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Differential Associations Between Partner Violence and Physical Health Symptoms Among Caucasian and African American Help-Seeking Women

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Abstract

The relationship between partner violence and physical health symptoms is well-established. Although some researchers have theorized that the physical health effects of partner violence may be worse for ethnic minority women, there is little research addressing this topic. The current study examined whether African American women demonstrate a differential association in this relationship than Caucasian women. This study included 323 women (232 African American, 91 Caucasian) who participated in a larger investigation of the psychological and psychophysiological correlates of recent partner violence among women seeking help for the abuse. Race was examined as a moderator of the relationship between partner violence frequency and physical health symptoms. Although mean levels of partner violence frequency and physical health symptoms did not significantly differ between African American and Caucasian women, linear regression analyses demonstrated a significant positive relationship between partner violence frequency and physical health symptoms for African American women; whereas there was no association observed between these variables for Caucasian women. Post hoc analyses revealed that posttraumatic stress disorder symptoms partially mediated the association between partner violence frequency and physical health symptoms for the African American women. The current findings underscore the importance of considering race when studying the effect of partner violence on women's health.

Keywords

race; women; partner violence; physical health; moderation

Intimate partner physical aggression, or partner violence, is a substantial problem in the United States, affecting large numbers of women and resulting in serious public health problems (Center for Disease Control, 2011). Adverse physical health effects are among the most common and costly consequences of partner violence (Campbell, 2002; Max, Rice, Finkelstein, Bardwell, & Leadbetter, 2004). Partner violence is associated with more physical health problems, chronic health conditions, lower self-rated health status, and higher health care utilization, even when controlling for other risk factors such as age, insurance status, substance abuse, and childhood trauma (Bonomi et al., 2006; Campbell, 2002; Coker et al., 2002; Coker, Smith, McKeown, & King, 2000; Plichta & Falik, 2001; Sutherland, Sullivan, & Bybee, 2001).

As the relationship between partner violence and physical health symptoms has been well-established, a growing body of literature has attempted to elucidate mechanisms linking partner violence to physical health problems (Dutton, 2009; Schnurr & Green, 2004). Significant mediators of the partner violence-physical health relationship have been identified, with special attention being paid to survivors' psychological health. For example, symptoms of anxiety and depression (Sutherland, Bybee, & Sullivan, 1998) and posttraumatic stress disorder (PTSD; Campbell, Greeson, Bybee, & Raja, 2008b; Taft, Vogt, Mechanic, & Resick, 2007) have been shown to mediate the associations between partner violence and physical health symptoms in partner violence survivors. Though such research has been instrumental in helping to explain the processes by which partner violence impacts physical health, much less is known about factors that influence the strength of this relationship.

Similarly, despite the growing literature examining the relationship between partner violence and physical health symptoms, there is an important need to describe the experiences of partner violence and its consequences for ethnic minority women (Bryant-Davis, 2005; Campbell et al., 2008a; Nash, 2005). Unfortunately, race is often either ignored or treated as a control variable in the partner violence and physical health literature. As a result, the possibility of racial differences in women's responses to partner violence have not been systematically assessed, contributing to a gap in the field's understanding of how partner violence impacts the health of ethnic minority women (Bryant-Davis, 2005; Taft, Bryant-Davis, Woodward, Tillman, & Torres, 2009). The limited empirical base is particularly concerning because research suggests that African American women experience partner violence at higher rates and endure more severe violence in their intimate relationships than Caucasian women (Hampton & Gelles, 1994; Moore, Probst, Tompkins, Cuffe, & Martin, 2007; Rennison & Planty, 2003; Rennison & Welchans, 2000; Sorenson, Upchurch, & Shen, 1996). Moreover, it is well-established that African American women face complex disparities in physical health problems as well as access to health care (Department of Health & Human Services, 2009; Smedley, Stith & Nelson, 2003), so it is important to understand the physical health effects of partner violence against African American women. In light of the severity of partner violence and the physical health disparities experienced by African American women, it is striking how few studies have examined health sequelae in African American women, particularly given the myriad of ways in which trauma can impact survivors' physical health (Schnurr & Green, 2004).

Women's racial and ethnic identities may impact partner violence, physical health sequelae, and the relationship between partner violence and physical health via several potential

pathways, including sociocultural processes (El-Khoury et al., 2004; Kasturirangan, Krishnan, & Riger, 2004; Suglia et al., 2010; Thompson et al., 2000). A growing body of research highlights the unique cultural processes among African American women that influence their recovery following partner violence (for a review, see Taft et al., 2009). For example, African American partner violence survivors are more likely than Caucasian survivors to use prayer as a coping strategy and more likely to indicate that prayer is helpful in terms of recovering from abuse (El-Khoury et al., 2004). Additionally, some researchers speculate that African American women, particularly those from low socioeconomic strata, are particularly vulnerable to the health effects of partner violence perhaps due to increased past and present experiences of adversity and less access to health care (Kaslow et al., 2010; Thompson et al., 2000).

The aim of the current study was to explore the impact of race on the association between partner violence and physical health symptoms among a large sample of predominantly low-income African American and Caucasian women who participated in a larger study of the psychological and psychophysiological correlates of recent partner violence among women seeking help for the abuse (Resick, 1997). This study provides an initial step toward determining potential racial differences in the associations between partner violence and physical health in survivors of partner violence. However, it is beyond the scope of the current study to comprehensively test a theoretical model or evaluate a multitude of contextual factors that may explain any differences that emerge. The current study used the same sample examined by Taft et al. (2007) to explore mental health mediators (PTSD, depression, anger) of the relationship between partner violence and physical health symptoms. In the previous study, Taft et al. (2007) demonstrated that PTSD symptoms fully mediated the relationship between partner violence and physical health symptoms, however, the researchers did not examine if there were differences in the association between partner violence and physical health symptoms among African American and Caucasian women. In contrast, the current study examined race as a moderator of the relationship between partner violence and physical health symptoms. Consistent with conceptualizations positing that partner violence has a particularly strong impact on African American women's health (Kaslow et al., 2010; Thompson et al., 2000), we hypothesized that the association between physical partner violence and physical health symptoms would be stronger for African American women relative to Caucasian women.

Method

Participants

Participants for the current study were 323 women who identified as either African American ($n = 232$) or Caucasian ($n = 91$) and participated in a larger study assessing the psychological and psychophysiological correlates of recent partner violence among women (Resick, 1997; see Mechanic, Weaver, & Resick, 2000 or Taft et al., 2007, for a more detailed description of the study). Participants were included in the parent study if they had been involved in an intimate relationship with a perpetrator for at least 3 months; experienced their most recent act of physical partner violence between 2 weeks and 6 months prior to study enrollment; and reported at least two severe acts or four minor acts of physical violence within the past year. Ostensible drug or alcohol intoxication or the presence of psychotic symptoms at the time of the screening excluded women from the study to avoid compromising the validity of their data.

Measures

Revised Conflict Tactics Scale (CTS-2; Straus, Hamby, Mc-Coy, & Sugarman, 1996)—Frequency of physical partner violence victimization was measured by the Physical

Assault subscale (12 items) of the CTS-2. Participants rated items based on frequency of each aggressive act in the past year (1 = *never*, 2 = *twice*, 3 = *3–5 times*, 4 = *6–10 times*, 5 = *11–20 times*, 6 = *more than 20 times*). Frequency scores were computed by summing the midpoints of each item in the subscale (e.g., *6–10 times* was recoded as 8; see Straus, 1979). The CTS has evidenced good reliability and validity (Straus, 1990). Internal consistency for the Physical Assault subscale in this sample was high ($\alpha = .91$).

Pennebaker Inventory of Limbic Languidness (PILL; Pennebaker, 1982)—

Physical health symptoms were assessed using a modified version of the PILL. The original 54-item scale measures the frequency of a number of common physical health symptoms. To fully evaluate physical health symptoms specific to women, five additional items were added to this measure. The added items were (a) “painful or irregular menstrual periods;” (b) “tumor/cyst/growth or other disease of the uterus or ovaries;” (c) “vaginal infections such as yeast infection;” (d) “monthly premenstrual problems such as severe abdominal bloating, headache, or breast tenderness;” and (e) “symptoms of menopause such as sudden sweats or hot flashes.” Participants rated items on a 5-point Likert scale ranging from 1 (*have never or almost never experienced the symptom*) to 5 (*more than once every week*). As recommended by Pennebaker (1982), the scale was scored using the binary technique, in which items rated as a 1 or 2 were recoded as 0, and scores of 3 or higher (*every month or so, or more frequently*) were recoded as 1. Recoded scores were then summed for a possible score ranging from 0 to 59. The PILL has been shown to be a reliable ($r_{tt} = .83$ over two months) and valid measure of physical health symptoms as demonstrated by moderate correlations with other health symptom inventories (Gijbers Van Wijk & Kolk, 1996). The PILL demonstrated excellent internal consistency in this sample ($\alpha = .96$).

Posttraumatic Diagnostic Scale (PDS; Foa, Cashman, Jaycox, Perry, 1997)—

PTSD symptom severity was measured using the 34-item PDS. The 17 items reflecting symptoms consistent with the PTSD diagnosis in the Diagnostic and Statistical Manual-IV (*DSM-IV*; American Psychiatric Association, 1994) were summed to obtain a total PTSD symptom severity score. Participants rated the 17 items based on the frequency of the symptom on a 4-point scale (ranging 0–3). The PDS has established psychometric properties (Foa et al., 1997). Internal consistency for the PDS in the current sample was excellent ($\alpha = .90$).

Procedures

Women receiving services at domestic violence shelters and victim agencies were informed about the study and invited to contact study personnel if they were interested in participating (for more detail, see Mechanic et al., 2000). Following a phone screen, eligible participants reported to a Trauma Recovery Center in a large city in the Midwestern United States for two visits that typically occurred within several days of each other. During these visits, participants completed a series of self-report questionnaires, structured clinical interviews, and physiological measures. The CTS-2, PILL, and PDS were administered as part of this larger assessment. Participants were debriefed following completion of study measures and were provided with safety planning information and referrals for supportive services. Participants were compensated \$40 for their participation. All procedures described in this study were approved by a university Institutional Review Board.

Statistical Analyses

First, independent samples *t* tests were calculated to assess group differences between Caucasian and African American women on the demographic measures, CTS-2, PDS, and the PILL. Next, the bivariate correlation was computed between physical partner violence frequency on the CTS-2 and physical health symptoms on the PILL.

Hierarchical linear regression analyses were performed to examine race as a moderator of the relationship between partner violence frequency and physical health symptoms. Moderation analyses were computed and probed following the approach outlined by Holmbeck (2002). Prior to computing the interaction terms and running the regression equation, race was coded dichotomously (0 = *Caucasian*; 1 = *African American*) and partner violence frequency, a continuous variable, was centered to reduce potential multicollinearity. The predictor (partner violence frequency) and moderator (race) were entered in the first step, followed by the interaction of the predictors and the moderator in the second.

Following Holmbeck's (2002) methods for probing moderation, another regression equation was computed which, in combination with the original regression equation, would allow for the computation of the conditional effects of partner violence frequency on physical health symptoms for African American and Caucasian women separately. The steps of the second regression equation was identical to the first; however, in line with Holmbeck's methods for coding, race was recoded ($-1 = \textit{Caucasian}$; $0 = \textit{African American}$). This new variable was used as a main effect in the regression equation and to compute the new race X partner violence frequency interaction term.

Due to group differences on several demographic variables, an additional hierarchical linear regression equation was computed controlling for those covariates in order to ensure that the results remained significant. The covariates (i.e., household income, shelter status, and relationship to the perpetrator) were entered at the first step; the main effects (partner violence frequency and race) were added into the equation at the second step, followed by the interaction of the two in the third step.

Based on results from the moderation analyses and findings from previous research (Campbell et al., 2008b; Taft et al., 2007), post hoc analyses examined PTSD symptom severity as a potential mediator of the relationship between partner violence frequency and physical health symptoms for the African American group. A series of regression equations were used to test mediation as recommended by Baron and Kenny (1986). First, within the African American women only, the relationship between the independent variable (partner violence frequency) and the outcome (physical health symptoms) was established. A second regression equation was performed to establish a relationship between the independent variable and the mediator (PTSD symptom severity). In the final regression, the independent variable and mediator were entered as predictors to confirm a relationship between the mediator and the outcome variable and to test for possible mediation of the independent variable and outcome variable. Sobel's standard error approximation was used to test the significance of the intervening variable effect (Sobel, 1982).

Results

Participant demographic characteristics are presented by racial group in Table 1. African American and Caucasian women did not significantly differ on age, education, gender of perpetrator, or number of children (all $ps > .05$). However, African American women reported lower household incomes, were more likely to be living in a shelter, and were more likely to be dating the perpetrator, whereas Caucasian women were more likely to be married to the perpetrator (all $ps < .05$). Although the groups did not significantly differ on means levels of partner violence frequency or physical health symptoms, the Caucasian women reported higher severity of PTSD symptoms compared to the African American women (see Table 1). A bivariate correlation between physical partner violence frequency on the CTS-2 and physical health symptoms on the PILL was computed to examine the relationship between study variables, $r(323) = .24, p < .001$.

Next, the hierarchical regression equation examining the moderating effect of race on the relationship between partner violence and physical health consequences was computed (see Table 2). Although the main effects of race and partner violence frequency were not significant once the interaction term was entered into the model, the race X partner violence frequency interaction significantly predicted physical health symptoms.

To probe this interaction effect, a second hierarchical regression equation was computed (see Table 2) and used in conjunction with the first to derive simple slopes and determine moderation effects for each condition of the moderator (African American and Caucasian women). As depicted in Figure 1, there was a significant positive association between partner violence frequency and physical health symptoms for African American women ($B = .07, p < .001$). In contrast, for the Caucasian women there was no significant association between partner violence frequency and physical health symptoms ($B = .00, p > .05$).

Because the African American and Caucasian women differed on several demographic variables including household income, shelter status, and relationship to the perpetrator, a hierarchical linear regression equation with the same moderator, predictor, and interaction term was computed controlling for these demographic factors that could have potentially confounded the results (see Table 3). The race X partner violence interaction remained significant after controlling for these demographic variables ($B = .06, p < .05$).

Because a significant relationship between partner violence frequency and physical health problems was only found in the African American women, post hoc analyses were conducted to further examine this relationship. Mediation analyses were performed using the regression approach (Baron & Kenny, 1986) to investigate the potential mediating role of PTSD symptom severity on the relationship between partner violence frequency and physical health symptoms within the African American subsample. First, a significant association was detected between partner violence frequency and physical health symptoms ($\beta = .32, t = 5.11, p < .001$). Second, partner violence frequency also significantly predicted PTSD symptom severity ($\beta = .32, t = 4.98, p < .001$). Physical health symptoms were then regressed on partner violence frequency and PTSD symptom severity and the equation was significant ($R^2 = .24, F(2, 223) = 35.10, p < .001$). Both partner violence frequency ($\beta = .18, t = 2.95, p < .01$) and PTSD symptom severity ($\beta = .40, t = 6.51, p < .001$) significantly predicted physical health symptoms. Sobel's z test revealed a statistically significant indirect effect of partner violence frequency on physical health symptoms through PTSD symptoms ($z = 3.92, p < .001$), suggesting that PTSD symptom severity was a partial mediator of the association between partner violence frequency and physical health symptoms for the African American women.

Discussion

To our knowledge, the present study is the first investigation of differential associations between partner violence and physical health symptoms as a function of race. Both Caucasian and African American women reported similar levels of poor physical health symptoms overall; however, the nature of the relationship between partner violence frequency and physical health symptoms differed by race. Specifically, African American women's health varied as a function of partner violence frequency, such that they only reported high levels of physical health symptoms at high levels of partner violence frequency. In contrast, Caucasian women's physical health symptoms did not vary as a function of partner violence frequency; they reported consistently high physical health symptoms regardless of violence frequency. The moderating effect of race remained significant when controlling for household income, shelter status, and relationship to perpetrator. Although the magnitude of the observed effects were modest, these findings

align with the results of a study examining racial differences in responses to sexual harassment among African American and Caucasian female military officers (Buchanan, Settles, & Woods, 2008). This previous study found that African American officers reported low levels of distress at low levels of sexual coercion, but as coercion became more frequent, their distress increased significantly, and at high levels, their distress matched those of their Caucasian counterparts.

Consistent with previous research (Campbell et al., 2008b; Taft et al., 2007), PTSD symptoms partially mediated the association between partner violence frequency and physical health symptoms in the African American women. Therefore, PTSD appears to be a mechanism through which partner violence impacts physical health symptoms for African American women. It is important to note, however, that partner violence still maintained a direct effect on physical health such that PTSD did not fully account for the association between partner violence and physical health symptoms. These findings suggest that additional factors may also underlie the association between partner violence and physical health among African American women.

To further understand and explain these findings, it is important to consider ethnic and cultural differences among female partner violence survivors, and factors impacting abused women's health (Bryant-Davis, 2005; Kasturirangan et al., 2004; Taft et al., 2009). One possible reason why African American partner violence survivors appear to exhibit greater resiliency at lower levels of violence than Caucasian survivors might pertain to the persona of "Strong Black Woman" (SBW) that many African American women have adopted (Harrington, Crowther, & Shipherd, 2010; Jones & Shorter-Gooden, 2003; Romero, 2000). The SBW image is an extremely salient cultural symbol of black womanhood; among its central tenets are that African American women are *inherently* strong, resilient, and capable of weathering significant adversity. Identifying with this symbol may help mitigate some of the negative health outcomes of partner violence for African American women, up to a point. It is important to remember when applying this explanation to the present findings, once the frequency of violence increases to a high frequency, the protective effects of the SBW image are greatly reduced or overshadowed, at least in terms of physical health symptoms. Although this continues to remain an empirical question, it is also possible that identification with the SBW image explains why African American women reported lower mean levels of PTSD symptoms relative to Caucasian women despite similar levels of partner violence frequency and physical health symptoms.

Similarly, social support and spirituality are two distinct and culturally relevant protective factors for African American survivors of partner violence that may be influencing the current findings (Fraser, McNutt, Clark, Williams-Muhammed, & Lee, 2002; Watlington & Murphy, 2006). For example, Paranjape and Kaslow (2010) found that higher spirituality and social support were significantly associated with African American women's better physical health status, even after controlling for lifetime violence exposure and demographic factors. In accordance, spirituality and social support have been shown to reduce the impact of partner violence on health (Coker, Watkins, Smith, & Brandt, 2003; El-Khoury et al., 2004). It is possible that spirituality and social support may be protective factors in terms of African American women's physical health at lower levels of partner violence, but their buffering effects may be reduced at higher levels of violence. The current study did not assess these variables and this hypothesis warrants testing in future research.

Although preliminary, the current findings provide information about race and partner violence that can inform culturally competent health services for both Caucasian and African American women. Clinical researchers have pointed toward the need for culturally informed psychosocial interventions to promote healthy recovery for diverse survivors

(Bryant-Davis, 2005; Taft et al., 2009). Several cognitive-behavioral therapies have been found to be effective in ameliorating mental health symptoms among survivors of partner violence (see Iverson, Lester, & Resick, 2011b). Yet, despite the high rates of partner violence and unique risk factors for such experiences in African American women (Taft et al., 2009), treatment outcome studies for survivors of partner violence tend not to report on efficacy by race or test whether such treatments lead to improvements in physical health outcomes (e.g., Iverson, Shenk, & Fruzzetti, 2009; Johnson & Zlotnick, 2006; Kubany et al., 2004). Such examinations could further our understanding of the resilience demonstrated by the African American women at lower frequencies of violence and potentially assist in helping to develop new coping strategies when facing more frequent partner violence. Moreover, there may be translatable constructs that would be relevant to survivors of different cultural backgrounds. However, more research on mechanisms associated with resilience in African American women is clearly needed. Fortunately, there has been an increased focus on the importance of culturally specific interventions for African American survivors of partner violence (Bell & Mattis, 2000; Heron, Twomey, Jacobs, & Kaslow, 1997; Kaslow et al., 2010). Connecting women with psychosocial treatments not only leads to improvements in women's health, but also reduce women's risk for future partner violence (Iverson et al., 2011a).

The results from this study should be interpreted in light of several limitations, each of which provides avenues for future research. This study examined *help-seeking* women who experienced recent physical partner violence. As noted earlier, African American women are less likely to seek help for abuse relative to Caucasian women (Campbell, Wasco, Aherns, Sefl, & Barnes, 2001; Coley & Beckett, 1988; Sullivan & Rumpitz, 1994), and thus, the current findings may not generalize to community samples of minority women or to male survivors of partner violence. Future research should attempt to replicate the present findings in a larger community sample of male and female victims of partner violence. There may be important racial differences observed on measures of partner violence and physical health in samples that are not seeking help for acute partner violence. This study only investigated the differential associations between partner violence and physical health in two racial groups. Although the focus on African American women represents a strength of this study, samples consisting of multiple racial groups are required to garner a comprehensive understanding of the role of race on the associations of interest. It is important to remember that this study was conducted with a sample of acutely abused women, so there is less variability in responses to the measures of partner violence and physical health examined in this study. In order to fully understand racial differences in the associations between partner violence and health, the current findings will need to be replicated and extended in future research with designs that include nonabused women and those with a more remote history of partner violence. Finally, the cross-sectional nature of the study design limits the strength of the conclusions that can be drawn from this study on its own.

We hope that the current study will stimulate additional research in this critically understudied area. Although racial differences were observed, the cultural processes that may influence these differences remain unknown. The complexities of race and its interaction with partner violence warrant more comprehensive and theoretically driven research. Moreover, it is important to consider additional potential explanatory factors in future examinations, such as racial differences in adverse health behaviors. In addition to the literature examining the physical health consequences of partner violence, findings may have implications for understanding patterns and pathways for other problems experienced by victims of partner violence, including mental health outcomes. Elucidating mechanisms associated with differential outcomes by race will inform interventions to limit the long-term health effects of partner violence and guide prevention efforts. In summary, the current

findings suggest that it is insufficient to simply examine group differences (i.e., African American compared to Caucasian women) on end state values of a variable of interest (e.g., health outcomes). Such research will advance the field's understanding of the health consequences of partner violence for ethnically diverse women and inform best practice guidelines for interventions to provide the highest quality health services to all survivors of partner violence.

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Figure 1.

Regression lines for the relationships between physical partner violence frequency and physical health symptoms as moderated by race. The lines illustrate the variability in physical health symptom severity at 1 standard deviation (*SD*) above and below the mean level of partner violence frequency.

Table 1Sample Characteristics, Partner Violence Frequency and Physical Health Symptoms by Race ($N = 323$)

	African American women ($n = 232$)	Caucasian women ($n = 91$)	Statistical Test
<i>Demographic Characteristics</i>			
Age, mean (SD)	34.37 (7.71)	6.21 (9.03)	$t(321) = 1.84, ns$
Education, mean (SD)	12.5 (1.83)	12.70 (2.26)	$t(319) = 1.51, ns$
Household Income, % (n)			$\chi^2(5) = 32.43, p < .001$
Less Than \$5,000	16.2 (37)	6.7 (6)	
\$5,000–\$10,000	19.3 (44)	10.0 (9)	
\$10,000–\$20,000	23.2 (53)	22.2 (20)	
\$20,000–\$30,000	21.5 (49)	11.1 (10)	
\$30,000–\$50,000	12.7 (29)	31.1 (28)	
Greater than \$50,000	7.0 (16)	18.9 (17)	
Number of Children, mean (SD)	1.7 (1.54)	1.2 (1.38)	$t(323) = -2.52, ns$
Shelter Status, % (n)			$\chi^2(1) = 7.71, p < .01$
Non-Shelter	45.5 (105)	62.6 (57)	
Shelter	54.5 (126)	37.4 (34)	
Relationship to Perpetrator, % (n)			$\chi^2(3) = 12.16, p < .01$
Dating	13.8 (32)	4.4 (4)	
Living Together	51.7 (120)	42.9 (39)	
Married	24.1 (56)	39.6 (36)	
Separated/Divorced	10.3 (24)	13.2 (12)	
Gender of Perpetrator, % (n)			$\chi^2(1) = -0.03, ns$
Male	97.8 (272)	96.7 (88)	
Female	2.2 (5)	3.3 (3)	
<i>Study Variables</i>			
CTS-2, mean (SD)	82.92 (71.59)	74.96 (65.17)	$t(321) = -.92, ns$
PILL, mean (SD)	22.93 (15.68)	25.55 (13.28)	$t(321) = 1.41, ns$
PDS, mean (SD)	28.38 (11.19)	31.14 (10.83)	$t(316) = 2.00, p < .05$

Note. CTS-2 = Revised Conflict Tactics Scale; PILL = Pennebaker Inventory of Limbic Languidness; PDS = Posttraumatic Diagnostic Scale.

Table 2

Regression Analyses for Race and Partner Violence Frequency Predicting Physical Health Symptoms ($N = 323$)

Outcome predictor	B	β	R^2	Model $F(df)$
Model 1				
PILL				
Step 1			0.07	11.30 (2,320) ***
Race (0 = Caucasian; 1 = African American)	-3.04	-0.09		
Partner Violence Frequency	0.05	0.25 ***		
Step 2			0.09	9.93 (3,319) ***
Race (0 = Caucasian; 1 = African American)	-2.78	-0.08		
Partner Violence Frequency	0.00	-0.001		
Race $\times$ Partner Violence Frequency	0.07	0.28 **		
Model 2				
PILL				
Step 1			0.07	11.30 (2,320) ***
Race (-1 = Caucasian; 0 = African American)	-3.04	-0.09		
Partner Violence Frequency	0.05	0.25 ***		
Step 2			0.09	9.93 (3,319) ***
Race (-1 = Caucasian; 0 = African American)	-2.78	-0.08		
Partner Violence Frequency	0.07	0.32 ***		
Race $\times$ Partner Violence Frequency	0.07	0.16 **		

Note. df = degrees of freedom.

**
 $p < .01$.

 $p < .001$.

Table 3

Regression Analyses for Race and Partner Violence Frequency Predicting Physical Health Symptoms Controlling for Covariates ($N = 317$)

Outcome Predictor	B	β	R^2	Model $F(df)$
PILL				
Step 1			0.004	0.37 (3,313)
Household Income	-0.11	-0.01		
Shelter Status	-1.77	-0.06		
Relationship to Perpetrator	-0.15	-0.01		
Step 2			0.07	4.98 (5,311) **
Household Income	-0.08	-0.01		
Shelter Status	-3.00	-0.10		
Relationship to Perpetrator	-0.20	-0.01		
Race (0 = Caucasian; 1 = African American)	-3.06	-0.09		
Partner Violence Frequency	0.06	0.26 ***		
Step 3			0.09	4.95 (6,310) **
Household Income	-0.13	-0.01		
Shelter Status	-2.88	-0.10		
Relationship to Perpetrator	-0.12	-0.01		
Race (0 = Caucasian; 1 = African American)	-2.78	-0.08		
Partner Violence Frequency	0.01	0.05		
Race $\times$ Partner Violence Frequency	0.06	0.24 *		

Note. df = degrees of freedom. Household income was coded in the following way for the regression analyses: Less than \$5,000 = 1; \$5,001–\$10,000 = 2; \$10,001–\$20,000 = 3; \$20,001–\$30,000 = 4; \$30,000–\$50,000 = 5; Greater than \$50,000 = 6.

* $p < .05$.

** $p < .001$.