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Psychological Distress of Spousal Caregivers of Older Adults:  
The Moderating Role of Marital Quality

Avalon White

A thesis submitted to the faculty of  
Brigham Young University  
in partial fulfillment of the requirements for the degree of  
Master of Science

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## ABSTRACT

### **Psychological Distress of Spousal Caregivers of Older Adults: The Moderating Role of Marital Quality**

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Master of Science

Caregiving, specifically caregiver burden, is commonly related to decreased psychological well-being. Conversely, marital quality is positively related to psychological well-being, though existing literature presents mixed findings as to whether or not a gender difference exists in this relationship. The current study examined the relationship between objective and subjective spousal caregiver burden and psychological distress with marital quality as a moderator. Gender differences in this relationship were also explored. 1,066 spousal caregivers from the National Study of Caregiving (NSOC) were used to estimate cross-sectional moderation models and plot significant interactions in Mplus. Results indicated a significant positive relationship between subjective caregiver burden and psychological distress, and higher marital quality protected against psychological distress in this relationship. The connection between objective caregiver burden and psychological distress was not significant, and no gender differences were found in the moderation of marital quality. These findings suggest that perceptions of caregiver burden are important for the psychological health of spousal caregivers, and higher marital quality may be an effective buffer of this relationship regardless of gender. Spousal caregivers who perceive caregiving to be highly burdensome may benefit from improving their marital quality to protect against negative psychological health outcomes.

Keywords: caregiver burden, marital quality, psychological distress, spousal caregivers

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## TABLE OF CONTENTS

TITLE PAGE .....	i
ABSTRACT .....	ii
ACKNOWLEDGEMENTS .....	iii
LIST OF TABLES .....	v
LIST OF FIGURES .....	vi
Psychological Distress of Spousal Caregivers of Older Adults: The Moderating Role of Marital Quality.....	1
Literature Review.....	2
Family Stress Theory .....	2
Caregiving and Psychological Health .....	3
Caregiving and Marital Quality.....	4
Marital Quality and Psychological Health .....	5
Marital Quality, Psychological Health, and Gender .....	7
Current Study .....	9
Methods.....	9
Sample.....	9
Measures.....	10
Caregiver Burden.....	10
Marital Quality .....	11
Psychological Distress .....	12
Covariates .....	12
Statistical Analysis .....	13
Results.....	13
Preliminary Analyses .....	13
Direct Effects.....	14
Interaction Terms .....	14
Discussion .....	15
Implications.....	17
Limitations and Future Directions.....	18
Conclusion .....	19
References.....	20

**LIST OF TABLES**

Table 1: Descriptive Statistics of NSOC Spousal Caregivers at Rounds 1, 2, and 3.....	28
Table 2: Correlations of Predictors, Outcomes, and Covariates.....	29
Table 3: Unstandardized Results for Predictors of Psychological Distress.....	30

**LIST OF FIGURES**

Figure 1: Conceptual Model of Objective and Subjective Caregiver Burden Predicting Psychological Distress with Marital Quality and Gender as Moderators .....	31
Figure 2: Plot of Interaction between Subjective Burden and Marital Quality Predicting Psychological Distress .....	32

## **Psychological Distress of Spousal Caregivers of Older Adults:**

### **The Moderating Role of Marital Quality**

In the past year, over 16% of Americans served as unpaid caregivers to older adults (American Association of Retired Persons [AARP], 2020). This percentage has increased in recent years and is likely to continue increasing as the Baby Boomer generation ages, because as the number of older adults increases, so does the number of older adults who require care. As caregiving for others is known to take a physical and psychological toll (see Bom et al., 2019 for a review), the increase in the number of caregivers will likely be related to an increase in the number of individuals who experience caregiving-related stress.

While caregiving is related to negative health effects, higher marital satisfaction is connected to better psychological health (Kim & McKenry, 2002; Proulx et al., 2007; Proulx & Snyder-Rivas, 2013). This relationship is particularly salient for the 12% of caregivers who care for a spouse or partner (AARP, 2020), as higher marital quality may protect spousal caregivers from the negative associations between caregiving and psychological health. Although some research distinguishes between spousal and other types of caregivers, there is a lack of research regarding the role of marital quality for spousal caregivers specifically. The current study examined marital quality as a moderator of the relationship between objective and subjective caregiver burden and psychological distress in spousal caregivers of older adults. Previous literature presents mixed findings on whether a gender difference exists in the relationship between marital quality and psychological well-being, so the current study also explored potential differences between males and females in the hypothesized moderated relationship.



## Literature Review

### Family Stress Theory

Family stress theory, developed by Reuben Hill (Hill, 1949), uses the ABC-X model to analyze and illustrate how individuals and families cope with stressors they experience. The framework includes components of the stressor event (A) interacting with both the individual's or family's resources and strengths (B) and their perceptions of the stressor event (C) to produce the degree of stress or crisis experienced (X). The theory proposes that the stress the individual or family system experiences is influenced by moderating factors beyond the stressor event itself. These moderating factors can also interact with each other, with perceptions of resources and resources affecting perceptions also relating to the level of stress experienced.

In later life, families may experience and cope with new stressors related to advancing age. One of these stressors is caregiving, which may involve providing instrumental support, emotional support, and care management. Family caregivers experience varying levels of stress based on the physical and emotional burdens they deal with and whether they have access to resources that buffer their stress (Bush & Price, 2021; e.g., Pinquart & Sörensen, 2002). For spousal caregivers, one of these resources may be their marital quality, which is likely to impact their perceptions of the burdens they experience and protect against negative outcomes related to caregiving (Choi & Marks, 2006; Kang, 2012). Perceptions of stress, or subjective burden, also contribute to caregivers' overall level of stress, as higher subjective stress is related to poorer caregiver health outcomes (Savundranayagam et al., 2011; Son et al., 2007). These perceptions of caregiver burden may be influenced by age (Montgomery et al., 1985). Because spousal caregivers of older adults are typically older adults themselves, they often deal with age-related health problems of their own, which may influence the amount of burden and caregiving-related

stress they experience (de Frias et al., 2005; de Oliveira et al., 2015). The ABC-X model of family stress provides a framework through which the relationship between the stressor of caregiving, including subjective assessments of burden, and the outcome of psychological well-being, as well as potential resources and moderating factors of this relationship, may be examined and better understood.

### **Caregiving and Psychological Health**

Research consistently finds that caregiving is related to psychological health. Generally, caregiving is negatively related to overall subjective well-being when compared to non-caregiving (Pinquart & Sörensen, 2003; Seltzer & Li, 2000). This includes greater unhappiness (Strawbridge et al., 1997) and stress (Pinquart & Sörensen, 2003). Spousal caregivers who view their caregiving experience as negative also report a lower quality of life overall (Harden et al., 2013), indicating that perceptions of caregiving are important for psychological health outcomes.

More specifically, caregivers frequently report more depressive symptoms (Burton et al., 2003; Chumbler et al., 2004; Dura et al., 1991; Hoyert & Seltzer, 1992; Min et al., 2020; Pinquart & Sörensen, 2003; Russo et al., 1995; Seltzer & Li, 2000; Strawbridge et al., 1997) and anxiety (Dura et al., 1991; Russo et al., 1995) than non-caregivers. This occurs for various types of caregivers, including children who are caregiving for a parent (Chumbler et al., 2004; Dura et al., 1991; Voydanoff & Donnelly, 1999) and individuals who are caring for a spouse (Min et al., 2020; Pinquart & Sörensen, 2003; Pinquart & Sörensen, 2011), even when caregivers have comparable rates of depression to non-caregivers prior to beginning care (Dura et al., 1991). The psychological burden of caregiving may be greater for spouses, as researchers of a meta-analysis found that spousal caregivers report more depressive symptoms and lower levels of psychological well-being than adult child caregivers (Pinquart & Sörensen, 2011).

Depressive symptoms in caregivers frequently increase over time, and this is exacerbated among heavily-involved caregivers compared to moderate caregivers (Burton et al., 2003). Researchers discovered that objective caregiver burden, such as the number of hours spent caregiving (Voydanoff & Donnelly, 1999) and the amount of support provided (Pinquart & Sörensen, 2011), is positively related to psychological distress. Similarly, Verbakel et al. (2018) found that more hours of caregiving were related to increased caregiver burden, which was negatively related to caregivers' subjective well-being. The perception of the amount or difficulty of caregiving is also related to psychological health. In a study of spousal caregivers by Godfrey et al. (2018), higher spousal agreement of the amount of care given and received was related to lower depression and anxiety in male caregivers and increased marital satisfaction in female caregivers, and Pruchno et al. (1995) discovered that subjective burden and caregiver depression were significantly positively related. These findings demonstrate that the burdens placed on caregivers, whether objective or subjective, are often related to negative psychological health outcomes, including depression, anxiety, and decreased overall well-being. Additionally, it is important to distinguish between objective and subjective caregiver burden because each type of burden is related to separate predictors and outcomes (Montgomery et al., 1985), and each may have differing associations with the psychological health of caregivers.

### **Caregiving and Marital Quality**

Marriage has been found to have a moderating influence on the negative associations between caregiving and health, as married caregivers frequently report fewer depressive symptoms than unmarried caregivers (Li et al., 1999; Chumbler et al., 2004). Other research suggests it is not the fact of being married that moderates the relationship between caregiving and psychological health, but the quality of the marriage relationship. Choi & Marks (2006)

discovered that when individuals who transitioned to caregiving for a parent experienced a higher level of marital disagreement, they reported a greater decline in overall happiness and a greater increase in depressive symptoms after becoming caregivers than did non-caregivers. Conversely, when marital disagreement was at mean or low levels, there was not a decrease in overall happiness after transitioning to caregiving for a parent, and there was no significant difference in depressive symptoms between non-caregivers and caregivers who had a low level of marital disagreement. Spouses in particular experienced a greater decline in overall happiness and increased depressive symptoms after transitioning to caregiving when they had mean or high levels of marital disagreement as compared to non-caregivers (Choi & Marks, 2006).

The research summarized in this section illustrates that the resource of high-quality marriages may protect against negative psychological health outcomes among caregivers. As there is a lack of research examining the moderating role of marital quality on the relationship between spousal caregiver burden and psychological distress, the current study adds to the limited research in this area.

### **Marital Quality and Psychological Health**

There is a large body of research demonstrating the relationship between marital quality and psychological health, and the outcomes are often negative. Marital strain is linked to greater frustration, sadness, and worry in older husbands and wives (Carr et al., 2016). Marital problems, including marital dissatisfaction, marital distress, and marital disagreement, are significantly related to greater depressive symptoms in both men and women (Bookwala & Jacobs, 2004; Chang, 2018; Goldfarb & Trudel, 2019; Koerner et al., 1994; Whisman, 2001; Woods et al., 2018), and marital conflict is related to depression longitudinally. Marital conflict can also create a feedback loop, where depressive symptoms are related to more marital conflict, which is

connected to more depressive symptoms (Choi & Marks, 2008). Husbands and wives both report more anxiety symptoms as marital strain increases. They also report more loneliness when marital quality is negative, but positive marital quality is unrelated to loneliness longitudinally (Stokes, 2017). The association between marital quality and negative psychological outcomes exists for subjective assessments of marital quality as well. Choi & Ha (2011) found that lower perceived partner support is related to higher depressive symptoms among women who are in committed relationships. Overall happiness is also related to marital quality. Hawkins & Booth (2005) found that unhappily married individuals had worse overall happiness, lower rates of life satisfaction, lower self-esteem, and higher levels of psychological distress than a control group of continuously married individuals.

Marital quality is related to positive psychological health outcomes as well. In a study of Chinese women, a positive marital relationship was significantly related to subjective well-being and quality of life (Wang et al., 2019). Marital quality is also positively related to personal well-being, both cross-sectionally and longitudinally (Proulx et al., 2007), and to life satisfaction (Carr et al., 2014; Chang, 2018; Holt-Lunstad et al., 2008). Overall happiness is also predicted by higher marital quality for older husbands and wives (Carr et al., 2014). Many studies have found a connection between marital quality and depression specifically. Higher marital quality is significantly negatively related to depressive symptoms (Beach et al., 2003; Bookwala & Jacobs, 2004; Kim & McKenry, 2002; Uebelacker et al., 2003), both cross-sectionally and longitudinally (Beach et al., 2003; Kim & McKenry, 2002). Choi & Ha (2011) found that individuals who had higher support from their partners reported lower depressive symptoms than those who had lower partner support. In addition, depression and stress are negatively predicted by increased marital adjustment and marital satisfaction (Holt-Lunstad et al., 2008). Marital quality may also

moderate the relationship between stressors and negative psychological health outcomes, as Min et al. (2020) found that the association between an individual's health conditions and their spouse's depressive symptoms was weaker for couples with higher marital satisfaction. The findings in this section demonstrate that marital quality is significantly related to psychological health and well-being.

The relationship between marital quality and psychological well-being exists for older adults specifically as well as for couples generally (see Goldfarb & Trudel, 2019 for a review). In a sample that included older adults, researchers found that the association between marital dissatisfaction and depression strengthened as age increased (Whisman, 2007), and in a population-based sample of middle-aged and older adults, marital discord predicted depressive symptoms (Whisman & Uebelacker, 2009). Additionally, Bookwala and Jacobs (2004) discovered that, when compared across different age groups, the negative relationship between marital satisfaction and depressive symptoms was strongest for older adults. There is a lack of research examining the connection between marital quality and psychological well-being in older couples specifically (Goldfarb & Trudel, 2019), especially with marital quality as a moderator, so the current study aims to fill this gap.

### **Marital Quality, Psychological Health, and Gender**

There is some disagreement in the literature about whether or not gender plays a significant role in marital quality and psychological well-being. Carr et al. (2014) found no gender difference in a study relating higher marital quality to increased life satisfaction and happiness for older males and females. Similarly, there were no gender differences in two studies of marital dissatisfaction (Whisman, 2007) and marital discord (Whisman & Uebelacker, 2009) as predictors of depressive symptoms. Beach et al. (2003) discovered that the relationship

between marital distress and depressive symptoms was stronger for females than for males concurrently, but no longitudinal gender difference existed.

Other research does find a significant gender difference for marital satisfaction and psychological health outcomes. Woods et al. (2018) found that marital dissatisfaction was related to later depressive symptoms for males, but this relationship was bidirectional for females only. Additionally, two separate meta-analyses discovered that marital dissatisfaction was related to depressive symptoms (Whisman, 2001) and marital quality was related to personal well-being (Proulx et al., 2007) for both females and males, but these relationships were significantly stronger for females (Proulx et al., 2007; Whisman, 2001). In a study by Uebelacker et al. (2003), marital satisfaction and depression were related for females, but not for males. Overall, females tend to report more depressive symptoms than males (Simon, 2002), and their depressive symptoms increase as partner support decreases. This specific relationship is not found for males (Choi & Ha, 2011).

The mixed findings in the literature regarding gender differences in the relationship between marital quality and psychological health indicate that it is unclear what role gender may play in this relationship, though several studies suggest that this relationship may be stronger for females. Research indicates that marital quality may be an effective moderator of the relationship between the stressor of caregiving and psychological health outcomes, and gender differences may exist in this moderation as well. Further research is needed to explore how gender may influence the relationship between marital quality and psychological health, including gender differences in the moderating role of marital quality on the association between caregiving and psychological health outcomes.

## **Current Study**

The current study examined the relationship between the stressors of objective and subjective caregiver burden and psychological distress of spousal caregivers of older adults. The resource of marital quality was explored as a potential moderator of the relationship between both types of caregiver burden and psychological distress, and gender differences in this moderation were examined (see Figure 1). I hypothesized that:

1. Higher objective and subjective caregiver burden would be related to higher psychological distress.
2. Marital quality would buffer the relationship between objective and subjective caregiver burden and psychological distress, with higher marital quality protecting against psychological distress.
3. Gender differences would exist in this moderated relationship, with marital quality being more effective for females than for males at decreasing the strength of the relationship between objective and subjective caregiver burden and psychological distress.

## **Methods**

### **Sample**

Data for this study were taken from Rounds 1, 2, and 3 of the National Study of Caregiving (NSOC; Freedman & Wolff, 2011-2017). The NSOC is a supplemental study to the National Health and Aging Trends Study (NHATS; Schrack & Freedman, 2011-2017), a publicly available nationally representative study of Medicare beneficiaries in the United States ages 65 and older. It began in 2011 with 8,245 participants, and in-person interviews are conducted annually to collect information on the processes and consequences of aging and disablement. The sample was replenished in 2015 due to attrition, adding 4,182 participants to bring the sample



size back up to 8,334 participants. The NHATS is sponsored by the National Institute on Aging (grant number NIA U01AG32947) and was conducted by the Johns Hopkins University. The NSOC consists of the family and unpaid caregivers of NHATS participants and collects data regarding the experience of caregiving for older adults, including: activities for which help was given; duration and intensity of caregiving; physical, emotional, and financial effects of helping; and support services used. It was conducted by telephone in conjunction with the NHATS Rounds 1, 5, and 7 (2011, 2015, and 2017). NHATS participants were eligible for NSOC if they lived in a residential care facility or if they received help in the last month with mobility activities, self-care activities, or household activities for health or functioning reasons. Helpers of NHATS participants were eligible for NSOC if they helped the NHATS participant with the activities listed above and were either related to the NHATS participant (either paid or unpaid) or unrelated to the NHATS participant and not paid to help. Up to five caregivers for each eligible NHATS participant were surveyed for the NSOC. At Round 1 (2011), 2,007 caregivers (422 spouses) were interviewed, 2,204 caregivers (471 spouses) were interviewed at Round 2 (2015), and 2,361 caregivers (518 spouses) were interviewed at Round 3 (2017). Only 46 spousal caregivers participated in all three rounds of the NSOC, so the current study used unique spousal caregivers from Round 1 ( $N = 422$ ), Round 2 ( $N = 380$ ), and Round 3 ( $N = 264$ ) to provide a larger cross-sectional sample size of 1,066 participants.

## **Measures**

### ***Caregiver Burden***

**Objective Burden.** Objective caregiver burden was measured using the average number of hours participants spent caregiving per day. Participants were asked how many days during the past month they spent helping the care recipient and about how many hours they spent

helping on those days. These two numbers were multiplied together to generate the total number of hours each participant spent caregiving in the last month, then divided by 28 to produce the average number of hours each participant spent caregiving per day. This variable was then centered at its mean (3.71 hours) for analysis. A higher number of hours spent caregiving per day indicated a higher level of objective caregiver burden.

**Subjective Burden.** Subjective caregiver burden was measured using six items from the NSOC. Participants were asked whether helping care recipients was financially difficult, emotionally difficult, and physically difficult. These items were dichotomous with 1 indicating a response of “yes.” Participants were then asked a follow-up question for any item to which they responded affirmatively, asking how financially difficult, emotionally difficult, and physically difficult helping the care recipient was on a scale of 1 (“A little difficult”) to 5 (“Very difficult”). These scale variables were adjusted to include participants who responded “no” to the three dichotomous items by assigning them a score of 0, so the new scales ranged from 0 (“Not difficult”) to 5 (“Very difficult”). Participants also reported whether the following statements described their situation very much, somewhat, or not so much: “You are exhausted when you go to bed at night,” “You have more things to do than you can handle,” and “You don’t have time for yourself.” These three items were reverse scored, and all six scale items were summed to create a composite scale of subjective caregiver burden, with higher scores indicating higher subjective burden. All items loaded in a confirmatory factor analysis with factor loadings above .500.

### ***Marital Quality***

Marital quality was assessed using three items from the NSOC. Participants were asked how much care recipients appreciated what they did, how often care recipients got on their

nerves, and how much care recipients argued with them, all with scores ranging from 1 (“A lot”) to 4 (“Not at all”). Items were reverse scored as needed so a higher number indicated a higher level of marital quality. All items loaded in a confirmatory factor analysis with factor loadings of .375 for the appreciate variable, .812 for the nerves variable, and .590 for the argue variable. A similar scale has been used previously to assess relationship quality with the NSOC (see Moon et al., 2017).

### ***Psychological Distress***

Psychological distress was measured using four items from the NSOC. Participants were asked how often they “had little interest or pleasure in doing things,” “felt down, depressed, or hopeless,” “felt nervous, anxious, or on edge,” and “been unable to stop or control worrying” over the last month. Response options ranged from 1 (“Not at all”) to 4 (“Nearly every day”). Higher scores indicated a higher level of psychological distress. All items loaded in a confirmatory factor analysis with factor loadings above .400.

### ***Covariates***

Due to the limited information contained in the NSOC about spousal caregiver demographics, covariates were taken from both the NHATS and the NSOC. Care recipient covariates included income, race, and length of marriage in decades. Race was dichotomous with White, non-Hispanic coded as 1 and all other races coded as 0. Caregiver covariates included cohort, gender, education, care rank, and physical health. Cohort measured whether a participant was interviewed in 2011, 2015, or 2017. Gender was coded as 0 for females and 1 for males. Care rank assessed whether or not a caregiver was the primary caregiver for an NHATS participant based on number of care hours. Primary caregivers were coded as 1, and all other caregivers were coded as 0. Physical health was measured using a subjective item asking

participants to rate their health in general. Response options ranged from 1 (“Poor”) to 5 (“Excellent”).

### **Statistical Analysis**

Preliminary analysis of the data included descriptive statistics, correlations, and mean difference tests by gender for variables of interest. The data were then analyzed using cross-sectional moderation structural equation models in Mplus (Muthén & Muthén, 2017). To test hypothesis 1, Model 1 was estimated with objective caregiver burden, subjective caregiver burden, and marital quality predicting psychological distress. Model 2 added covariates. To test hypotheses 2 and 3, Models 3 and 4 added interaction terms for objective/subjective caregiver burden with marital quality, gender with objective/subjective caregiver burden, gender with marital quality, and a three-way interaction between objective/subjective caregiver burden, gender, and marital quality. Separate models were estimated for each of the interaction terms except the Model 4 including the three-way interaction, which also contained the interaction between marital quality and gender in order to create a three-way latent variable interaction in Mplus using the XWITH command. Significant interactions were then plotted and tests of simple slopes were estimated in Mplus. Full information maximum likelihood was used to handle missing data, and maximum likelihood with robust standard error estimates was used to handle the non-normal distribution of psychological distress in all estimated models.

## **Results**

### **Preliminary Analyses**

Descriptive statistics of the sample are displayed in Table 1. The sample consisted of 638 female and 428 male spousal caregivers, of which 820 (76.92%) were the primary caregiver of an NHATS participant. The majority of the sample (76.17%) was White, non-Hispanic. The

average age was 74.98 years, and the mean length of marriage was 4.30 decades. T-tests indicated significant gender differences on a number of variables. Males were higher than females in age, percentage of White participants, length of marriage, and marital quality, and females were higher than males in objective and subjective caregiver burden and psychological distress. Correlations between variables were all in the expected directions (see Table 2).

### **Direct Effects**

Results from structural equation models indicated a significant positive relationship between subjective caregiver burden and psychological distress across all models (see Table 3). The association between marital quality and psychological distress was also significant across all models, with higher marital quality relating to lower psychological distress. Objective caregiver burden was not significantly related to psychological distress. Models 1 (without controls) and 2 (with controls) had adequate model fit, with a CFI of .99 and an RMSEA of .02 for Model 1 and a CFI of .95 and an RMSEA of .03 for Model 2. Model fit is not reported for Models 3 and 4 because Mplus does not currently generate absolute indices of model fit for latent variable interaction models using the XWITH command.

### **Interaction Terms**

Results from Models 3 and 4 indicate that marital quality was a significant moderator of the relationship between subjective caregiver burden and psychological distress ( $\beta = -.176$ ), but not between objective caregiver burden and psychological distress. As displayed in Figure 2, higher subjective burden was related to higher psychological distress, and this relationship was strongest for caregivers with low marital quality (one standard deviation below the mean) and weakest for caregivers with high marital quality (one standard deviation above the mean).

Results from Models 3 and 4 also indicated no gender differences in the interactions between objective and subjective caregiver burden and marital quality, but gender did significantly moderate the relationship between objective caregiver burden and psychological distress. A test of simple slopes revealed that the association between objective burden and psychological distress was non-significant for males and slightly negative for females ( $\beta = -.011$ ,  $p < .05$ ). None of the other gender interactions, including the three-way interactions, were significant.

### **Discussion**

Research supports that caregiving is related to higher psychological distress, and perceptions of caregiving play an important role in this relationship. Conversely, marital quality and psychological distress are negatively related. Marital quality has also been found to act as a buffer on the association between caregiving and negative psychological health outcomes. The current study used 1,066 spousal caregivers from the NSOC to explore the relationship between objective and subjective caregiver burden and psychological distress with marital quality as a moderator through the framework of family stress theory. Gender differences in this moderated relationship were also tested. Findings indicated that the stressor of subjective caregiver burden was related to increased psychological distress, and marital quality was negatively related to psychological distress. Objective caregiver burden was not connected to psychological distress. Significant interactions existed between subjective caregiver burden and marital quality and between objective caregiver burden and gender.

Results partially supported my first hypothesis. Higher subjective caregiver burden was significantly related to higher psychological distress, but objective caregiver burden was not related to psychological distress. This suggests that the amount of caregiving is less important for

psychological well-being than the perceptions of the difficulty of caregiving. Previous research supports these results, indicating that perceptions of burden are directly related to caregiver health outcomes (Savundranayagam et al., 2011; Son et al., 2007). This finding is also in line with family stress theory, which suggests that stress outcomes, such as psychological distress, are influenced by perceptions of stressors (Hill, 1949).

Results partially supported my second hypothesis as well. Marital quality was significantly negatively related to psychological distress in all models, and it moderated the relationship between subjective caregiver burden and psychological distress with higher marital quality protecting against psychological distress, suggesting that marital quality is an effective resource to reduce the stress outcomes that spousal caregivers may experience. These findings are supported by previous research indicating a connection between higher marital quality and increased psychological well-being (Beach et al., 2003; Bookwala & Jacobs, 2004; Kim & McKenry, 2002; Uebelacker et al., 2003), as well as marital quality as a buffer of the relationship between stressors and negative psychological health outcomes (Min et al., 2020). Marital quality did not significantly moderate the relationship between objective caregiver burden and psychological distress, which is not surprising based on the non-significant direct effect between objective caregiver burden and psychological distress.

Findings did not support my third hypothesis that marital quality would be more effective for females than for males at buffering the relationship between objective/subjective caregiver burden and psychological distress. Gender differences did not exist in the moderation of marital quality. Previous research presents mixed results about whether or not a gender difference exists in the relationship between marital quality and psychological well-being (see Carr et al., 2014; Proulx et al., 2007; Whisman, 2007), and the current study adds to the literature suggesting there

is no gender difference. However, gender did significantly moderate the relationship between objective caregiver burden and psychological distress, with this relationship being non-significant for males and slightly negative for females. Females did report higher objective burden than males in the current sample, which may have contributed to the significant gender interaction. It was unexpected that higher objective caregiver burden was related to lower psychological distress for females. This finding differs from previous research suggesting a positive relationship between objective caregiver burden and psychological distress (Burton et al., 2003; Pinquart & Sörensen, 2011; Voydanoff and Donnelly, 1999). There may be another factor not included in the model that both decreases psychological distress and increases time spent caregiving for female caregivers. It may also be that female caregivers with lower psychological distress are able to spend more time caring for their spouse than those with higher psychological distress. Determining the direction of this effect is prevented by the cross-sectional nature of the current study, but a future longitudinal study may lead to increased understanding of this relationship.

### **Implications**

Findings suggest that distinguishing between objective and subjective caregiver burden is important for researchers to understand how the stressor of caregiving is related to various outcomes. Perceptions of burden play an important role in the psychological well-being of caregivers and their stress outcomes, and this relationship is particularly salient for older adult caregivers whose age is likely to influence their perceptions and the burden they experience (de Frias et al., 2005; de Oliveira et al., 2015; Montgomery et al., 1985). Interventions, such as caregiver support groups, may target caregivers' perceptions of the stressor of burden in order to improve their psychological well-being.



Findings also suggest that marital quality is an effective buffer of the relationship between subjective caregiver burden and psychological distress for spousal caregivers. The resource of higher marital quality may protect against negative outcomes associated with the stressor of caregiving, and it may also improve caregivers' perceptions of their burden and how difficult they perceive caregiving to be. As seen in Table 2, the correlation between subjective caregiver burden and marital quality was substantial ( $r = -.57$ ), indicating that marital quality and subjective caregiver burden may indeed be related. Spousal caregivers may improve their perceptions of their caregiving burden and protect against psychological distress by taking steps to strengthen their marital relationship and improve their marital quality.

### **Limitations and Future Directions**

Although the NSOC is a supplemental study to the nationally representative NHATS, the NSOC itself is not nationally representative, particularly the current subsample of spousal caregivers. Additionally, the small number of spousal caregivers who participated in all three rounds of the NSOC (2011, 2015, and 2017;  $N = 46$  spousal caregivers) prevented the current study from examining the data longitudinally instead of cross-sectionally. Future research would benefit from examining a longitudinal, nationally representative sample of spousal caregivers in order to better understand and apply the relationship between caregiver burden and psychological distress with marital quality as a moderator.

The marital quality measure used in the current study was limited by the items included in the NSOC, which measured aspects of the caregiver and care recipient relationship rather than aspects of relationship or marital quality specifically. Future studies could use established, validated measures of marital quality to better understand the role marital quality plays in the relationship between caregiver burden and psychological distress for spousal caregivers.

The current study did not distinguish between the types of caregiving tasks required of caregivers or different reasons why caregiving is necessary. The relationship between caregiver burden and psychological distress may differ for individuals caring for a spouse with a physical disability versus a cognitive disability. Future research may investigate how different types of or reasons for caregiving are related to caregiver burden and the stress caregivers experience.

The current study examined marital quality as a moderator of the link between caregiver burden and psychological distress, but there are likely other factors that moderate this relationship as well. Future research could examine additional resources that may be connected to perceptions and the stress outcomes experienced by caregivers. Other potential moderators may include additional sources of support beyond marital quality, such as familial support, financial support, and caregiver support groups.

### **Conclusion**

Previous research suggests a negative relationship between caregiver burden and psychological well-being with marital quality as a potential protective factor. The current study found that the stressor of higher subjective caregiver burden, but not objective caregiver burden, is related to higher psychological distress, and marital quality is an effective resource in this relationship with higher marital quality protecting against psychological distress. Spousal caregivers who perceive their caregiving as being highly difficult and burdensome may seek to improve their marital quality to protect against negative psychological health outcomes. Future research should utilize representative longitudinal data and a validated measure of marital quality to further explore marital moderation of the relationship between spousal caregiver burden and psychological distress.

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**Table 1***Descriptive Statistics of NSOC Spousal Caregivers at Rounds 1, 2, and 3*

Variable	Total ( <i>N</i> = 1,066) M ( <i>SD</i> ) or N (%)	Females ( <i>N</i> = 638) M ( <i>SD</i> ) or N (%)	Males ( <i>N</i> = 428) M ( <i>SD</i> ) or N (%)	Min—Max	T-score
Age	74.98 (8.99)	73.16 (9.13)	77.70 (8.04)	42-98	-8.30***
Education	5.35 (2.13)	5.30 (2.07)	5.43 (2.22)	1-9	-1.00
Income	\$68,587 (\$221,268)	\$62,936 (\$116,909)	\$77,463 (\$323,353)	\$0-5,000,000	-0.79
White, non-Hispanic	812 (76.17%)	467 (73.20%)	345 (80.61%)	0-1	-2.66**
Length of marriage	4.30 (1.82)	4.16 (1.86)	4.49 (1.75)	0-7.2	-2.54*
Physical health	3.22 (1.11)	3.19 (1.12)	3.26 (1.09)	1-5	-1.05
Primary caregiver	820 (76.92%)	497 (77.90%)	323 (75.47%)	0-1	0.92
Objective burden	3.71 (5.04)	4.42 (5.59)	2.67 (3.85)	0.04-26.57	5.17***
Subjective burden	7.33 (4.76)	8.18 (5.18)	6.12 (3.78)	3-24	6.90***
Marital quality	9.31 (1.82)	9.06 (1.93)	9.68 (1.58)	3-12	-5.40***
Psychological distress	6.26 (2.41)	6.55 (2.57)	5.85 (2.10)	4-16	4.52***

*Note.* Length of marriage is measured in decades, Objective burden is measured in number of hours spent caregiving per day.

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

**Table 2**

*Correlations of Predictors, Outcomes, and Covariates*

	Obj Burden	Subj Burden	Marital Quality	Psyc Dis	Cohort 2	Cohort 3	Gender	Educ	Income	Race	Mar Length	Care Rank
Obj Burden	1											
Subj Burden	.32***	1										
Marital Quality	-.13**	-.57***	1									
Psyc Dis	.16***	.64***	-.45***	1								
Cohort 2	-.01	-.06	.04	-.04	1							
Cohort 3	-.06	-.02	-.02	.01	-.43***	1						
Gender	-.17***	-.27***	.25***	-.18***	.01	-.03	1					
Educ	-.07*	.01	.03	-.11**	.00	.11**	.03	1				
Income	-.07*	-.06**	.00	-.06*	.02	.11*	-.02	.38***	1			
Race	-.11**	.00	.08*	.02	.00	.06	.08**	.20***	.20***	1		
Mar Length	-.10*	-.09*	.05	-.04	.07	-.06	.08*	.06	.09*	.17***	1	
Care Rank	-.14***	-.08*	.04	-.06	.01	-.06	-.03	.01	.02	-.01	-.10**	1
Health	-.11**	-.27***	.14***	-.34***	.06	.03	.04	.22***	.15***	.11**	.01	.10**

*Note.* Obj Burden = Objective Burden, Subj Burden = Subjective Burden, Psyc Dis = Psychological Distress, Educ = Education, Mar Length = Length of Marriage. Gender was coded as 0 = Female, 1 = Male. Race was coded as 0 = Other, 1 = White, non-Hispanic. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

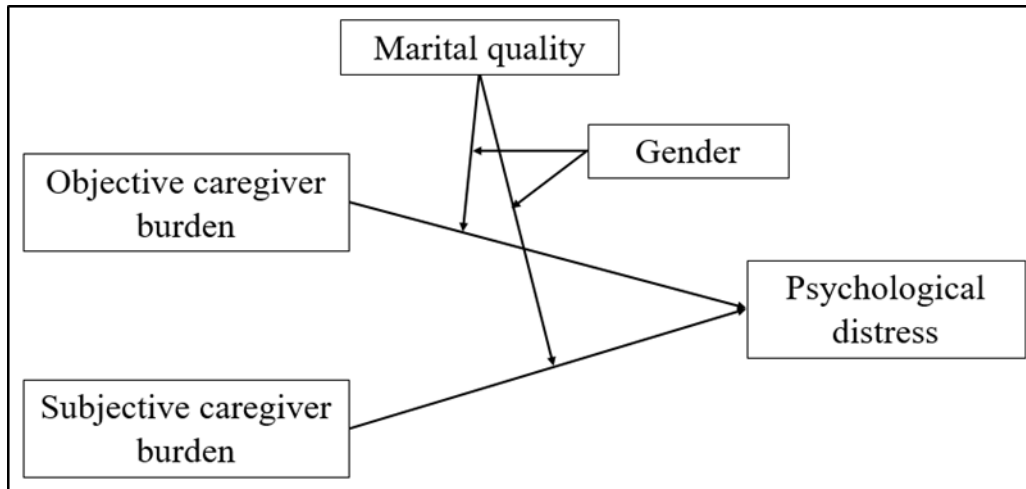
**Table 3***Unstandardized Results for Predictors of Psychological Distress*

	Model 1 No Controls $\beta$ (SE)	Model 2 With Controls $\beta$ (SE)	Model 3 With Obj Burden Interactions $\beta$ (SE)	Model 4 With Subj Burden Interactions $\beta$ (SE)
Objective Burden	-.005 (.00)	-.005 (.00)	-.005 (.00)	-.005 (.00)
Subjective Burden	.463*** (.06)	.432*** (.06)	.430*** (.06)	.453*** (.07)
Marital Quality	-.126* (.06)	-.124* (.05)	-.125* (.06)	-.143* (.06)
Burden*MarQual	--	--	-.006 (.01) <sup>a</sup>	-.176* (.09) <sup>a</sup>
Burden*Gender	--	--	.025* (.01) <sup>a</sup>	-.073 (.07) <sup>a</sup>
MarQual*Gender	--	--	.084 (.07) <sup>a</sup>	.085 (.08) <sup>a</sup>
Burden*MarQual*Gender	--	--	-.014 (.04) <sup>a</sup>	-.081 (.14) <sup>a</sup>
Cohort2	--	.023 (.04)	.024 (.04)	.023 (.04)
Cohort3	--	.044 (.05)	.044 (.05)	.042 (.05)
Gender	--	-.012 (.04)	-.012 (.04)	-.009 (.04)
Education	--	-.026** (.01)	-.027** (.01)	-.025** (.01)
Income	--	.009 (.02)	.009 (.02)	.007 (.02)
Race	--	.081† (.04)	.080† (.04)	.080† (.04)
Length of Marriage	--	.002 (.01)	.002 (.01)	.001 (.01)
Care Rank	--	.010 (.04)	.012 (.04)	.008 (.04)
Health	--	-.084*** (.02)	-.085*** (.02)	-.086*** (.02)
CFI/RMSEA	.99/.02	.95/.03	--	--
R-squared	.42	.46	.46	.45
N	1060	1066	1066	1066

*Note.* Obj Burden = Objective Burden, Subj Burden = Subjective Burden, MarQual = Marital Quality. † $p < .10$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ . Model fit is not reported for Models 3 and 4 because Mplus does not currently generate absolute indices of model fit for latent variable interaction models using the XWITH command. <sup>a</sup> Separate models were estimated for each of the interaction terms in Models 3 and 4, and the direct effects coefficients and R-squared were taken from the models that included the interaction between Burden and Marital Quality. Coefficients from the other interaction models are available upon request. In Model 4, the model including the three-way interaction also included the interaction between Marital Quality and Gender in order to create a three-way interaction using the XWITH command in Mplus.

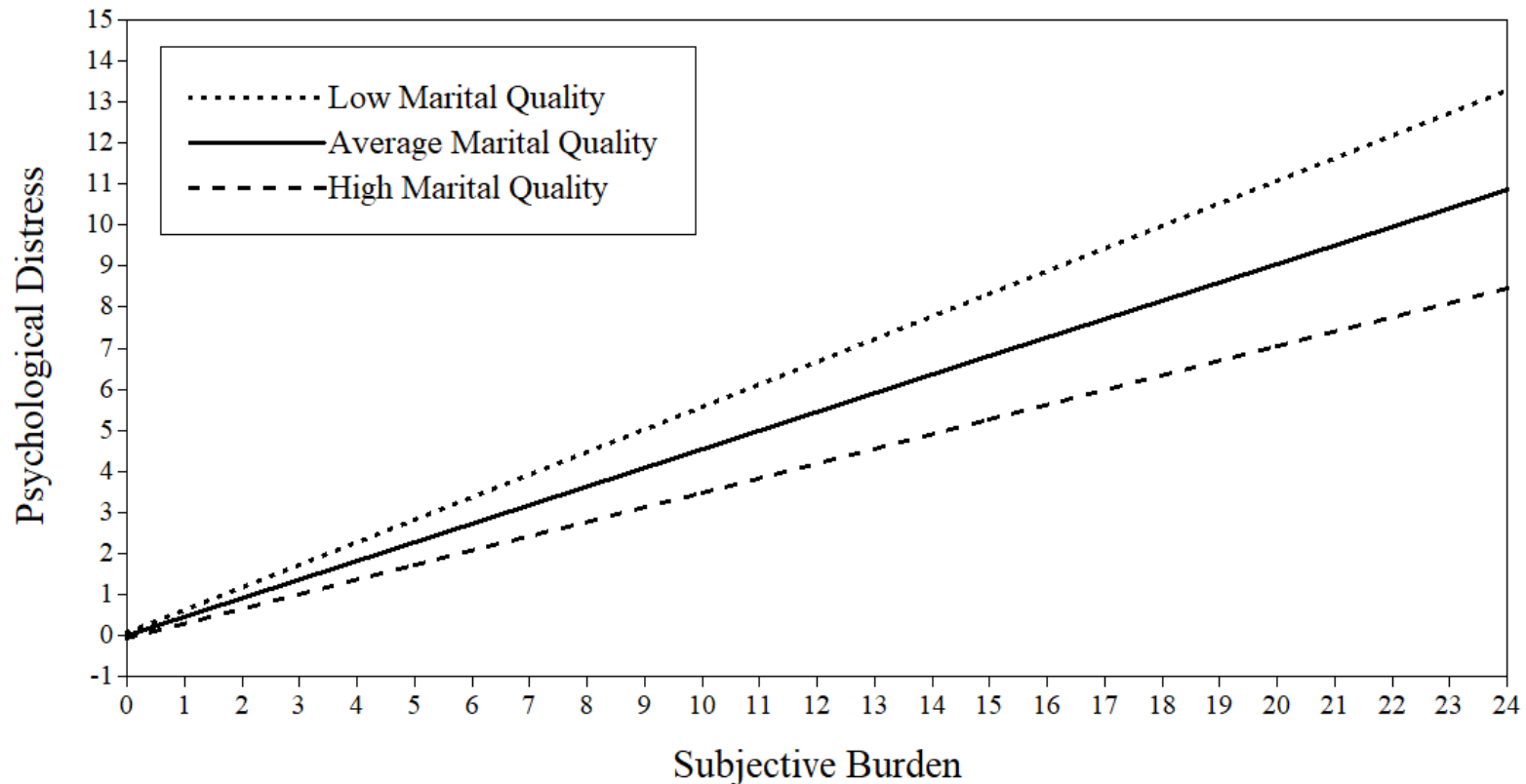
**Figure 1**

*Conceptual Model of Objective and Subjective Caregiver Burden Predicting Psychological Distress with Marital Quality and Gender as Moderators*



**Figure 2**

*Plot of Interaction between Subjective Burden and Marital Quality Predicting Psychological Distress*



*Note.* A test of simple slopes indicated that all three slopes significantly differed from 0 (Low Marital Quality  $\beta = .550, p < .001$ ; Average Marital Quality  $\beta = .453, p < .001$ ; High Marital Quality  $\beta = .356, p < .001$ ). Wald tests of parameter differences indicated the slopes differed from each other (Low vs. Average Marital Quality = 3.860,  $p < .05$ ; High vs. Average Marital Quality = 3.860,  $p < .05$ ).