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Racial Discrimination and Psychological Wellbeing of Pregnant Women

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Abstract

Purpose—African American women are more likely to be exposed to racial discrimination and to experience psychological distress compared with white women. While studies have shown that social support is positively related to psychological wellbeing, little is known about the potential buffering effect of social support on the relationship between racial discrimination and psychological wellbeing of pregnant women. The purpose of this study was to determine if social support moderates effects of racial discrimination on psychological wellbeing among pregnant African American women.

Study Design and Methods—Using a cross-sectional design, 107 African American women between 15-26 weeks gestation from an urban university-based midwifery practice completed questionnaires.

Results—Women who reported more experiences of racial discrimination also reported lower levels of social support and psychological wellbeing ($p < .01$). Controlling for maternal characteristics, for every 1-unit increase in racial discrimination there was a 1.96 point decrease in psychological wellbeing. For every 1-unit increase in social support there was a 0.54 point increase in psychological wellbeing. However, social support did not buffer the relationship between racial discrimination and psychological wellbeing.

Clinical Implications—Maternal child nurses should be aware that experiences of racial discrimination have negative effects on psychological wellbeing of pregnant African American

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women regardless of their levels of social support. However, social support can reduce psychological distress and improve wellbeing of pregnant women. Therefore, nurses need to provide pregnant women with positive and supportive experiences that may improve their psychological wellbeing.

Keywords

racial discrimination; social support; psychological distress; pregnancy

Introduction

Pregnant African American women are more likely to be exposed to racial discrimination, a type of stressor that is defined as being hassled or made to feel inferior due to one's race, ethnicity, or color (Krieger et al., 2010), compared with pregnant white women (Dominguez, Dunkel-Schetter, Glynn, Hobel, & Sandman, 2008). Pregnant African American women also report higher levels of psychological distress compared with pregnant white women (Catov, Abatemarco, Markovic, & Roberts, 2010; Seng, Kohn-Wood, McPherson, & Sperlich, 2011). The higher levels of psychological distress observed in African American women may be due to their increased exposure to racial discrimination.

A meta-analysis of 28 independent samples with a total of 6,131 African American participants (51% females) found that racial discrimination was positively related to psychological distress, showing small to medium effects (4.4% of total variance shared between racial discrimination and psychological distress) (Lee & Ahn, 2013). Limited data also suggest that racial discrimination is associated with psychological distress in pregnant and postpartum racial minorities. Young minority pregnant women (38% of whom were African American) who reported more experiences of racial discrimination also reported higher levels of psychological distress (Earnshaw et al., 2013; Rosenthal et al., 2015). Similarly, postpartum African American women who reported more experiences of racial discrimination had higher levels of psychological distress (Giurgescu et al., 2012). These results suggest that racial discrimination may have adverse psychological consequences for African American women.

The impact of racial discrimination on psychological distress can be eased by the support of family and friends. According to Cohen and Wills (1985), social support can diminish the effects of stress in two ways:

1. Main Effect Model: Social support has a direct positive effect on health outcomes (e.g., psychological wellbeing), thereby benefiting women during both stressful and non-stressful situations. Higher levels of social support are associated with higher levels of psychological wellbeing, regardless of whether a person has experienced a stressor.
2. Stress Buffering Hypothesis: Social support buffers effects of stress on health outcomes. Benefits of social support are most apparent when support is provided during times of high stress. Social support protects mental health by moderating the stressor's effect, or counteracting the

harmful effect of a stressor on mental health. The influence of racial discrimination on psychological distress may be attenuated at higher levels of social support.

Supporting the main effect model, researchers have found higher levels of social support are related to higher levels of psychological wellbeing in pregnant African American women (Giurgescu et al., 2015; Molina & Kiely, 2011). Research with non-pregnant African American women also suggests that social support moderates the effect of racial discrimination on psychological wellbeing. Supporting the stress buffering hypothesis, one group of researchers found that African American women who received high levels of social support tailored for racial discrimination were protected from the negative impact of racial discrimination on depressive symptoms (Seawell, Cutrona, & Russell, 2014). In contrast, African American women who reported low levels of such tailored social support experienced the highest level of depressive symptoms (Seawell et al., 2014). Very little is known about the potential role of social support for moderating the relationship between racial discrimination and psychological wellbeing in pregnant African American women. Pregnant African American women who reported more experiences of discrimination (e.g., due to race, gender, age, and education) also reported lower levels of social support (D. E. Dailey, 2009). The purpose of this study was to determine if social support moderates effects of racial discrimination on psychological wellbeing among a sample of pregnant African American women. We hypothesized that the relationship between racial discrimination and psychological wellbeing will be weaker when social support is high.

Methods

Design and Sample

A cross-sectional design was used with survey data collected between 15 to 26 weeks gestation. A sample of 114 self-identified African American women was enrolled in the study. All women (a) were at least 18 years of age; (b) had singleton medically low-risk pregnancy; c) were any gravidity; and (d) were in the second trimester of pregnancy. Women were excluded if they had a pre-existing medical diagnosis (i.e., chronic hypertension, pre-gestational diabetes, HIV, autoimmune disorders) since these factors may pose as stressors themselves. We did not exclude women with prior preterm birth given that preterm birth may be due to the persistence of exposures to racial discrimination from one pregnancy to the next. Women were recruited between 2009 and 2011 from an urban university-based nurse midwifery practice. Six questionnaires were not completed or were lost in the mail, and one woman declined participation after signing the informed consent. Hence, data were available for a sample of 107 women.

Procedures

Institutional Review Board approval was obtained. Potential participants were contacted first by their health care provider. The principal investigator or a research assistant met face-to-face with women before or after their prenatal visit, explained the study, invited them to participate, and completed the informed consent process. The majority of participants completed the packet of questionnaires in a private room in the clinic within 10-20 minutes.

Twelve women completed the questionnaires at home and mailed them. The questionnaires were at the 6-7th grade level. Women received $25 for their time.

Measures

Maternal characteristics—Maternal socio-demographic characteristics such as maternal age, living with the father of the baby, level of education, employment status, and household income were collected via self-report. Gestational age at time of data collection was collected from prenatal medical records.

Experiences of racial discrimination—The Experiences of Discrimination (EOD) instrument measures self-reported experiences of discrimination due to race, ethnicity or color in nine situations (e.g., at school; at work; getting service from store or restaurant; getting medical care). For each situation, respondents may reply *yes* = 1 or *no* = 0. The sum of all 9 situations equals the total score (range 0-9). The EOD has established construct validity in a sample of African American adults (Krieger, Smith, Naishadham, Hartman, & Barbeau, 2005). In the current study, the Cronbach's alpha was 0.79.

Social support—The Medical Outcomes Study (MOS) Social Support Survey contains 19 items on a 5-point scale (*none of the time* to *all of the time*) related to four functional domains: emotional/informational, tangible, affectionate, and positive social interaction. The sum of the 19 items can range from 19–95 with higher scores representing greater social support (Sherbourne & Stewart, 1991). In the current study, Cronbach's alpha was 0.97.

Psychological wellbeing—The Psychological General Wellbeing (PGWB) Index assesses subjective feelings of psychological wellbeing or distress and consists of 22 items on a 6-point scale (*most distress* to *least distress*). The sum can range from 0 to 110, with some items being reverse-scored. Scores of 72 or lower represent psychological distress. Factor analysis produced six factors representing six dimensions: positive wellbeing, self-control, vitality, anxiety, depression, and general health. Evidence of concurrent validity had acceptable correlations between the PGWB and other depression scales ranging from 0.52-0.80 (Dupuy, 1984). In the current study, the Cronbach's alpha was 0.94.

Analytic Strategy

Data were entered, cleaned, and prepared for analysis on an ongoing basis using IMB SPSS Statistics version 22. Descriptive statistics were used to analyze maternal characteristics. Pearson *r* correlation coefficients and point-biserial correlations were used to examine the relationships among racial discrimination, social support, and psychological wellbeing. Independent samples *t* tests were used to examine differences in major variables of the study (e.g., racial discrimination) by maternal characteristics (e.g., level of education). Multiple linear regression analyses were used to examine if racial discrimination, social support, and the interaction term between racial discrimination and social support predicted psychological wellbeing. Level of education (high school or less; some college or higher) and household income (<$10,000; ≥$10,001) were dichotomized in order to conduct independent samples t-test and multiple linear regression analyses. The variables of racial discrimination and social support were mean-centered in order to examine the interaction

term between these variables in predicting psychological wellbeing. We included both the main effects of racial discrimination and social support as well as the interaction term between racial discrimination and social support in order to test the stress buffering hypothesis.

Results

Maternal Characteristics

Women had a mean age of 24 years and a mean gestational age of 20 weeks. The majority of women were multigravid (69%), were living with the father of the baby (51%), and were unemployed (51%) (see Table 1). Women with at least some college education reported more experiences of racial discrimination compared with women with high school or lower level of education (1.91 and 0.94, respectively, $t_{(104)}$=-2.764, p=.007). Multigravid women reported lower levels of social support compared with primigravid women (79.83 and 89.40, respectively, $t_{(104)}$=3.683, p=.000). There were no other bivariate relationships between maternal characteristics and racial discrimination, social support or psychological wellbeing (data not shown).

Relationships among racial discrimination, social support and psychological wellbeing

More experiences of racial discrimination related to lower levels of social support (r=-.257, p=.008) and psychological wellbeing (r=-.313, p=.001). Higher social support related to higher levels of psychological wellbeing (r=.557, p=.000). Women with psychological distress (PGWB scores ≤72) reported twice as many experiences of racial discrimination as women without psychological distress (PGWB scores > 72) (2.3 and 1.1, respectively, $t_{(103)}$=-2.996, p=.003).

Multivariable associations of racial discrimination and social support with psychological wellbeing

After adjustment for maternal age, gravidity, living with the father of the baby, level of education, employment and household income, multiple linear regression analysis showed that experiences of racial discrimination were negatively associated with psychological wellbeing (B=-1.963, p=.031, 95% CI:-3.80; -.21), while social support was positively associated with psychological wellbeing (B=.535, p=.000, 95% CI: .32; .73). The model accounted for 38% of the variance in psychological wellbeing. For every 1-unit increase in racial discrimination there was a 1.96 points decrease in psychological wellbeing. For every 1-unit increase in social support there was a 0.54 point increase in psychological wellbeing. The interaction term between racial discrimination and social support was not associated with psychological wellbeing (see Table 2).

Clinical Implications

Pregnant African American women who reported higher levels of social support also reported higher levels of psychological wellbeing supporting the main effect model of social support. Other research also has found that social support had a positive effect on psychological wellbeing in pregnant African American women further supporting the direct

effect of social support on psychological wellbeing (Giurgescu et al., 2015; Molina & Kiely, 2011). However, we did not find a moderating effect of social support on the relationship between racial discrimination and psychological wellbeing. Thus, our results do not support the stress buffering hypothesis of social support. Perhaps to buffer the effects of racial discrimination on psychological wellbeing, social support needs to be specific for experiences of racial discrimination. In support of this notion, social support tailored for racial discrimination, but not general social support, has been shown to buffer the negative effects of racial discrimination on depressive symptoms in non-pregnant African American women (Seawell et al., 2014). Therefore, in order for social support to be effective, it must match the needs elicited by the stressful situation.

Women with at least some college education reported more experiences of racial discrimination compared with women with high school or lower level of education. Other researchers have similarly found that college educated African American women report more experiences of racial discrimination compared with African American women with high school or lower levels of education (A. B. Dailey, Kasl, Holford, Lewis, & Jones, 2010). Compared with less educated African American women, college educated African American women may be more attuned to racial discrimination (Ertel et al., 2012). Unlike less educated African Americans, college educated African American women are more likely to experience racial discrimination as they make valid attempts to climb the economic ladder and break the glass ceiling limiting their successful advancement (Fang, Moy, Colburn, & Hurley, 2000).

There are limitations to our study. Women were enrolled from an urban university-based nurse midwifery practice; therefore results cannot be generalized to other samples or settings. Women completed the questionnaires one time during the second trimester of their pregnancy. Longitudinal data would provide a better understanding of the impact of social support on psychological wellbeing across pregnancy. Sample size was relatively small and the majority of women reported high levels of social support, limiting its variability. Future longitudinal studies with larger samples are needed to examine the impact of racial discrimination, and potential beneficial effect of social support, on psychological wellbeing of pregnant African American women. Such studies should consider both general social support and social support that is tailored for racial discrimination, and might link birth outcomes to these measures as well.

In our study, pregnant African American women with psychological distress reported twice as many experiences of racial discrimination compared with pregnant African American women without psychological distress. Other researchers also found that more experiences of racial discrimination related to higher psychological distress in pregnant and postpartum African American women (Earnshaw et al., 2013; Giurgescu et al., 2012; Rosenthal et al., 2015). The majority of women reported racial discrimination outside of the health care system (e.g., getting service in a store); however, 6% of women reported experiencing racial discrimination while “getting medical care”. Maternal child nurses should be aware that women also experience racial discrimination as they receive prenatal care. These experiences have a negative effect on psychological wellbeing of pregnant African American women.

Racial discrimination has been related to adverse birth outcomes. In a review, Giurgescu and colleagues found a consistent positive relationship between racial discrimination and preterm birth and low birth weight infants (Giurgescu, McFarlin, Lomax, Craddock, & Albrecht, 2011). Psychological distress may be the pathway by which experiences of racial discrimination increase the risk for preterm birth. Indeed, psychological distress has a well-established relationship with preterm birth (Dominguez et al., 2008; Giurgescu et al., 2012). Prenatal stress may not entirely be an individual level phenomenon, but be linked to the individual's social-structural context such as experiences of racial discrimination (Wadhwa, Entringer, Buss, & Lu, 2011). Nurses should evaluate stress experienced by women due to their social-structural context and implement stress reduction interventions that have the potential to improve birth outcomes.

Even though our results do not support the stress-buffering hypothesis, our results support the main effect model of social support. Higher levels of social support predicted higher levels of psychological wellbeing. Nurses who provide pregnant African American women with positive and supportive experiences may improve their psychological wellbeing. Such positive experiences might be obtained through the establishment of support groups, perhaps with a specific focus on issues of discrimination. Policy and public health interventions to reduce racial discrimination or combat its deleterious effects on psychological wellbeing of pregnant African American women are needed (see Table 3).

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Callouts

- Pregnant African American women are more likely to be exposed to racial discrimination and to experience psychological distress compared with pregnant non-Hispanic white women.
- Experiences of racial discrimination predicted lower levels of psychological wellbeing.
- Clinicians who provide pregnant African American women with positive and supportive experiences may improve their psychological wellbeing.

Table 1

Descriptive statistics for sample characteristics (N=107)

Variable		
	***Mean* (*Standard Deviation*)**	***Range***
Age	23.80 (5.30)	18-41
Gestational age at data collection (weeks)	19.85 (2.50)	15-26
	Number (Frequency)	
Gravidity		
Primigravida	33 (30.8%)	
Multigravida	74 (69.2%)	
Living with the father of the baby		
Yes	54 (50.5%)	
No	53 (49.5%)	
Education		
Less than high school	14 (13.1%)	
Graduated high school	28 (26.2%)	
Some college	43 (40.2%)	
Associate degree	8 (7.5%)	
Bachelor degree	11 (10.3%)	
Graduate program	3 (2.8%)	
Employment		
Yes	52 (48.6%)	
No	55 (51.4%)	
Household income[a]		
Less than $10,000	50 (46.7%)	
$10,001-20,000	13 (12.1%)	
$20,001-30,000	22 (20.6%)	
More than $30,001	16 (15.0%)	
	Mean (*Standard Deviation*)	*Range*
Experiences of Discrimination (situations)	1.53 (1.99)	0-9
Social Support	82.78 (16.80)	22-95
Psychological General Wellbeing Index	77.50 (18.48)	11-110

Note:

[a]Household income available for 101 women

Table 2

Predictors of psychological wellbeing (N=107)

Variables	B[a]	β	*p*	95% CI
Racial discrimination	-1.963	-.212	.031	-3.80; -.21
Social support	.535	-.487	.000	.32; .73
Racial discrimination*Social support	-.019	-.047	.624	-.09; .06

Note:

[a]B=unstandardized regression coefficients; β=standardized regression coefficients; CI=confidence interval;

R^2= .380; $F_{(7,93)}$ =6.202, p=.000

Maternal age, gravidity, living with the father of the baby, level of education, employment, and household income did not predict psychological wellbeing.

Table 3

Clinical Implications

Evaluate the stress experienced by pregnant women due to their social-structural context such as experiences of racial discrimination.
Provide social support to pregnant women to improve their psychological wellbeing.
Establish support groups with a specific focus on issues of discrimination.
Implement stress reduction interventions.
Develop policy and public health interventions to reduce racial discrimination or combat its deleterious effects on psychological wellbeing of pregnant African American women.