Examining the linkages between marital quality and anxiety: A Meta-Analytic Review

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Abstract:

This study examines the associations between marital quality and anxiety using meta-analytic techniques. A total of $k = 151$ effects published between the years 2000 and 2019 were analyzed. It was hypothesized that better overall marital quality would be associated with less anxiety. Results showed significant associations between marital quality and anxiety in such a way that higher overall marital quality was associated with lower anxiety. Post hoc analyses revealed that higher levels of positive marital behaviors (e.g., communication and intimacy) and fewer negative marital behaviors (e.g., criticism) were associated with lower anxiety. Additional results examined potential moderators of the association between marital quality and anxiety, including study design, direction of longitudinal associations (i.e., marital quality predicting anxiety or vice versa), gender, assessment of anxiety, and the use of control variables to account for comorbidities and demographic factors. Findings from this study provide a comprehensive review of the associations between marital quality and anxiety, which may be used to inform future research and treatment.

Keywords: anxiety | marital quality | meta-analysis

Article:

Introduction

Marital quality has been linked to anxiety in the empirical literature (Goldfarb et al., 2007). Specifically, individuals who report marital distress are at higher risk for anxiety symptoms or disorders over time (Whisman, 2007). Anxiety has also been linked to negative marital interactions (Zaider et al., 2010) and lower overall marital quality (Gana et al., 2016). Missing from this literature, however, is a meta-analytic review examining the linkages between marital quality and anxiety that statistically summarizes the nature and strength of this association.

Although not specifically focused on marital quality and anxiety, meta-analytic reviews have examined the associations between marital quality and other mental health factors, including depression and indicators of personal well-being (Proulx et al., 2007; Whisman, 2001), which are often comorbid with anxiety. From this work, marital quality has been shown to be positively associated with overall well-being with the strength of the longitudinal associations varying based on which variable is treated as the dependent variable (i.e., if marital quality predicted well-being or vice versa). In a seminal meta-analytic review of the associations between marital quality and personal well-being reported across 93 studies, marital quality was positively associated with well-being for both cross-sectional and longitudinal effects (i.e., study design treated as a moderator), with average-weighted effect sizes of $r = 0.37$ and $r = 0.25$, respectively (Proulx et al., 2007). In addition to study design, this meta-analysis examined several additional moderating variables, including gender, marital duration, direction of longitudinal effect (i.e., treatment of dependent variable), study year, and valence of the marital behavior (i.e., positive or negative). Previous meta-analyses have documented the associations between marital quality and other mental health factors providing a useful template to examine these associations, including moderating variables that may impact these associations. Nonetheless, anxiety has not been systematically included in prior work leaving a gap in the literature. Specifically, no known study to date has empirically summarized the links between marital quality and anxiety using meta-analytic techniques.

In the present study, we address this gap in the literature and use meta-analytic techniques to synthesize findings from peer-reviewed studies published across the 20 years from 2000 to 2019 that assessed links between marital quality and anxiety. The current study does not address the links between anxiety and relationship quality in other long-term intimate or committed relationships outside of marriage. More specifically, we build on previous meta-analytic research regarding the links between marital quality and mental health and examine associations between marital quality and anxiety including moderators to better understand the association. Accordingly, the current study aims to (a) statistically summarize previously reported effect sizes to provide a synthesis of the associations between marital quality and anxiety including post hoc analyses comparing the strength of the associations between positive and negative marital behaviors and (b) examine moderating variables that may impact the strength of the association, including study design, direction of longitudinal associations (i.e., marital quality predicting

anxiety or vice versa), gender, assessment of anxiety, and the use of control variables to account for comorbidities and demographic factors.

Conceptualization and literature review

The current study examines marital quality, which has been operationalized in the literature by several conceptually distinct indicators including positive and negative marital behaviors, marital adjustment, marital distress/discord, and marital satisfaction. Marital behaviors are processes or interactions between spouses. For example, scholars who study marital behaviors may measure positive or negative behavior patterns that may include warmth, support, communication, intimacy, hostility, criticism, and withdrawal. Previous research has documented associations between marital behavior and anxiety and found a positive association between negative marital interactions and anxiety (Bertera, 2005; Zaider et al., 2010). Marital adjustment refers to spouses' ability to adapt to marital roles which require that couples learn to work as a team, co-exist, and effectively interact (Burgess & Cottrell, 1939; Huston, 2000). In Dehle and Weiss's (2002) examination of marital adjustment and anxiety using two waves of data from 47 recently married couples, results showed that anxiety was related to subsequent marital adjustment, such that higher levels of husbands' anxiety were related to lower levels of their own and their wives' marital adjustment. Most often used to demonstrate broad marital difficulties across domains, marital distress/discord refers to difficulties in marital functioning. Distressed couples typically score low on measures of marital adjustment or satisfaction, and marital distress has been linked to a higher risk for the development of anxiety disorders (Whisman & Baucom, 2012). Marital satisfaction is conceptualized as subjective evaluations or feelings of satisfaction in one's marriage and is often measured as an overall evaluation of the marriage or satisfaction across a variety of domains of marriage (Helms, 2013). Previous research has shown that anxiety lowers couples' satisfaction with their marriage over time (Goldfarb et al., 2007; Stevens et al., 2013). In the current study, the overall association between indicators of marital quality and anxiety is examined along with a series of post hoc analyses for positive and negative marital behaviors.

Anxiety disorders are one of the most frequently diagnosed forms of psychopathology (Baxter et al., 2013; Valentiner et al., 2014). Although most people experience anxiety occasionally, for some, it is constant, overwhelming, or intense. According to the National Institute of Mental Health (NIMH), 19.1% of adults in the United States have an anxiety disorder. Furthermore, a global meta-analytic study estimated that 7.3% of adults worldwide have an anxiety disorder (Baxter et al., 2013). Anxiety disorders are characterized by extreme fear and/or anxiety that is out of proportion to the situation or threat (American Psychiatric Association; APA, 2013). Although anxiety can be adaptive (i.e., signaling danger), “it may become overlearned or occur at inappropriate times such that it interferes with people's lives” (Baucom et al., 2003, p. 57)—resulting in physical symptoms, increased stress, and changes in how people behave and think (APA, 2013). Of note, this meta-analysis does not focus on relationship anxiety, including adult attachment. Specifically, attachment in adulthood is related

to how individuals cope when their partner is unavailable. Adult attachment has two-dimensional continuums, attachment-related anxiety and attachment-related avoidance (Selcuk et al., 2010). Those who score low on both dimensions are considered to have a secure adult attachment with their romantic partner (Selcuk et al., 2010). Similarly, this meta-analysis does not focus on posttraumatic stress disorder (PTSD), which has been linked to relationship discord in an earlier meta-analysis (Taft et al., 2011). Instead, the examination of anxiety in the current study focuses on symptoms and/or clinical diagnoses of anxiety which are conceptually distinct from attachment-related anxiety and PTSD. In so doing, the current study provides a nuanced analysis of the association between marital quality and anxiety (e.g., anxiety symptom counts and clinical diagnoses).

The Vulnerability-Stress-Adaptation model (VSA; Karney & Bradbury, 1995) and the Marital Discord Model of Depression (Beach et al., 1990) were used to inform our understanding of the links between marital quality and anxiety. The VSA model provides a framework for how individual-level factors (e.g., anxiety) may impact couples' ability to effectively cope, which in turn impacts marital quality. In contrast, the Marital Discord Model of Depression (Beach et al., 1990) postulates that the marital relationship can impact psychological functioning, namely depressive symptoms. Together, these theoretical models provide a conceptual backdrop to explain the directionality of the associations between marital quality and anxiety.

Recent literature has demonstrated that marital quality is associated with anxiety, but the direction and strength of the associations vary across studies. Across this body of work, longitudinal associations from marital quality to anxiety are more likely to be examined and supported (Overbeek et al., 2006; Whisman et al., 2018). For example, previous research has demonstrated that the quality of marital relationships is associated with the onset or exacerbation of anxiety symptoms (Goldfarb et al., 2007). Similarly, in a study informed by the Marital Discord Model (Beach et al., 1990), decreases in marital quality were shown to predict heightened symptoms of anxiety (Whisman et al., 2018). In contrast, several studies show that anxiety also impacts marital quality. Indeed, relationship difficulties often accompany anxiety (Foran et al., 2015) and may be viewed as a common source of worry (APA, 2013; Paprocki & Baucom, 2017). Marital scholars have linked anxiety disorders to worse marital outcomes, which is likely related to the increased stress and tension that anxiety places on a marriage (Bradbury & Karney, 2004). For example, in a cross-sectional test of the Marital Discord Model (Beach et al., 1990) versus the VSA Model (Karney & Bradbury, 1995), a recent study of couples found that those with an anxious wife were more likely to perceive that their relationship was worse than other couples (Gana et al., 2016). Although the use of both theoretical models provided an opportunity to theorize about the directionality of these associations, Gana et al. (2016) were limited by the use of cross-sectional data in drawing conclusions about the directional associations between marital quality and anxiety. Nonetheless, longitudinal research has shown that anxiety lowers couples' overall satisfaction with their marriage over time (Goldfarb et al., 2007; Stevens et al., 2013). In sum, many scholars have utilized the VSA Model or the Marital Discord Model to speculate about the nature and direction of the association between marital

quality and anxiety. Although support has been found for both frameworks, more research has examined the longitudinal association from marital quality to anxiety, in support of the Marital Discord Model. The current meta-analysis provides an opportunity for a comprehensive test of these theoretical frameworks as we empirically synthesize 20 years of literature on the associations between marital quality and anxiety.

The present study

In the current study, meta-analytic techniques were used to synthesize and summarize empirical research findings that examined the association between marital quality and anxiety. Given previous research and theory, two research questions were considered. First, is there an association between marital quality and anxiety? A negative association between marital quality and anxiety was hypothesized. Second, is the association between marital quality and anxiety moderated by various study- and effect-level characteristics? Informed by the literature including meta-analyses examining marital quality and personal well-being, moderators related to study design, measurement, and gender were examined to address factors that may explain the association between marital quality and anxiety. More specifically, aspects of study design that were treated as moderators included the nature of the study (i.e., cross-sectional or longitudinal) and the direction of the longitudinal associations; measurement moderators were the operationalization of anxiety (i.e., continuous vs categorical), the use of standardized vs non-standardized measurement tools, and the use of control variables (e.g., depression and demographic factors); and the sample characteristic of gender.

Moderators of the association between marital quality and anxiety

Study design

Cross-sectional studies only provide a snapshot of the associations between marital quality and anxiety, and, due to method variance, it is likely that cross-sectional associations are stronger than those that prospectively examine the association over time. Thus, longitudinal studies may provide a more stringent estimate of the association between marital quality and anxiety than cross-sectional studies. Similarly, previous research has reported medium effect sizes for cross-sectional findings and small effect sizes for longitudinal associations between marital quality and anxiety (Gana et al., 2016; Priest, 2013; Rehman et al., 2015; Whisman & Baucom, 2012; Whisman et al., 2018; Zaider et al., 2010). Therefore, we hypothesized that the strength of the association between marital quality and anxiety is stronger for cross-sectional effects than for longitudinal effects. Similarly, because previous research and theorizing have demonstrated directional associations between marital quality and anxiety over time, the treatment of the dependent variable (i.e., marital quality or anxiety) in the association between marital quality and anxiety was examined as a moderator for longitudinal effects. Aligned with the Marital Discord

Model, existing longitudinal research, and meta-analytic findings linking marital quality to other mental health indicators (Proulx et al., 2007; Whisman et al., 2018), we hypothesized that the association is stronger when anxiety, rather than marital quality, is treated as the dependent variable.

Measurement

Studies that examine the association between marital quality and anxiety typically operationalize anxiety as continuous counts of symptoms (Renshaw et al., 2010) or as categorical descriptions of the presence or absence of anxiety disorders (Priest, 2013). Because this difference in how anxiety is measured may reflect different experiences of anxiety (i.e., continuous symptoms that may fall below clinical thresholds versus a clinical diagnosis), we treated the operationalization of anxiety as a moderating variable. Similarly, the use of diagnostic procedures versus self-report was also examined as a moderator because some studies use rigorous assessment to verify the presence of anxiety, whereas others rely on self-reported symptoms. Because scholars use both standardized and non-standardized measures of marital quality, we wanted to know whether the association between marital quality and anxiety would vary based on the measurement of marital quality. Because reliability and validity are typically established for standardized measures, we expected the strength of the association to be stronger for studies that utilized standardized measures of marital quality than those that used non-standardized measures. Finally, because there are high rates of comorbidity between depression, anxiety, and substance use disorders (APA, 2013; Valentiner et al., 2014), we treated the use of control variables as a moderator. Specifically, we examine whether the presence of controls moderates the associations between marital quality and anxiety, including specific control variables related to comorbidities (i.e., depression or demographic factors).

Gender

Although much of the previous literature has used samples of couples in which the wife is diagnosed with anxiety (Goldfarb et al., 2007), several studies have demonstrated variability in the effects of anxiety disorders on marital quality, and vice versa, between husbands and wives. For example, although anxiety is more common among women, some studies suggest that husbands' anxiety symptoms may be more detrimental to marriages than wives' anxiety symptoms (Rehman et al., 2015; Whisman et al., 2018). Accordingly, we hypothesized that the strength of the association between anxiety and marital quality is stronger for husbands' anxiety than wives' anxiety.

Methods

Procedures

We employed meta-analytic techniques to gather and analyze effects from empirical articles spanning the last 20years (i.e., 2000–2019) that assessed associations between marital quality and anxiety. Meta-analysis enables researchers to estimate average effect sizes for conceptually similar associations across a range of empirical studies, provide a range of reported effect sizes, and examine associations between reported effect sizes and study characteristics (Card, 2012). Additionally, meta-analysis can be used to examine the variability of effect sizes across studies, which helps demonstrate the overall variability of the associations across contexts (Field & Gillett, 2010). This variability can be further examined by investigating potential moderators of the associations between marital quality and anxiety. Overall, meta-analytic techniques summarize findings across a body of research and, in so doing, provide greater statistical power and more generalizable conclusions than those from single studies (Card, 2012).

An exhaustive and systematic literature search was conducted to collect eligible articles published between 2000 and 2019. To provide a review of recent research, and because scholars have noted shifts in expectations regarding marriage across time, which is evidenced by increased rates of cohabitation, delaying marriage, and less stigma surrounding divorce (Cherlin, 2010; Coontz, 2016), only empirical articles published between 2000 and 2019 were included. This situated the current study in contemporary scholarship addressing the links between marital quality and anxiety published in the preceding two decades. Studies were collected primarily from online databases, such as PsychINFO and EBSCOhost. Marital quality search terms marriage, marital quality, marital satisfaction, marital communication, marital adjustment, and marital conflict were combined with the anxiety search terms anxiety, generalized anxiety, panic disorder, panic attack, agoraphobia, specific phobia, and social anxiety disorder to identify studies to be reviewed for inclusionary and exclusionary criteria. Additionally, a manual search of abstracts (and text of the article if necessary) from top-tier peer-reviewed research journals in family studies, psychology, close relationships, and related fields was conducted (i.e., Journal of Marriage and the Family, Journal of Family Issues, Family Process, Family Relations, Journal of Family Psychology, Personal Relationships, and Journal of Social and Personal Relationships). Finally, reference lists from relevant articles and related literature reviews were used to search for additional articles.

The titles and abstracts of the collected empirical articles were reviewed for inclusion and exclusion criteria. Articles were examined for inclusion based on the following criteria: (a) association(s) between marital quality and anxiety were examined, (b) the effects had conceptual consistency with the marital quality and anxiety factors outlined in the current study, and (c) the study provided one or more statistical measure of the association between marital quality and anxiety. Articles were excluded based on the following criteria: (a) the study was not published in English, (b) the study was unpublished, such as a thesis or dissertation, and (c) the sample was only comprised of non-married individuals (e.g., single, cohabiting). Studies that utilized samples with both married and unmarried individuals were included if separate associations

between marital quality and anxiety were provided for the subsample of married persons. In such cases, only the results for the married subsamples were included.

The review of the title and abstract of the articles identified in the searches described above identified 180 potential studies for the meta-analysis. Upon more extensive examination for the inclusionary and exclusionary criteria, 154 articles were excluded because the study did not provide a statistical measure of the association between marital quality and anxiety or because multiple articles utilized the same sample. Recent research has questioned the common practice of using beta-estimation procedures to adjust study reported beta coefficients into correlations for use in meta-analyses that may result in biased effect size estimates and encourages researchers to exclude any studies that would require statistical transformations (e.g., betas and logit d, Roth et al., 2018). More specifically, Roth et al. (2018) found that including transformations in meta-analyses, such as beta coefficients, may introduce bias by underestimating mean correlations and overestimating standard deviations. Furthermore, transformations did not provide a better statistical synthesis of the previously reported effect sizes than using effects reported as r alone, despite the smaller number of included studies. Following recommendations from Roth et al. (2018) to "return to the standard practice of using only existing correlations in meta-analysis" (p. 1), the current meta-analysis relies solely on study-reported correlations and partial correlations that do not require beta-estimation or other transformation procedures. In cases where multiple studies reported using the same sample, the study with the most advanced model (e.g., most variables and use of controls) was retained. Through this process, 151 effects gleaned from 26 articles were deemed eligible and coded for study- and effect-level data (Figure 1).

Coding procedures and data preparation

Articles were coded for study characteristics and effects that compared marital quality and anxiety. Study-level coding included descriptive information about the overall study such as year of publication, location (i.e., U.S. or international), sample size, sample composition (e.g., age, race, gender, education, employment, marital length), and sample population (i.e., community or clinical sample). Effect-level coding included information about individual findings, such as design of the effect (i.e., cross-sectional or longitudinal), which marital and anxiety factors were examined, gender, and controls included (e.g., depression and demographics). Studies often included multiple findings related to various marital quality and anxiety associations. For example, the association between various underlying aspects of marital quality in relation to anxiety was often examined separately, or studies examined the associations between marital quality and anxiety separately for husbands and wives. In those cases, separate effect-level coding sheets were completed for each effect in the study.

Articles were coded by the first author and a team of supervised research assistants. The first 20% of all effects coded by assistants were cross-checked by the first author. Coding inconsistencies were discussed and changes to coding guidelines were applied to all coded

studies. After a final coding scheme was developed and all coding was complete, a random 20% of effects were double coded and interrater reliability was assessed. Overall, there was a 94.76% agreement between raters, with a Cohen's Kappa coefficient of $\kappa = 0.884$.

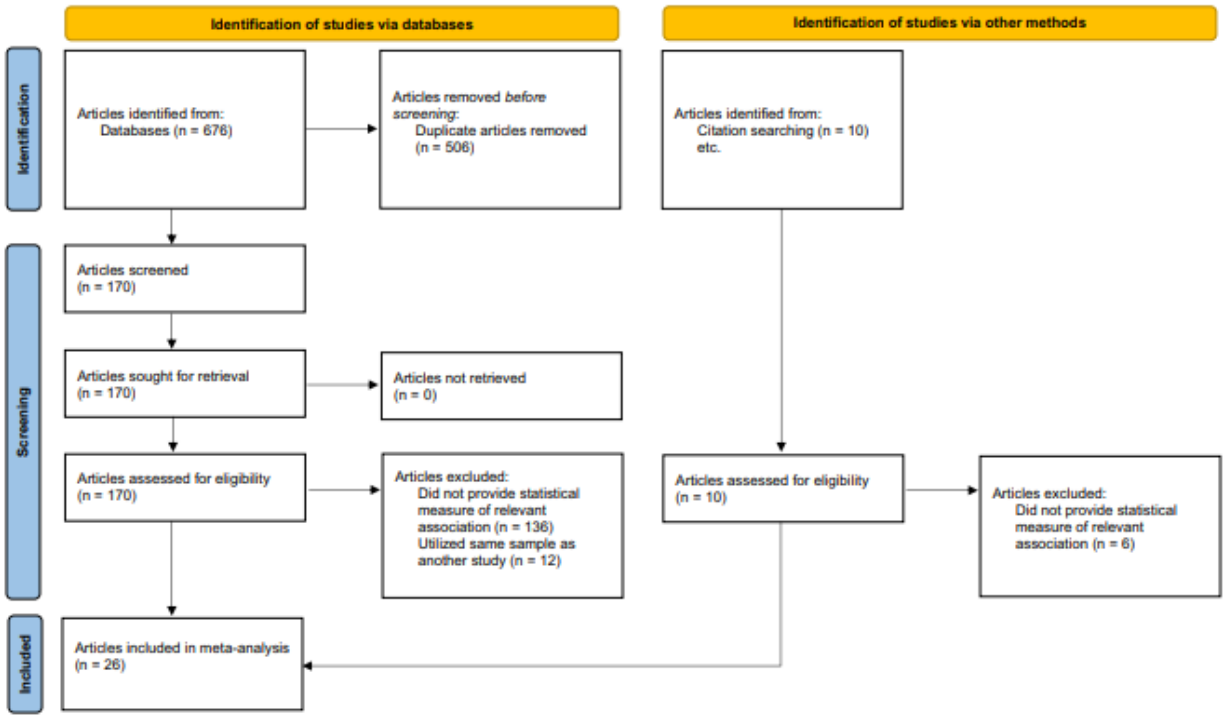

Figure 1. Prisma flow diagram

Results

Study characteristics

The current study included 26 studies published between 2000 and 2019 with $k = 151$ total effect sizes that examined the association between marital quality and anxiety (Figure 2). Sample sizes from the studies ranged in size from 50 to 5848, with a median sample size of 200. 65.38% of the studies utilized samples drawn from within the United States ($n = 17$). The mean length of marriage for couples in the studies ranged from 1 year to 41 years, with an average of 13.8years. Studies reported a range of family income from $25,000 to $72,200, with an average reported mean of $49,519. For sample demographic information, including mean age, racial and ethnic composition, and education for husbands and wives, see Table 1.

Of the $k = 151$ effects, 71.5% were statistically significant and 28.5% were not significant at the $p<0.05$ level. Most effect sizes examined marital quality in relation to anxiety symptoms (k = 125). Some effect sizes, however, were based on the relationship between marital quality and categorical anxiety, such as the presence of an anxiety disorder ($k = 26$). Relatedly, 82.78% of

effects were based on samples of individuals that were not formally diagnosed with anxiety, or the anxiety diagnoses were not confirmed. Only 17.22% of effects were based on samples of individuals that were diagnosed with anxiety following DSM criteria as part of the study.

Association between marital quality and anxiety

Few studies used a general indicator of marital quality. Instead, most studies examined underlying aspects of marital quality (e.g., specific marital behaviors and marital satisfaction) and their association with anxiety. Because previous research has examined both positive (e.g., satisfaction) and negative (e.g., distress) indicators of marital quality, we recoded effects so that all indicators were in the same direction (i.e., high marital quality vs low marital quality). Effects were then combined to examine the overall association between a variety of indicators of marital quality and anxiety. Collapsing across all indicators of marital quality (i.e., marital behaviors, marital adjustment, marital distress, and marital satisfaction), the current study found a significant negative association between marital quality and anxiety ($k = 151$, $r = -0.228$, 95% CI [−0.278, −0.177], $p<0.001$), with significant variance in the effect sizes between studies (I 2 = 82.9%, $p = 0.000$). Given the significant heterogeneity of effect sizes, tests of moderation by study design, measurement, and gender were conducted.

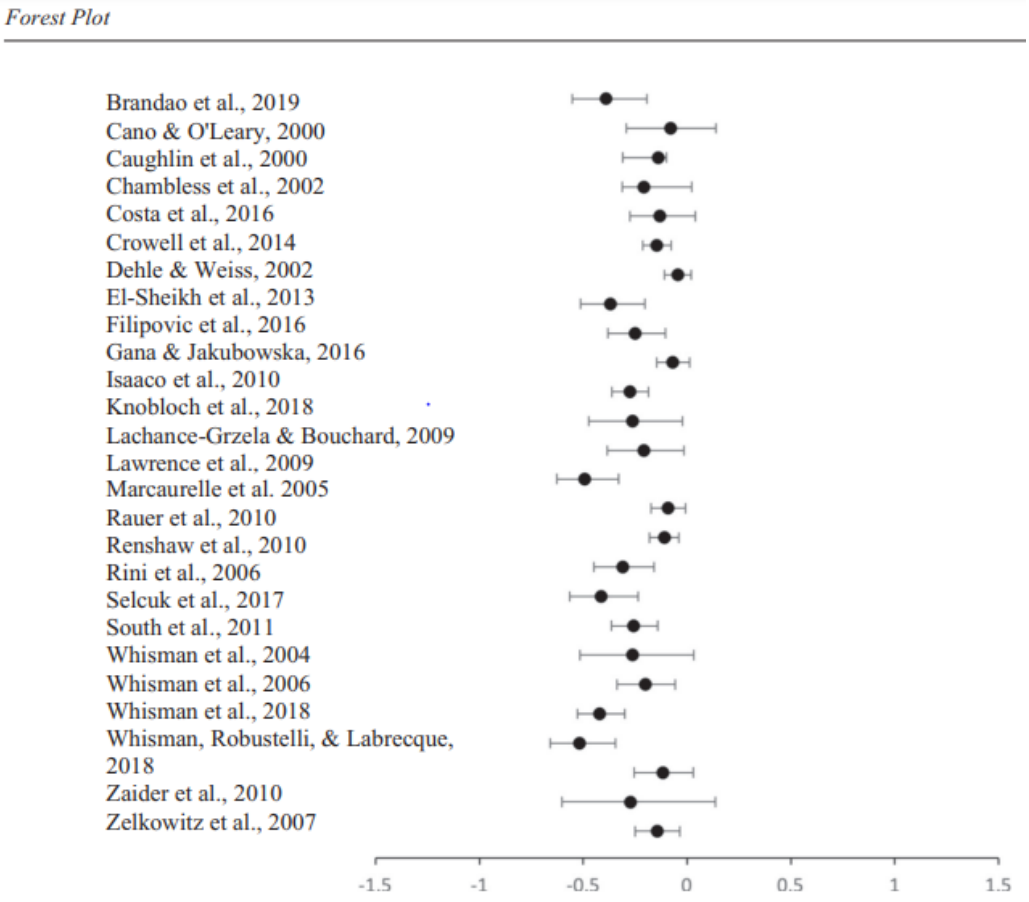

Figure 2. Forest plot

Table 1. Sample demographics

	Husbands mean	Husbands mean range	Wives mean	Wives mean range
Age	41.13 years	26.40-71.93 years	38.83	25.00-67.83 years
White	77.30%	38%–95%	79%	46%–96%
Black	12%	0%–23%	6.94%	0%–13%
Latinx or Hispanic	7.60%	0%–22%	8.90%	2%–24%
Asian	1%	0%–2%	4.05%	1.16%–9%
Native American	3.50%	0%–4%	0.50%	0%–1%
Other/multiple	2.40%	1%–4%	3.40%	0%–7%
Education	14.38years	11.7–15.9years	14.23years	11.8–16.7years

Note: Not all studies reported demographics information for the samples included in their studies.

Study design

The association between marital quality and anxiety was significant regardless of the study design employed ($Q = 2.208$, $df = 2$, p = 0.332), evidenced by significant results for both crosssectional ($k = 91$, $r = -0.234$, 95% CI [−0.293, −0.173], $p<0.001$) and longitudinal studies ($k = 60$, $r = -0.209$, 95% CI [−0.260, −0.158], $p<0.001$). Among the longitudinal effects, the association from marital quality predicting subsequent anxiety was significant ($k = 51$, $r = -0.220$, 95% CI [−0.284, −0.154], $p<0.001$), whereas the association from anxiety predicting subsequent marital quality was not ($k = 9$, $r = -0.047$, 95% CI [−0.283, −0.194], $p = 0.194$). Nonetheless, few effects examined the association from anxiety to marital quality ($k = 9$) and this difference was not statistically significant ($Q = 3.355$, $df = 2$, $p = 0.187$).

Measurement

The association between marital quality and anxiety symptoms ($k = 126$, $r = -0.211$, 95% CI [−0.257, −0.165], $p<0.001$) and marital quality and categorically defined anxiety, such as the presence/absence of anxiety ($k = 25$, $r = -0.249$, 95% CI [−0.394, −0.092], $p = 0.002$), were both significant with similar effect sizes. Nonetheless, these associations were statistically different ($Q = 14.768$, $df = 1$, $p = 0.001$), with the association between marital quality and anxiety stronger when anxiety was measured by the categorical presence or absence of anxiety than as a continuous count of anxiety symptoms. The current study also examined differences based on

clinical diagnosis vs self-reported anxiety. There were no significant differences ($Q = 2.790$, $df = 2$, $p = 0.248$) observed in the association between effects that diagnosed anxiety as part of the study ($k = 26$, $r = -0.283$, 95% CI [−0.496, −0.038], $p = 0.024$) as compared to those that relied on self-reported anxiety ($k = 125$, $r = -0.217$, 95% CI [−0.263, −0.170], $p<0.001$). It should be noted, however, that there were few studies ($N = 5$) included in our meta-analysis that used diagnostic procedures in part due to our exclusion of studies that required transformations (i.e., N = 4 studies were excluded).

Significant differences in the association between marital quality and anxiety based on the type of marital measurement used were found ($Q = 14.078$, $df = 1$, $p = 0.001$), such that the association was stronger among studies that relied on standardized measures ($k = 102$, $r = -0.239$, 95% CI [−0.294, −0.183], $p < 0.001$) than studies that did not use standardized measures ($k = 49$, $r = -0.143$, 95% CI [−0.221, −0.063], $p < 0.001$). Finally, the use of control variables did not significantly moderate the association between marital quality and anxiety. Specifically, there were no significant differences ($Q = 0.158$, $df = 2$, p = 0.924) in the association between studies that used control variables ($k = 110$, $r = -0.227$, 95% CI [−0.330, −0.119], $p < 0.001$) and studies that did not use control variables ($k = 41$, $r = -0.217$, 95% CI [−0.269, −0.163], $p < 0.001$). More specifically, the association between marital quality and anxiety remained significant when depression ($k = 28$, $r = -0.260$, 95% CI [−0.438, −0.062], $p = 0.011$) or demographic factors were controlled ($k = 17$, $r = -0.198$, 95% CI [−0.277, −0.115], $p < 0.001$). Insufficient data prevented us from treating substance use as a control.

Gender

Gender moderated the association between marital quality and anxiety, such that the associations differed based on whether husbands' or wives' anxiety was examined ($Q = 11.984$, $df = 1$, $p = 0.007$). Husbands' anxiety was more strongly correlated with husbands' marital quality ($k = 48$, $r = -0.239$, 95% CI [−0.311, −0.164], $p<0.001$) and wives' marital quality ($k = 21$ $r = -0.224$, 95% CI [−0.337, −0.105], $p<0.001$) than wives' anxiety was with either spouse's marital quality. Nonetheless, wives' anxiety was also significantly correlated with husbands' marital quality ($k = 31$, $r = -0.151$, 95% CI [−0.233, −0.066], $p<0.001$) and wives' marital quality ($k = 43$, $r = -0.173$, 95% CI [−0.234, −0.110], $p<0.001$).

Post hoc exploratory analyses related to specific positive and negative marital behaviors

Although combining marital quality indicators to assess how broadly defined marital quality relates to anxiety is useful to provide an overall estimate, it does not provide more nuanced information about how specific positive and negative dimensions of marital quality are associated with anxiety. Thus, we examined associations between marital quality and anxiety for specific indicators of positive and negative marital behaviors. The current study found significant

associations between anxiety and positive marital behaviors, such as closeness/intimacy, communication frequency, responsiveness, and emotional support (k = 10, r = −0.250, 95% CI [−0.393, −0.096], p = 0.002). Similarly, negative marital behaviors, such as criticism, negative communication, and perceived psychological abuse, were also significantly related to anxiety (k = 29, r = 0.283, 95% CI [0.205, 0.357], p<0.001).

Assessment of potential publication bias

To address the potential "file drawer problem," analyses in CMA were conducted to examine the presence of publication biases that may impact the significant results. Specifically, analyses were conducted to determine whether publication biases (e.g., missing data from unpublished dissertations, theses, or other publications) impact the overall findings. Duval and Tweedie's trim and fill test (Duval & Tweedie, 2000) and Rosenthal's Classic Fail-Safe N test (Rosenthal, 1979) were conducted to assess any present publication biases using the CMA 3.0 software (Table 2). Overall, the analyses appeared robust against any potential publication biases. Specifically, the publication biases statistical tests suggest that the current analyses examining associations between anxiety and overall marital quality as well as positive and negative marital behaviors have low risk for publication bias.

Discussion

Anxiety disorders are one of the most common psychological diagnoses in the United States (NIMH, 2 017) and globally (Baxter et al., 2013). Although not as widely studied as other men-tal health factors (e.g., depression), the literature has consistently demonstrated a relationship between anxiety and marital quality (Gana et al., 2016; Goldfarb et al., 2007; Whisman, 2007). Missing from the existing body of research, however, is a comprehensive meta-analytic review that effectively summarizes the nature and strength of these associations. The current study aimed to address this gap in the literature and is the first known study to analyze previously

Table 2. Assessment of potential publication biases

Marital Factor	N (k)	Trim and fill	Classic
		Imputed studies	Fail-safe *N*
Overall Marital Quality	26 (151)	10	1690
Marital Quality indicators			
Positive behaviors	5 (10)	0	65
Negative behaviors	6 (29)	0	169

Note: Duval and Tweedie's Trim and Fill (Random Effects) and Rosenthal's Classic Fail-Safe N tests for publication bias in the associations between marital quality factors and anxiety. ♦= indicates marital factors were not robust against potential publication biases

reported effect sizes for the links between marital quality and anxiety with meta-analytic tech-niques. As hypothesized, when overall marital quality was high anxiety tended to be lower. Furthermore, post hoc analyses revealed that positive marital behaviors, such as closeness or emotional support, were negatively correlated with anxiety, such that higher levels of these behaviors were associated with lower levels of anxiety. In contrast, negative marital behaviors, such as criticism, were associated with higher levels of anxiety. These findings suggest that both positive and negative aspects of marital behaviors are associated with anxiety. Although the magnitude of the correlations found between marital quality and anxiety were small to medium (Card, 2012), findings were consistent with research that has linked anxiety to lower overall marital quality (Gana et al., 2016), marital adjustment (Dehle & Weiss, 2002; Whisman & Baucom, 2012), marital satisfaction (Rehman et al., 2015; Renshaw et al., 2010; Stevens et al., 2013), and higher marital distress (Whisman, 2007), and negative interactions, such as hostility (Bertera, 2005; Zaider et al., 2010).

Inconsistent with our hypothesis, the nature of the study (i.e., cross-sectional vs. longitudi-nal) did not moderate the association between marital quality and anxiety. This finding differs from prior meta-analyses of marital quality and more general well-being, such that longitudi-nal associations—suggested to be a more stringent test of the association—were weaker than cross-sectional associations (Proulx et al., 2007). That the strength of the association did not differ is notable and suggests that the link between marital quality and anxiety can be observed as a snapshot in time and across the course of a marriage. The majority of the longitudinal ef-fects in the current study examined how indicators of marital quality impact subsequent anx-iety (k= 58) versus how anxiety impacts subsequent marital quality (k= 20). Consistent with results from Proulx et al.'s (2007) meta-analysis of marital quality and well-being, there was a significant longitudinal relationship from marital quality to subsequent anxiety. In contrast, the longitudinal association from anxiety to marital quality was not significant; which is likely an indication of low statistical power rather than a failure to support the VSA Model. Indeed, moderation analyses demonstrated that these associations were not significantly different. Thus, future research should continue to examine the longitudinal association of anxiety lead-ing to subsequent marital quality. Nonetheless, our meta-analytic results provide support for the Marital Discord Model of Depression (Beach et al., 1990), which has been used to sug-gest that decreases in marital quality are linked to increases in anxiety across time (Whisman et al., 2018). Similarly, the findings align with research that shows spouses who perceive their marriages to be of lower quality are at higher risk for developing anxiety disorders, including GAD and panic attacks (Priest, 2013). Accordingly, this association may be indicative of high marital quality serving as a protective factor for anxiety, but more research is needed to exam-ine these linkages prospectively.

The measurement used for anxiety (i.e., continuous or categorical) moderated the associa-tion between marital quality and anxiety in such a way that the association was stronger

when anxiety was measured by the categorical presence or absence of anxiety than as a continuous count of anxiety symptoms. Although statistically different, the magnitude of the effect was small and should be viewed with caution; both continuous and categorical measures of anxiety are likely to be effective measurement tools to use in examinations of the association between anxiety and marital quality. No moderation was found based on measures of formal diagnostic procedures versus self- reported diagnosis, which suggests that the association between mari-tal quality and anxiety is not dependent on the use of rigorous diagnosis measures of anxiety. Nonetheless, this finding should be viewed with caution because few studies and effects (N= 5; k= 26) in the meta-analysis employed rigorous diagnostic procedures to assess clinically sig-nificant levels of anxiety. Indeed, before excluding effects that would require transformations, only nine studies (k= 48 effects) were found that included formal anxiety diagnosis data across 20 years of literature that were reviewed. Importantly, most studies and effects included in the meta- analysis (N= 21; k= 125) and reflected in the larger literature did not provide diagnostic information but may still include individuals who have anxiety that exceeds clinical thresh-olds. Future research should continue to examine these associations, especially in the context of rigorous diagnostic assessment for anxiety disorders. Finally, there were no statistical differ-ences in the association between marital quality and anxiety when control variables, including depression, were included in analyses. That the relationship between marital quality and anx-iety remains when comorbidities such as depression (APA, 2013) are considered speaks to the validity of the association.

Our findings revealed that gender moderated the association between marital quality and anxiety. Consistent with our hypothesis, the current study showed husbands' anxiety was more strongly related to husbands' and wives' overall marital quality than was wives' anxiety. Prior research was inconsistent, with some studies reporting no gender differences (Whisman, 2007; Whisman et al., 2000), and others reporting significant gender differences. The results of the meta-analysis align with recent work that has found husbands' anxiety to be more detrimen-tal to marriages than wives' anxiety (Rehman et al., 2015; Whisman et al., 2018). Specifically, husbands' anxiety has been linked to lower marital satisfaction (Rehman et al., 2015), lower levels of marital adjustment (Dehle & Weiss, 2002), and higher marital discord (Whisman et al., 2018) for themselves and their wives across time.

Post hoc analyses revealed that both positive and negative marital behaviors were signifi-cantly related to anxiety and highlight the importance of both increasing positive marital behaviors and decreasing negative marital behaviors. The finding that lower anxiety is asso-ciated with positive marital behaviors provides a point of entry for intervention in work with couples and aligns with marital therapy approaches that target increased opportunities for positive interactions and bids for connection (Baucom et al., 2019). Clinicians can tailor their support with the knowledge that increasing positive aspects of marital behavior (e.g., com-munication, intimacy, and warmth) may be just as meaningful as reducing negative aspects of marital behavior (e.g., hostility) for both marital functioning and the treatment of anxiety. Indeed, researchers and therapists have found that treating anxiety and marital distress to-gether

leads to better mental health and marital functioning (Baucom et al., 2018). Despite this, risk for marital distress and anxiety are rarely assessed concurrently (Schonbrun & Whisman, 2010), and anxiety is usually treated at the individual level with therapy and medi-cation without the involvement of spouses (NIMH, 2022). Therapists who are attuned to the links between marital quality and anxiety can provide better assessments and more targeted interventions or support, which may reduce anxiety and strengthen the couple's relationship. For example, husbands' anxiety was shown to be more impactful on both husbands' and wives' overall marital quality than wives' anxiety. This information may be useful to help tailor treatment efforts to the unique needs of husbands and wives presenting for marital and/or anxiety- related treatment. For example, some scholars have posited that husbands' anxiety may be more strongly related to marital quality because husbands rely on social support primarily from their wives (Whisman et al., 2018). Additionally, husbands' anxiety may challenge gendered norms and societal expectations regarding masculinity, which may strain the marriage (Simon, 2014).

Limitations and future directions

Although our meta-analysis was the first to statistically summarize contemporary literature regarding the associations between marital quality and anxiety, we were limited by the con-straints of meta-analytic procedures. For example, meta-analyses do not provide an opportu-nity to examine complex research questions or mediational hypotheses. Thus, we are unable to comment on the processes through which the associations between marital quality and anxiety may operate.

In addition, our choice to not use statistical transformations may be viewed as a limitation and deviation from common and recommended practice for meta-analytic studies (Borenstein et al., 2009; Chinn, 2000). Although we grounded our approach in contemporary recommen-dations to reduce bias in meta-analyses (Roth et al., 2018), the decision to not transform effect sizes in cases where r was not reported (e.g., betas and logit d) reduced our overall number of effect sizes from $k = 252$ to $k = 151$. In so doing, our approach risked "the loss of informa-tion, and possibly the systematic loss of information, resulting in a biased sample of studies" (Bornstein, et al., p. 46). Indeed, in addition to excluding articles that would require beta- estimation procedures, our approach also excluded studies that required transforming log odds ratios to logit d. Because of this choice, the association between marital quality and categorical measures of anxiety based on diagnostic interviews in probability samples had the potential to be systematically excluded including the results of the Whisman (2007) seminal study. Importantly, although based on a smaller sample of effects, our current findings were similar to those based on the full sample of effects that included transformations (i.e., $k = 252$, $r = -0.217$, 95% CI [−0.368, −0.054], $p < 0.01$; results available from the authors). These prelim-inary findings in combination with Roth et al.'s assertions informed our analytic decision and attended to recommendations by Bornstein and

colleagues to conduct a sensitivity analysis when choosing to restrict the sample of effects in this manner. It should be noted, however, that our approach may be viewed as controversial and as a limitation of the study.

Furthermore, meta-analytic procedures are also limited by the scope of prior research. For example, the data did not permit us to examine whether there were any differences between in-dividuals or couples who are receiving treatment for anxiety and/or marital distress and those who are not receiving treatment. Additionally, more research is needed that relies on rigorous diagnostic procedures to better understand the association between marital quality and anxiety when anxiety does and does not meet clinical thresholds. Furthermore, the current study was unable to effectively examine differences between spouses in their first marriages and spouses in remarriages, because studies failed to consistently provide this information. Nonetheless, some research has suggested that how marriage and mental health relate may differ based if spouses are in a first or higher-order marriage (Hiyoshi et al., 2015; Scott et al., 2010). Likewise, the process of considering and/or taking steps toward divorce (i.e., divorce proneness) is likely rife with anxiety. Few studies have investigated how divorce proneness may relate to anxiety across time. Due to constraints of previous literature, we were also unable to examine addi-tional contextual factors such as the presence or absence of children in the marriage and soci-etal factors (e.g., no-fault divorce laws, cultural considerations, and mental health stigma) that could potentially impact the association between marital quality and anxiety.

The current study was limited in scope to the examination of marital quality and anxiety. Future research would benefit from meta-analytic studies of several related areas. Adult attach-ment and anxiety related to the unavailability of a partner (Mikulincer & Shaver, 2016) is a core aspect of anxious attachment and should be examined more extensively in future marital research. Additionally, future research should examine additional mental health factors that may be associated with marital quality, such as substance use disorders. Finally, we focused solely on the marital literature and did not examine other types of relationships (e.g., nonmarital committed or long-term intimate relationships in the form of dating and cohabitation) that may also be related to anxiety. Future research would benefit from examination of how the quality of other intimate and family relationships is related to anxiety. Given societal shifts and the reduced stigma related to nonmarital intimate relationships (Cherlin, 2010; Coontz, 2016), it is likely that similar associations would be found when examining relationships outside the bounds of marriage. Nonetheless, the linkages between relationship quality and anxiety—including the potential impact on relationship trajectories—is an important direction for future research.In conclusion, this was the first known meta-analytic study to examine the association between marital quality and anxiety. Results demonstrate that a significant correlation between marital quality and anxiety exists, such that higher marital quality is associated with lower anxiety. Overall, the current study provides a statistical synthesis of previous research that has investigated these linkages, and therefore, a more comprehensive analysis than findings reported in individual studies. These findings provide a comprehensive picture of the nature of the associations between marital quality and anxiety and

the conditions under which associ-ations emerge, which may be used to inform future research, improve therapeutic experiences for individual spouses and couples, and educate practitioners and couples.

References

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders: DSM- 5*. American Psychiatric Association.

Baucom, D. H., Belus, J. M., Stanton, S., & Epstein, N. B. (2018). Treating relationship distress. In A. L.Vangelisti & D.Perlman (Eds.), *The Cambridge handbook of personal relationships* (pp. 538–549). Cambridge University Press.

Baucom, D. H., Fischer, M. S., Corrie, S., Worrell, M., & Boeding, S. E. (2019). *Treating relationship distress and psychopathology in couples.* Routledge.

Baucom, D. H., Stanton, S., & Epstein, N. (2003). Anxiety disorders. In D. K.Snyder & M. A.Whisman (Eds.), *Treating difficult couples* (pp. 57–87). Guilford Press.

Baxter, A., Scott, K., Vos, T., & Whiteford, H. (2013). Global prevalence of anxiety disorders: A systematic review and meta- regression. *Psychological Medicine, 43(5)*, 897– 910. https://doi.org/10.1017/S00332917200147X

Beach, S. R. H., Sandeen, E. E., & O'Leary, K. D. (1990). *Depression in marriage: A model for etiology and treatment.* Guilford Press.

Bertera, E. (2005). Mental health in U.S. adults: The role of positive social support and social negativity in personal relationships. *Journal of Social and Personal Relationships, 22(1)*, 33 – 48.

Borenstein, M., Hedges, L., Higgins, J., & Rothstein, H. (2014). *Comprehensive meta-analysis (version 3) [computer software]*. Biostat.

Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H. R. (2009). *Introduction to meta-analysis.* John Wiley & Sons.

Bradbury, T., & Karney, B. (2004). Understanding and altering the longitudinal course of marriage. *Journal of Marriage and Family, 66(4)*, 862 – 879.

Burgess, E. W., & Cottrell, L. (1939). *Predicting success or failure in marriage.* Prentice- Hall.

Card, N. (2012). *Applied meta-analysis for social science research (methodology in the social sciences)*. Guilford Press.

Coontz, S. (2016). *The way we never were: American families and the nostalgia trap (Revised and updated*, 2016th ed.. Perseus.

Cherlin, A. J. (2010). *The marriage-go-round: The state of marriage and the family in America today*. Vintage Books.

Chinn, S. (2000). A simple method for converting an odds ratio to effect size for use in meta-analysis. *Statistics in Medicine, 19(22)*, 3127– 3131. https://doi.org/10.1002/1097-0258

Dehle, C., & Weiss, R. L. (2002). Associations between anxiety and marital adjustment. The *Journal of Psychology: Interdisciplinary and Applied, 136(3)*, 328– 338. https://doi.org/10.1080/00223980209604160

Duval, S., & Tweedie, R. (2000). Trim and fill: A simple funnel-plot-based method of testing and adjusting for pub-lication bias in meta-analysis. *Biometrics, 56(2)*, 455 – 463.

Field, A. P., & Gillett, R. (2010). How to do a meta-analysis. *British Journal of Mathematical and Statistical Psychology, 63*, 665– 694. https://doi.org/10.1348/000711010X502733

Foran, H. M., Whisman, M. A., & Beach, S. R. H. (2015). Intimate partner relationship distress in the DSM-5. *Family Process, 54(1)*, 48– 63. https://doi.org/10.1111/famp.12122

Gana, K., Saada, Y., Broc, G., Koleck, M., & Cazauvieilh, C. (2016). Dyadic cross-sectional associations between negative mood, marital idealization, and relationship quality. *The Journal of Psychology, 150(7)*, 897– 915. https://doi.org/10.1080/00223980.2016.1211982

Goldfarb, M. R., Trudel, G., Boyer, R., & Preville, M. (2007). Marital relationships and psychological distress: Its cor-relates and treatments. *Sexual and Relationship Therapy, 22(1)*, 109– 126. https://doi.org/10.1080/14681990600861040

Helms, H. (2013). Marital relationships in the 21st century. In G. W.Peterson & K. R.Bush (Eds.), *Handbook of marriage and the family* (pp. 233–254). Springer.

Hiyoshi, A., Fall, K., Netuveli, G., & Montgomery, S. (2015). Remarriage after divorce and depression risk. *Social Science & Medicine, 141*, 109– 114. https://doi.org/10.1016/j.socscimed.2015.07.029

Huston, T. L. (2000). The social ecology of marriage and other intimate unions. *Journal of Marriage and Family, 62*, 298– 320.

Karney, B. R., & Bradbury, T. N. (1995). The longitudinal course of marital quality and stability: A review of theory, method, and research. *Psychological Bulletin, 118*, 3– 34.

Mikulincer, M., & Shaver, P.R. (2016). *Attachment in adulthood, second edition: Structure, dynamics, and change.* Guilford Press.

National Institute of Mental Health (2017, November). *Mental health information statistics – Any anxiety disorder.* https://www.nimh.nih.gov/health/statistics/any-anxiety- disorder.shtml

National Institute of Mental Health (NIMH) (2022, April). *Anxiety Disorders*. https://www.nimh.nih.gov/healt h/topics/anxiety-disorders#part_222

Overbeek, G., Vollebergh, W., deGraaf, R., Scholte, R., deKemp, R., & Engels, R. (2006). Longitudinal associa-tions of marital quality and marital dissolution with the incidence of DSM-III-R disorders. *Journal of Family Psychology, 20(2)*, 284–291. https://doi.org/10.1037/0893-3200.20.2.284

Paprocki, C. M., & Baucom, D. H. (2017). Worried About us: Evaluating an Intervention for Relationship-Based Anxiety. *Family Process, 56(1)*, 45– 58. https://doi.org/10.1111/famp.12175

Priest, J. B. (2013). Anxiety disorders and the quality of relationships with friends, relatives, and romantic partners. *Journal of Clinical Psychology, 69(1)*, 78– 88. https://doi.org/10.1002/jclp.21925

Proulx, C. M., Helms, H. M., & Buehler, C. (2007). Marital quality and personal well-being: A meta-analysis. *Journal of Marriage and the Family, 69*, 576 – 593.

Rehman, U., Evraire, L., Karimiha, G., & Goodnight, J. (2015). Actor-partner effects and the differential roles of depression and anxiety in intimate relationships: A cross-sectional and longitudinal analysis. *Journal of Clinical Psychology, 71(7)*, 715– 724. https://doi.org/10.1002/jclp.22162

Renshaw, K., Blais, R., & Smith, T. (2010). Components of negative affectivity and marital satisfaction: The importance of actor and partner anger. *Journal of Research in Personality, 44(3)*, 328– 334. https://doi.org /10.1016/j.jrp.2010.03.005

Rosenthal, R. (1979). The file drawer problem and tolerance for null results. *Psychological Bulletin, 86(3)*, 638– 664. https://doi.org/10.1037/0033-2909.86.3.638

Roth, P. L., Le, H., Oh, I. S., Van Iddekinge, C. H., & Bobko, P. (2018). Using beta coefficients to impute missing cor-relations in meta-analysis research: Reason for caution. *Journal of Applied Psychology, 103(6)*, 644– 658. https://doi.org/10.1037/apl0000293

Schonbrun, Y., & Whisman, M. (2010). Marital distress and mental health care service utilization. *Journal of Consulting and Clinical Psychology, 78(5)*, 732–732, 736.

Scott, K., Wells, J., Angermeyer, M., Brugha, T., Bromet, E., Demyttenaere, K., Girolamo, G. D., Gureje, O., Haro, J. M., Jin, R., Karam, A. N., Kovess, V., Lara, C., Levinson, D., Posada-Villa, J., Samposon, N., Takeshima, T., Zhang, M., & Kessler, R. (2010). Gender and the relationship between marital status and first onset of mood, anxiety and substance use disorders. *Psychological Medicine, 40(9)*, 1495–1505. https://doi.org/10.1017/S0033291709991942

Selcuk, E., Zayas, V., & Hazan, C. (2010). Beyond satisfaction: The role of attachment in marital functioning. *Journal of Family Theory & Review, 2(4)*, 258– 279. https://doi.org/10.1111/j.1756-2589.2010.00061.x

Simon, R. W. (2014). Twenty years of the sociology of mental health: The continued significance of gender and mar-ital status for emotional well-being. In R. J.Johnson, R. J.Turner, & B. G.Link (Eds.), *Sociology of mental health: Selected topics from forty years 1970s–2010s* (pp. 21–51). Springer.

Stevens, E. S., Jendrusina, A. A., Sarapas, C., & Behar, E. (2013). Generalized anxiety disorder. In P. M. G.Emmelkamp & T.Ehring (Eds.), *The Wiley handbook of anxiety disorders* (pp. 378–423). John Wiley & Sons.

Taft, C. T., Watkins, L. E., Stafford, J., Street, A. E., & Monson, C. M. (2011). Posttraumatic stress disorder and inti-mate relationship problems: A meta-analysis. *Journal of Consulting and Clinical Psychology, 79(1)*, 22– 33. https://doi.org /10.1037/a0022196

Valentiner, D. P., Fergus, T. A., Bhar, E., & Conybeare, D. J. (2014). Anxiety disorders. In D. C.Beidel, B. C.Frueh, & M.Hersen (Eds.), *Adult psychopathology and diagnosis* (pp. 299–353). John Wiley & Sons.

Whisman, M., & Baucom, D. (2012). Intimate relationships and psychopathology. *Clinical Child and Family Psychology Review, 15(1)*, 4– 13. https://doi.org/10.1007/s10567-011-0107-2

Whisman, M., Robustelli, B., & Labrecque, L. (2018). Specificity of the association between marital discord and longitudinal changes in symptoms of depression and generalized anxiety disorder in the Irish longitudinal study on ageing. *Family Process, 57(3)*, 649– 661. https://doi.org /10.1111/fa mp.12351

Whisman, M., Sheldon, C., & Goering, P. (2000). Psychiatric disorders and dissatisfaction with social relationships: Does type of relationship matter? *Journal of Abnormal Psychology, 109(4)*, 803– 808.

Whisman, M. A. (2001). The association between depression and marital dissatisfaction. In S. R. H.Beach (Ed.), *Marital and family processes in depression: A scientific foundation for clinical practice* (pp. 3–24). American Psychological Association.

Whisman, M. A. (2007). Marital distress and DSM-IV psychiatric disorders in a population-based national survey. *Journal of Abnormal Psychology, 116(3)*, 638– 643. https://doi.org /10.1037/0 021- 843X.116.3.638

Zaider, T., Heimberg, R., & Iida, M. (2010). Anxiety disorders and intimate relationships: A study of daily processes in couples. *Journal of Abnormal Psychology, 119(1)*, 163–163, 173.

Studies included in the Meta-Analysis

Brandão, T., Brites, R., Pires, M., Hipólito, J., & Nunes, O. (2019). Anxiety, depression, dyadic adjustment, and attachment to the fetus in pregnancy: Actor–partner interdependence mediation analysis. Journal of Family Psychology, 33(3), 294– 303. https://doi.org/10.1037/fam0000513

Cano, A., & O'Leary, K. D. (2000). Infidelity and separations precipitate major depressive episodes and symptoms of nonspecific depression and anxiety. Journal of Consulting and Clinical Psychology, 68(5), 774 – 781. https://doi.org/10.1037/0022-006X.68.5.774

Caughlin, J. P., Huston, T. L., & Houts, R. M. (2000). How does personality matter in marriage? An examination of trait anxiety, interpersonal negativity, and marital satisfaction. Journal of Personality and Social Psychology, 78(2), 326– 336. https://doi.org/10.1037/0022-3514.78.2.326

Chambless, D. L., Fauerbach, J. A., Floyd, F. J., Wilson, K. A., Remen, A. L., & Renneberg, B. (2002). Marital interaction of ag-oraphobic women: A controlled, behavioral observation study. Journal of Abnormal Psychology, 111(3), 502– 512. https://doi.org/10.1037/0022-3514.78.2.326

Costa, E. V., Vale, S., Sobral, M., & Graça Pereira, M. (2016). Illness perceptions are the main predictors of depression and anx-iety symptoms in patients with chronic pain. Psychology, Health & Medicine, 21(4), 483– 495. https://doi.org/10.1080/13548506.2015.1109673

Crowell, J. A., Dearing, E., Davis, C. R., Miranda-Julian, C., Barkai, A. R., Usher, N., Trifiletti, S., & Mantzoros, C. (2014). Partnership and extended family relationship quality moderate associations between lifetime psychiatric diagnoses and current depressive symptoms in midlife. Journal of Social and Clinical Psychology, 33(7), 612 – 629. https://doi.org/10.1521/jscp.2014.33.7.612

Dehle, C., & Weiss, R. L. (2002). Associations between anxiety and marital adjustment. The Journal of Psychology: Interdisciplinary and Applied, 136(3), 328– 338. https://doi.org/10.1080/00223980209604160

El-Sheikh, M., Kelly, R., & Rauer, A. (2013). Quick to berate, slow to sleep: Interpartner psychological conflict, mental health, and sleep. Health Psychology, 32(10), 1057– 1066. https://doi.org/10.1037/a0031786

Filipović, S., Vukosavljević- Gvozden, T., & Opačić, G. (2016). Irrational beliefs, dysfunctional emotions, and marital adjustment: A structural model. Journal of Family Issues, 37(16), 2333– 2350. https://doi.org/10.1177/0192513X15572384

Gana, K., & Jakubowska, S. (2016). Relationship between infertility-related stress and emotional distress and marital satisfaction. Journal of Health Psychology, 21(6), 1043 – 1054. https://doi.org/10.1177/1359105314544990

Isacco, A., Garfield, C. F., & Rogers, T. E. (2010). Correlates of coparental support among married and nonmarried fathers. Psychology of Men & Masculinity, 11(4), 262– 278. https://doi.org/10.1037/a0020686

Knobloch, L. K., Knobloch-Fedders, L. M., & Yorgason, J. B. (2018). Communication of military couples during deployment predicting generalized anxiety upon reunion. Journal of Family Psychology, 32(1), 12– 21. https://doi.org/10.1037/fam0000344

Lachance-Grzela, M., & Bouchard, G. (2009). The well-being of cohabiting and married couples during pregnancy: Does preg-nancy planning matter?Journal of Social and Personal Relationships, 26(2– 3), 141– 159. https://doi.org/10.1177/0265407509106705

Lawrence, E., Yoon, J., Langer, A., & Ro, E. (2009). Is psychological aggression as detrimental as physical aggression? The indepen-dent effects of psychological aggression on depression and anxiety symptoms. Violence and Victims, 24(1), 20– 35. https://doi.org/10.1891/0886-6708.24.1.20

Marcaurelle, R., Bélanger, C., Marchand, A., Katerelos, T. E., & Mainguy, N. (2005). Marital predictors of symptom severity in panic disorder with agoraphobia. Journal of Anxiety Disorders, 19(2), 211– 232. https://doi.org/10.1016/j.janxdis.2004.01.005

Rauer, A. J., Kelly, R. J., Buckhalt, J. A., & El-Sheikh, M. (2010). Sleeping with one eye open: Marital abuse as an antecedent of poor sleep. Journal of Family Psychology, 24(6), 667– 677. https://doi.org/10.1037/a0021354

Renshaw, K. D., Blais, R. K., & Smith, T. W. (2010). Components of negative affectivity and marital satisfaction: The importance of actor and partner anger. Journal of Research in Personality, 44(3), 328– 334. https://doi.org/10.1016/j.jrp.2010.03.005

Rini, C., Schetter, C. D., Hobel, C. J., Glynn, L. M., & Sandman, C. A. (2006). Effective social support: Antecedents and consequences of partner support during pregnancy. Personal Relationships, 13(2), 207– 229. https://doi.org/10.1111/j.1475-6811.2006.00114.x

Selcuk, E., Stanton, S. C. E., Slatcher, R. B., & Ong, A. D. (2017). Perceived partner responsiveness predicts better sleep quality through lower anxiety. Social Psychological and Personality Science, 8(1), 83– 92. https://doi.org/10.1177/1948550616662128

South, S., Krueger, R., & Iacono, W. (2011). Understanding general and specific connections between psychopathology and marital distress: A model based approach. Journal of Abnormal Psychology, 120(4), 935 – 935.

Whisman, M. A., duPont, A., Rhee, S. H., Spotts, E. L., Lichtenstein, P., Ganiban, J. M., Reiss, D., & Neiderhiser, J. M. (2018). A genetically informative analysis of the association between dyadic adjustment, depressive symptoms, and anxiety symptoms. Journal of Affective Disorders, 237, 23718– 23726. https://doi.org/10.1016/j.jad.2018.04.105

Whisman, M., Robustelli, B., & Labrecque, L. (2018). Specificity of the association between marital discord and longitudinal changes in symptoms of depression and generalized anxiety disorder in the Irish longitudinal study on ageing. Family Process, 57(3), 649– 661. https://doi.org/10.1111/famp.12351

Whisman, M. A., Uebelacker, L. A., Tolejko, N., Chatav, Y., & McKelvie, M. (2006). Marital discord and well-being in older adults: Is the association confounded by personality?Psychology and Aging, 21(3), 626– 631. https://doi.org/10.1037/0882-7974.21.3.626

Whisman, M., Uebelacker, L., & Weinstock, L. (2004). Psychopathology and marital satisfaction: The importance of evaluating both partners. Journal of Consulting and Clinical Psychology, 72(5), 830 – 838.

Zaider, T., Heimberg, R., & Iida, M. (2010). Anxiety disorders and intimate relationships: A study of daily processes in couples. Journal of Abnormal Psychology, 119(1), 163 – 163.

Zelkowitz, P., Bardin, C., & Papageorgiou, A. (2007). Anxiety affects the relationship between parents and their very low birth weight infants. Infant Mental Health Journal, 28(3), 296– 313. https://doi.org/10.1002/imhj.20137