LONGITUDINAL ASSOCIATIONS BETWEEN DEPRESSIVE SYMPTOMS AND MARITAL SATISFACTION IN BLACK COUPLES AND MODERATION BY DISCRIMINATION AND RACIAL CENTRALITY

A Thesis in
Human Development and Family Studies
by
August Jenkins

© 2018 August Jenkins

Submitted in Partial Fulfilment of the Requirements for the Degree of
Master of Science

August 2018
The thesis of August Jenkins was reviewed and approved* by the following:

Steffany J. Fredman
Assistant Professor of Human Development and Family Studies
Thesis Adviser

Susan M. McHale
Distinguished Professor of Human Development and Family Studies and Demography

Lisa Gatzke-Kopp
Associate Professor of Human Development and Family Studies
Professor-in-Charge of the Graduate Human Development and Family Studies Program

*Signatures are on file in the Graduate School.
ABSTRACT

Although there are well-established bidirectional associations between depressive symptoms and martial satisfaction among romantic couples, it is unknown whether this bidirectional association exists among Black couples, specifically, and how the nature of this relation might depend on contextual factors. To address these questions, the current study was designed to assess the prospective associations between depressive symptoms and marital satisfaction over a one-year period in a sample of 168 married or cohabitating heterosexual, Black, romantic couples and to explore moderation of these associations by (a) experiences of discrimination and (b) racial centrality within a dyadic context. Depressive symptoms predicted lower marital satisfaction for self and partner one year later, and wives’ satisfaction positively predicted husbands’ satisfaction but not vice versa. Moderation analyses revealed that, for both husbands and wives, one’s own experiences of discrimination moderated the effect of one’s partners’ satisfaction on one’s own depressive symptoms but that there were different patterns for husbands and wives. Specifically, at high levels of husbands’ discrimination, the association between wives’ satisfaction and husbands’ depressive symptoms was negative, and the association was positive at low levels of husbands’ discrimination. In contrast, at high levels of wives’ discrimination, the association between husbands’ satisfaction and wives’ depressive symptoms was positive and was negative at low levels of wives’ discrimination. Wives’ racial centrality also moderated the effect of wives’ depressive symptoms on husbands’ subsequent satisfaction, such that the association between wives’ depressive symptoms and husbands’ satisfaction emerged at high, but not at low, levels of wives’ racial centrality. Findings suggest that practitioners working with African American individuals and couples should attend to the interdependence between spouses’ mental health and relationship satisfaction and consider the
broader social context in which Black individuals and couples are situated to improve both individual and relational well-being.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acknowledgements</td>
<td>vi</td>
</tr>
<tr>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Depression and Couple Functioning</td>
<td>1</td>
</tr>
<tr>
<td>Gender Differences in the Association between Depression and Couple Functioning</td>
<td>2</td>
</tr>
<tr>
<td>Depression and Couple Functioning among Ethnic Minorities</td>
<td>3</td>
</tr>
<tr>
<td>Linking Depression and Couple Functioning among African Americans</td>
<td>4</td>
</tr>
<tr>
<td>Discrimination and Racial Centrality as Possible Moderators of the Association</td>
<td>5</td>
</tr>
<tr>
<td>Current Study</td>
<td>6</td>
</tr>
<tr>
<td>METHOD</td>
<td>7</td>
</tr>
<tr>
<td>Participants</td>
<td>7</td>
</tr>
<tr>
<td>Procedure</td>
<td>8</td>
</tr>
<tr>
<td>Measures</td>
<td>8</td>
</tr>
<tr>
<td>Data Analysis</td>
<td>9</td>
</tr>
<tr>
<td>RESULTS</td>
<td>13</td>
</tr>
<tr>
<td>Descriptive Results</td>
<td>13</td>
</tr>
<tr>
<td>Main Effects Model</td>
<td>14</td>
</tr>
<tr>
<td>Moderation by Discrimination and Racial Centrality</td>
<td>14</td>
</tr>
<tr>
<td>DISCUSSION</td>
<td>16</td>
</tr>
<tr>
<td>General Discussion of the Main Effects APIM Model</td>
<td>17</td>
</tr>
<tr>
<td>Moderations Model: Experiences of Discrimination and Depressive Symptoms</td>
<td>19</td>
</tr>
<tr>
<td>Moderation Model: Wives’ Racial Centrality and Husbands’ Marital Satisfaction</td>
<td>21</td>
</tr>
<tr>
<td>Clinical Implications</td>
<td>22</td>
</tr>
<tr>
<td>Limitations and Future Directions</td>
<td>22</td>
</tr>
<tr>
<td>References</td>
<td>25</td>
</tr>
<tr>
<td>Appendix A: Table 1</td>
<td>35</td>
</tr>
<tr>
<td>Appendix B: Figures</td>
<td>37</td>
</tr>
</tbody>
</table>
Acknowledgements

I would like to thank the multiple people that aided me in the process of completing this thesis. Thank you to my advisor, Dr. Steffany Fredman, who has supported and encouraged me from the genesis of this project. Thank you for being incredibly generous with your time and expertise throughout the numerous drafts of this paper. I would also like to thank my co-advisor, Dr. Susan McHale, who munificentely gave me access to her dataset and provided instrumental guidance and feedback. Many thanks to Dr. Tim Brick and Dr. Gregory Fosco, for lending your statistical and your substantive expertise, which helped bring this paper to further level of rigor. And thank you, Annie Le, for all of your guidance and patience; I could not have asked for a better academic sibling.

I am blessed to have such amazing family and friends that helped me make it through this process. Thank you to my mother and sister who constantly gave me the love, reassurance, and support that allowed me to persist in this journey. I would also like to thank my friends and fellow graduate students who have been a tremendous support and resource as well.

Finally, I would like to thank God, for giving me the passion, strength, favor, and capability to embark on this educational endeavor.

This material is based upon work supported by the National Institute of Child Health and Human Development under Award No. R01-HD32336-02. Any opinions, findings, and conclusions or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the views of the National Institute of Child Health and Human Development.
Introduction

There are well-established associations between depressive symptoms and romantic relationship quality (Beach 2014; Beach et al., 2003; Benazon & Coyne, 2000; Fincham et al. 1997; Hammen, 2006; Kouros et al., 2008; Whisman, 2001a; Whisman 2001b; Whisman & Baucom 2012), with numerous studies documenting bidirectional associations in the prospective prediction of self and partner depressive symptoms and relationship satisfaction over time (Beach, 2014; Davila, Bradbury, Cohan, & Tochluk, 1997; Davila, Karney, Hall & Bradbury, 2003; McLeod & Eckberg, 1993; Whisman & Bruce, 1999; Whisman & Uebelacker, 2009). However, the extent to which these associations generalize to Black, or African American, couples is not well documented. Black couples tend to be underrepresented in extant research on this topic, and the impact of sociocultural factors that might moderate these associations are rarely considered (see Barton et al., 2018; Lincoln & Chae, 2010; Mackenzie et al., 2014; McNeil, Fincham, & Beach, 2014; Murry et al., 2001 for exceptions). The present study addresses this gap in the literature by assessing the dyadic longitudinal associations of depressive symptoms and marital satisfaction within a sample of heterosexual, Black romantic couples at midlife and examining the extent to which these associations are moderated by experiences of discrimination and racial centrality.

Depression and Couple Functioning

Consistent with Coyne’s interpersonal theories of depression (1976), depressive symptoms and poorer intimate relationship adjustment are associated bidirectionally within and across partners in romantic relationships (Davila et al., 1997; Davila et al., 2003; Whisman & Ubelacker, 2009). Individuals with depression are more likely to have impaired social interactions and decreased available social support, which, in turn, can maintain or exacerbate
depression through a recursive process. Being in a close relationship with a depressed individual can also be considered a chronic stressor (Benazon & Coyne, 2000). Consequently, living with a depressed person is likely to induce interpersonal rejection from a spouse, increase the spouses distress or depression (i.e., a contagion effect), erode relationship satisfaction within the couple, and maintain the individual’s depressive symptoms over time (Coyne, 1976). Indeed, in an epidemiological sample of older White, British couples in established relationships, Whisman and Uebelacker (2009) demonstrated a longitudinal bidirectional association linking marital discord and depression. Specifically, in addition to bidirectional effects between one’s own depression and marital discord, they also found that depressive symptoms predicted the spouse’s subsequent discord (interpersonal rejection) and that husbands’ depressive symptoms predicted wives’ depression (contagion effect) one year later.

**Gender Differences in the Association between Depression and Couple Functioning**

Given that women tend to report higher levels of depression (Nolen-Hoeksema, 1987), researchers have explored possible gender differences in the association between depression and couple functioning. There do not appear to be gender differences in the association between depressive symptoms and relationship distress (e.g., Whisman, 2007). However, when considering within-couple, cross-partner effects, findings are less consistent. For example, in a longitudinal study of middle-aged couples, husbands’ depressive symptoms predicted wives’ depressive symptoms a year later but not vice versa, and this effect was stronger among martially distressed couples (Kouros & Cumming, 2010). In contrast, in a study of predominantly White couples, for both men and women, there were cross-partner effects from one spouse’s depressive symptoms to the other’s relationship quality (Mackenize et al., 2014). However, when the same
analyses were performed using a subsample of 42 African American couples, there were no such significant cross-partner effects for either men or women.

**Depression and Couple Functioning among Ethnic Minorities**

Little research has examined the impact of mental health on relationship adjustment among ethnic minorities, and the few studies that have examined the impact of relationship quality on mental health across ethnic groups have yielded inconsistent findings. Some studies indicate little or no difference across ethnic groups in these associations (e.g., McShall & Johnson, 2015), whereas others have demonstrated that the relation between relationship quality and depressive symptoms varies by race as well as gender. For example, Fagan (2009) found that African American and Hispanic fathers experienced greater depressive symptoms when they reported low levels of perceived spousal support, whereas White fathers did not.

Methodological limitations associated with prior studies have made it difficult to discern the nature of the associations between depressive symptoms and marital quality in non-majority samples. For example, many studies have relied on cross-sectional data that are analyzed separately by gender and that have ignored the interdependence of partners (e.g., Williams, Takeuchi, & Adair, 1992). This approach limits the ability to (a) determine the directionality of effects in the association between depression and relationship quality, (b) estimate partner effects (i.e., the extent to which spouses—or “actors”—influence their partners, taking into account partners’ effects on their own outcomes) and (c) formally test whether men and women differ from one another with respect to the directionality and strength of these associations.

Prior research is also limited because racial groups are usually treated as monolithic. Although cultural or contextual explanations are often cited as the reason for racial differences in the association between mental health and relationship functioning, race is the only measure of
culture in many studies. The assumption that all who identify with a specific racial group have the same experiences or cultural characteristics ignores the heterogeneity that exists within a racial group (McLoyd et al. 2000; Phinney & Landin, 1998). To characterize how sociocultural factors may impact mental health and its association with romantic relationship functioning and explicitly examine how factors such as racial/ethnic identity operate in the context of particular groups, is essential.

**Linking Depression and Couple Functioning among African Americans**

Several characteristics of Black couples suggest the importance of considering the depression-relationship link in this population specifically, as the nature of this relation may be different from the findings reported in the larger literature. First, although depression is less prevalent among Blacks as compared to Whites, depression tends to be longer-lasting and more severe (Walton & Shepard Payne, 2016), suggesting that depression or depressive symptoms could serve as a chronic stressor for intimate relationships. Second, compared to other racial groups, Blacks are less likely to marry and tend to report lower marital satisfaction (Bulanda & Brown, 2007), which could also affect that the association between mental health and relationship adjustment.

Finally, accurately capturing the relation between depression and marital satisfaction among African American couples may provide insights for improving health and preventing psychological distress (Barton et al., in press; Barton et al. 2018). Stigma surrounding mental health treatment and mistrust of service providers due to historical abuses still poses barriers to help-seeking among many African Americans who experience depressive symptoms or other forms of psychological distress. Intervening in romantic relationship and upholding high-quality marriages might serve as an opportunity to promote mental health and well-being while
minimizing the stigma that is typically associated with psychological treatment for this population.

Discrimination and Racial Centrality as Possible Moderators of the Association

A growing body of research on marriage and romantic relationships suggests that experiences of discrimination and racial centrality are salient sociocultural factors for Black Americans that could influence the association between depression and relationship satisfaction (James, Coard, Fine, & Rudy, 2018). Within the family context, experiences with discrimination and negative life events can serve as a severe, chronic stressor that magnifies the negative consequences of stressors and hostility that are exhibited within intimate relationships (Carroll, 1998; Murry et al., 2001; Pearlin et al., 1981; Proulx, Buehler, & Helms, 2009). In contrast, theoretical work on the impact of racial centrality—that is, the salience of race in one’s identity—on African American romantic relationships suggests that couples in which both partners endorse an Afro-centric worldview may reject the need to uphold Euro-centric standards of love and commitment and display greater egalitarianism, unity, and cooperation within the relationship (Bell et al., 1990; Bryant et al., 2010).

Discrimination. Experiences of discrimination are related to greater depression and depressive symptoms (Mereish et al., 2016; Watkins et al., 2011) and poorer relationship quality (Kerr et al., 2018; Trail et al., 2012). Further, discrimination has been shown to indirectly affect relationship quality by decreasing self-image, self-esteem, and emotion regulation and increasing levels of hostility, stress appraisals, and stressor pileup (Doyle & Molix, 2014a; Doyle & Molix, 2014b; Doyle & Molix, 2014c; Murry et al. 2001). This suggests that more frequent experiences of discrimination could strengthen the negative relation between depressive symptoms and relationship satisfaction.
Racial centrality. Although multiple studies with adolescents and emerging adults have found that racial identity is associated with greater self-esteem and psychological well-being (Neblett, Banks, Cooper, Smalls-Glover, 2013; Nghe & Mahalik, 2001; Pierre & Mahalik, 2005; Settles et al., 2010), only a handful has examined the impact of racial identity on African American marriage. The extant work on this topic indicates harmful effects of low or conflicting racial identity on relationship quality (Kelly & Floyd, 2001; Kelly & Floyd, 2006; Taylor & Zhang, 1990; Trail et al., 2011). Furthermore, developmental research suggests that racial centrality may be an important factor for African American couples with adolescent-aged offspring as the salience of racial centrality within the relationship might be heightened during this time, as parents transmit racial socialization messages to their children and assist their adolescents in beginning to determine the importance of race to their own identity (McHale et al., 2006; Neblett, Smalls, Ford, Nguyễn, Sellers, 2009).

Current Study

The goals of the current study were to assess the prospective association between depressive symptoms and marital satisfaction within a dyadic context across a one-year period among heterosexual, Black, romantic partners in midlife and to test whether and how experiences with discrimination and racial centrality moderate such bidirectional associations. Guided by interpersonal theories of depression (Coyne, 1976) and family systems theory (Minuchin, 1985), which posits that the experiences of those within the family are interconnected, we had several hypotheses. We predicted, for both husbands and wives: (1) negative, bidirectional associations between both spouses’ depressive symptoms and marital satisfaction over time (cross-construct actor effects); (2) positive associations between partners’ depressive symptoms over time (within-construct partner effects); (3) positive associations
between partners’ marital satisfaction over time (within-construct partner effects); and (4) negative, bidirectional relations between spouses’ depressive symptoms and partners’ marital satisfaction over time as well as between spouses’ marital satisfaction and partners’ depressive symptoms (cross-construct partner effects). We also hypothesized that within-construct and cross-construct paths would not differ between men and women gender. Regarding the sociocultural context of these associations, we anticipated that discrimination and racial centrality would serve as risk and protective factors, respectively, and moderate the strength of the associations between marital satisfaction and depression. Specifically, we expected that (5) the negative association between depressive symptoms and marital satisfaction would be stronger at higher levels of discrimination, whereas (6) the negative association between depressive symptoms and marital satisfaction would be weaker at higher levels of high racial centrality.

**Method**

**Participants**

Data for the current investigation are from two waves, one year apart, of a longitudinal study of African American families (McHale et al., 2006). Families that identified as Black or African American and included a mother and father figure and at least two adolescent-age children living together were recruited from two urban cities in the mid-Atlantic region of the United States. Half of the families in the study were initially contacted by local African American recruiters via churches, businesses, and community events. The other half were initially contacted via a mailing list purchased from a marketing firm, which identified families with children in grades 4-7.
In the first phase of the larger study, 202 families participated. Parents who were not in a romantic relationship (e.g. mother and grandfather pairs, $n = 7$), families in which one of the parents identified as a race other than Black or African American ($n = 14$), couples that had divorced ($n = 7$), and couples that were together fewer than three years ($n = 6$) were omitted to increase homogeneity of the current sample, resulting in a final analytic sample of 168 Black married and cohabiting parents. Ten couples either divorced or withdrew from the study between Time 1 and Time 2; the Time 1 scores of these ten couples were retained in the analyses, but their Time 2 scores were not included. The mean ages of men and women at Time 1 were 43.57 ($SD = 7.21$) and 40.75 ($SD = 5.66$), respectively. Approximately 96% of the sample was married; the remaining 7 couples were cohabitating. Given that most couples were married, male and female partners will be referred to as “husbands” and “wives” henceforth. On average, couples had been living together for 14.16 years ($SD = 6.88$) at Time 1. Families were mostly working to middle class, and the median annual family income for these primarily dual earner families was $83,850.

Procedure

Data were collected during annual in-home interviews that lasted two to three hours and were conducted by teams of two interviewers, almost all of whom were Black. Parents completed measures on current well-being and relationship quality. Families received $200 honorarium for participation at each wave. The study protocols and procedures were approved by the Pennsylvania State University Institutional Review Board.

Measures

Depressive symptoms. Depressive symptoms were assessed at both time points using a 12-item version of the Center for Epidemiological Studies Depression (CES-D) scale (Radloff,
Participants rated how frequently they experienced each symptom in the previous week (e.g., feeling blue) using a 4-point Likert-type scale ranging from 1 \textit{(rarely or none of the time)} to 4 \textit{(most or all of the time)}, with higher scores reflecting greater depressive symptom severity. For husbands, Cronbach’s alphas ranged from .75 to .80 across time and gender.

\textit{Marital satisfaction.} Marital satisfaction was measured at both time points using eight items from the Domains of Marriage Scale (Houston, McHale, & Crouter, 1986). Respondents rated their satisfaction in eight domains of their relationship (e.g., communication, support) using a 9-point Likert-type scale ranging from 1 \textit{(extremely dissatisfied)} to 9 \textit{(extremely satisfied)}, with higher scores reflecting greater satisfaction. Cronbach’s alphas ranged from .89 to .92 across time and gender.

\textit{Experiences of discrimination.} Experiences of discrimination were assessed at Time 1 with 11 items from the Experience with Discrimination Scale (Murry, Brown, Brody, Cutrona, & Simmons, 2001); two items concerning the frequency that friends and families experienced discrimination were omitted. Participants rated how frequently they encountered a variety of discrimination experiences using a 4-point scale ranging from 1 \textit{(never)} to 4 \textit{(several times)}. An example item includes, “how often have you been treated unfairly because you are African American instead of White?” Higher scores reflect more experiences of discrimination. Cronbach’s alpha was .90 for both husbands and wives at Time 1.

\textit{Racial centrality.} Racial centrality was assessed once, at Time 1, by using eight items from the Centrality Subscale of the Multidimensional Inventory of Black Identity (Sellers et al.1997; Sellers et al. 1998). Using ratings from 1 \textit{(strongly agree)} to 4 \textit{(strongly disagree)}, participants rated their agreement with statements such as “In general, being Black is an
important part of my self-image.” Items were summed, with higher scores reflecting greater racial centrality. Cronbach’s alpha was .71 for husbands and .73 for wives.

**Data Analysis**

First, bivariate correlations between husbands’ and wives’ depressive symptoms, marital satisfaction, experiences of discrimination, and racial centrality were examined. Sizes of the correlations were interpreted consistent with Cohen’s (1992) recommendations for small (.10), medium (.30), and large (.50) effects.

**Main Effects Actor Partner Interdependence Model.** To investigate the prospective associations between depressive symptoms and marital satisfaction within a dyadic context, an autoregressive cross lagged model using the Actor Partner Interdependence Model (APIM; Kenny et al., 2006) within a Structural Equation Modeling (SEM) framework in Mplus version 7.4 (Muthen & Muthen, 2006) was estimated. The links between depressive symptoms and marital satisfaction within each member of the dyad (i.e., cross-construct actor effects) were examined, as were the links between one spouse’s attribute and the other’s outcome (i.e., within- and cross-construct partner effects). Up to 15.5% of the data was missing for a given study variable. Robust maximum likelihood (MLR) was used as the method of estimation to account for missing data and the non-normality of study variables. Consistent with the recommendations by Hu and Bentler (1999), good model fit was interpreted in terms of a non-significant chi-square test, root mean square error of approximation (RMSEA) less than or equal to .06, root mean squared residuals (SRMR) less than or equal to .08, and the Comparative Fit Index greater than or equal to .95.

To test the cross-construct actor effects and within- and cross-construct partner effects while controlling for the autoregressive effects of each variable, husbands and wives’ Time 1
depressive symptoms and marital satisfaction scores were entered as simultaneous predictors and their Time 2 depressive symptoms and marital satisfaction scores were entered as simultaneous outcomes in the same model. In addition to specifying directional paths from husbands’ and wives’ Time 1 scores to their own and their partners’ Time 2 scores, all predictors were allowed to covary at Time 1, and all residuals were allowed to correlate at Time 2. Participants’ ages, their children’s ages, income, and relationship duration were initially included as covariates. However, because none were significant, they were not retained in the final model.

Gender differences in the estimated paths were examined by comparing models in which husbands and wives’ actor and partner paths were constrained to be equivalent versus freely estimated using the chi-square difference test (corrected for the use of MLR). When model fit did not degrade significantly by constraining paths to be the same across partners, the more parsimonious model was retained.

*Moderation by experiences of discrimination and racial centrality.* To evaluate the moderating role of experiences of discrimination and racial centrality on the prospective associations between depressive symptoms and marital satisfaction within and across partners, four separate moderation models were estimated. Depressive symptoms and marital satisfaction were estimated as separate outcomes. For each outcome (i.e., depressive symptoms and marital satisfaction), discrimination and racial centrality were each tested as the moderator in two separate models. Each model included cross-construct actor paths and within- and cross-construct partner paths between depressive symptoms and marital satisfaction, along with the autoregressive effects for depressive symptoms and marital satisfaction for the models in which depressive symptoms and marital satisfaction were the outcomes, respectively. The main effects
of Time 1 predictors were allowed to covary with each other, and Time 2 residuals were allowed

to correlate.

For each moderation model, four, two-way interaction terms were created between
husbands and wives’ standardized predictor scores (i.e., depressive symptoms or marital
satisfaction) and standardized moderator scores (i.e. discrimination or racial centrality) and
included along with the main and autoregressive effects for that model. The four moderation
models were: (a) a model that included the autoregressive effects for husbands and wives’
satisfaction, main effects for husbands and wives’ depressive symptoms, main effects for
husbands and wives’ experiences of discrimination, and four, two-way interactions between
husbands and wives’ depressive symptoms and their own and their partners’ experiences of
discrimination predicting subsequent marital satisfaction (i.e., husbands’ depressive symptoms
and husbands’ discrimination, husbands’ depressive symptoms and wives’ discrimination, wives’
depressive symptoms and wives’ discrimination, and wives’ depressive symptoms and husbands’
discrimination; Moderation Model 1); (b) a model that included the autoregressive effects for
husbands and wives’ depressive symptoms, main effects for husbands and wives’ marital
satisfaction, main effects for husbands and wives’ experiences of discrimination, and four two-
way interactions between husbands and wives’ marital satisfaction and their own and their
partners’ experiences of discrimination predicting subsequent depressive symptoms (i.e.,
husbands’ satisfaction and husbands’ discrimination, husbands’ satisfaction and wives’
discrimination , wives’ satisfaction and  wives’ discrimination, and wives’ satisfaction and
husbands’ discrimination; Moderation Model 2); (c) a model that included the autoregressive
effects for husbands and wives’ marital satisfaction, main effects for husbands and wives’
depressive symptoms, main effects for husbands and wives’ racial centrality, and four two-way
interactions between husbands and wives’ depressive symptoms and their own and their partners’ racial centrality predicting subsequent marital satisfaction (i.e., husbands’ depressive symptoms and husbands’ centrality, husbands’ depressive symptoms and wives’ centrality, wives’ depressive symptoms and wives’ centrality, and wives’ depressive symptoms and husbands’ centrality; Moderation Model 3); (d) a model that included the autoregressive effects for husbands and wives’ depressive symptoms, main effects for husbands and wives’ marital satisfaction, main effects for husbands and wives’ racial centrality, and four two-way interactions between husbands and wives’ marital satisfaction and their own and their partners’ racial centrality predicting subsequent depressive symptoms (i.e., husbands’ satisfaction and husbands’ centrality, husbands’ satisfaction and wives’ centrality, wives’ satisfaction and wives’ centrality, and wives’ satisfaction and husbands’ centrality; Moderation Model 4). Significant interactions were probed at low (1 standard deviation below the mean) and high (1 standard deviation above the mean) levels of the moderator.

Results

Descriptive Results

Table 1 presents the means, standard deviations, and bivariate correlations among the study variables. Consistent with the non-clinical nature of the sample, depressive symptoms were low, and marital satisfaction was high. Correlations between husbands’ depressive symptoms and marital satisfaction were significant at the bivariate level cross-sectionally and longitudinally and ranged from moderate to large in size. Wives’ depressive symptoms and marital satisfaction were generally moderately and significantly associated with their own depressive symptoms and satisfaction cross-sectionally and prospectively. Across time points, most of the correlations between husbands and wives’ depressive symptoms and marital
satisfaction scores and the other’s depressive symptoms and marital satisfaction were significant and ranged from small to moderate in size. The association between husbands and wives’ racial centrality and the association between wives’ racial centrality and their experiences of discrimination were significant but small.

**Main Effects APIM Model**

The final autoregressive, cross-lagged model (see Figure 1) provided excellent fit to the data, ($\chi^2(7) = 4.31, p = .74$; RMESA = .00; SRMR = .04; CFI = 1.00). All paths were constrained to be equivalent across husbands and wives, with the exception of the paths between partners’ marital satisfaction from Time 1 to Time 2, as described below.

In partial support of our first hypothesis, for both husbands and wives, there was a significant negative association between actors’ Time 1 depressive symptoms and Time 2 marital satisfaction (cross-construct actor effect). However, Time 1 marital satisfaction did not predict Time 2 depressive symptoms. Contrary to our second hypothesis, there was not a significant association between husbands’ and wives’ depressive symptoms over time. In partial support of our third hypothesis, wives’ Time 1 marital satisfaction positively predicted husbands’ Time 2 marital satisfaction. Husbands’ satisfaction, however, did not significantly predict wives’ subsequent marital satisfaction. Evidence of a gender difference in these partner effects was confirmed by a significant chi-squared difference test ($\chi^2 (1) = 7.1023, p = .01$). Our fourth hypothesis was also partially supported. Specifically, actors’ Time 1 depressive symptoms negatively predicted partners’ Time 2 marital satisfaction (cross-construct partner effect). However, this relation was not bidirectional, as Time 1 marital satisfaction did not predict partners’ Time 2 depressive symptoms.

**Moderation by Discrimination and Racial Centrality**
Of the four moderation models tested, two revealed significant interactions. Moderation Model 2, which included interactions between husbands and wives’ marital satisfaction and each partner’s experiences of discrimination at Time 1 to predict husbands and wives’ depressive symptoms at Time 2, provided excellent fit to the data ($\chi^2(12) = 9.86, p = .63$, RMESA = .00; SRMR = .03; CFI = 1.00). Two significant interactions were found: (1) the interaction between wives’ Time 1 marital satisfaction and husbands’ Time 1 experiences of discrimination predicted husbands’ Time 2 depressive symptoms ($\beta = -0.16, p = .04$) and (2) the interaction between husbands’ Time 1 marital satisfaction and wives’ Time 1 experiences of discrimination predicted wives’ Time 2 depressive symptoms ($\beta = 0.20, p = .01$). As displayed in Figure 2, post hoc probing of the interaction between wives’ Time 1 marital satisfaction and husbands’ Time 1 experiences of discrimination indicated that, at high levels of husbands’ discrimination, the association between wives’ Time 1 marital satisfaction and husbands’ Time 2 depressive symptoms was negative and significant ($B = -1.32, p = .04$). At low levels of husbands’ experiences of discrimination, the association between wives’ Time 1 marital satisfaction and husbands’ Time 2 depressive symptoms was positive but not significantly different from zero ($B = 0.39, p = .37$). As displayed in Figure 3, post hoc probing of the interaction between husbands’ Time 1 marital satisfaction and wives’ Time 1 experiences of discrimination revealed that the association between husbands’ Time 1 marital satisfaction and wives’ Time 2 depressive symptoms was positive at high levels of wives’ discrimination ($B = 0.97, p = .046$) but was negative and not significantly different from zero at low levels of wives’ discrimination ($B = -0.62, p = .12$).

Moderation Model 3, which included interactions between husbands’ and wives’ depressive symptoms and each spouses’ racial centrality at Time 1 predicting marital satisfaction
at Time 2, also provided excellent fit to the data ($\chi^2(11) = 14.40, p = .63$, RMSEA = 0.04; SRMR = 0.03; CFI = 0.98) and indicated a significant interaction. Specifically, there was an interaction between wives’ Time 1 depressive symptoms and their racial centrality in predicting husbands’ Time 2 marital satisfaction ($\beta = -0.24, p = .00$). As shown in Figure 4, post hoc probing of the interaction indicated that, at high levels of wives’ racial centrality, the association between wives’ Time 1 depressive symptoms and husbands’ Time 2 marital satisfaction was negative and significant ($B = -4.36, p < .001$), whereas at low levels of wives’ racial centrality this association was positive but not significantly different from zero ($B = 1.22, p = .19$).

**Discussion**

Previous research on depression and relationship satisfaction has tended to include racial minority couples in marginal numbers and has largely ignored how sociocultural factors such as experiences of discrimination and racial centrality might affect these relations. To address these gaps in the literature, the goals of the current study were to examine the longitudinal associations between Black couples’ depressive symptoms and marital satisfaction in a dyadic context over a one-year span and to explore the potential moderation of these associations by experiences of discrimination and racial centrality.

We found evidence of prospective cross-construct actor effects in depressive symptoms to marital satisfaction, a within-construct partner effect from wives’ marital satisfaction to husbands’ later marital satisfaction, and cross-construct partner effects in depressive symptoms to marital satisfaction for both husbands and wives over time. We also found preliminary evidence of the moderating effects of experiences of discrimination and racial centrality on depressive symptoms and marital satisfaction, respectively. Specifically, at high levels of husbands’ discrimination the association between wives’ satisfaction and husbands’ subsequent
depressive symptoms was negative, and at high levels of wives’ discrimination the association between husbands’ satisfaction and wives’ subsequent depressive symptoms was positive. Additionally, the association between wives’ depressive and husbands’ marital satisfaction was negative at high levels of wives’ racial centrality but not significant at low levels of centrality. Together, these findings demonstrate that depressive symptoms and marital satisfaction are linked among African American couples and highlights the importance of including sociocultural factors when examining these relations.

**General Discussion of the Main Effects APIM Model**

The results of the main effect model indicated that, for both husbands and wives, depressive symptoms predicted lower marital satisfaction for self and partner. These results are consistent with cognitive-behavioral models of depression that highlight the social deficits and stressful experiences of depressed people, which may lead them to hold a negative view of themselves and the broader social environment around them to affect one’s own marital satisfaction (Davila et al. 1997; Whisman & Beach, 2015). This finding also supports the interpersonal rejection component of Coyne’s interpersonal theory of depression (1976) and demonstrates that being in an intimate relationship with a person experiencing depressive symptoms decreases one’s satisfaction in their relationship with them. As hypothesized by theory, decreases in satisfaction may be attributable to impaired social interaction on the part of the individual with depression and/or a decrease in social support provided by the spouse as a consequence of the depressive symptoms. However, these specific mechanisms were not tested in the current study. Future research which examines these potential mediators could be useful in clarifying the processes through which depressive symptoms may contribute to poorer satisfaction among individuals experiencing depressive symptoms and their spouses.
The association we observed between depressive symptoms and satisfaction replicates findings reported in Whisman and Ubelacker’s (2009) large epidemiological study of 1,869 White couples that depressive symptoms predicted subsequent marital discord for self and partner. In fact, the effects observed in the current study are larger than those reported in the previous study with respect to the paths from depressive symptoms to marital satisfaction ($\beta = - .17$ and $-.13$ vs. $\beta = .04$ and $.04$, for husbands and wives respectively), suggesting that the association between depressive symptoms and relationship quality may be even stronger for Black couples than White couples. Future studies that include both Black and White couples in the same sample would be helpful in determining whether there are racial differences in the strength of these associations.

In the main effects only APIM, there was no evidence of significant effects of marital satisfaction on subsequent depressive symptoms for husbands and wives. This finding diverges from prior work demonstrating the prospective effect of relationship satisfaction on depressive symptoms across partners and bidirectional influences of depressive symptoms and marital satisfaction within partners (Beach et al., 2003; Culp & Beach, 1998; Kouros & Cumming, 2011; Kournos, Papp, & Cummings, 2008; Whisman & Bruce, 1999). It seems that for couples in our sample, the association between depressive symptoms and marital satisfaction is only unidirectional – that is, depressive symptoms impact the couple system by affecting both one’s own and one’s partner’s satisfaction. This directional effect of depressive symptoms on relationship functioning was also recently found in a nationally representative study of individuals in committed relationships (Roberson et al. 2018). However, given the sample size of the current study, it is also possible that we were underpowered to detect the effect of marital
satisfaction on depressive symptoms, which may be smaller than the effect of depressive symptoms on marital satisfaction.

We also found evidence of gender differences in the prediction of marital satisfaction. Specifically, wives’ marital satisfaction positively predicted husbands’ marital satisfaction, but husbands’ satisfaction did not predict wives’. Although this gender difference was not predicted, it may be understood within the context of the broader literature on couples more generally.

Wives are generally considered to serve as the “barometers” in heterosexual romantic relationships (Floyd & Markman, 1983) through their relatively greater attunement to relationship functioning. As a result, their satisfaction tends to influence husbands’ satisfaction more strongly than vice versa.

Contrary to prediction, there were no partner effects for spouses’ depressive symptoms over time (contagion effect). Although this finding diverges from studies of predominately White couples (e.g., Kounos & Cummings, 2010; Pradeep & Sutin 2015; Thomeer, Umberson, & Pudrovska, 2013), this pattern is consistent with prior findings with Black couples. For example, in a sample of married African American couples, O’Neal, Wickrama, and Bryant (2014) did not find an association between spouses’ depressive symptoms. This suggests that, among Black couples, there is less interdependence between spouses’ mental health compared to couples of other ethnicities. This interpretation is supported by sociological work that shows African American family structure retains the West African cultural tradition to organize families around blood relatives and extended families rather than marital unions (Dixon, 2009).

Prioritizing familial blood ties could result in greater allegiances to extended family members but may weaken of the interdependence within the couple with respect to psychological health.
Future research that examines how extended family and kinship networks influence mental health among married couples would add greater nuance to these findings.

**Moderations Model: Experiences of Discrimination and Depressive Symptoms**

When examined in the context of racial discrimination, the association between marital satisfaction and depressive symptoms across partners diverges from the pattern that has been observed (e.g., Beach et al., 2003) and highlights differences across gender. Among *both* husbands and wives, their own experiences of discrimination moderated the effect of their partners’ satisfaction on their own subsequent depressive symptoms; however, the direction of these effects differed for husbands and wives. Specifically, when husbands reported more frequent experiences of discrimination, wives’ satisfaction predicted decreases in husbands’ depressive symptoms. However, when wives reported more frequent experiences of discrimination, husbands’ satisfaction predicted increases in wives’ depressive symptoms.

This difference in the role of husbands and wives’ experiences of discrimination is important for understanding the association between one’s marital satisfaction and the partner’s depressive symptoms in Black couples and suggests the potentially deleterious effect of the “Black Superwoman” ideal (Woods-Giscombé, 2010). Given the focus on the injustices that Black men face in society, many Black women report feeling cultural pressure to protect Black men from the effects of racial trauma (Cowdery et al. 2009) or to enact the Black Superwomen trope to save, uplift, and carry their family while men endure psychological distress related to these stressful experiences (Watkins et al. 2013). As such, this stereotype may amplify women’s instinctive drive to invest care, attention, and affiliation in close relationships in response to threat (Taylor et al., 2000). Thus, when husbands encounter multiple experiences of discrimination, wives satisfied in their relationship may provide additional support and comfort.
to their husbands to protect them from the negative psychological consequences of discrimination. In fact, McNeil, Fincham, and Beach (2014) found the negative effects of discrimination on mental health were attenuated in the presence of high spousal support for African American men but not for African American women.

When wives experience discrimination, they may similarly invest additional time and energy in their relationships—namely their marital relationship. Such compensatory behavior by wives may result in husbands being more satisfied in their marriage but at the expense of the women’s mental health. Given the disparity in the amount of research on the impact of discrimination on Black men’s mental health compared to research on Black women’s mental health, these findings are particularly notable and highlight the detrimental effects of discrimination on Black women’s psychological well-being, even in the presence of a highly satisfied spouse. Greater consideration should be given to the effects of discrimination on Black women and how discrimination differentially affects the relational context of depressive symptoms for husbands and wives.

**Moderation Model: Wives’ Racial Centrality and Husbands’ Marital Satisfaction**

Racial centrality provides greater insight regarding the connection between wives’ depressive symptoms and husbands’ marital satisfaction. Specifically, we found that, for wives with high racial centrality, their depressive symptoms predicted decreases in husbands’ marital satisfaction one year later. In contrast, among wives who reported low levels of racial centrality, their depressive symptoms were positively associated with husbands’ satisfaction a year later; however, this effect was not significantly different from zero and, thus, cannot be interpreted.

Racial identity has typically been conceptualized as a protective factor in terms of romantic relationship functioning (e.g., LaTaillade, 2006); however, our results are not consistent
with this conceptualization. In the current study, under conditions of women’s high racial centrality, couples display the typical negative association between wives’ depressive symptoms and husbands’ marital satisfaction, whereas this association is not significant under conditions of low centrality. It may be that, among couples in this sample, wives’ racial centrality fosters greater spousal interdependence. According to Bell, Bouie, and Baldwin (1990), in relationships in which individuals have high racial identity, partners provide for the other’s “physical, intellectual, emotional, and social stimulation” and value “mutuality and reciprocity [as] core ingredients” (p. 171) for a satisfying relationship. Consistent with this conceptualization, when wives have high racial centrality and exhibit lower depressive symptoms, they may engage in this process of mutual inspiration and reciprocity that results in high husband satisfaction. By contrast, as wives’ exhibit more depressive symptoms, they may disengage from this process and fail to meet their spouses’ expectations for stimulation, which decreases husbands’ satisfaction. Thus, it seems, high racial centrality may be a protective factor of marital satisfaction at low levels of depressive symptoms, but a risk factor at high levels of depressive symptoms. Conversely, when wives have low racial centrality, they may not engage in this process of mutual inspiration that fosters inter-connections within the couple, so their depressive symptoms do not have a significant impact on husbands’ satisfaction. Future work should explore whether racial centrality is actually a protective factor for relationship functioning or simply increases interdependence between the couple.

**Clinical Implications**

The results from the current study have practical implications. First, we found that the mental health and relationship functioning are linked both within and across African American partners and that these associations demonstrate potential bidirectional relations when examined
in the broader sociocultural context of experiences of discrimination and racial centrality. As such, these basic research findings are congruent with the rationale for empirically supported relationship education programs such as Protecting Strong African American Families (Barton et al., in press) and other culturally-informed intimate relationships programs that serve as an accessible, low-stigma method for improving mental health and enhancing relationship quality among African American couples. Second, as others have suggested (e.g. LaTaillade, 2006), practitioners working with Black couples should routinely assess each spouse’s discrimination experiences and racial centrality, in addition to couple satisfaction and mental health symptoms, as this could be a neglected consideration that impacts the individuals within the couple.

**Limitations and Future Directions**

There are several limitations associated with the current study. First, this investigation relied on a relatively advantaged community sample in terms of income and education drawn from the same geographic location in the U.S. Consequently, the results do not generalize to all African American couples. Future studies that include a sample that is more diverse with respect to socioeconomic background would be helpful in determining if the pattern of findings generalizes beyond this sample. Relatedly, research that includes clinical populations, in terms of both depression and satisfaction, would likely capture a broader range of scores and possibly demonstrate if and/or how these associations differ for Black couples that include one or more members who are clinically depressed and/or relationally distressed. Second, we relied exclusively on self-report measures, which could inflate the associations between these constructs due to shared method variance. Future work would benefit from using clinical interview measures of depression and/or observational measures of relationship quality, in addition to self-report ratings of depressive symptoms and marital satisfaction. Finally, we did
not make a priori hypotheses concerning specific interactions containing discrimination or racial centrality. Consequently, the results should be considered tentative. Future studies that replicate the pattern of results in different samples would help to increase confidence in the findings.

The current study addresses the need to investigate the prospective associations between depressive symptoms and marital satisfaction in a dyadic context among Black couples and to consider these associations within the context of racially-relevant constructs that are salient for this population, such as experiences of discrimination and racial centrality. Our findings suggest that associations between depressive symptoms and marital satisfaction may be unique among African American couples relative to what has been previously reported and underscore the importance of considering sociocultural constructs to add nuance when investigating the relational context of mental health.
References


cognitive behavioral model of marriage. *Journal of Consulting and Clinical Psychology, 51*,


Hu, L.-t., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis:
Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*, 1-55. doi:
[10.1080/10705519909540118](https://doi.org/10.1080/10705519909540118)

Huston, T. L., McHale, S. M., & Crouter, A. C. (1985). When the honeymoon’s over: Changes in
the marriage relationship over the first year. In R. Gilmour & S. Duck (Eds.), *The

in reframing family systems theory: A consideration of choice and time. *Journal of
Family Theory & Review, 10*, 419-433. doi: [10.1111/jftr.12262](https://doi.org/10.1111/jftr.12262)

Kelly, S., & Floyd, F. J. (2001). The effects of negative racial stereotypes and Afrocentricity on
Black couple relationships. *Journal of Family Psychology, 15*, 110-123. doi:
[10.1037/0893-3200.15.1.110](https://doi.org/10.1037/0893-3200.15.1.110)

trust and adjustment for African American couples. *Journal of Family Psychology, 20*,
79-87. doi: [10.1037/0893-3200.20.1.79](https://doi.org/10.1037/0893-3200.20.1.79)

Guilford.


APPENDIX A

TABLE 1
Table 1
Correlations, Means, and Standard Deviations among Depressive Symptoms, Marital Satisfaction, Racial Centrality, and Experiences of Discrimination

<table>
<thead>
<tr>
<th>Variables</th>
<th>Husbands</th>
<th>Wives</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RC</td>
<td>EoD</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Husbands</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RC</td>
<td></td>
<td>--</td>
</tr>
<tr>
<td>EoD</td>
<td>.13</td>
<td>--</td>
</tr>
<tr>
<td>Time 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DS</td>
<td>-.09</td>
<td>.22*</td>
</tr>
<tr>
<td>MS</td>
<td>.12</td>
<td>.13</td>
</tr>
<tr>
<td>Time 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DS</td>
<td>-.14</td>
<td>.11</td>
</tr>
<tr>
<td>MS</td>
<td>-.04</td>
<td>-.12</td>
</tr>
<tr>
<td>Wives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RC</td>
<td>.18*</td>
<td>.00</td>
</tr>
<tr>
<td>EoD</td>
<td>.03</td>
<td>.10</td>
</tr>
<tr>
<td>Time 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DS</td>
<td>-.01</td>
<td>-.01</td>
</tr>
<tr>
<td>MS</td>
<td>.00</td>
<td>.08</td>
</tr>
<tr>
<td>Time 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DS</td>
<td>.02</td>
<td>-.02</td>
</tr>
<tr>
<td>MS</td>
<td>.06</td>
<td>.12</td>
</tr>
</tbody>
</table>

| M         | 2.76     | 20.68 | 19.64 | 58.51 | 19.48 | 57.38 | 2.68  | 19.01 | 17.87 | 53.91 | 18.12 | 55.20 |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| SD        | 0.56     | 6.92  | 5.38  | 11.01 | 5.79  | 12.01 | 0.57  | 6.30  | 4.40  | 12.91 | 4.83  | 12.24 |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |

Note. N = 168 couples. RC = Racial Centrality; EoD = Experiences of Discrimination; DS = Depressive Symptoms; MS = Marital Satisfaction.
*p < .05
APPENDIX B

FIGURES
This figure depicts the prospective associations between depressive symptoms and marital satisfaction in an Actor Partner Interdependence Modeling framework. Standardized coefficients are provided for significant paths ($p < .05$). Non-significant paths have been omitted from the figure. Covariances between predictors and correlations between the residuals were included in the final model but are not displayed for ease of presentation.
Figure 2. The association between wives’ marital satisfaction and husbands’ depressive symptoms at high versus low levels of husbands’ experiences of discrimination.
Figure 3. The association between husbands’ marital satisfaction and wives’ depressive symptoms at high versus low levels of wives’ experiences of discrimination.
Figure 4. The association between wives’ depressive symptoms and husbands’ satisfaction at high versus low levels of wives’ racial centrality.