, that their responses would remain anonymous, and that they would not receive any feedback on their test results or other compensation (Snyder, 1997).

Participants ranged in age from 18 to 92 years (M = 39.8, SD = 13.7). On average, husbands (M = 40.7, SD = 14.0) were slightly older than wives (M = 38.8, SD = 13.4). Men and women reported similar education levels, with men completing an average of 14.0 (SD = 3.4) years of education and women completing roughly 13.7 (SD = 3.2) years of education. Couples reported an average of 14.8 (SD = 13.2) years of marriage. Most couples (78.1%) had one or more children (M = 1.9, SD = 1.5). The

majority of the sample was non-Hispanic White (76.3%), with smaller percentages of Black (12.9%), Hispanic (8.6%), Asian (1.4%), and other (0.8%). The original standardization sample approximated 2010 U.S. census data for educational and racial/ethnic criteria (U.S. Census Bureau, 2010), with the exception of containing a smaller percentage of Hispanic participants (8.6% compared to 14.8%; Kreider & Ellis, 2011).

Measure

Marital Satisfaction Inventory – Revised. The Marital Satisfaction Inventory–Revised (MSI-R; Snyder, 1997) is a 150-item, true-false, multidimensional self-report measure intended to assess the presence and severity of relationship distress for each partner in a close romantic relationship. The items on the MSI-R are written at a 6th-grade reading level. Complete administration of the MSI-R takes about 25 minutes, and the test is completed by each partner separately.

The MSI-R is composed of 13 scales, including two validity scales (Inconsistency, INC; Conventionalization, CNV), one global affective scale (Global Distress, GDS), and ten scales assessing specific domains of relationship functioning (Affective Communication, AFC; Problem- Solving Communication, PCS; Aggression, AGG; Time Together, TTO; Disagreement About Finances, FIN; Sexual Dissatisfaction, SEX; Role Orientation, ROR; Family History of Distress, FAM; Dissatisfaction With Children, DSC; and Conflict Over Child Rearing, CCR). (Refer to Table 1 for MSI-R scale descriptions.) Each scale, with the exception of Inconsistency (INC), Conventionalization (CNV), and Role Orientation (ROR), is scored in the direction of

the discordant response, such that higher scores indicate higher levels of dissatisfaction with a specific dimension within the relationship. Normalized *T*-scores below 50, between 50 and 60, and above 60 indicate low, moderate, and high levels of distress, respectively ($M = 50$, $SD = 10$). The MSI-R has been used with different types of couples, including heterosexual, gay, lesbian, cohabiting, community and clinical couples (Means-Christensen, Snyder, & Negy, 2003).

The reliability and construct validity of MSI-R scales are supported by more than three decades of research. Studies examining the reliability of the MSI-R scales have shown high internal consistency. With the exception of the Inconsistency scale, Cronbach's alpha coefficients obtained from the scores of a sample of 1,019 couples in the general population and a sample of 50 couples in marital therapy ranged from .70 to .93 for all scales ($M = .82$; Snyder, 1997). Test-retest reliability coefficients also confirm the temporal stability of the MSI-R scales. Again, excluding the Inconsistency scale, the test-retest coefficients obtained from the scores of a sample of 105 couples who completed the MSI-R twice (6-week interval between test administrations) ranged from .74 to .88 ($M = .79$; Snyder, 1997). Based on these data, the MSI-R appears to be internally consistent across independent samples of couples and temporally stable across testing periods.

Studies have additionally examined the validity of the MSI-R using correlational studies, actuarial studies, and studies of group discriminative validity. Correlational studies assessing the convergent validity of the MSI-R indicate that the MSI-R scales correlate highly with the Locke –Wallace (1959) Marital Adjustment Test and Spanier's

(1976) Dyadic Adjustment Scale (Snyder & Aikman, 1999). Actuarial tables have linked scale scores to relationship descriptors provided by clinicians and partners, suggesting that the MSI-R scales are related to several external criteria consistent with their proposed interpretation (Snyder, 1997). Lastly, in a study comparing 50 clinic couples and 77 community couples matched on demographic variables, all MSI-R scales discriminated between the clinic and community couples, with effect sizes (Cohen's *d*) ranging from moderate to large (0.43 to 2.35; Snyder & Aikman, 1999). Combined, these findings support the MSI-R as a valid assessment of relationship distress.

In the present study, three measures of relationship distress were used from the MSI-R: the Affective Communication (AFC) scale, the Sexual Dissatisfaction (SEX) scale, and a composite general relationship distress measure created for the purposes of this study. The Affective Communication (AFC) scale evaluates the respondent's dissatisfaction with the quantity of affection and understanding expressed by their partner, with content covering (1) lack of affection and support, and (2) lack of empathy or mutual disclosure. According to Snyder (1997), the AFC scale provides the best single measure of emotional intimacy experienced in the romantic relationship. Individuals who score low on the AFC scale (below 50*T*) are likely to describe their relationships as happy and fulfilling, and their partners as loving and supportive. They generally feel understood by their partner and are likely to confide in them. Individuals who score moderate on the AFC scale (between 50*T* and 60*T*) tend to endorse moderate distress regarding the amount of affection their partner expresses. They report often feeling emotionally distant from their partner, and possibly unappreciated or

misunderstood. They may also wish their partner would be more open about their own feelings, and describe themselves as being reluctant to confide in their partners. Those who score high on this scale (above 60*T*) tend to indicate more extensive dissatisfaction with the amount of love and affection expressed in their relationship. They are likely to describe their partner as emotionally distant, uncaring, reluctant to share intimate feelings, and unsupportive. They are also likely to feel unappreciated and misunderstood by their partner, potentially contributing to general alienation and mistrust (Snyder, 1997).

The Sexual Dissatisfaction (SEX) scale evaluates the respondent's level of discontent with frequency and quality of sexual intercourse and other sexual activities by assessing three content areas: (1) general dissatisfaction with the sexual relationship, (2) partner's lack of interest in the sexual relationship, and (3) inadequate affection during sexual exchanges. Individuals with low scores on the SEX scale (below 50*T*) indicate a generally positive attitude toward the overall quality of their sexual relationship. They tend to describe their partner as sexually exciting, and the sexual relationship as satisfying for both their partner and themselves. Disagreements regarding the frequency or content of sexual behaviors are likely to be uncommon and viewed as having little importance to the overall relationship. Moderate scores on the SEX scale (between 50*T* and 60*T*) typically reflect the presence of concern regarding the couple's sexual relationship and its role as a significant source of relationship discontent. Individuals with moderate scores might express dissatisfaction with the frequency and quality of sexual relations and sexual expression of affection and intimacy, as well as difficulties

discussing sexual concerns with their partner. Individuals with high scores on this scale (above 60*T*) report extensive dissatisfaction with the sexual relationship and frequency of sexual exchanges. They are likely to describe their partner as uninterested about their sexual relationship, unaffectionate, and as not being sexually satisfying. They are also likely to report feeling emotionally distant.

General relationship distress was defined in the present study by testing a one-factor model composed of the following seven MSI-R scales: Sexual Dissatisfaction (SEX), Affective Communication (AFC), Problem-Solving Communication (PCS), Aggression (AGG), Time Together (TTO), Disagreement about Finances (FIN), and Global Distress (GDS). The remaining six MSI-R scales, including the two validity scales (Inconsistency, INC, and Conventionalization, CNV), scales assessing distress in the parent-child relationship (Dissatisfaction With Children, DSC), parent-parent relationship (Conflict Over Child Rearing, CCR) or family of origin (Family History of Distress, FAM) as well as attitudes toward marital and parental roles (Role Orientation, ROR) were excluded from this model of general relationship distress.

Previous findings, both theoretical (based on scale item content and interpretive intent) and empirical (support for configural invariance across a one-factor model defined by 8 MSI-R scales reflecting various aspects of couple relationship distress) across U.S. and German, Spanish, and South Korean samples (Gasbarrini, Snyder, Willson, & Newman, 2010), Middle Eastern (Arabic speaking) samples (Balderrama-Durbin, Snyder, & Semmar, 2011), and Taiwanese samples (Lou, Lin, Chen, Balderrama-Durbin, & Snyder, in press) formed the basis for using a similar one-factor

model in the current study. The composite general relationship distress measure created in the present study mirrored the same one-factor model supported in previous studies, with the exception of excluding the scale assessing distress in the parent-parent relationship (Conflict over Child Rearing, CCR). The decision to exclude this scale was based on the sample's characteristics, as not all couples in the present sample reported having children.

Data Analyses

The present study used (1) a graded response model (Samejima, 1969, & 1997) of differential item functioning (DIF) to explore gender differences in dissatisfaction sexual intimacy and emotional intimacy across the continuum of relationship distress, and (2) a two-parameter logistic (2PL) model of differential item functioning (DIF) to explore gender differences in dissatisfaction within the domains of sexual intimacy and emotional intimacy.

Unidimensional IRT models require that two basic assumptions be met: (1) the scale is unidimensional, such that it measures only a single latent variable underlie item performance, and (2) the item scores are locally independent, such that once variance from the primary dimension is accounted for, the residuals are uncorrelated. In unidimensional IRT (versus multidimensional IRT), once the assumption of unidimensionality is confirmed, local independence can also be assumed (Hambleton, Swaminathan, & Rogers, 1991), and subsequent IRT-based analyses can be conducted.

Dissatisfaction with sexual intimacy and emotional intimacy across the continuum of relationship distress. To examine gender differences in sexual intimacy

and emotional intimacy as they relate to couple distress, the first part of the present study used a graded response model (Samejima, 1969, & 1997) of DIF. The graded response model is an ordered polytomous IRT model that can accommodate items with several response options to examine data across groups, while controlling for true group mean differences. Individual's responses are conditional upon their trait level (θ; trait in this case being relationship distress), the item difficulty (βi), and the item discrimination (α). In order to use this model, raw scores for each of the seven scales (which varied in length from 10 to 22 items) were reduced to a seven-point scale (0 to 6) using equal interval data binning. That is, each scale (e.g., SEX, AFC, AGG, and so on) was converted to one item, resulting in seven "items" (each with seven ordered categorical responses) defining composite relationship distress. Converting the seven scales (SEX, AFC, PSC, AGG, TTO, FIN, and GDS) into seven "items" with seven ordered categorical responses allowed for analyses to be conducted at the scale-level instead of the item-level. Each ordered categorical response represented increasing levels of distress related to that item category (e.g., SEX or AFC), such that an ordered categorical response of 0 represented absence or little distress, and an ordered categorical response of 6 represented severe distress.

Prior to conducting DIF analyses, exploratory factor analyses (EFA) were conducted using the same data to confirm the unidimensionality and local independence of the composite general relationship distress scale created for the purposes of this study. The EFAs were used to test the 1-factor structure of a latent factor of general relationship distress, and consequently confirm unidimensionality and local

independence in preparation for DIF analyses. The EFAs were conducted using Mplus (Muthén & Muthén, 2011) and a weighted least-squares solution with mean and variance adjustment. The resulting factor eigenvalues were evaluated to determine the fit of the data to the proposed structure. Although there are several suitable ways to determine unidimensionality using eigenvalues (Ruscio & Roche, 2012), the IRT assumption of good fit or unidimensionality is generally met if the ratio of the first eigenvalue to the second eigenvalue is substantially larger than the ratio of the second eigenvalue to the others (Lord, 1980), or if the ratio between the first and second eigenvalues is greater than 3.0 (Kline, 2005).

Upon confirming unidimensionality and local independence of the 1-factor model of the latent factor of general relationship distress (GDS, AFC, PSC, AGG, TTO, FIN, and SEX), graded-response differential item functioning (DIF) was conducted using IRTLRDIF software (Thissen, 2001). G^2 values, one discrimination parameter, and six difficulty parameters for the Sexual Dissatisfaction (SEX) and Affective Communication (AFC) were examined to identify any gender differences in the impact of dissatisfaction with sexual and emotional intimacy on relationship distress. The first difficulty parameters (β_1) reflected the cumulative probability of endorsing an ordered categorical response value of 1 to 6 compared to 0. The second difficulty parameters (β_2) reflected the cumulative probability of endorsing an ordered categorical response value of 2 to 6 compared to 0 to 1, and so on.

Dissatisfaction within domains of sexual intimacy and emotional intimacy. To explore gender differences in reports of dissatisfaction with sexual and emotional

intimacy, the second part of the present study used a two-parameter logistic (2PL) model of DIF. The 2PL model accommodates binary items, or items with two response options, while controlling for true group mean differences. The 2PL model states that the respondent's responses are conditional upon their trait level (θ; traits in this case being sexual intimacy and emotional intimacy), the item difficulty (β), and the item discrimination (α).

Again, exploratory factor analyses (EFA) were first conducted on the dichotomized items of the Sexual Dissatisfaction (SEX) and Affective Communication (AFC) scales to test a 1-factor structure and to confirm the unidimensionality and local independence of each scale in preparation for DIF analyses. The EFAs were conducted using Mplus (Muthén & Muthén, 2011) and a weighted least-squares solution with mean and variance adjustment. The resulting factor eigenvalues were evaluated to determine the fit of the data to the proposed structure. The ratios between the first and second eigenvalues were evaluated to determine the fit of the data to the proposed structure.

Once the assumptions of unidimensionality and local independence for IRT were affirmed for the two scales, two-parameter logistic (2PL) differential item functioning (DIF) was conducted using IRTLRDIF software (Thissen, 2001). Items with the highest G^2 values in the overall omnibus test obtained from repeating DIF analyses using anchor and candidate items were interpreted by looking at the magnitude of α and β parameters to identify which parameter was driving any DIF or gender differences in sexual and emotional intimacy. Analyses were conducted independently for the Sexual Dissatisfaction (SEX) and Affective Communication (AFC) scales. That is, EFA and

DIF analyses were conducted for dissatisfaction with sexual intimacy, and separate EFA and DIF analyses were performed for dissatisfaction with emotional intimacy.

CHAPTER III

RESULTS

Dissatisfaction with Sexual and Emotional Intimacy across the Continuum of Relationship Distress

Preliminary factor analyses examining unidimensionality. Exploratory factor analyses (EFA) evaluating a 1-factor structure of a latent factor of general relationship distress using the composite scale created for the purposes of this study supported its unidimensionality. The ratio of the first eigenvalue to the second eigenvalue (4.53) was substantially larger than the ratio of the second eigenvalue to the third (0.72) (Lord, 1980), and the ratio between the first and second eigenvalues exceeded the suggested cutoff value of 3.0 (Kline, 2005), demonstrating satisfactory unidimensionality for the composite scale.

Graded response differential item functioning (DIF) analyses. For the purposes of this study, the cutoff G^2 value for the omnibus test was 9.21 ($df = 2$, $\alpha = 0.01$) and 6.63 ($df = 1$, $\alpha = 0.01$) for the α and β parameters nested within the omnibus test. Analyses examining the impact of sexual and emotional intimacy on overall relationship distress using a graded response model revealed significant gender differences. Men, compared to women with equivalent general marital distress, were more likely to endorse dissatisfaction with sexual intimacy (indicated by lower β parameters). Women, compared to equivalently distressed men, were more likely to endorse dissatisfaction with emotional closeness (also indicated by lower β

parameters). The α and β parameters from the graded response DIF analyses can be found in Table 2. Figures 1 and 2 depict the item characteristic curves for the Sexual Dissatisfaction (SEX) scale and the Affective Communication (AFC) scale across the continuum of relationship distress, respectively. For both figures, the solid lines indicate men's results and the dashed lines indicate women's results.

Dissatisfaction within Domains of Sexual and Emotional Intimacy.

Preliminary factor analyses examining unidimensionality. Exploratory factor analyses (EFA) evaluating a 1-factor structure of the Sexual Dissatisfaction (SEX) scale and the Affective Communication (AFC) scale supported each scale's unidimensionality. The ratios of the first eigenvalue to the second eigenvalue for both scales were substantially larger than the ratios of the second eigenvalue to the others (Lord, 1980). Moreover, the ratios between the first and second eigenvalues exceeded the suggested value of 3.0 (Kline, 2005), with values of 5.35 for the Affective Communication (AFC) scale, and 6.10 for the Sexual Dissatisfaction (SEX) scale, demonstrating satisfactory unidimensionality for both scales.

Two-parameter logistic (2PL) differential item functioning (DIF) analyses. Subsequent analyses using a two-parameter logistic model also revealed significant differences between men and women in item endorsement of dissatisfaction with sexual and emotional intimacy using the cutoff G^2 value for the omnibus test 9.21 ($df = 2$, $\alpha = 0.01$), and 6.63 ($df = 1$, $\alpha = 0.01$) for the α and β parameters nested within the omnibus test. Seven of the 13 SEX items were identified as demonstrating DIF. Lower β parameters for men on five of these seven items assessing sexual dissatisfaction suggest

that, in comparison to women with equivalent sexual intimacy dissatisfaction, men were more likely to report dissatisfaction with frequency of sex, and with sexual enthusiasm, enjoyment, and regard expressed by their wives. Women, however, were more likely to report dissatisfaction with amount of tenderness expressed by their husbands during sexual interactions. A significantly higher α parameter on one of these seven items also indicates that, compared to men reporting similar sexual intimacy dissatisfaction, dissatisfaction with the couples' discussion of sex is more closely related to women's dissatisfaction with sexual intimacy. The α and β parameters from the 2PL DIF analyses for the SEX scale items can be found in Table 3. Figures 3 and 4 depict the item characteristic curves for the SEX items demonstrating DIF.

Three of the 13 AFC items were also identified as demonstrating DIF. Lower β parameters for women on two of these three items measuring emotional relationship dissatisfaction suggest that women, in comparison to men with comparable emotional intimacy dissatisfaction, were more likely to confide in friends than in their partners and to think poorly of their husband′s abilities to disclose their feelings. Men, on the other hand, were more likely to report not feeling free to express negative emotions to their partners. The α and β parameters from the 2PL DIF analyses for AFC scale items can be found in Tables 4. Figure 5 shows the respective item characteristic curves for AFC items demonstrating DIF.

CHAPTER IV

DISCUSSION

Intimacy is an important determinant of relationship functioning. It emerges over time through self-disclosure, mutual trust, understanding, and validation, and encompasses several domains of the couple's relationship, including the intellectual, physical, and emotional. Of these domains, previous studies have identified couples' subjective experiences of sexual and emotional closeness and connectedness with their romantic partners as being particularly important in couples' relationship functioning. Several studies have also explored gender differences in sexual and emotional intimacy in couples, and found that men and women generally tend to differ in these domains. However, research has often been limited to focusing on general differences between men and women, particularly whether one gender or the other prefers or values one type of intimacy more than the other. Furthermore, many, if not all, of these studies have consistently used statistical analyses developed under the assumptions of classical test theory which ultimately limit interpretations of findings. Although results from these previous studies have undoubtedly contributed to conceptualizing and understanding sexual and emotional intimacy, the nature and impact of these constructs within the context of romantic, committed relationships remains somewhat elusive, rendering problems in these areas of relationship functioning more difficult to treat or prevent. Indeed, a need has persisted for additional research using different statistical analyses and different research questions to refine our understanding of intimacy in couples.

The present study sought to expand on the existing literature on intimacy by adopting a finer lens for examining ways in which men and women differ in terms of emotional and sexual intimacy within romantic, committed relationships. The first part of the study explored gender differences in sexual intimacy and emotional intimacy as they relate to couple distress by examining differences in women's and men's dissatisfaction with sexual and emotional intimacy across the continuum of relationship distress. The second part of the study offered a more nuanced examination of these two intimacy domains by examining the subfeatures of dissatisfaction with sexual intimacy and emotional intimacy. In contrast to the first part of the study, which was intended to offer a more global understanding of emotional intimacy and physical intimacy in men and women within the context of romantic relationships, the second part identified items and item content that men and women are more likely to endorse when distressed in these respective domains. Ultimately, the present study explored gender differences at both the scale and item level, generating data that speak to both broad and specific differences between men's and women's experiences of emotional and sexual intimacy in relationships. In addition to differing conceptually in terms of its research questions, the present study used two forms of differential item functioning based in item response theory (as opposed to the more popular classical test theory), allowing for statistically meaningful comparisons between men and women.

Interpreting Gender Differences

Overall, our findings suggest that men and women do, indeed, tend to differ in terms of their dissatisfaction with sexual intimacy and emotional intimacy across the

continuum of relationship distress, and more specifically, in the subfeatures of dissatisfaction with sexual and emotional intimacy. Although gender differences are not pervasive or universally true for all men and women, our findings do align well with previous research on gender differences by suggesting that men and women tend to focus on different aspects of intimacy in the relationship. Such findings are coherent when considering how men and women, as a group, tend to communicate, both sexually and emotionally, in different ways and for different reasons. Women typically use speech and exchange information as a way of establishing, maintaining, and acknowledging intimacy in close relationships (Lever, 1976; Maltz & Borker, 1982); men, on the other hand, have been found to have more difficulties communicating their emotions (Carpenter & Addis, 2000; Cordova et al., 2005). Valuing closeness and commitment, women tend to think more often and more elaborately about relationships and enjoy discussing relationships more than men (Acitelli & Young, 1996; Maltz & Borker, 1982). Whereas men tend to pursue dominance in conversations and form social hierarchies through story- or joke-telling and arguing, women often aim to elicit input and participation from others in the conversation as a means of developing rapport and enhancing intimacy (Maltz & Borker, 1982).

Research examining gender differences in the ways men and women conceptualize themselves within the context of close relationships also suggests that men are more likely than women to define themselves as separate from others, and women as more likely to include others in their definition of the self (Cross & Madson, 1997). In terms of romantic relationships specifically, studies have found that women are more

likely than men to process information in terms of their relationship (Sullivan & Baucom, 2005).

Given that women seem to value exchanging emotional information, it may be that women perceive emotional interactions with their partners as the primary indicator of their relationship health. On the other hand, men may tend to rely on sexual interactions as a way of assessing their relationship satisfaction because of their preference for communicating in more active and physical terms. It is important to note that these differences do not indicate an absolute difference between men and women or imply that men and women are on opposite ends of a spectrum. Rather, for men and women, sexual intimacy and emotional intimacy represent overlapping but different distributions of relationship style. In light of these communication styles and preferences, it is understandable that (1) as a group, women are more likely to be affected relationally by overall dissatisfaction with emotional intimacy, and to report dissatisfaction with emotional intimacy, and (2) as a group, men are more likely to be affected relationally by overall dissatisfaction with sexual intimacy, and to report dissatisfaction with sexual intimacy.

Considering Different Methodology

Despite the extant research on various aspects of intimacy, the definition of intimacy remains elusive and inconsistent, particularly as it tends to differ among researchers. The problems with defining intimacy as a field are also observable in existing measures of intimacy. As with most popular definitions of intimacy, measures of intimacy generally tend to assess one broad, all-inclusive construct, making it difficult

to differentiate among distinct yet possibly equally impactful sources of intimacy. However, there are some measures of intimacy that, like the MSI-R scales, attempt to distinguish among different types of intimacy, including emotional and physical intimacy.

The PAIR (Schaefer & Olson, 1981), for example, based on Olson's conceptualization of intimacy, assesses for emotional intimacy using six questions and sexual intimacy using six questions (in addition to three others types of intimacy – social, recreational, and intellectual, also with six questions each). The Waring Intimacy Questionnaire (Waring & Reddon, 1983) similarly assesses specific sources of intimacy, including aspects of emotional and physical intimacy (specific areas measured include conflict resolution, affection, cohesion, sexuality, identity, compatibility, autonomy, and expressiveness). Although the item content on these and similar measures might parallel the MSI-R in some ways, there is also the possibility that replicating the IRT methodology in this study using other measures of sexual and emotional intimacy would yield different results. Future studies might therefore consider examining these constructs using different measures to affirm, complement, clarify, or contradict our current findings.

In addition to considering both emotional and sexual intimacy, it is important to consider how other sources of intimacy impact couples' functioning, and to examine how men and women report on those others sources of intimacy and how they impact their overall relationship functioning. Among several aspects of intimacy, emotional intimacy (e.g., Cordova, Gee, & Warren, 2005; Greef & Malherbe, 2001) and sexual

intimacy (e.g., Guo & Huang, 2005; Sprecher, 2002; Yeh, Lorenz, Wickrama, Conger, & Elder, 2006) have been emphasized within the field of couple therapy and research as important correlates of couples' relationship satisfaction. Indeed, studying the value and impact of emotional and sexual intimacy as distinct constructs for men and women within the context of intimate relationships allows for a more comprehensive understanding of intimacy, as opposed to studying just one overall construct of intimacy. Nonetheless, it is also of interest to consider the role of additional sources of intimacy within romantic relationships. For example, Olson's (1981) model proposes seven types of intimacy: (1) emotional intimacy (experience of close feelings); (2) social intimacy (experience of close friends and social networks); (3) intellectual intimacy (experience of sharing ideas); (4) sexual intimacy (experience of general affection and/or sexual activity); (5) recreational intimacy (experience in sharing hobbies and sporting events); (6) spiritual intimacy (experience of sharing goals, religion, and/or concerns); and (7) aesthetic intimacy (experience of sharing beauty). Waring's (1983) conceptualization of intimacy includes conflict resolution, affection, cohesion, sexuality, identity, compatibility, autonomy, and expressiveness. Prager (1995, 2001, & 2013) also offers a more comprehensive conceptualization of intimacy, and proposes that intimacy encompasses the recreational, intellectual, sexual, emotional, and spiritual domains of the relationship. Future studies might also look to these multi-domain or multi-dimensional definitions of intimacy to examine gender differences in several aspects of intimacy within romantic relationships.

Limitations

Despite the advantages of this two-part study, particularly in terms of its statistical methodology, it is not without its limitations. Of particular significance are the data. Collected almost 20 years ago, the data used in the present study are, in some ways, outdated. Although the original standardization sample approximates the 2010 U.S. census data for educational and racial/ethnic criteria, the sample did not accurately represent the percentage of Hispanic individuals in the U.S. (the percentage of Hispanic participants in sample was 8.6% compared to 14.8% in the 2010 census; Kreider & Ellis, 2011). Furthermore, it is possible that evolutions in gender roles over the past 20 years would contribute to different results had the present study used a more recent sample. Today, women are more encouraged to embrace and pursue their sexuality, and to expect sexual satisfaction from partners, as an important condition (and resource) of overall relationship happiness. Men are also more encouraged to embrace and express their vulnerable emotions, and to pursue emotional expressiveness and responsiveness as an important condition (and resource) of overall relationship happiness. If our data reflected these shifts in gender roles or behaviors, we might not have found as many significant differences between men and women in terms of their dissatisfaction with sexual intimacy and emotional intimacy across the continuum of relationship distress, and in the subfeatures of dissatisfaction with sexual and emotional intimacy.

The type of data used in the present study might also limit our findings. Although the MSI-R does include items regarding the respondent's partner, most of its questions focus on the respondent's experience of the relationship. That is, there is more

information about the respondent's perceptions of the relationship and its features, but not much about the respondent's perceptions of their partner's experience. As such, it might be of interest to include more items that assess how the respondent perceives their partner's experience in order to facilitate a clearer, more complete picture of how intimacy impacts couple functioning.

Lastly, although there seems to be some important concensus in the literature regarding key components of sexual and emotional intimacy, there still remains much work to be done in terms of refining those constructs. For the present study, the definitions of emotional and sexual intimacy were based on (a) empirical findings, (b) theories of intimacy, and (c) item content of the MSI-R. Nonetheless, more elaborate and potentially more accurate conceptualizations of emotional and sexual intimacy may evolve in the future, along with corresponding measurement techniques.

Implications

Understanding the ways in which men and women differ in terms of their dissatisfaction with sexual intimacy and emotional intimacy as it relates to relationship distress, and their dissatisfaction with specific features of sexual and emotional intimacy, provides further insight into men's and women's experience of relationship distress across the entire spectrum of relationship functioning. Our findings highlight that, although two partners in a relationship may both report equivalent levels of relationship distress, the reasons why they are distressed can be different. This is not to imply that either gender experiences dissatisfaction with sexual or emotional intimacy exclusively, or that only one of the two types of intimacy impacts their relationship functioning.

However, it does suggest that men and women differ in observable and important ways. These identified differences, although not necessarily applicable to all men and women, may provide some guidance in treating distressed couples in clinical settings and preventing relationship distress in nonclinical populations.

Treatment for clinically distressed couples. The lack of clarity and specificity in the existing definitions of intimacy and in understanding its impact on relationship functioning complicates treatment of intimacy problems. Just as relationship researchers tend to agree that it is difficult to define and assess intimacy (e.g., Patrick, Sells, Giordano, & Tollerud, 2007), it is likely that therapists have a difficult time understanding how intimacy specifically relates to relationship satisfaction and distress in treatment-seeking couples. Indeed, studies indicate that therapists often identify couples' intimacy-related concerns as challenging problems to treat (e.g., Geiss & O'Leary, 1981; Whisman, Dixon, & Johnson, 1997), possibly due to the generally broad conceptualization of intimacy as one all-encompassing construct. By differentiating between emotional and sexual intimacy (both theoretically and methodologically), our findings provide a clearer and more direct understanding of how men and women experience and are impacted by specific domains of intimacy. These findings could potentially (1) facilitate therapists' conceptualization of intimacy problems in a given couple, and consequently (2) refine or redirect therapists' interventions to address the specific sources of intimacy problems for a given couple.

Prevention of intimacy problems in community couples. Identifying and understanding the role of emotional and physical intimacy in men's and women's

relationship functioning can also be incorporated into relationship education programs as a mean of preventing or buffering against common problems associated with relationship distress. Again, although the gender differences identified in the present study do not apply universally to all men and women, there are consistent patterns suggested by prior research and confirmed in the present study that suggest potential pathways for prevention efforts. Educating couples about these potential differences in their experience of the relationship and relationship conflict, using easily understood terminology (e.g., “seven love languages”), may serve to (1) normalize the tendency for men and women to have discrepant views on the value of sexual and emotional intimacy, while encouraging partners to (2) engage in an open dialogue to discuss their emotional and physical needs, and (3) identify ways of addressing those needs before experiencing distress in those respective domains of intimacy.

CHAPTER V

SUMMARY AND CONCLUSIONS

The present study sought to explore gender differences in dissatisfaction with sexual intimacy and emotional intimacy (1) across the continuum of relationship distress, and (2) within each domain, respectively. Data were provided by husbands and wives (n = 2,038) from a representative sample of community couples who completed the Marital Satisfaction Inventory – Revised (MSI-R; Snyder, 1997), and were analyzed using differential item functioning (DIF), an IRT-based statistical framework. Overall, the findings suggest that men and women do, indeed, differ in their reports of dissatisfaction with sexual intimacy and emotional intimacy, both broadly (across the continuum of relationship distress), and more specifically (within the respective domains of sexual intimacy and emotional intimacy). Understanding the ways in which men and women differ in regards to these two fundamental types of intimacy provides further insight into men's and women's experience of relationship distress across the entire spectrum of relationship functioning, and provides additional guidance in treating and preventing relationship distress. Future studies might consider using alternative measures to affirm, complement, clarify, or contradict our current findings, and incorporate multi-dimensional definitions of intimacy to examine potential gender differences in additional aspects of intimacy within romantic relationships.

REFERENCES

Acitelli, L. K., & Young, A. M. (1996). Gender and thought in relationships. In G. Fletcher & J. Fitness (Eds.), *Knowledge structures and interactions in close relationships: A social psychological approach* (pp. 147–168). Hillsdale, NJ: Erlbaum.

Balderrama-Durbin, C., Snyder, D. K., & Balsis, S. (2015). Tailoring assessment of relationship distress using the Marital Satisfaction Inventory – Brief Form. *Couple and Family Psychology: Research and Practice*, *4*, 127-135.

Balderrama-Durbin, C., Snyder, D. K., & Semmar, Y. (2011). Assessing Arabic couples: An evidence-based approach. *Family Science, 2*, 24-33.

Bortolotti, S. L. V., Tezza, R., Andrade, D. F., Bornia, A. C., & Sousa Junior, A. F. (2013). Relevance and advantages of using the item response theory. *Quality and Quantity*, *47*, 2341-2360.

Carpenter, K. M., & Addis, M. E. (2000). Alexithymia, gender, and responses to depressive symptoms. *Sex Roles, 43*, 629-644.

Christensen, A., & Shenk, J. L. (1991). Communication, conflict, and psychological distance in nondistressed, clinic, and divorcing couples. *Journal of Consulting and Clinical Psychology*, *59*, 458-463.

Christopher, F. S., & Sprecher, S. (2000). Sexuality in marriage, dating, and other relationships: A decade review. *Journal of Marriage and the Family, 62*, 999-1017.

Cohen, A. S., Kim, S., & Wallack, J. A (1996). An investigation of the likelihood ratio test for detection of differential item functioning. *Applied Psychological Measurement, 20*, 15-26.

Cole, S. R., Kawachi, I., Maller, S. R., & Berkman, L. F. (2000). Test of item response bias in the CES-D scale: Experience from the New Haven EPESE study. *Journal of Clinical Epidemiology*, *53*, 285-289.

Cordova, J. V., & Scott, R. L. (2001). Intimacy: A behavioral interpretation. *The Behavior Analyst*, *24*, 75–86.

Cordova, J. V., Gee, C. B., & Warren, L. Z. (2005). Emotional skillfulness in marriage: Intimacy as a mediator of the relationship between emotional skillfulness and marital satisfaction. *Journal of Social and Clinical Psychology*, *24*, 218–235.

Cross, S. E., & Madson, L. (1997). Models of the self: Self-construals and gender. *Psychological Bulletin*, *122*, 5–37.

De Ayala, R. J. (2009). *The Theory and Practice of Item Response Theory*. New York. NY: Guilford Press.

Doss, B. D., Simpson, L. S., & Christensen, A. (2004). Why do couples seek marital therapy? *Professional Psychology: Research and Practice*, *35*, 608–614.

Embretson, S. E., & Reise, S. P. (2000). *Item response theory for psychologists*. Mahwah, NJ: Erlbaum.

Fincham, F. D., Stanley, S. M., & Beach, S. R. H. (2007). Transformative processes in marriage: An analysis of emerging trends. *Journal of Marriage and Family*, *69*, 275-292.

Funk, J. L. & Rogge, R. D. (2007). Testing the ruler with item response theory: Increasing precision of measurement for relationship satisfaction with the Couples Satisfaction Index. *Journal of Family Psychology*, *21*, 572-583.

Gasbarrini, M. F., Snyder, D. K., Willson, V., & Newman, D. (2010, June). Adaptation of the Marital Satisfaction Inventory – Revised (MSI-R) in Germany, Spain, and Korea: An empirical analysis of structural invariance. In D. K. Snyder & C. Balderrama-Durbin (Co-chairs), *Crossnational approaches to evidence-based couple assessment.* Symposium presented at the meeting of the World Congress of Behavioral and Cognitive Therapies, Boston, MA.

Geiss, S. K., & O'Leary, K. D. (1981). Therapist ratings of frequency and severity of marital problems: Implications for research. *Journal of Marital and Family Therapy*, *7*, 515–520.

Greef, A. P., & Malherbe, H. L. (2001). Intimacy and marital satisfaction in spouses. *Journal of Sex and Marital Therapy*, *27*, 247–257.

Guo, B., & Huang, J. (2005). Marital and sexual satisfaction in Chinese families: Exploring the moderating effects. *Journal of Sex & Marital Therapy*, *31*, 21- 29.

Hambleton, R. K., Swaminathan, H., & Rogers, H. J. (1991*). Fundamentals of item response theory*. Newbury Park, CA: Sage.

Hatfield, E. (1984). The dangers of intimacy. In V. J. Derlega (Ed.), *Communication, intimacy, and close relationships* (pp. 207-220). New York, NY: Academic Press.

Hatfield, E., Sprecher, S., Pillemer, J. T., Greenberger, D., & Wexler, P. (1988). Gender differences in what is desired in the sexual relationship. *Journal of Psychology and Human Sexuality*, *1*, 39–52.

Hawton, K., & Catalan, J. (1986). Prognostic factors in sex therapy. *Behaviour Research and Therapy*, *24*, 377–385.

Henderson-King, D. H., & Veroff, J. (1994). Sexual satisfaction and marital well-being in the first years of marriage. *Journal of Social and Personal Relationships*, *11*, 509-534.

Hendrick, S. S., Hendrick, C., & Adler, N. L. (1988). Romantic relationships: Love, satisfaction, and staying together. *Journal of Personality and Social Psychology*, *54*, 980-988.

Holt-Lunstad, J., Birmingham, W., & Jones B. Q. (2008). Is there something unique about marriage? The relative impact of marital status, relationship quality, and network support on ambulatory blood pressure and mental health. *Annals of Behavioral Medicine*, *35*, 239-244.

Hook, M. K., Gerstein, L. H., Detterich, L., & Gridley, B. (2003). How close are we? Measuring intimacy and examining gender differences. *Journal of Counseling and Development*, 81, 462-472.

Impett, E. A., & Gordon, A. (2008). For the good of others: Toward a positive psychology of sacrifice. In S. J. Lopez (Ed.), *Positive psychology: Exploring the best in people* (pp. 79-100). Westport, CT: Greenwood Publishing.

Kaplan, H. S. (1974). *The new sex therapy.* New York: Brunner/Mazel.

Kaplan, H. S. (1979). *Disorders of sexual desire and other new concepts and techniques in sex therapy*. New York, NY: Brunner/Mazel.

Karami, H. (2012). An introduction to differential item functioning. *International Journal of Educational and Psychological Assessment*, *11*, 59-76.

Kayser, K. (1993). *When love dies: The process of marital disaffection*. New York: Guilford Press.

Kieffer, C. (1977). New depths in intimacy. In R.W. Libby & R. N. Whitehurst (Eds.), *Marriage and alternatives: Exploring intimate relationships* (pp. 267-293). Glenview, IL: Scott, Foresman.

Kline, R. B. (2005). *Principles and practice of structural equation modeling*. New York, NY: Guilford Press.

Kreider, R. M., & Ellis, R. (2011). Number, timing, and duration of marriages and divorces: 2009. *Current Population Reports*, pp. 70-125. Washington, DC: U.S. Census Bureau.

Laurenceau, J., Feldman Barrett, L., & Pietromonaco, P. R. (1998). Intimacy as an interpersonal process: The importance of self-disclosure and perceived partner responsiveness in interpersonal exchanges. *Journal of Personality and Social Psychology*, *74*, 1238–1251.

Lawrence, K. A., & Byers, E. S. (1995). Sexual satisfaction in long-term heterosexual relationship. The interpersonal exchange model of sexual satisfaction. *Personal Relationships, 2*, 267-285.

Lever, J. (1976). Sex differences in the games children play. *Social Problems, 23*, 478–487.

Lippert, T., & Prager, K. J. (2001). Daily experiences of intimacy: A study of couples. *Personal Relationships, 8,* 283–298.

Litzinger, S., & Gordon, K. C. (2005). Exploring relationships among communication, sexual satisfaction, and marital satisfaction. *Journal of Sex and Marital Therapy, 31*, 409-424.

Locke, H. J., & Wallace, K. M. (1959). Short marital adjustment and prediction tests: Their reliability and validity. *Marriage and Family Living, 21*, 251–255.

Lord, F. M. (1980). *Applications of item response theory to practical testing problems*. Hillsdale, NJ: Erlbaum.

Lou, Y., Lin, C., Chen, C., Balderrama-Durbin, C., & Snyder, D.K. (in press). Assessing intimate relationships of Chinese couples in Taiwan using the Marital Satisfaction Inventory–Revised. *Assessment*.

Maltz, D. & Borker, R. (1982). A cultural approach to male-female miscommunication. In J. Gumperz (Ed.), *Language and social identity* (pp. 195-216). New York, NY: Cambridge University Press.

Masters, W. H., & Johnson, V. E. (1966). *Human sexual response*. Boston, MA: Little, Brown.

Means-Christensen, A. J., Snyder, D. K., & Negy, C. (2003). Assessing nontraditional couples: Validity of the Marital Satisfaction Inventory-Revised (MSI-R) with

gay, lesbian, and cohabiting heterosexual couples. *Journal of Marital and Family Therapy*, *29*, 69-83.

Mitchell, A. E., Castellani, A. M., Herrington, R. L., Joseph, J. I., Doss, B. D., & Snyder, D. K. (2008). Predictors of intimacy in couples' discussions of relationship injuries: An observational study. *Journal of Family Psychology*, *22*, 21-29.

Mueller, A. E., Segal, D. L., Gavett, B., Marty, M. A., Yochim, B., June, A., & Coolidge, F. L. (2015). Geriatric Anxiety Scale: Item response theory analysis, differential item functioning, and creation of a ten-item short form (GAS-10). *International Psychogeriatrics*, *27*, 1099-1111.

Muthén, L. K., & Muthén, B. O. (1998-2011). *Mplus user's guide*. Los Angeles, CA: Muthén & Muthén.

O'Leary, K. D., & Arias, I. (1983). The influence of marital therapy on sexual satisfaction. *Journal of Sex and Marital Therapy*, *9*, 171-182.

Patrick, S., Sells, J. N., Giordano, F. G., & Tollerud, T. R. (2007). Intimacy, differentiation, and personality variables as predictors of marital satisfaction. *The Family Journal: Counseling and Therapy for Couples and Families*, *15*, 359-367.

Prager, K. J. (1995). *The psychology of intimacy*. New York: Guilford.

Prager, K. J. (2001). Nonverbal behavior in intimate interactions. In L. K. Guerrero, J. A. DeVito, and M.L. Hecht (Eds.), *The nonverbal communication reader: Classic and contemporary readings* (pp. 298-304). Long Grove, IL: Waveland Press.

Prager, K. J., & Buhrmester, D. (1998). Intimacy and need fulfillment in couple relationships. *Journal of Social and Personal Relationships, 15*, 435–469.

Prager, K. J., & Roberts, L. J. (2004). Deep Intimate Connection: Self and Intimacy in Couple Relationships. In Mashek, D. and Aron, A. (Eds.), *The handbook on closeness and intimacy* (pp. 43-60). Mahwah, NJ: Ehrlbaum.

Prager, K. J. (2013). *Dilemmas of intimacy: Conceptualization, assessment, and treatment*. New York: Routledge.

Reis, H. T. (1994). Domains of experience: Investigating relationship processes from three perspectives. In R. Erber & R. Gilmore (Eds.), *Theoretical frameworks in personal relationships* (pp. 87-110). Hillsdale, NJ: Erlbaum.

Reis, H. T., & Shaver, P. (1988). Intimacy as an interpersonal process. In S. W. (Ed.), *Handbook of personal relationships* (pp. 367-389). Chichester, England: Wiley.

Reis, H. T., & Patrick, B. C. (1996). Attachment and intimacy: Component processes. In E. T. Higgins & A. W. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (pp. 523-563). New York, NY: Guilford Press.

Ridley, J. (1993). Gender and couples: Do men and women seek different kinds of intimacy? *Sexual and Marital Therapy, 8*, 243-253.

Roberts, L. J. & Greenberg, D.R. (2002). Observational windows to intimacy processes in marriage. In P. Noller & J. Feeny (Eds.), *Understanding marriage: Developments in the study of couple interaction* (pp. 118-149). New York, NY: Cambridge University Press.

Ruscio, J., & Roche, B. (2012). Determining the number of factors to retain in an exploratory factor analysis using comparison data of known factorial structure. *Psychological Assessment*, 24, 282-292.

Samejima, F. (1996). Estimation of latent ability using a response pattern of graded scores. Psychometric Monograph, *34*, 100-114.

Samejima, F. (1997). Graded response model. In W. J. van der Linden & R. K. Hambleton (Eds.), *Handbook of modern item response theory* (pp. 85-100). New York: Springer-Verlag.

Schaefer, M. T., & Olson, D. H. (1981). Assessing intimacy: The PAIR inventory. *Journal of Marital and Family Therapy, 7*, 47– 60.

Schnarch, D. M. (1991). *Constructing the sexual crucible : An integration of sexual and marital therapy*. New York. NY: Norton.

Snyder, D. K. (1997). *Manual for the Marital Satisfaction Inventory – Revised.* Los Angeles, CA: Western Psychological Services.

Snyder, D. K., & Aikman, G. G. (1999). The Marital Satisfaction Inventory – Revised. In M. E. Maruish (Ed.), *Use of psychological testing for treatment planning and outcomes assessment* (pp. 1173-1210). Mahwah, NJ: Erlbaum.

Spanier, G. B. (1976). Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads. *Journal of Marriage and the Family, 38*, 15–28.

Sprecher, S. (2002). Sexual satisfaction in premarital relationships: Associations with satisfaction, love, commitment, and stability. *Journal of Sex Research*, *39*, 190–196.

Stadler, G., Snyder, K. A., Horn, A. B., Shrout, P. E., & Bolger, N. P. (2012). Close relationships and health in daily life: A review and empirical data on intimacy and somatic symptoms. *Psychosomatic Medicine*, *74*, 398-409.

Stephenson, K. R., Rellini, A. H., & Meston, C. M. (2012). Relationship satisfaction as a predictor of treatment response during cognitive behavioral sex therapy. *Archives of Sexual Behavior*, *42*, 143–152.

Sullivan, L. J., & Baucom, D. H. (2005). Observational coding of relationship-schematic processing. *Journal of Marital and Family Therapy*, *31*, 31–43.

Talmadge, L. D., & Dabbs, J. M. (1990). Intimacy, conversational patterns, and concomitant cognitive/emotional processes in couples. *Journal of Social and Clinical Psychology*, *9*, 473 488.

Thissen, D. (2001). *IRTLRDIF v.2.0b: Software for the computation of the statistics involved in item response theory likelihood-ratio tests for differential item functioning*. Retrieved August 10, 2014, from http://www.unc.edu/~dthissen/dl.html.

U.S. Census Bureau. (2010). *Education: Educational Attainment*. Washington, D.C.: Government Printing Office.

Waring, E. M. (1983). Marital intimacy and self-disclosure. *Journal of Clinical Psychology*, *39*, 183-190.

Waring, E. M., & Reddon, J. R. (1983). The measurement of intimacy in marriage: The Waring Intimacy Questionnaire. *Journal of Clinical Psychology, 39*, 53-57.

Waring, E. M. (1988). *Enhancing marital intimacy through facilitating cognitive self-disclosure.* New York, NY: Brunner/Mazel.

Whisman, M.A., Dixon, A. E., & Johnson, B. (1997). Therapists perspectives of couple problems and treatment issues in couple therapy. *Journal of Family Psychology*, *11*, 361-366.

Whisman, M. A., Snyder, D. K., & Beach, S. R. H. (2009). Screening for marital and relationship discord. *Journal of Family Psychology*, *23*, 247-254.

Yeh, H., Lorenz, F. O., Wickrama, K. A. S., Conger, R. D., & Elder, G. H. (2006). Relationships among sexual satisfaction, marital quality, and marital instability at midlife. *Journal of Family Psychology, 20*, 339-343.

Yoo, H., Bartle-Haring, S., Day, R. D., & Gangamma, R. (2013). Couple communication, emotional and sexual intimacy, and relationship satisfaction. *Journal of Sex and Marital Therapy*, *40*, 37-41.

APPENDIX A

LIST OF TABLES

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Table 1

MSI-R Scale Descriptions

MSI-R Scale	Description
Inconsistency (INC)	Validity scale; Assesses respondent's consistency in responding to item content (20 item pairs)
Conventionalization (CNV)	Validity scale; Evaluates respondent's tendencies to distort appraisal of their relationship in a socially desirable direction (10 items)
Global Distress (GDS)	Global affective scale; Measures respondent's overall dissatisfaction with their relationship (22 items)
Affective Communication (AFC)	Assesses respondent's dissatisfaction with amount of affection and understanding expressed by partner (13 items)
Problem-Solving Communication (PSC)	Assesses couple's general ineffectiveness in resolving differences (19 items)
Aggression (AGG)	Evaluates level of intimidation and physical aggression experienced by respondent from their partner (10 items)
Time Together (TTO)	Measures couple's companionship as expressed in time shared in leisure activity (10 items)
Disagreement about Finances (FIN)	Assesses relationship discord regarding couple's management of finances (11 items)
Sexual Dissatisfaction (SEX)	Evaluates respondent's dissatisfaction with frequency and quality of sexual relations within the relationship (13 items)
Role Orientation (ROR)	Assesses respondent's advocacy for a traditional versus nontraditional orientation toward marital and parental gender roles (12 items)
Family History of Distress (FAM)	Measures disruption of relationships within respondent's family of origin (9 items)
Dissatisfaction with Children (DSC)	Evaluates relationship quality between respondent and their children, and parental concern regarding their children's well-being (11 items)
Conflict over Child Rearing (CCR)	Assesses extent of conflict between partners regarding child rearing practices (10 items)

Note. Each scale, with the exception of INC, CNV, and ROR, is scored in the direction of the discordant response, such that high scores indicate high levels of dissatisfaction.

Table 2

Differential Item Functioning (DIF) Statistics for Sexual Dissatisfaction (SEX) and Affective Communication (AFC) as Indicators of Overall Relationship Distress

	Parameters						
	α	β_1	β_2	β_3	β_4	β_5	β_6
Sexual Dissatisfaction (SEX)							
Women	1.16	-1.98	-0.47	0.74	1.8	2.78	3.96
Men	1.23	-1.95	-0.72	0.27	0.89	1.6	2.67
Affective Communication (AFC)							
Women	2.51	-1.28	-0.32	0.62	1.1	1.5	2.05
Men	2.89	-0.83	0.09	0.9	1.39	1.82	2.29

Note. α = discrimination parameter; β = difficulty parameter.

Table 3

Differential Item Functioning (DIF) statistics for Sexual Dissatisfaction (SEX) Items (Dissatisfaction with Sexual Intimacy)

Item wording	Women		Men	
	α	β	α	β
(R) My partner seems to enjoy sex as much as I do (Item 7).	1.39	**1.69**	1.64	**0.77**
I would prefer to have sexual relations more frequently than we do now (Item 11).	0.66	**0.65**	1.55	**-0.38**
One thing my partner and I don't fully discuss is our sexual relationship (Item 48).	**1.73**	0.14	**0.93**	0.33
My partner sometimes shows too little enthusiasm for sex (Item 52).	1.19	**1.24**	1.62	**0.10**
My partner has too little regard sometimes for my sexual satisfaction (Item 81).	1.92	**1.06**	1.87	**0.78**
I would like my partner to express a little more tenderness during intercourse (Item 119).	1.06	**0.58**	0.75	**1.68**
There are some things I would like us to do, sexually, that my partner doesn't seem to enjoy (Item 123).	1.04	**2.08**	1.02	**0.76**

Note. α = discrimination parameter; β = difficulty parameter. Bold values are statistically significant ($p < .05$).

Table 4

Differential Item Functioning (DIF) Statistics for Affective Communication (AFC) Items (Dissatisfaction with Emotional Intimacy)

	Women		Men	
Item wording	α	β	α	β
It is sometimes easier to confide in a friend that in my partner (Item 6).	1.35	**0.24**	1.02	**0.57**
(R) I feel free to express openly strong feelings of sadness to my partner (Item 115).	1.85	**1.32**	1.55	**1.02**
My partner keeps most of his or her feelings inside (Item 126).	1.13	**0.26**	0.99	**0.82**

Note. α = discrimination parameter; β = difficulty parameter. Bold values are statistically significant ($p < .05$).

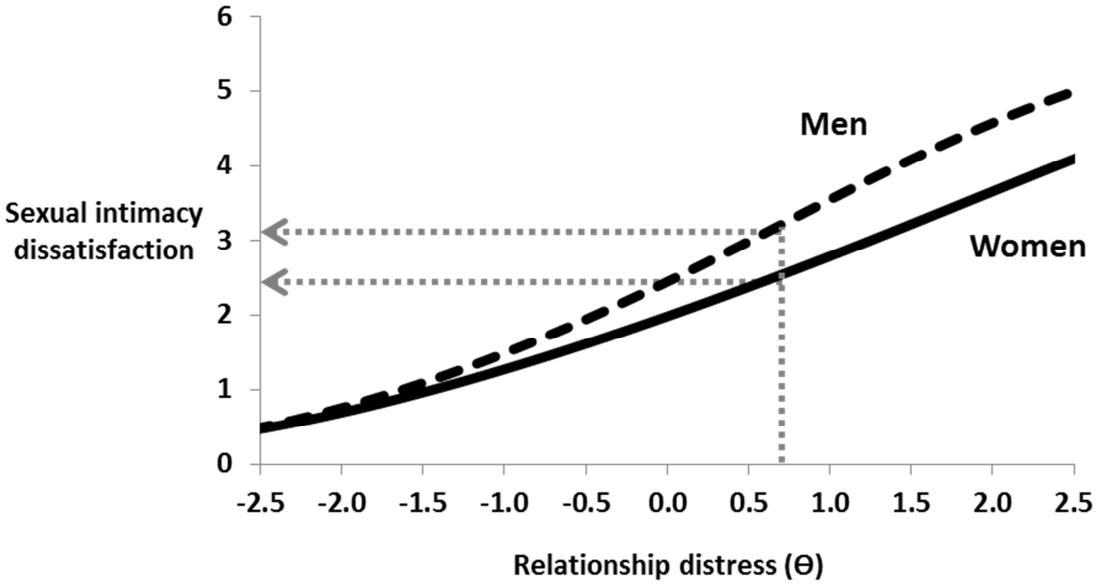

Figure 1. Item characteristic curves for Sexual Dissatisfaction (SEX) scale across the continuum of relationship distress indicate that men report dissatisfaction with sexual intimacy more often than women, even when both genders are matched with respect to relationship distress. Solid lines indicate men's results. Dashed lines indicate women's results.

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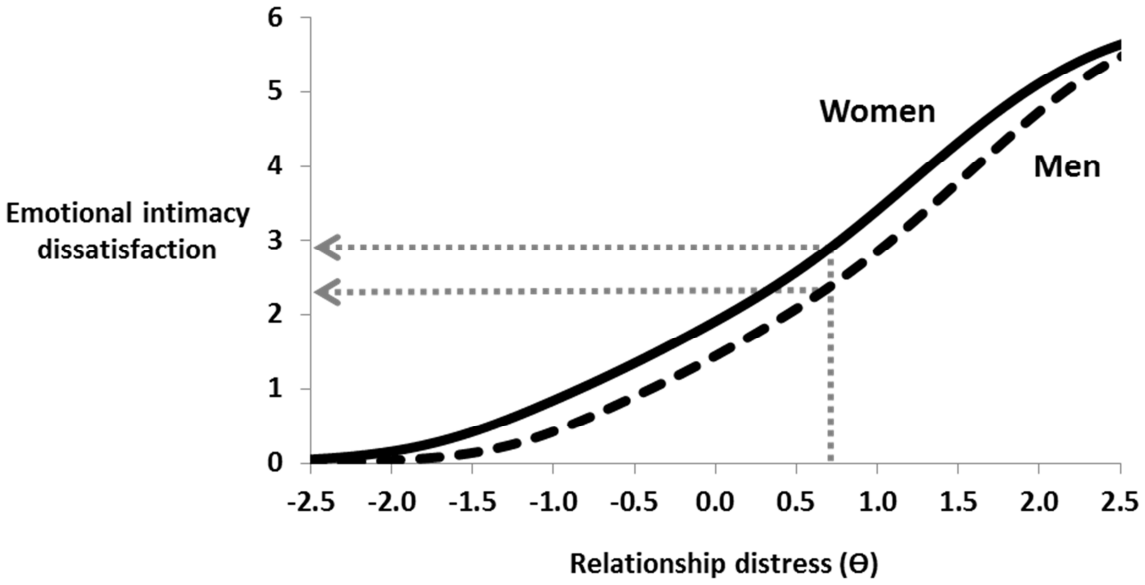

Figure 2. Item characteristic curves for Affective Communication (AFC) scale across the continuum of relationship distress indicate that women report dissatisfaction with emotional intimacy more often than men, even when both genders are matched with respect to relationship distress. Solid lines indicate men's results. Dashed lines indicate women's results.

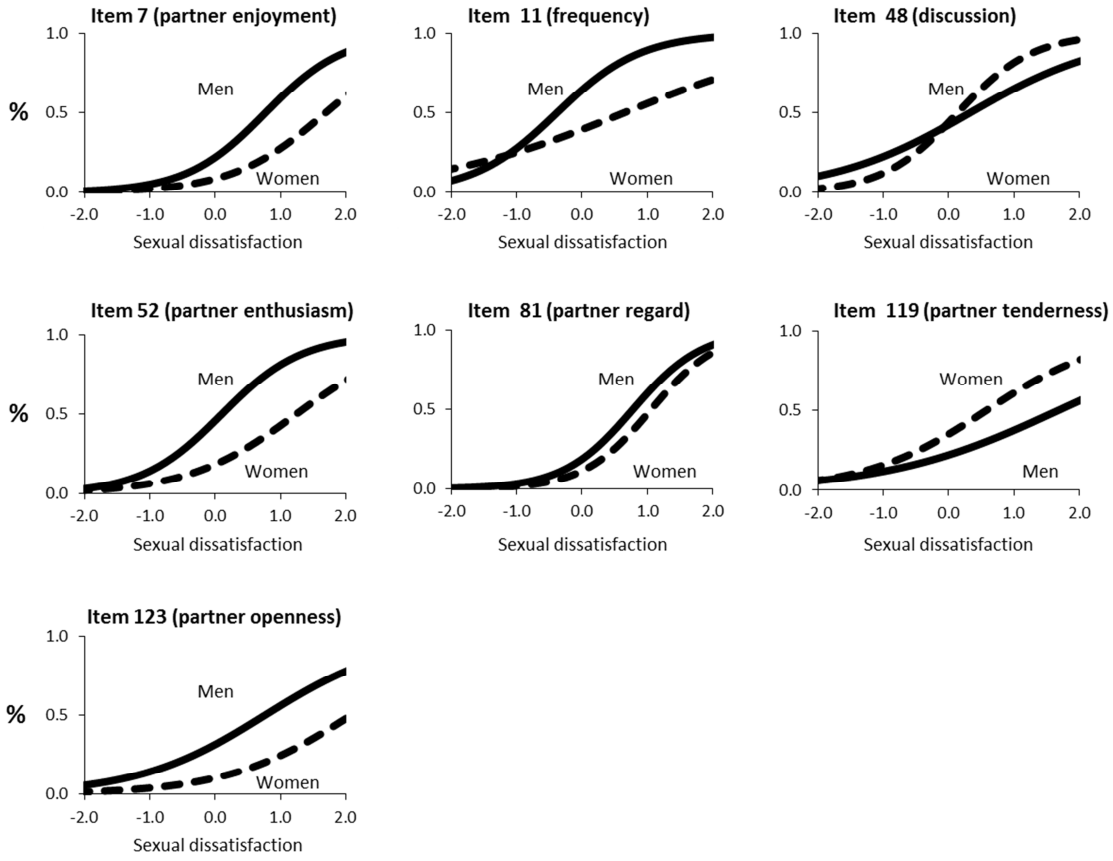

Figure 3. Item characteristic curves for Sexual Dissatisfaction (SEX) items demonstrating differential item functioning. With the exception of partner tenderness, men are more likely than women to report complaints with facets of sexual intimacy related to frequency and partner enjoyment, enthusiasm, openness, and regard during sexual interactions. Solid lines indicate men's results. Dashed lines indicate women's results.

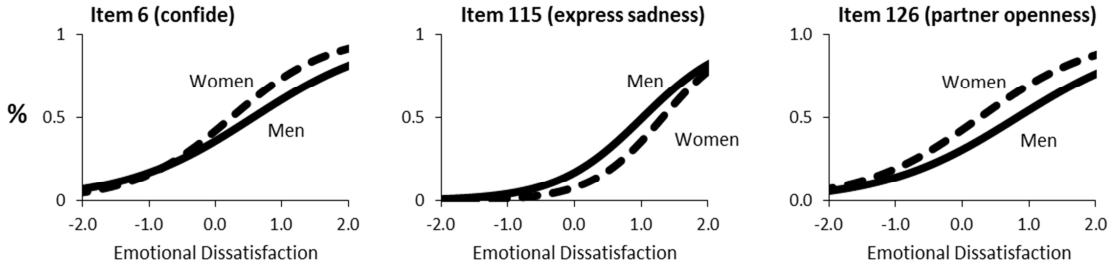

Figure 4. Item characteristic curves for Affective Communication (AFC) items demonstrating differential item functioning. With the exception of expressing sadness, women are more likely than men to report complaints with facets of emotional intimacy related to partner openness and confiding in partner, even when both genders are matched with respects to emotional intimacy dissatisfaction.
Solid lines indicate men's results. Dashed lines indicate women's results.