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Negative Marital Interaction, Purpose in Life, And Depressive Symptoms among Middle-Aged and Older Couples: Evidence from the Health and Retirement Study

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Abstract

Objective: Negative marital interaction and purpose in life have been associated with depressive symptoms. Yet, these associations have not been fully explored in a dyadic context. This study examines the actor (intra-individual) and partner (cross-spousal) effects of negative marital interaction on depressive symptoms in couples and the potential mediating role of purpose in life.

Methods: Data came from 1,186 heterosexual married couples who participated in the 2016 (T1) and 2018 (T2) waves of the Health and Retirement Study and completed the psychosocial questionnaire in 2016. Structural equation modeling was used to estimate the direct and indirect associations among T1 negative marital interaction, T1 purpose in life, and T2 depressive symptoms at the actor and partner levels. Models controlled for age, race, educational level, self-rated health, and length of marriage.

Results: At the actor level, a greater negative marital interaction was associated with significantly lower levels of purpose in life for husbands and wives. Negative marital interaction was also associated with depressive symptoms for wives. Purpose in life mediated the relationship between negative marital interaction and depressive symptoms. At the partner level, wives' negative marital interaction was negatively associated with husbands' purpose in life, independent of husbands' own effects.

Conclusion: The findings support the dominant marital discord model of depression and highlight gender differences in the cross-spousal effects of negative marital interaction on purpose in life. Positive psychology interventions can be beneficial to promote purpose in life and subsequently improve mental health outcomes among couples.

Keywords

relationship quality; psychological well-being; dyadic analysis; mental health

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Introduction

Social relationships, particularly marital relationships, play an important role in maintaining positive health outcomes (Robles et al., 2014).The protective effects of marriage depend on the quality of the relationship and negative marital interaction has a stronger association with health compared to positive aspects of the relationship (Carr et al., 2016). People shape their meaning in life, a concept closely related to purpose in life, based on their social relationships and their interactions with others (Crescioni & Baumeister, 2013; Schnell, 2011). Negative marital interaction may have an influence on spouses' perceptions of their purpose in life, which has been linked to reduced risk for depressive symptoms (Wood & Joseph, 2010). Existing research highlights the interdependence of relational factors, psychological states, and health outcomes in couples (Ayotte et al., 2010; Choi et al., 2016; Stokes, 2017; Townsend et al., 2001). Therefore, it is important to explore the dyadic associations among negative marital interaction, purpose in life, and depressive symptoms.

In the current study, we use data from two waves of the Health and Retirement Study (HRS) to examine the actor (intra-individual) and partner (cross-spousal) effects of negative marital interaction on depressive symptoms in couples and the potential mediating role of purpose in life at the actor and partner levels. Our study builds on the existing literature about the protective effects of psychological well-being, and assesses whether a person's perception of a negative interaction with their spouse influence their own as well as their spouse's purpose in life and depressive symptoms.

Negative Marital Interaction and Depressive Symptoms

Negative marital interaction refers to the extent to which a person perceives their partner as critical, disappointing, irritating, or demanding (Schuster et al., 1990) and is more highly predictive of health compared to positive aspects of the relationship (Kiecolt-Glaser & Newton, 2001). Negative marital interaction has been shown to negatively influence health outcomes, such as worsening physical and mental health, and increasing the risk of mortality (Kiecolt-Glaser & Newton, 2001; Robles et al., 2014). According to the marital discord model of depression, strain, and conflict have negative effects for mental health, resulting in a higher depressive symptoms among married partners (Beach et al., 1990). Most of the early work focused on individual-level analyses linking negative marital interaction and depressive symptoms (Kiecolt-Glaser & Newton, 2001; Proulx et al., 2007). Additionally, longitudinal studies found that spouses experiencing a negative marital interaction suffer from a cumulative effect on their health over time (Umberson et al., 2006; Wickrama et al., 1997).

There is an increased attention towards dyadic approaches to examine the actor and partner effects of negative marital interaction on health outcomes, including depressive symptoms (Carr & Utz, 2020). Actor effects are associations within a person, while partner effects are associations across members of the dyad independent of one's own effect (e.g. a person's perception of marital interaction and their spouse's depressive symptoms; Cook & Kenny, 2005). In one of the earliest dyadic studies, Fincham et al. (1997) explored similar associations in newlywed couples and found no evidence of one spouse's marital satisfaction predicting the other's depressive symptoms. Later, Beach et al. (2003) reported

cross-spousal effects of marital satisfaction on later depressive symptoms among couples in established relationships. More recently, studies of middle-aged and older married adults confirmed the concurrent and longitudinal associations between negative marital interaction and depressive symptoms. Kwak and Ingersoll-Dayton (2020) established the associations between negative marital interaction and depressive symptoms within a person and across the dyad. Moreover, Bulanda et al., (2020) found that own perception and spousal perception of a negative marital interaction were associated with growth in depressive symptoms. The established cross-spousal effects may be due to spouses being sensitive to their partners' feelings and experiences. Therefore, dyadic appraisals of a marital interaction play a complex role in influencing mental health, particularly among couples in long-term relationships.

There is a clear relationship between negative marital interaction and depressive symptoms, and this relationship is deleterious for physical health and other areas of functioning in couples, specifically at older ages (Wickrama et al., 1997). It is important to explore potential areas for intervention to alleviate the dyadic effect of negative marital interaction on depressive symptoms and subsequent health outcomes.

Purpose in Life and Health Outcomes

In 1989, Ryff introduced a model of psychological well-being that integrated multiple dimensions consistent with a *eudaimonic* perspective. Eudaimonia is more precisely defined as "the feelings accompanying behavior in the direction of, and consistent with, one's true potential" (Waterman, 1984, p. 16). Purpose in life, a dimension of psychological well-being, refers to the extent to which a person feels their life has meaning, purpose and direction—a concept that can characterize an individual's *eudaimonic* perspective.

The beneficial health effects associated with psychological well-being have been well documented in the literature. Wood and Joseph (2010) affirmed that individuals with low levels of purpose in life are more likely to develop depressive symptoms over time. Moreover, higher levels of purpose in life predict better emotional recovery from negative stimuli, suggesting a potential mechanism to explain the influence of stressful life events on adverse outcomes (Schaefer et al., 2013). Individuals with a greater sense of purpose may perceive stressors as less difficult and/or may engage in healthy coping strategies to maintain their overall well-being (Kim et al., 2019).

In a recent study of spousal caregivers, greater perceptions of purpose in life in caregivers were associated with fewer physical and emotional difficulties related to caring for a spouse with functional limitations (Polenick et al., 2018). Additionally, care recipients' higher sense of purpose in life was linked to less emotional caregiving difficulty (Polenick et al., 2018). Caregivers' and care recipients' reports of their life purpose appear to be important psychosocial resources for spousal caregivers, further supporting the significance of assessing the influence of purpose in life on well-being in a dyadic context.

There is strong evidence that purpose in life decreases with age (Hill & Weston, 2019). However, aging is not necessarily associated with decline and several studies show that purpose in life can be modified (McKnight & Kashdan, 2009; Ryff, 2014; Weiss et al.,

2016). Therefore, it is important to examine purpose in life in the context of marital relationships, to uncover how psychological well-being in husbands and wives can alleviate the stress experienced from a negative marital relationship for both members of a couple.

Social Relationships and Purpose in Life

The existing research about social relationships and purpose in life in adulthood is in its infancy. Most of the literature supporting the link between social relationships and purpose in life is focused on a younger population. For instance, child reports of higher levels of conflict with mothers predict a lower sense of purpose in life in emerging adulthood (Hill et al., 2019). Recently, Weston et al., (2020) posited that positive relationships with others can improve health and well-being during adulthood through receiving support for following one's purposeful aims. In fact, having valued goals and being future oriented often requires a greater integration into one's social network in order to achieve one's purpose (Thoits, 2011). Therefore, lack of support and negative interactions with others may be detrimental to ones' life purpose.

According to the linked lives principle, individuals are embedded within their social networks and interact with their social worlds over the life span (Elder Jr, 1994). As individuals age and start losing some of their social connections, they reflect on their existing social ties and most married individuals identify their spouse as the most important social tie (Carstensen et al., 1995). Marital relationships can be considered a central source of meaning and purpose in older age. A recent study provided evidence that change in purpose over an 8-year period is positively associated with initial levels of negative marital interaction, highlighting that individuals reporting lower levels of negative marital interaction are less likely to have a decline in their levels of purpose in life (Weston et al., 2020). Therefore, a person's assessment of a marital relationship is essential in the context of purpose in life, and negative marital interaction can influence one's sense of purpose later in life.

Husbands' and wives' lives are highly interdependent in a way that husbands and wives can elicit changes in each other's experiences and perceptions (Elder Jr, 1994; Settersten Jr, 2015). Accordingly, a person's negative marital interaction can influence their spouse's sense of purpose. Therefore, it is important to extend the findings of Weston and colleagues by adopting a dyadic perspective to assess how negative marital interaction is associated with purpose in life for husbands and wives, and whether one's perception of a negative relationship influences their partner's level of purpose in life. Exploring the association between negative relationship interaction and purpose in life may also help in identifying areas for future interventions to sustain purpose in life in older age and further optimize health outcomes.

The Present Study

This study is guided by the transactional model of stress and coping where negative marital interaction is viewed as a negative stressor and purpose in life is considered a factor that would facilitate coping mechanisms (Lazarus & Folkman, 1984). A negative marital interaction often becomes a source of chronic stress in a relationship, leading to a

sustained stress response over time. Therefore, purpose in life can serve as a psychological mechanism that explains how the stressors experienced from a negative marital relationship can influence depressive symptoms.

The purpose of this study is to examine the dyadic associations between relational (i.e., negative marital interaction) and psychological factors (i.e., purpose in life) that would contribute to depressive symptoms in middle-aged and older married couples. To do so, we select couples' data from two waves of the HRS, an ongoing longitudinal study of a nationally representative sample of middle-aged and older adults in the United States. We use a dyadic actor-partner interdependence approach to model the actor and partner effects of negative marital interaction on depressive symptoms (Figure 1). Based on prior research, we predict that greater negative relationship interaction will be associated with a higher number of depressive symptoms, and that this association will be maintained at the actor and partner levels. We also examine the potential mediating role of purpose in life at the actor and partner levels. Based on previous research, we predict that purpose in life will mediate the relationship between negative marital interaction and depressive symptoms. Measures of negative marital interaction and purpose in life were retrieved from the 2016 wave (T1), while the depressive symptoms measure was retrieved from the 2018 wave (T2). Due to existing gender differences in the relationship between marital interaction and well-being (Proulx et al., 2007; Sandberg & Harper, 2000), we will also assess whether the associations between the variables of interest in the model are different for husbands and wives. Our findings will expand on the existing literature about the benefits of psychological well-being and highlight the role of purpose in life at the couple's level.

Methods

Participants

We used data from the 2016 and 2018 waves of the Health and Retirement Study (HRS), a nationally representative longitudinal study of Americans over the age of 50 (Sonnega et al., 2014). Every other year, HRS participants answer questions about a range of demographic, economic, and health-related topics. Starting in 2006, a random half of the sample received an enhanced face-to-face interview while the second half first completed it in 2008. The enhanced face-to-face interview consists of a comprehensive assessment of physical performance, saliva and blood collection for biomarker measurements, and a self-administered psychosocial questionnaire that is left for participants to complete and mail back to study offices. Therefore, in addition to the biennial surveys, participants complete a psychosocial questionnaire every 4 years, providing information on social support, subjective well-being, and personality traits, among other factors (Smith et al., 2017).

For this study, we selected heterosexual married couples who lived together, participated in the 2016 and the 2018 waves of the HRS, and completed the psychosocial questionnaire in 2016. In 2016, 10,238 respondents were eligible to receive the psychosocial questionnaire and 6,324 (61.77%) completed it without the need of a proxy, out of which 2,844 respondents (44.97%) reported being married to the same spouse over both waves of data. We excluded individuals if only one member of the couple completed the psychosocial

questionnaire in 2016 (*n* = 456) and if they were not in a heterosexual marital relationship (*n* = 16). The final analytic sample included 1,186 couples.

Measures

Negative Marital Interaction—Negative marital interaction consisted of 4 validated and widely used items that assess negative interaction with a spouse: "How often do they make too many demands on you?", "How much do they criticize you?", "How much do they let you down when you are counting on them?" and "How much do they get on your nerves?" (Schuster et al., 1990). Items were retrieved from the 2016 wave (T1). Participants answered each item on a 4-point Likert scale (1 = *a lot* to 4 = *not at all*) by indicating how frequently they experienced each of the negative qualities in their marital relationship. All items were reverse-coded so that higher scores reflect a higher negative marital interaction.

Purpose in Life—The purpose in life measure was retrieved from the 2016 wave (T1) and consisted of 7 items that assess participants' level of agreement on a 6-point Likert scale (1 = *strongly disagree* to 6 = *strongly agree*) with statements about belief that one's life has purpose and meaning, such as "I enjoy making plans for the future and working to make them a reality" and "I am an active person in carrying out the plans I set for myself" (Ryff & Keyes, 1995). Four negatively-worded items (e.g., "My daily activities often seem trivial and unimportant to me") were reverse coded before computing an average score across items so that higher scores reflected greater levels of purpose. In the present study, the internal consistency reliability (Cronbach's alpha) of the purpose in life scale was .76 for husbands and .77 for wives.

Depressive Symptoms—Depressive symptoms in 2018 (T2) were measured using a modified 8-item version of the Center for Epidemiologic Studies Depression Scale (CES-D; Steffick et al., 2000). This short version of the CES-D is a dichotomous scaling (e.g., yes or no) of items that represent symptoms associated with depression. Participants indicated whether they experienced symptoms in the past week including feeling depressed, sad, lonely, and happy; enjoying life; feeling that everything they did was an effort, having restless sleep, and not being able to get going. The scale is unidimensional and includes two positive items (being happy and enjoying life) that require reverse coding. Total scores range from zero to eight, with higher scores reflecting a higher number of depressive symptoms. In the full HRS sample, the scale has an internal consistency score ranging from .81 to .83 (Steffick et al., 2000). In the present sample, internal consistency (Kuder-Richardson 20) was .76 for husbands and .81 for wives.

Covariates—Participants completed self-report demographic and health-related measures in the 2016 wave that were used as covariates in the analyses. These included age, race, educational attainment, length of marriage, and self-rated health given the association of these variables with purpose in life and depressive symptoms (Hill & Weston, 2019; Kwak & Ingersoll-Dayton, 2020; Proulx et al., 2007). Age, education, and self-rated health were specified as individual-level covariates. Age and education were measured as continuous variables (in years). For self-rated health, participants responded to the item "In general, would you say your health is excellent, very good, good, fair, or poor?" on a five-point

Likert scale, with higher scores reflecting better health. Race and length of marriage were specified as couple-level covariates. Self-reports of race were strongly correlated for husbands and wives (ϕ = .77, p <.001). Therefore, we computed a couple-level race variable to represent whether or not both members of a couple self-identified as White. Length of marriage represented how long husbands and wives were married (in years). It was computed by averaging the reports of husbands and wives on the length of their current marriage.

Analysis Strategy

The statistical analyses consisted of four steps to produce a structural equation model in AMOS (Analysis of Moment Structures, version 26; IBM Corporation) to assess the relationships among study variables at the actor and partner levels. The first step consisted of screening the data to assess adequate variability and evaluate univariate normality by reviewing variable histograms, and skewness and kurtosis values for each variable of interest. We evaluated the joint distribution of the endogenous variables using the Mardia's coefficient, which is a multivariate measure of kurtosis to support the assumption of multivariate normality in structural equation modeling with maximum likelihood estimation. We compared husbands' and wives' ratings using paired t-test and McNemar's test to assess for gender differences at the univariate level. We also assessed the relationship between study variables at the actor and partner levels using bivariate correlations.

Measurement Model—In the second step of data analysis, we tested a confirmatory factor analysis (CFA) model for negative marital interaction to account for the measurement error associated with each of the items. Negative marital interaction was represented with two latent variables, one for husbands and another for wives, each with 4 observed indicators representing husbands' and wives' ratings on negative interaction, respectively. We fixed the metric of the scale by setting the factor loadings of the reference items ("Irritating") for husbands and wives to be equal to 1. Given the interdependence between husbands' and wives' reports of marital interaction, we specified the two latent variables to be correlated, which also satisfies the two-indicator rule (Kline, 2016). The CFA model has more observations than free parameters (df_M = 19), therefore is overidentified, which will make it possible to derive a unique set of model parameter estimates.

Structural Model—Next, we estimated the dyadic structural equation model based on the actor-partner interdependence model (APIM; Kenny et al., 2006) using maximum likelihood estimation, with maximum likelihood handling of missing data. The full information maximum likelihood approach provides unbiased and more efficient estimates compared to other methods for handling missing data (Enders & Bandalos, 2001). We tested a structural mediation model where T1 purpose in life was represented as an observed variable that mediated the relationship between T1 negative marital interaction (latent construct) and T2 depressive symptoms (observed variable) at the actor and partner levels (Figure 1). The term "actor effects" refers to estimates for each person (i.e., intra-individual effect), whereas the term "partner effects" refers to estimates for associations between spouses (i.e., cross-spousal effects). Therefore, the APIM allowed for estimating both associations between a person's own variables, as well as the associations between their variables and their spouses'

variables, while accounting for the statistical nonindependence of observations within a couple.

To account for the interdependence of observations, husbands' and wives' exogenous variables (negative marital interaction, self-rated health, education, and age) and endogenous disturbances (on the mediator, purpose in life, and on the outcome, depressive symptoms) were specified as correlated. The structural model has more observations than free parameters ($df_M = 39$), therefore is overidentified. The model includes 8 indirect paths: 2 paths of the mediation effect of purpose in life at the actor level, 2 paths of the mediation effect of partner's purpose in life, 2 paths of actor's purpose in life mediating the relationship between actor's negative marital interaction and partner's depressive symptoms, and 2 paths of partner's purpose in life mediating the relationship between actor's negative marital interaction and partner's depressive symptoms. The significance of the mediational paths at the actor and the partner levels was assessed using the Sobel test at the level of $p \leq$ .05.

Lastly, we conducted additional analyses to assess the differences between husbands and wives on specific parameter estimates to understand if the magnitude of the relationships found in the model were different for husbands and wives. Gender differences were assessed using the critical ratio difference (CRDIFF) method as recommended by Byrne (2010).

Model Fit—We assessed model fit for the measurement and structural models using the Tucker-Lewis index (TLI) and comparative fit index (CFI; for both > .95 indicates acceptable fit), and root mean square error of approximation (RMSEA; < .06 indicates acceptable fit) because the Chi-square test statistic is sensitive to sample size (West et al., 2012). In our testing for mediation using dyadic data, we reviewed the fit indices in light of the model's complexity.

Results

Sample Characteristics

Table 1 presents the descriptive statistics of the study variables for husbands and wives. On average, husbands were significantly older (mean difference = 2.83, $p < .001$), had lower scores of purpose in life (mean difference = −.07, $p = .039$), and reported fewer depressive symptoms than their wives (mean difference = −.23, $p < .001$). Table 2 presents correlations between the study variables at the actor (i.e., intra-individual) and partner (i.e., cross-spousal) levels.

Testing the Measurement Model of Negative Marital Interaction

Table 3 presents the results from the confirmatory factor analysis that examined whether the 4 items of negative marital interaction for husbands and wives fit the hypothesized two factor model of husband negative marital interaction and wife negative marital interaction. The model resulted in an acceptable fit: TLI = .95, CFI = .98, and RMSEA = .06. The Chi-square statistic, $\chi^2 (19) = 85.91$, $p < .001$ was significant given the large sample size. Husbands' reports of negative marital interaction (4-items) all loaded on a single factor and the coefficients ranged from .62 to .77. Similarly, wives' reports of negative marital

interaction loaded onto a single latent factor and the coefficients ranged .66 to .71. The two factors, husbands' and wives' negative marital interaction, were moderately correlated ($r =$ .51, $p < .001$), which is consistent with the interdependence of relational factors in couples.

Testing the Mediation Model of Purpose in Life

In an effort to test the mediation model of purpose in life, we assessed the structural mediation model, which had acceptable fit indices (TLI = .93, CFI = .96, and RMSEA = .04; see Table 4). Given this evidence, we proceeded with exploring the associations at the actor and partner levels, as well as gender differences.

Associations at the Actor level—Husband's reports of greater negative marital interaction were associated with lower levels of their purpose in life ($b = -.20$, $p < .001$), which were then associated with higher depressive symptoms ($b = -.27$, $p < .001$). Similarly, wives' reports of greater negative marital interaction were associated with lower levels of their purpose in life ($b = -.39$, $p < .001$) and greater depressive symptoms ($b = .47$, $p < .001$). Wives' lower levels of purpose were also associated with higher depressive symptoms ($b = -.36$ $p < .001$). A Sobel test confirmed the mediating effect of purpose in life at the actor level for husbands ($z = 2.87$, $p = .004$) and for wives ($z = 4.37$, $p < .001$). Reporting better self-rated health was associated with greater levels of purpose and lower depressive symptoms for husbands and wives, whereas having more years of education was associated with greater levels of purpose and lower depressive symptoms only for husbands. The estimates of other covariates are included in Table 4.

Associations at the Partner Level—We found limited evidence for cross-spousal effects, with one exception. Wives' reports of greater negative marital interaction were associated with lower levels of purpose in life for their husbands ($b = -.23$, $p < .001$), which was independent of the husbands' own effects of negative marital interaction. Other relationships in the model at the partner level were not statistically significant.

One of the mediating effects of purpose in life at the partner level was supported by the Sobel test. Husbands' purpose in life mediated the relationship between wives' negative marital interaction and husbands' depressive symptoms ($z = 3.06$, $p = .002$).

Gender Differences—The magnitude of the association between one's own negative marital interaction and purpose in life was significantly different by gender, with wives having a stronger association than husbands ($z = 2.22$, $p = .026$). There were also gender differences in the cross-spousal effects of negative marital interaction on purpose in life ($z = 2.80$, $p = .005$). Wives' perception of a negative marital interaction was negatively associated with husband's purpose in life.

Discussion

The purpose of this study was to examine the dyadic relationships between negative marital interaction, purpose in life, and depressive symptoms in middle-aged and older married couples. At the actor level, negative marital interaction was associated with purpose in life for husbands and wives, and with depressive symptoms for wives only. At the partner level,

wives' greater negative marital interaction was associated with lower levels of purpose for husbands. Purpose in life mediated the relationship between negative marital interaction and depressive symptoms at the actor level.

The perception of greater negative marital interaction was associated with a higher number of depressive symptoms at the actor level for wives, which supports the dominant marital discord model of depression (Beach et al., 1990). The association between negative marital interaction and depressive symptoms was not significant for husbands, which suggests that husbands' purpose in life explains more of the variance in their depressive symptoms. Our different findings for wives and husbands could also reflect that wives' mental health has been traditionally more strongly linked to the quality of their marriage (Proulx et al., 2007). Our sample of middle-aged and older couples were raised during a time when there was a greater emphasis on gender roles within a marriage, with wives tending to invest more in their marital relationships and feeling responsible for maintaining the well-being of the family (Bernard, 1972; Thompson & Walker, 1989).

Greater negative marital interaction was associated with a lower level of purpose in life at the actor level. Non-straining family relationships, including marital relationships are crucial to the maintenance of a sense of purpose later in life (Weston et al., 2020). Social relationships are among the most frequently discussed sources of meaning (Crescioni & Baumeister, 2013; Schnell, 2011). Therefore, individuals often derive their purpose in life based on the connections they have with the close people around them. Based on our findings, the quality of a marital relationship matters for the maintenance of purpose in life, which in turn has an effect on the mental health of married individuals. Future studies are needed to explore how social relationships can contribute to a higher sense of purpose. The socioemotional selectivity theory may serve as a framework to understand the relationship between marital quality and purpose in life in older age where individuals often focus on positive and emotionally meaningful experiences and connections (Carstensen et al., 2003).

We found gender differences in how individuals influence their spouses' purpose in life. Wives' negative marital interaction was inversely associated with husbands' purpose in life, whereas the cross-spousal effect of husbands' negative marital interaction on wives' purpose in life was not significant. Our study extends the recent findings about social relationships and purpose in life (Weston et al., 2020) to a dyadic context. Individuals are embedded in their social networks and their life experiences and meanings are shaped by their interaction with their closest social ties (Elder Jr, 1994). Married older men consider their spouse as their closest social support person, while women tend to have a wider range of support sources (Liao et al., 2018). Therefore, wives play a central supportive role for their husbands whose sense of purpose may be contingent upon the quality of the marital relationship. If wives are experiencing greater conflict within their marriage, husbands may not be able to adequately derive a sense of purpose, which can justify the association we found between wives' negative marital interaction and husbands' levels of purpose. These cross-spousal effects underscore the importance of couple-based interventions to improve the sense of purpose of older married individuals, especially men whose wives report high levels of negative marital interaction.

Purpose in life mediated the relationship between negative marital interaction and depressive symptoms at the actor level. This finding highlights purpose in life as a potential target for intervention to improve depressive symptoms in middle-aged and older couples. In a meta-analysis of behavioral interventions targeting psychological well-being, a moderate effect size was found across studies (Weiss et al., 2016), which further supports that purpose in life can be modified. Existing programs have been tested in non-clinical and clinical populations with a focus on individuals with mental health disorders (Ryff, 2014; Weiss et al., 2016). More recently, *life crafting* was proposed as an intervention to improve students' well-being and academic success (Schippers & Ziegler, 2019). Guided by positive psychology principles and the salutogenic model, this intervention can be adapted to couples to encourage them to discover what is important to them, then formulate plans to achieve their life goals. Promoting purpose in life and having a positive outlook can improve health outcomes, and that would be particularly important for couples facing stressful experiences or having negative relationships to help them find purpose in the midst of difficult situations. The next step would be to identify whether similar interventions are most beneficial if delivered in a dyadic context or separately for each individual.

This study has several limitations that need to be acknowledged. First, there may be other explanations for the role of purpose in life in the context of the relationships between negative marital interaction and depressive symptoms. For instance, the existing literature suggests that purpose in life acts as a moderator in the context of a stressor (Hill et al., 2018), which highlights the importance of conducting moderation analyses in the future. Second, a sum score for the purpose in life measure was included in the model because purpose in life as a latent construct had a very poor model fit. Future work is needed to understand the factor structure of the purpose in life measure used in this study in order to include it as a latent variable in future models. Third, there may be omitted variables, such as the quality of other social interactions, that can alter the established relationships in our model. Moreover, the current study examined one of many potential mechanisms linking negative marital interaction to mental health among couples. Other plausible alternatives include other behavioral or psychosocial mechanisms such as self-regulatory processes and psychological resilience. For example, recent literature suggests that marital strain over an extended period has an effect on loneliness in later years (Wickrama et al., 2020), which is associated with greater depressive symptoms (Lee et al., 2021). Additional research is needed to identify other pathways that can explain how negative marital interaction affects depressive symptoms over time. Lastly, the couples included in this study were predominantly White and non-Hispanic. The relationships found between the study variables may be different among a more diverse sample of middle-aged and older married couples.

Despite these limitations, the findings highlight the role of psychological well-being for married couples. Purpose in life explains how negative marital interaction can influence depressive symptoms, therefore provides a point of intervention to improve mental health outcomes. Moreover, our findings highlight the gender differences in the cross-spousal effects of negative marital interaction on purpose in life. Compared to wives, husbands' sense of purpose is more affected by their spouses' perception of negative marital interaction. Future research is needed to explore the value of adapting positive psychology

interventions for middle-aged and older couples experiencing negative marital interaction to promote their purpose in life and subsequently their health outcomes.

Acknowledgments

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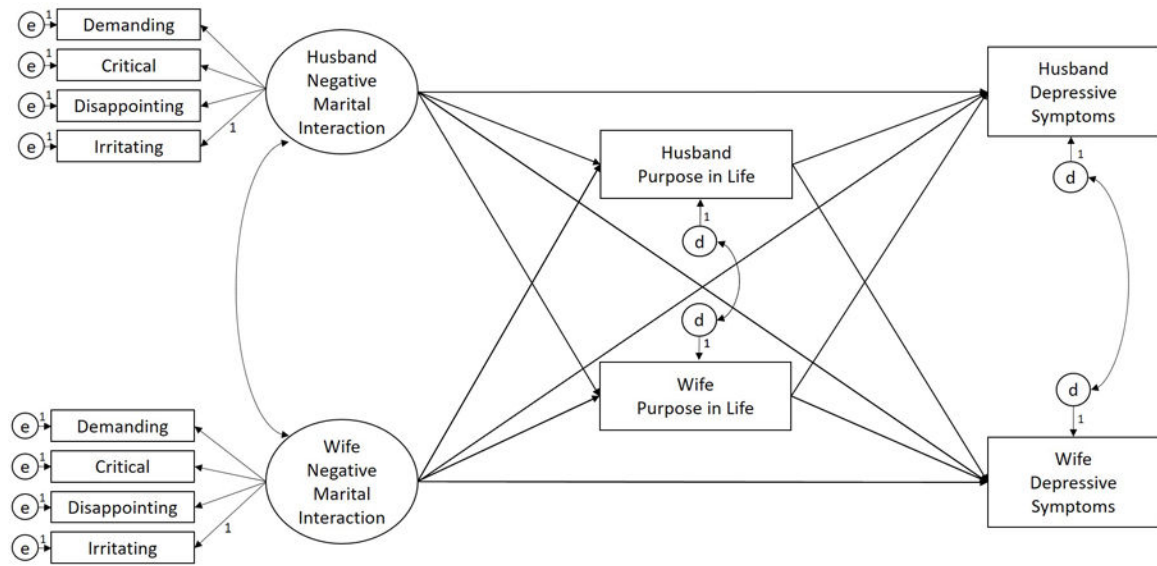
Figure 1.
Hypothesized Model Representing the Actor and Partner Effects of Negative Marital Interaction on Depressive Symptoms and the Mediation Effect of Purpose in Life at the Actor and Partner Levels

Note. The relationships in the model control for both partners' age, years of education, and self-rated health, and for couples' race and length of marriage.

Table 1

Characteristics of Husbands and Wives (N = 1,186)

Variables	Husbands	Wives	t / χ^2
	$M \pm SD / n\ (\%)$	$M \pm SD / n\ (\%)$	
Age (years)	67.60 ± 10.29	64.77 ± 10.14	18.32 [**]
Race			
White	932 (78.7%)	954 (80.8%)	6.01 [*]
Non-White	252 (21.3%)	227 (19.2%)	
Ethnicity			
Hispanic	161 (13.6%)	167 (14.1%)	0.66
Non-Hispanic	1025 (86.4%)	1016 (85.9%)	
Education (years)	13.38 ± 3.14	13.30 ± 2.86	0.94
Self-rated health	3.26 ± 0.99	3.33 ± 0.99	−1.93
Negative marital interaction			
Too many demands on you	2.02 ± 0.86	1.93 ± 0.86	2.65 [*]
Criticizes you	2.08 ± 0.84	1.93 ± 0.86	4.79 [**]
Let you down	1.49 ± 0.75	1.69 ± 0.85	−6.94 [**]
Get on your nerves	1.92 ± 0.76	2.10 ± 0.81	−6.54 [**]
Purpose in life	4.69 ± 0.89	4.76 ± 0.90	−2.07 [*]
Depressive symptoms	0.92 ±1.54	1.16 ± 1.80	−3.60 [**]
Couple Characteristics			
Race			
Both White	897 (76.08%)		
Both non-White or interracial	282 (23.92%)		
First marriage for both spouses	777 (65.6%)		
Length of current marriage	34.97 ± 16.56		

Note. Paired t-test and McNemar's test were conducted to compare husbands' and wives' responses.

[*]
$p < .05$,

[**]
$p < .001$

Table 2

Correlations among Negative Marital Interaction, Purpose in Life, and Depressive Symptoms for Husbands and Wives

A: Correlations at the actor levels

Items	1	2	3	4	5	6
1. Too many demands on you[a]	-	.50**	.47**	.42**	−.14**	.15**
2. Criticizes you[a]	.54**	-	.42**	.47**	−.19**	.16**
3. Let you down[a]	.42**	.41**	-	.51**	−.24**	.21**
4. Get on your nerves[a]	.52**	.55**	.50**	-	−.23**	.22**
5. Purpose in life	−.11**	−.15**	−.15**	−.20**	-	−.31**
6. Depressive symptoms	.07*	.11**	.13**	.12**	−.24**	-

B: Correlations at the partner levels

Items	W1	W2	W3	W4	W5	W6
H1. Too many demands on you[a]	.17**	.22**	.20**	.24**	−.09*	.08*
H2. Criticizes you[a]	.19**	.26**	.23**	.30**	−.07*	.09*
H3. Let you down[a]	.20**	.27**	.27**	.25**	−.15**	.15**
H4. Get on your nerves[a]	.21**	.30**	.27**	.34**	−.12**	.14**
H5. Purpose in life	−.18**	−.13**	−.21**	−.21**	.23**	−.14**
H6. Depressive symptoms	.14**	.07*	.10*	.13*	−.11**	.13**

Note. A: Correlation values for husbands (H) are presented below the diagonal and those for wives (W) are presented above the diagonal

[a] Negative Marital Interaction items,

*
$p < .05$,

**
$p < .001$

Table 3

Unstandardized and Standardized Estimates of the Confirmatory Factor Analysis Model for Negative Marital Interaction in Husbands and Wives

| | Husband Negative Marital Interaction | | | | | Wife Negative Marital Interaction | | | | |
| | Factor Loading | | | Residual Variance | | Factor Loading | | | Residual Variance | |
	Estimate	SE	Standardized Estimate	Estimate	SE	Estimate	SE	Standardized Estimate	Estimate	SE
1. Too many demands on you	1.01	.05	.70	.38	.02	1.04	.06	.66	.47	.03
2. Criticizes you	1.02	.05	.72	.34	.02	1.02	.05	.68	.40	.02
3. Let you down	.79	.04	.62	.35	.02	1.01	.05	.69	.38	.02
4. Get on your nerves	1.00		.77	.24	.02	1.00		.71	.33	.02
Model fit statistics										
Chi-square						85.91, $df = 19$, $p < .001$				
RMSEA						.055				
TLI						.954				
CFI						.976				

Note. All estimates were significant at .001 level.

SE: standard error, RMSEA: Root Mean Square Error of Approximation, TLI: Tucker-Lewis Coefficient, CFI: Comparative Fit Index, *df:* degrees of freedom

Table 4

Unstandardized and Standardized Estimates of the Structural Model

| | PIL | | | | | | Depressive Symptoms | | | | | |
| | Husband | | | Wife | | | Husband | | | Wife | | |
	Estimate (SE)	β	p	Estimate (SE)	β	p	Estimate (SE)	β	p	Estimate (SE)	β	p
H NMI	−.20 (.06)	−.13	<.001	.01 (.06)	.01	.804	.16(.10)	.06	.100	.07(.11)	.02	.539
W NMI	−.23 (.06)	−.15	<.001	−.39 (.06)	−.25	<.001	.08(.11)	.03	.433	.47(.12)	.15	<.001
H PIL							−.27(.05)	−.16	<.001	−.02(.06)	−.01	.670
W PIL							−.07(.05)	−.04	.152	−.36(.06)	−.18	<.001
H SRH	.17 (.03)	.19	<.001				−.37(.05)	−.24	<.001			
W SRH				.22 (.03)	.26	<.001				−.49(.05)	−.27	<.001
H EDU	.04 (.01)	.15	<.001				.01(.01)	.02	.456			
W EDU				.03 (.01)	.08	<.001				−.00(.02)	−.01	.831
H Age	−.01(.00)	−.10	.005				.00(.01)	.03	.418			
W Age				.00 (.00)	−.06	.582				.00(.01)	.01	.814
Couple Race	−.12 (.05)	−.07	.014	−.19 (.05)	−.10	<.001	−.01(.09)	.00	.950	−.04(.10)	−.01	.717
Marriage Length	.00 (.00)	.03	.371	−.01 (.00)	−.11	.003	−.01(.00)	−.13	<.001	.00(.00)	−.01	.684

Model fit statistics

Chi-square	442.209, df= 138, p < .001
RMSEA	.043
TLI	.932
CFI	.955

Note. H: husband, W: wife, SE: standard error, β: standardized estimate, NMI: Negative Marital Interaction, PIL: Purpose in Life, SRH: Self-rated Health, EDU: Education level, RMSEA: Root Mean Square Error of Approximation, TLI: Tucker-Lewis Coefficient, CFI: Comparative Fit Index, *df*: degrees of freedom. Model was adjusted for both partners' age, years of education, and self-rated health, and for couples' race and length of marriage.