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Intimate Partner Violence Perpetration Among College Students

The Role of Gender Role and Gendered Violence Attitudes

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This study examines the relationships between college students' attitudes regarding gender roles and gendered violence and their perpetration of intimate partner violence. Although findings from previous studies demonstrate associations between gender role and gendered violence-related attitudes and intimate partner violence, research to date fails to fully explore these associations. In an attempt to fill this void, the current study looks at attitudes before and after perpetration is reported to determine whether attitudes precede or follow perpetration. Additionally, the study examines these relationships among a previously unexplored set of attitudes within the physical violence literature—those related to chivalry. Findings suggest that the relationships between attitudes and intimate partner violence are more complex than prior research indicates and differ for female and male college students.

Keywords: *beliefs; perceptions; attitudes; dating violence; relationship violence; domestic violence; intimate partner abuse; college students; attitudes toward intimate partner violence; chivalry; gender role acceptance*

Partly because of a growing amount of research over the past three decades, domestic violence is now widely recognized as a serious problem (for review, see Dulmus, Ely, & Wodarski, 2004; Langhinrichsen-Rohling, 2005). Moreover, evidence exists indicating that dating couples are significantly more likely to be violent in their relationships than married couples (e.g., Erez, 1986; Stets & Straus, 1992; Sugarman & Hotaling, 1989). Specifically, college students experience an extremely high level of intimate partner violence (IPV) during their college careers (e.g., Bethke & DeJoy, 1993; Bogal-Allbritten & Allbritten, 1985; Bryant & Spencer, 2003; Clark, Beckett, Wells, & Dungee-Anderson, 1994; Lane & Gwartney-Gibbs,

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1985; Makepeace 1981, 1986; Shook, Gerrity, Jurich, & Segrist, 2000; Straus 2004). It is important to understand more completely what lies at the foundation of this type of abuse, because IPV among college students is such a widespread problem.

Researchers have found correlations between college students' beliefs supportive of relationship violence and perpetration of aggressive acts against intimate partners (e.g., Archer & Graham-Kevan, 2003; Locke & Richman, 1999; Nabors, Dietz, & Jasinski, 2006; Riggs & O'Leary, 1996) as well as associations between traditional gender role ideology and attitudes condoning the use of violence and actual perpetration of IPV (e.g., Archer & Graham-Kevan, 2003; Brownridge, 2002; Dibble & Straus, 1980; Reitzel-Jaffe & Wolfe, 2001); however, research to date fails to fully explore these associations. The purpose of the current study is to determine whether attitudes regarding traditional gender roles and gendered violence as well as attitudes regarding chivalry, which have previously been ignored in the literature, precede or follow perpetration of IPV and to investigate potential gender differences in these relationships.

IPV Among College Students

Although IPV is recognized as a significant problem across many different age groups and populations, college students undeniably perpetrate high rates of physical assault within their intimate relationships. Estimates of physical assault perpetration against intimate partners among college students range from 20% (Arias & Johnson, 1989; Makepeace, 1981, 1986; Shook et al., 2000) to 50% (Bethke & DeJoy, 1993; Clark et al., 1994; Straus & Ramirez, 2007), although most research indicates that approximately 30% of students physically assault their partners (Arias, Samios, & O'Leary, 1987; Bryant & Spencer 2003; Riggs & O'Leary, 1996; Straus, 2004; Straus & Yodanis, 1996). Moreover, between 5% and 20% of college students engage in severe physical assault against their partners, perpetrating acts such as punching, choking, kicking, or attacking partners with a weapon (Arias et al., 1987; Makepeace, 1981; Riggs & O'Leary, 1996; Straus, 2004; Straus, Hamby, Boney-McCoy, & Sugarman, 1996). In fact, physical violence occurs more than one time in one half of students' intimate relationships and five or more times in 8% of these relationships (Makepeace, 1981). Given the rates of physical assault among college students, it is not surprising that more than three in four students believe that relationship violence is a major problem (Knickrehm & Teske, 2000); therefore, identifying the underlying factors that increase students' risk for violence perpetration is an important step toward the development of effective prevention programming aimed at eradicating this pervasive problem.

Attitudes and IPV

Previous research examining the link between beliefs about and perpetration of IPV has explored a variety of attitudes. General population studies have found a

strong correlation between acceptance of the use of violence and perpetration of IPV (e.g., Archer & Graham-Kevan, 2003; Archer & Haigh, 1997; Kaufman Kantor, Jasinski, & Aldarondo, 1994; Price et al., 1999). For example, Dibble and Straus (1980) found that 28% of respondents believed that slapping their partners is necessary, normal, or good. Of that 28%, one third reported physically abusing their partners, whereas only 8% of respondents not supportive of slapping their partners reported perpetrating domestic violence. Dibble and Straus (1980) also found that 5% of participants believed that acts including slapping, pushing, grabbing, shoving, and throwing something at their partner were acceptable. Stith, Smith, Penn, Ward, and Tritt's (2004) meta-analysis provided additional support for a strong correlation between attitudes and perpetration. Using a sample of 85 studies, their analysis demonstrated a large effect size between physical assault perpetration committed against an intimate partner and attitudes condoning marital violence. Additional research also showed that individuals who are at risk for participation in abusive relationships, such as males, youths, and racial and ethnic minorities, are more likely to hold perceptions, attitudes, beliefs, and knowledge approving of violence against intimate partners than do those who are not members of high-risk populations (Beyers, Leonard, Mays, & Rosen, 2000; Edleson, 2000; Fitzpatrick, Salgado, Suvak, King, & King, 2004; Locke & Richman, 1999; Nabors et al., 2006; Simon et al., 2001; Yick & Agbayani-Siewert, 1997).

Similar findings have also been observed in research focusing specifically on college students (Archer & Graham-Kevan, 2003; Archer & Haigh, 1999; Bryant & Spencer, 2003; Cate, Henton, Koval, Christopher, & Lloyd, 1982; Knickrehm & Teske, 2000; Nabors et al., 2006; Riggs & O'Leary, 1996). In fact, Archer and Graham-Kevan (2003) found that beliefs supportive of domestic violence are more predictive of abuse in intimate relationships among college students than among either women in domestic violence shelters or male prisoners convicted of physically abusing their partners. These findings are particularly troublesome when combined with the high rates of perpetration of IPV in this population.

Acceptance of traditional gender role stereotypes also has been associated with perpetration of IPV (e.g., Anderson & Umberson, 2001; Berkel, Vandiver, & Bahner, 2004; DeKeseredy & Kelly, 1993; Finn, 1986; Fitzpatrick et al., 2004; Stith & Farley, 1993). For example, Brownridge (2002) found that males who hold traditional gender role attitudes, supporting acts such as preventing partners' access to family income, socially isolating their partners, and always knowing their partners' whereabouts and who they are with, were more likely to physically assault their partners compared with males with egalitarian attitudes. More recently, Stith and associates' (2004) meta-analytical review of 85 studies identified a moderate effect size between IPV perpetration and traditional attitudes about women's gender roles. Furthermore, males who endorse both traditional gender role attitudes and attitudes accepting of IPV are more likely to physically assault partners than those endorsing either traditional gender role ideologies or attitudes supportive of IPV alone (Reitzel-Jaffe & Wolfe, 2001).

Although the literature on physical violence among intimate partners has not addressed attitudes endorsing chivalry as a separate risk factor for violence, related work has found that chivalrous attitudes are correlated with attitudes accepting of traditional gender roles (e.g., Viki, Abrams, & Hutchison, 2003), suggesting that there may be an important link yet to be examined. In a study focusing on lethal violence between intimates, Zimring, Mukherjee, and Van Winkle (1983) concluded that chivalry acted as a protective factor whereby males endorsing chivalrous attitudes may have been more likely to consider males' use of violence against women as unmanly and therefore unnecessary or even unacceptable.

Our belief in the importance of understanding the relationship between attitudes and violence stems from the theoretical basis of these relationships and the utility of these relationships for prevention programming. IPV prevention programs are generally grounded in social learning and feminist theory (Jaffe, Sudermann, Reitzel, & Killip, 1992; Wekerle & Wolfe, 1999; Wiehe, 1998; Wolfe & Jaffe, 1999). Patriarchal ideology forms the basis of the feminist understanding of IPV and suggests that social structures founded on the principles of patriarchy create and maintain systems of male domination over women (Sugarman & Frankel, 1996). As a part of these social structures, the use of violence, specifically male violence, is justified as a mechanism for reproducing male authority. Furthermore, the feminist perspective considers both the historically male-dominated social structure and socialization practices teaching gender-specific roles to be main contributors to IPV (Smith, 1990; Yllö, 1984). Consequently, the cultural ideology of male dominance manifests itself in the form of violence, specifically violence against women. Feminist theory and social learning theory both indicate that perceptions, attitudes, beliefs, and knowledge supportive of relationship violence precede abuse among intimate partners (Jaffe et al., 1992; Markowitz, 2001; Tontodonato & Crew, 1992). Consistent with these theoretical frameworks, the underlying assumption of the current IPV literature examining relationships between attitudes and violence as well as prevention programming targeting this problem is that attitudes precede perpetration. Research to date, however, has failed to test the possibility that attitudes instead result from IPV perpetration as a justification mechanism. The current analyses will attempt to address this deficiency.

This project addresses three issues. First, it examines the relationships between traditional gender role and gendered violence-related attitudes and IPV perpetration by determining whether those attitudes precede or follow perpetration. Second, it extends the literature on the associations between attitudes and perpetration of physical assault by considering previously unexamined attitudes, namely those endorsing chivalry. Third, it looks at gender differences within the relationships between gender role (i.e., traditional gender roles and chivalry) and gendered violence attitudes and IPV perpetration. From these goals, the following hypotheses were developed: (a) Levels of adherence to traditional gender role stereotypes are positively related to the likelihood of subsequent IPV perpetration. (b) Levels of endorsement of IPV

are positively related to the subsequent likelihood of IPV perpetration. (c) Individuals who report IPV perpetration are more likely than those who do not to report adherence to traditional gender role stereotypes after such perpetration. (d) Individuals who report IPV perpetration are more likely than those who do not to report endorsement of IPV following such perpetration. (e) There will be gender differences in the relationship between traditional gender role stereotypes and IPV perpetration. (f) There will be gender differences in the relationship between endorsement of IPV and violence perpetration. Previous research has not addressed the issue of time order with respect to attitudes and beliefs supportive of violence perpetration and actual perpetration. Hence, we do not have specific hypotheses regarding the comparative strength of these relationships, although our main goal is to determine whether attitudes conducive to increased risk for perpetration of IPV are present prior to actual perpetration or whether those attitudes only exist after perpetration as a mechanism for justifying the behavior. Additionally, the current literature with regard to physical violence among intimate partners has not examined attitudes related to chivalry as a risk factor for perpetration. Therefore, we do not have specific hypotheses related to the relationships between these two variables, despite our secondary goal of determining whether these attitudes are related to physical violence among intimate partners as either risk factors for or results of this type of violence.

Data and Methods

Data for this project were taken from the Longitudinal Study of Violence Against Women: Victimization and Perpetration Among College Students in a State-Supported University in the United States, 1990-1995, which was funded by the National Institutes of Health (White & Smith, 2001). The study included a sample of two incoming classes of women (1990 and 1991) totaling 1,580 female students and three incoming classes of men (1990, 1991, and 1992) totaling 851 male students. Five waves of data were collected. Respondents were initially surveyed during student orientation (prior to their freshman year), and follow-up studies were conducted at the end of each spring semester for 4 years. The surveys included measures assessing sexual and physical violence perpetration and victimization as well as measures addressing individual experiences such as prior experiences, attitudes, and personality and contextual factors consisting of items related to the immediate circumstances of victimization and perpetration. Respondents also were asked to answer a variety of demographic and control questions. The data in this longitudinal study were uniquely poised to address our research questions in that variables addressing violence perpetration and attitudes and belief systems were included in each wave of the survey administration.

Measures

IPV Perpetration

IPV perpetration was assessed using a modified version of the Conflict Tactics Scale (CTS; Straus, 1979) Form A, which contained 14 pairs of items assessing reasoning, verbal aggression, and physical violence among intimate partners. Respondents answered questions regarding their partners' as well as their own use of each conflict tactic. In Wave 1 of the study respondents indicated how often each action occurred during high school, and in Waves 2 through 5 respondents specified how often each action occurred in the previous year by answering (1) *never*, (2) *once*, (3) *2 to 5 times*, (4) *6 to 10 times*, or (5) *more than 10 times*. For the purposes of this project, these responses were used to calculate the dichotomous total incidence score for perpetration of physical violence during Wave 2, which assessed whether students perpetrated physical violence during their freshman year of college.

The CTS is perhaps the most widely used and accepted instrument to assess assaults by intimate partners, and it is one of only a handful of standardized instruments used to measure IPV (e.g., Hegarty, Sheehan, & Schonfeld, 1999; Hudson & McIntosh, 1981; Marshall, 1992). However, it is also the subject of a great deal of controversy by researchers who suggest that it does not accurately measure the phenomenon of IPV and criticize the instrument's reliability and validity (Dobash, Dobash, Wilson, & Daly, 1992; Kurtz, 1993; Straus, 1999; Yllö, 1993). Despite the proliferation of literature discussing the faults of the CTS, most researchers continue to use this instrument as the primary measure of IPV (Schwartz, 2000).

The modified CTS Form A used by the authors of the Longitudinal Study of Violence Against Women and used in this study included only four items assessing respondents' perpetration of physical violence. These items consisted of two items measuring minor violence (i.e., throwing something at a partner and pushing, grabbing, or shoving a partner) and two items measuring more severe violence (i.e., hitting or trying to hit a partner and hitting or trying to hit a partner with a hard object); however, in later versions of the CTS, additional severe items were included in the Physical Violence scale (e.g., beat up a partner, choked a partner, threatened a partner with a knife or gun, and used a knife or gun against a partner). Consequently, the CTS items used in this study included a higher proportion of minor violence items compared with items used in other versions of the CTS Physical Violence scale, and therefore our results with respect to the relationships between attitudes and violent behaviors should be more consistent with research that only considers minor violence (e.g., Crossman, Stith, & Bender, 1990; Stith & Farley, 1993). This distinction is important, because research indicates that gender differences in violence perpetration are highly related to whether minor or severe violence is examined (for discussion, see Straus, 1999).

Approximately 26% of the sample reported physically assaulting their partners in their freshman year, which is consistent with previous findings (Arias et al., 1987;

Bryant & Spencer, 2003; Riggs & O'Leary, 1996; Straus, 2004; Straus & Yodanis, 1996). With regard to gender differences, women reported higher incidence rates than men (30% and 18%, respectively). Because the perpetration data included in this study disproportionately addressed minor acts of violence, these differences are consistent with literature finding that women are more likely than men to perpetrate minor forms of violence, whereas men are more likely than women to perpetrate more severe forms of violence (for discussion, see Straus, 1999).

Gender Role and Gendered Violence Attitudes

Attitudes regarding gender roles and gendered violence were measured using scales derived from the Gender Attitude Inventory (GAI; Ashmore, Del Boca, & Bilder, 1995). In the current study, only three of the four scales used in the Longitudinal Study of Violence Against Women were used, including the Endorsement of Chivalry, Acceptance of Traditional Gender Role Stereotypes, and Acceptance of Male Heterosexual Violence scales.[1] Respondents indicated whether they (1) *agreed strongly*, (2) *agreed*, (3) *were neutral*, (4) *disagreed*, or (5) *disagreed strongly* with each of the items used to calculate mean scores for the scales. The scale assessing respondents' endorsement of chivalry was calculated using the following six items: "Men should continue to show courtesies to women such as holding open the door or helping them on with their coats," "special attentions like standing up for a woman who comes into a room or giving her a seat on a crowded bus are outmoded and should be discouraged," "chivalrous gestures toward women on the part of men should be encouraged," "a man should protect a woman from physical harm, even at his own expense," "chivalry is generally demeaning to women," and "social courtesies should not favor one sex over the other." The scale evaluating respondents' acceptance of traditional gender role stereotypes included 10 items. Examples of these items consist of "women are generally more sensitive to the needs of others than men are," "men are more competitive than women," "men are generally more egotistical than women," "on the average, men are more arrogant than women," "men are more independent than women," "men are more sure of what they can do than women are," "compared with men, women tend to be gullible," and "compared with men, women are more able to devote themselves completely to others." The Acceptance of Male Heterosexual Violence scale was calculated using respondents' scores on five items, including the following: "In most cases, when a woman gets raped, she was asking for it," "most charges of 'wife beating' are made up by the woman to get back at her husband," "if a woman is making out and she lets things get out of hand, it's her own fault if the man forces sex on her," "in forcible rape, the victim never causes the crime," and "a man is sometimes justified in hitting his wife." Because these scales each contained different numbers of items, respondents' scores on items corresponding with each of the three scales were averaged rather than summed to provide equal ranges for the scales and enhance the ability to compare the attitudinal constructs they assessed. Prior to computation, items

Table 1
Distributions of Control Variables for the Total Sample, Male Respondents, and Female Respondents

Variable	Total (N = 2,431)	Male (n = 851)	Female (n = 1,580)
% Childhood victimization	26.6	28.2	25.8
% Childhood exposure	8.7	7.7	9.2
% White, non-Hispanic	72.2	68.5	74.3
% Black or African American	23.5	25.7	22.3
% Other racial or ethnic group	4.3	5.8	3.4
% Female	65.0		

NOTE: Sample size varies slightly for select variables because of missing cases.

were recoded so that higher scores on the three scales would indicate greater endorsement of chivalry, acceptance of traditional gender role stereotypes, and acceptance of male heterosexual violence. The possible scores for each of the three scales ranged from 1 to 5. Scores from Wave 1 (directly before respondents' freshman year of college) and Wave 2 (at the end of respondents' freshman year of college) of the study were included in the subsequent analysis.

Control Variables

Several control variables also were included in the following analyses. These variables consisted of childhood domestic violence victimization and exposure, racial and ethnic group, and gender. Each of these control variables has been commonly cited in the literature as a risk factor for IPV perpetration (for review, see Jackson, 1999; Lewis & Fremouw, 2001; Schumacher, Feldbau-Kohn, Smith Slep, & Heyman, 2001). Table 1 presents the distributions of the control variables for the entire sample as well as separately for male and female respondents.

Childhood victimization. Respondents indicated in Wave 1 of the study whether their parents (1) were never physically violent with them or (2) were physically violent with them 1 to 5 times a month, (3) 6 to 10 times a month, (4) 11 to 20 times a month, or (5) more than 20 times a month when they were growing up. For the purposes of this project, these scores were collapsed to form a dichotomous variable representing any childhood victimization by parents. Approximately one quarter of respondents' parents were physically violent with them during childhood, with more male respondents reporting victimization than female respondents (28% and 26%, respectively).

Childhood exposure. Respondents were asked during the first wave of the study whether one of their parents or stepparents (1) never delivered physical blows to the other or (2) delivered physical blows to the other 1 to 5 times a month, (3) 6 to 10

times a month, (4) 11 to 20 times a month, or (5) more than 20 times a month when they were growing up. As with childhood victimization, these scores were collapsed to form a dichotomous variable representing any childhood domestic violence exposure. Less than 10% of respondents reported exposure to interparental violence during childhood, with slightly more female respondents reporting exposure than males (9% and 8%, respectively).

Racial or ethnic group. During the first wave of data collection, respondents were asked whether they were (1) White, non-Hispanic, (2) Black, non-Hispanic, (3) Hispanic, (4) Asian or Pacific Islander, or (5) American Indian or Alaskan Native. Because of the skewed distribution of this variable, racial or ethnic group was recoded as (1) White, non-Hispanic, (2) Black, non-Hispanic, or (3) other racial or ethnic group. The majority of respondents (73%) reported their racial or ethnic group as White. Approximately one quarter (24%) of the sample identified their racial or ethnic group as Black, and only about 4% made up the other racial or ethnic group category.

Gender. For the subsequent analysis, separate data files for male and female respondents were merged and gender was coded as (0) male and (1) female. About two thirds of the sample (65%) were female.

Analytic Strategy

Three paired-samples *t* tests were conducted to examine changes between respondents' gender role and gendered violence attitudes from Wave 1 (measuring attitudes before respondents' freshman year of college) and Wave 2 of the study (assessing attitudes at the end of respondents' freshman year of college). A series of multivariate regression models also were estimated to determine whether attitudes regarding gender roles and gendered violence preceded or followed perpetration of IPV and to examine the specific relationships between gender role and gendered violence-related attitudes and IPV perpetration. A set of logistic regression analyses was estimated with the three attitude scales from Wave 1 of the survey included as the independent variables and physical assault perpetration from Wave 2 of the survey included as the dependent variable. Next, three sets of ordinary least squares (OLS) regressions were estimated with physical assault perpetration from Wave 2 included as the independent variable and one of the three attitude scales from Wave 2 included as the dependent variable in each set of regressions. The control variables outlined above also were included in each logistic and OLS regression model. To ensure against multicollinearity, tolerances for each of the independent and control variables included in these regressions were examined; tolerances demonstrated that none of the variables were redundant. Each of the analyses was performed for the entire sample as well as separately for male and female respondents to assess gender differences in the relationships between gender role and gendered violence attitudes and IPV perpetration.

Table 2
Means, Standard Deviations, and Reliabilities for Gender Attitude Inventory (GAI) Scales From Waves 1 and 2 for the Total Sample, Male Respondents, and Female Respondents

	Wave 1			Wave 2		
GAI Scales	*M*	*SD*	Alpha	*M*	*SD*	Alpha
Total (N = 2,431)						
Endorsement of Chivalry	3.434	0.588	.580	3.408	0.605	.566
Acceptance of Male Violence	1.813	0.672	.703	1.843	0.775	.743
Acceptance of Traditional Stereotypes	3.025	0.547	.745	2.989**	0.552	.731
Male (n = 851)						
Endorsement of Chivalry	3.322	0.617	.563	3.260	0.623	.526
Acceptance of Male Violence	2.185	0.683	.654	2.582***	0.738	.573
Acceptance of Traditional Stereotypes	3.104	0.497	.674	3.010***	0.493	.578
Female (n = 1,580)						
Endorsement of Chivalry	3.496	0.563	.609	3.460*	0.590	.590
Acceptance of Male Violence	1.660	0.588	.660	1.583***	0.600	.671
Acceptance of Traditional Stereotypes	2.982	0.567	.779	2.982	0.571	.787

NOTE: The GAI scales range from 1 to 5, with higher scores indicating greater endorsement of chivalry, greater acceptance of male violence, or greater acceptance of traditional stereotypes. Significant differences in mean scores between scores from Wave 1 and 2, assessed using paired-samples t tests, are noted. Sample size varies slightly for select scales because of missing cases.
*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

Results

Gender Role and Gendered Violence Attitudes

Table 2 presents the means, standard deviations, and alpha coefficients for the three gender role and gendered violence attitude scales included in these analyses from Waves 1 and 2 of the survey. Paired-samples t tests were conducted to evaluate whether respondents' mean scores on each of the attitude scales differed between Waves 1 and 2. Among the entire sample of college students, mean scores on the Acceptance of Traditional Gender Role Stereotypes scale decreased significantly between Wave 1 (M = 3.025, SD = 0.547) and Wave 2 (M = 2.989, SD = 0.552), $t(1735) = 2.940$, $p = .003$. Mean scores on the other two attitude scales, including the Endorsement of Chivalry and Acceptance of Male Heterosexual Violence scales, did not significantly vary between Waves 1 and 2 among the sample as a whole; however, there were significant differences by gender.

For the subsample of male students, mean scores on two of the three attitude scales changed significantly between Waves 1 and 2 of data collection. Males' mean scores on the Acceptance of Male Heterosexual Violence scale significantly

increased between the beginning ($M = 2.185$, $SD = 0.683$) and end of their freshman year ($M = 2.582$, $SD = 0.738$), $t(457) = -7.303$, $p < .001$. Conversely, their mean scores on the acceptance of Traditional Gender Role Stereotypes scale significantly decreased between Wave 1 ($M = 3.104$, $SD = 0.497$) and Wave 2 ($M = 3.010$, $SD = 0.493$), $t(440) = 4.063$, $p < .001$. Males' mean scores did not differ significantly between Waves 1 and 2 on the Endorsement of Chivalry scale.

Like the male subsample, mean scores on two of the three attitude scales significantly differed between Waves 1 and 2 among the female subsample. However, in contrast to findings from the male subsample, mean scores on the Endorsement of Chivalry and Acceptance of Male Heterosexual Violence scales showed significant variation for females, whereas their mean scores on the Acceptance of Traditional Gender Role Stereotypes scale did not significantly differ. More specifically, female students' mean scores on the Endorsement of Chivalry scale decreased significantly between Wave 1 ($M = 3.496$, $SD = .563$) and Wave 2 ($M = 3.460$, $SD = .590$), $t(1294) = 2.294$, $p = .022$, as did their mean scores on the Acceptance of Male Violence scale ($M = 1.660$, $SD = .588$ for Wave 1 and $M = 1.583$, $SD = .600$ for Wave 2), $t(1321) = 4.690$, $p < .001$.

Attitudes Predicting IPV Perpetration

The set of logistic regression models examining the impact of gender role and gendered violence-related attitudes on IPV perpetration among college students are presented in Table 3. Each of these three regression models was significant. However, attitudes were only predictive of students' perpetration in one of the three regression models, and none of the models explained even 5% of the variance in students' use of physical violence within their intimate relationships.

The first model included in Table 3 considered the relationship between attitudes and perpetration among the entire sample ($\chi^2 = 91.539$, $p < .001$) and explained almost 5% of the variance in students' IPV perpetration. Only one of the three attitude scales, Acceptance of Male Violence, emerged as a significant predictor of students' perpetration of physical violence within intimate relationships. Students scoring higher on the scale were more likely to physically assault their intimate partners (odds ratio = 1.256, $p = .014$). Four control variables also were significantly related to respondents' use of physical assault against their intimate partners. Childhood victimization was associated with a 72% increase in students' likelihood of using violence within their relationships ($p < .001$); similarly, witnessing interparental violence during childhood was associated with a 59% increase in their likelihood of physically assaulting their intimate partners ($p = .014$). Additionally, Black students were 39% more likely to physically assault their intimate partners compared with White students ($p = .010$), and female students were about two and one half times more likely than male students to perpetrate physical assault ($p < .001$).

Table 3
Logistic Regressions Predicting Respondents' Physical Assault for Total Sample, Male Respondents, and Female Respondents

	Total (N = 1,833)			Male (n = 579)			Female (n = 1,254)		
Variable	B	*SE*	Exp(B)	B	*SE*	Exp(B)	B	*SE*	Exp(B)
Endorsement of chivalry	–0.026	0.098	0.974	–0.171	0.198	0.843	0.054	0.114	1.055
Acceptance of male violence	0.228	0.093	1.256*	0.193	0.175	1.213	0.182	0.112	1.200
Acceptance of traditional stereotypes	0.115	0.104	1.122	0.374	0.261	1.454	0.032	0.116	1.033
Childhood victimization	0.540	0.126	1.716***	0.573	0.246	1.774*	0.538	0.147	1.713***
Childhood exposure	0.464	0.189	1.590*	0.559	0.383	1.749	0.382	0.218	1.465
Black[a]	0.332	0.128	1.393**	–0.368	0.287	0.692	0.589	0.149	1.802***
Other race[a]	–0.003	0.305	0.997	–0.083	0.522	0.921	0.001	0.373	1.001
Female[b]	0.949	0.141	2.582***						
Constant	–2.706			–2.804			–1.768		
Cox & Snell pseudo R^2	.049			.034			.036		

[a]Compared with Caucasian.
[b]Compared with male.
*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

The second model included in Table 3 gauged associations between attitudes and perpetration among the subsample of male students ($\chi^2 = 20.177$, $p = .005$) and explained approximately 3% of the variance in their use of physical assault within relationships. None of the attitude scales was significantly associated with males' use of physical violence against intimate partners. However, one of the control variables included in this model emerged as a significant predictor of male students' physical assault perpetration. This finding closely mirrored that of the previous model: Males who were victimized by their parents were 77% more likely to physically assault their intimate partners compared with those who were not victimized ($p = .020$).

The final model included in Table 3 assessed correlations between students' attitudes and perpetration among the subsample of female students ($\chi^2 = 45.554$, $p < .001$). This model explained less than 4% of the variance in females' use of physical assault against intimate partners. As with the model addressing the subsample of male students, none of the attitude scales was significant in this model. Two control variables, however, were significantly related to female students' use of violence within their intimate relationships, demonstrating that female students who witnessed their parents engaging in violent acts during childhood were 71% more likely to physically assault their intimate partners compared with those who did not witness such acts ($p < .001$), and Black females were 80% more likely than White females to perpetrate acts of IPV ($p < .001$).

IPV Perpetration Predicting Attitudes

Each OLS regression model assessing the impact of physical assault perpetration on respondents' gender role and gendered violence attitudes was significant. The

Table 4
Ordinary Least Squares Regressions Predicting Respondents' Endorsement of Chivalry for Total Sample, Male Respondents, and Female Respondents

	Total (N = 1,778)			Male (n = 450)			Female (n = 1,328)		
Variable	B	*S*E	β	B	*SE*	β	B	*SE*	β
Physical assault	0.032	0.033	.023	–0.120	0.078	–.074	0.068	0.036	.052
Childhood victimization	–0.064	0.034	–.046	–0.161	0.069	–.114*	–0.025	0.040	–.019
Childhood exposure	–0.088	0.053	–.041	0.004	0.112	.002	–0.119	0.060	–.058*
Black[a]	0.105	0.037	.068**	0.189	0.106	.084	0.089	0.040	.062*
Other race[a]	–0.030	0.078	–.009	0.095	0.143	.031	–0.084	0.094	–.025
Female[b]	0.187	0.033	.134***						
Constant	3.266			3.300			3.441		
R^2	.031			.027			.012		

[a]Compared with Caucasian.
[b]Compared with male.
*$p \le .05$. **$p \le .01$. ***$p \le .001$.

results for the first set of regression models, which investigated the potential predictors of college students' endorsement of chivalry, are presented in Table 4. Students' use of physical assault against their intimate partners was not significantly associated with their attitudes related to chivalry in any of the following three regression models, indicating that students who perpetrated acts of IPV were no more or less likely to hold attitudes endorsing chivalry compared with those who did not perpetrate this type of violence. Furthermore, none of these models explained more than about 3% of the variance in the dependent variable.

The first model included in Table 4 analyzed the relationship between IPV perpetration and attitudes related to chivalry for the entire sample of college students, $F(6, 1771) = 9.570$, $p < .001$. This model only explained approximately 3% of the variance in students' attitudes. Although IPV perpetration was not significantly related to college students' endorsement of chivalry, two control variables included in this model emerged as significant predictors of attitudes related to chivalry. Black students were more likely than White students to hold attitudes endorsing chivalry ($\beta = .068$, $p = .005$), and females were more likely to endorse chivalry compared with males ($\beta = .134$, $p < .001$).

The second regression presented in Table 4 examined potential predictors specifically related to male students' endorsement of chivalry, $F(5, 444) = 2.492$, $p = .031$, and only explained approximately 3% of the variance in those attitudes. Only one of the control variables was significant in this model. Male students who were physically abused during childhood were less likely to endorse chivalry compared with those who were not abused ($\beta = –.114$, $p = .020$).

The final regression model included in Table 4 addressed potential predictors of female students' endorsement of chivalry, $F(5, 1322) = 3.139$, $p = .008$, and only

Table 5
Ordinary Least Squares Regressions Predicting Respondents' Acceptance of Male Violence for Total Sample, Male Respondents, and Female Respondents

	Total (N = 1,782)			Male (n = 450)			Female (n = 1,332)		
Variable	B	*SE*	β	B	*SE*	β	B	*SE*	β
Physical assault	0.109	0.035	.063**	0.315	0.089	.167***	0.057	0.036	.044
Childhood victimization	0.041	0.036	.023	0.088	0.079	.054	0.024	0.040	.017
Childhood exposure	–0.000	0.056	.000	0.141	0.131	.052	–0.042	0.060	–.020
Black[a]	0.091	0.039	.046*	–0.106	0.124	–.040	0.126	0.040	.087**
Other race[a]	0.099	0.083	.024	0.139	0.165	.039	0.076	0.095	.022
Female[b]	–1.003	0.035	–.571***						
Constant	2.519			2.471			1.532		
R^2	.320			.042			.011		

[a]Compared with Caucasian.
[b]Compared with male.
*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

explained about 1% of the variance in their attitudes. Two control variables included in this model were significantly related to females' attitudes related to chivalry. Females students exposed to domestic violence during childhood were less likely to endorse chivalry compared with those who were not exposed to this type of violence (β = –.058, p = .047) and Black females were more likely to hold attitudes endorsing chivalry than White females (β = .062, p = .025).

Table 5 displays the second set of OLS regression models. Each of these three regressions addressed college students' acceptance of male heterosexual violence. Physical violence perpetrated against an intimate partner was significantly correlated with students' acceptance of male violence in two of these three regression models. However, only one of the three models explained more than 4% of the variance in the dependent variable.

The first of the three models presented in Table 5 examined the relationship between IPV perpetration and attitudes regarding male violence among the entire sample of college students, $F(6, 1775) = 138.929$, $p < .001$, and explained 32% of the variance in students' attitudes. Physical assault was associated with students' acceptance of male violence (β = .063, p = .002) in that respondents who physically assaulted their intimate partners were significantly more likely to hold attitudes accepting male violence compared with those who did not physically assault their partners. Additionally, two control variables were significant: Black students were more likely than White students to hold attitudes accepting of male violence (β = .046, p = .021), and female students were less likely than males to accept male violence (β = –.571, $p < .001$).

The second model presented in Table 5 examined the relationship between IPV perpetration and attitudes regarding male violence among the male subsample, $F(5, 444) = 3.860$, $p = .002$. In contrast to the previous regression model, which explained nearly one third of the variance in students' attitudes accepting of male heterosexual violence, this regression model only explained about 4% of the variance in male students' attitudes. However, similar to results for the overall sample, physical violence perpetration was positively related to male students' attitudes regarding male heterosexual violence ($\beta = .167$, $p < .001$), indicating that males who perpetrated acts of physical assault against their intimate partners were more likely to hold attitudes accepting male violence compared with males who did not perpetrate such acts. None of the control variables included in the model was significantly associated with males' attitudes.

The final regression model included in Table 5 examined the relationship between IPV perpetration and attitudes accepting of male violence among the subsample of female students, $F(5, 1326) = 2.932$, $p = .012$. Like the model for the subsample of male students, this model explained far less of the variance (just over 1%) in females' attitudes compared with the model for the entire sample. However, in contrast to both of the previous regression models examining attitudes related to male violence, physical violence perpetration against an intimate partner was not significantly related to female students' acceptance of male violence, suggesting that females who perpetrate acts of physical violence against intimates do not differ from those who do not perpetrate this type of violence with regard to their attitudes about male violence. Yet, one control variable was significant in this model: Black female students were more likely to hold attitudes accepting of male heterosexual violence compared with White females ($\beta = .087$, $p = .002$).

Results for the final set of OLS regression models, which addressed potential predictors of college students' acceptance of traditional gender role stereotypes, are displayed in Table 6. Perpetrating acts of physical violence against an intimate partner was a significant predictor of students' endorsement of traditional gender role stereotypes in each of these three models. However, with results similar to the first set of OLS regression models, none of these models explained more than 4% of the variance in college students' attitudes regarding traditional gender role stereotypes.

The first of the three regressions included in Table 6 provided an analysis of the relationship between IPV perpetration and acceptance of traditional gender role stereotypes among the entire sample of college students, $F(6, 1753) = 6.056$, $p < .001$, and explained 2% of the variance in students' attitudes. IPV perpetration was positively related to college students' attitudes accepting traditional gender role stereotypes ($\beta = .076$, $p = .002$), indicating that students who physically assaulted their intimate partners were more likely to hold attitudes accepting traditional gender role stereotypes compared with those who did not engage in this type of violence. In addition, one control variable was significantly associated with students' attitudes: Black students were more likely than White students to accept traditional gender role stereotypes ($\beta = .112$, $p < .001$).

Table 6
Ordinary Least Squares Regressions Predicting Respondents' Acceptance of Traditional Stereotypes for Total Sample, Male Respondents, and Female Respondents

	Total (N = 1,760)			Male (n = 440)			Female (n = 1,320)		
Variable	B	*SE*	β	B	*SE*	β	B	*SE*	β
Physical assault	0.095	0.030	.076**	0.213	0.061	.166***	0.068	0.035	.054*
Childhood victimization	–0.011	0.032	–.009	–0.002	0.055	–.002	–0.016	0.038	–.012
Childhood exposure	0.008	0.049	.004	–0.010	0.090	–.005	0.012	0.058	.006
Black[a]	0.159	0.034	.112***	0.118	0.084	.067	0.168	0.038	.121***
Other race[a]	0.011	0.074	.004	–0.082	0.122	–.032	0.044	0.091	.013
Female[b]	–0.056	0.031	–.044						
Constant	2.977			2.962					
R^2	.020			.035			.019		

[a]Compared with Caucasian.
[b]Compared with male.
*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

The second model provided in Table 6 includes results for the subsample of male students, $F(5, 434) = 3.102$, $p = .009$, and explained nearly 4% of the variance in males' attitudes regarding traditional gender role stereotypes. As with the previous regression model, IPV perpetration was positively correlated with male students' acceptance of traditional gender role stereotypes ($\beta = .166$, $p = .001$), showing that males who used physical violence against their intimate partners were more likely to accept traditional gender role stereotypes compared with those who did not use physical violence. None of the control variables included in this model emerged as a significant predictor of males' traditional gender role attitudes.

The regression model for the subsample of females, $F(5, 1314) = 5.184$, $p < .001$, presented as the final model in Table 6, explained about 2% of the variation in female students' attitudes accepting of traditional gender role stereotypes. Like results from the previous two regressions, these results demonstrated that perpetrating physical violence against an intimate partner was a significant predictor of female students' attitudes regarding traditional gender role stereotypes ($\beta = .054$, $p = .052$). This finding suggested that females who perpetrated acts of physical violence within their intimate relationships were more likely to accept traditional gender role stereotypes compared with those who did not perpetrate such acts of violence. Additionally, one of the control variables included in this model was significant, showing that Black female students were more likely to hold attitudes accepting of traditional gender role stereotypes compared with White female students ($\beta = .121$, $p < .001$).

Discussion and Conclusion

Because previous work has indicated an association between attitudes supportive of IPV and perpetration of this type of violence, the current study set out to determine the nature of this relationship. Our first set of multivariate analyses revealed that gender role and gendered violence-related attitudes were not strong predictors of students' use of physical violence within their intimate relationships. Although we found a positive relationship between attitudes accepting of gender role stereotypes and gendered violence and later IPV perpetration, this relationship was only significant among the full sample and the explained variance was minimal. What was interesting among these analyses, however, was relationship between childhood victimization experiences and IPV perpetration. Such experiences were a consistent risk factor for the use of violence against intimates across all models, suggesting the relative importance of these experiences over gender role and gendered violence attitudes. This finding indicates that early prevention and intervention efforts during childhood would likely reduce the high levels of students' use of violence against intimates. In contrast to the first set of models, our second group of multivariate models, which examined whether the use of physical assault against intimates predicted subsequent gender role or gendered violence attitudes, generally demonstrated positive relationships between violent behaviors and attitudes. More specifically, physical assault perpetration was significantly associated with higher levels of acceptance of male heterosexual violence and acceptance of traditional gender role stereotypes. These findings supported our second set of hypotheses, in which we expected to find a positive relationship between IPV perpetration and subsequent attitudes supportive of gender role stereotypes and gendered violence.

Taken together, the analyses detailed above suggest that the attitude–behavior link in IPV research is attributable to the development of attitudes justifying violent behaviors following IPV perpetration rather than physical assault among intimates resulting from attitudinal support for such violence as many researchers assume and theoretical explanations purport. However, students' use of physical violence within intimate relationships did not seem to have an especially strong impact on their subsequent attitudes. For example, with regard to attitudes accepting of male violence, gender appears to play a more important role in predicting attitudes than IPV perpetration. The model for the total sample of college students, in which gender was a significant predictor of attitudes, explained far more of the variance than either the model for the subsample of males or the model for the subsample of females, with R^2 values of .320, .042, and .011, respectively. Furthermore, students' use of physical assault against intimates was predictive of their acceptance of male violence among the male subsample but not among the female subsample, demonstrating that IPV perpetration is related to males' acceptance of this type of violence but not

females'. Racial and ethnic group appears to be a more influential factor with regard to female students' attitudes accepting of male violence than the use of violence against intimates. With regard to attitudes accepting of traditional stereotypes, physical assault perpetration was positively related to these subsequent attitudes among the total sample of college students as well as the male and female subsamples. In contrast to models predicting students' acceptance of male violence, our model showed that IPV perpetration seems to be a more influential factor than gender in predicting these attitudes, because gender was not significantly related to acceptance of traditional stereotypes in the model assessing relationships among the total sample. However, as with attitudes accepting of male violence, racial and ethnic group seems to be a more significant predictor with regard to female students' endorsement of traditional stereotypes than IPV perpetration. Furthermore, none of the three models predicting students' attitudes related to traditional gender roles explained even 4% of the variance in their acceptance of traditional stereotypes, suggesting that the variables entered in the regression models described above, including physical assault, do not have a strong impact on these attitudes.

It is possible that the lack of a strong influence between attitudes and violent behaviors can be explained, at least to some extent, by the phrasing of attitudinal questions, especially those relating to gendered violence. For instance, all questions regarding the acceptability of violence addressed violence in marital relationships. Consequently, many of the participants may not have identified with these statements, because only a small number were married. In addition, the gendered nature of these attitude questions may explain the lack of significant findings among the female subsample. The scale used in this study to assess attitudes regarding IPV asked respondents about the acceptability of male-perpetrated violence but not female-perpetrated violence. Therefore, although female students were asked questions about their perpetration behaviors, they were not asked comparable questions about the acceptability of female-perpetrated violence. The disjunction between these attitudinal and behavioral measures might explain the lack of significant findings with regard to potential relationships between gendered violence attitudes and IPV among female college students. To overcome these potential issues, future work should adopt measures that are more appropriate to the common types of intimate relationships within a college student population and that are more gender inclusive.

Another explanation for the lack of findings demonstrating a strong link between gendered violence-related attitudes and IPV perpetration might be the absence of contextual measures related to this form of violence. For example, female students might not demonstrate significant relationships between IPV beliefs and perceptions and IPV perpetration because their use of this type of violence was primarily self-defensive, which would be consistent with some of the current research in the field (e.g., Barnett, Lee, & Thelan, 1997; Cascardi & Vivian, 1995; Makepeace, 1986; O'Keefe, 1997; O'Keefe & Treister, 1998; Saunders, 1988). In such cases, partners' use of violence would likely be more predictive of females' perpetration than their

attitudes concerning either gender roles or gendered violence. Similarly, Dibble and Straus (1980) found that the consistency between attitudes and violent behaviors is higher when respondents both hold attitudes supportive of IPV and have violent partners, regardless of gender. Therefore, partners' violent behaviors might add to explanatory models for both male and female college students. However, because our analyses did not include measures of motivations for IPV perpetration or partners' use of violence, we were not able to empirically examine these possibilities. Future research examining the link between IPV attitudes and perpetration should incorporate contextual measures, such as students' motivations for using violence against intimates or their partners' use of violence. With such efforts, the relationships between attitudes and violent behaviors would likely become more apparent.

Furthermore, although our research has demonstrated a more significant relationship between traditional gender role stereotypes and IPV perpetration compared with the relationship involving attitudes regarding IPV, especially among males, this relationship might be even stronger with more specific measures of gender role attitudes. For instance, differentiating between three types of traditional gender role attitudes, Herzog (2007) found varying relationships between these types of attitudes and perceptions of IPV scenarios. These three types of traditional gender role attitudes included blatant or hostile, modern, and benevolent sexism. Herzog (2007) explains blatant sexists as individuals holding attitudes similar to old-fashioned traditional gender roles and modern sexists as those identifying with current traditional gender roles, which are more subtle than old-fashioned traditional gender roles. In contrast to these two types, benevolent sexists hold more positive attitudes toward women, endorsing protective and affectionate behaviors. With regard to perceptions of IPV scenarios, blatant and modern sexists held less serious perceptions of the use of this type of violence compared with benevolent sexists. This research indicates that measures of traditional gender role attitudes as a whole are ambivalent in that some of these attitudes present negative feelings toward women that are likely to support the use of violence against women and others present more positive feelings that are likely to condemn such acts. This might explain the relatively small impact between attitudes and violent behaviors in our study, particularly among male college students, because our measure of traditional gender role attitudes did not differentiate between types. Further research should investigate relationships between these attitudes and IPV perpetration with attention to the potential granular differences in traditional gender role attitudes.

An additional goal of this study was to examine potential relationships between IPV perpetration and attitudinal measures specifically related to chivalry. These potential relationships have previously been ignored in the literature on physical violence among intimate partners, although related research suggests that there is at least an indirect link (through traditional gender role attitudes) between these two variables (e.g., Viki et al., 2003). However, our results demonstrated that attitudes with regard to chivalry, either before or after IPV perpetration, were not associated

with college students' use of physical assault within their intimate relationships, suggesting that these particular gender role attitudes are not related to IPV perpetration among this population.

The final goal of this project was to determine whether the relationships between IPV perpetration and attitudes supportive of such violence differ by gender. We did find support for this third set of hypotheses, because the models were different for males than for females. The relationships between gender role and gendered violence attitudes and IPV perpetration were generally significant for males but not for females. This pattern is consistent with findings from previous studies (e.g., Foshee, Linder, MacDougall, & Bangdiwala, 2001; Stets & Pirog-Good, 1987; Tontodonato & Crew, 1992). As previously stated, the gender-specific measures included in the survey instrument assessing gendered violence attitudes asked specifically about male-perpetrated violence but not female-perpetrated violence; hence, the disparity between measures of attitudes and violent behaviors for the female subsample provides a possible explanation for the gender differences evident in this study. Providing another potential explanation for these findings, as noted above, previous research has demonstrated gender differences with regard to the motivations for using violence against an intimate (e.g., Barnett et al., 1997; Cascardi & Vivian, 1995; Makepeace, 1986; O'Keefe, 1997; O'Keefe & Treister, 1998; Saunders, 1988). This research suggests that females' perpetration of IPV is commonly self-defensive and that females' partners' use of violence would be more predictive of females' IPV perpetration than their attitudes. To overcome these potential issues, researchers should incorporate attitudinal measures relating to female perpetration in addition to those relating to male perpetration and should also include measures of motivations for IPV perpetration or partners' use of violence to more accurately assess the relationships between IPV attitudes and perpetration, particularly for female students.

Of note, our study did find important and gendered changes in attitudes toward traditional gender role stereotypes and male-perpetrated violence acceptability. Between their first and second year in college, male students' acceptance of violence increased, whereas at the same time their endorsement of traditional gender role stereotypes decreased. In contrast, among female students, both acceptance of male violence and endorsement of chivalry decreased. These changes in attitudes are particularly troublesome, because they suggest that first-year experiences among male college students somehow contribute to negative attitudes regarding violence against women. Such experiences may include membership in athletic or fraternal organizations, which may foster a climate supportive of violence against women (Boeringer, 1999). Additionally, analyses of gender differences in students' attitudes regarding violence against women showed that males were significantly more likely to support the use of this type of violence than females both before and at the end of their freshman year of college.[2] These findings, together with those from the multivariate analyses demonstrating greater relationships between IPV perpetration and

related attitudes, reiterate the importance of prevention programs and their focus on changing attitudes, especially among male college students. Evaluations of school-based curricula and media-based programming designed to change attitudes supportive of violence have demonstrated significant improvements in perceptions, beliefs, attitudes, knowledge, and reported behaviors related to relationship violence (Avery-Leaf, Cascardi, O'Leary, & Cano, 1997; Foshee et al., 2004; Gadomski, Tripp, Wolff, Lewis, & Jenkins, 2001; Jaffe et al., 1992; Jones, 1991; Klein, Campbell, Soler, & Ghez, 1997; Krajewski, Rybarik, Dosch, & Filmore, 1996; Sacco & Trotman, 1990; Sousa, 1991; Weisz & Black, 2001; Wekerle & Wolfe, 1999). Clearly, based on the gendered nature of the attitudinal changes and the link between attitudes and violence demonstrated in this study, these are efforts that need to be supported by school administrators if rates of violence against women on college campuses are to be reduced or eliminated.

Although not all of our sets of hypotheses were supported in this study, it remains an important contribution to the literature. We were able to consider the potential relationships between attitudes and violent behaviors with a longitudinal data set. This allowed us to advance the work on these relationships, because much of the research to date is limited to analyses of cross-sectional data (e.g., Carlson & Worden, 2005; Nabors et al., 2006). We were also able to examine the attitude and behavior link among a high-risk population. Given the prevalence of IPV among college students, any research furthering the understanding of this pervasive problem is beneficial. In addition, we were able to examine the potential relationships between attitudes endorsing chivalry and IPV perpetration, which prior work has not considered.

The most important limitation associated with this research is that associated with the data, which were collected in the early 1990s. However, these data are taken from the most current publicly available longitudinal dataset including measures of gender and gendered violence attitudes and IPV perpetration among college students. The unavailability of more current longitudinal data is not surprising given the time commitment and cost associated with collecting such data, and this presents serious impediments for such research (Gelles, 1992). Federal funding would provide the resources necessary for this type of research, allowing for more current analyses of these relationships and enabling policy makers, such as college administrations, to more effectively address the pervasive problem of IPV among college students, a high-risk population for IPV.

The current study provides an important step toward a more complete understanding of the relationship between attitudes and perpetration of IPV among college students, a population at great risk for IPV, by empirically evaluating the assumption that gender role and gendered violence-related attitudes supportive of IPV precede actual use of such violence. Our findings show that this assumption does not hold true. Instead, our alternative suggestion that attitudes might follow IPV perpetration as a means of justifying such acts appears to be a more accurate explanation of the link between attitudes and behaviors. Yet, even this explanation did not receive

strong support in the current study. The lack of attitudinal influence on students' violent behaviors suggests that either the attitudinal measures included in this study did not assess the intended constructs or factors other than those included in these analyses have a greater impact on college students' perpetration of IPV. Given the current literature demonstrating strong relationships between attitudes supportive of IPV and perpetration of violent behaviors, we believe that the former explanation of our findings is more likely than the latter. Therefore, we suggest that researchers continue to examine these relationships while taking into account measures addressing the context of IPV perpetration, such as the motivations for such violent behavior or students' partners' use of violence, as well as the need for measures more appropriate for the types of relationships common in a college student population and more gender-inclusive measures.

Notes

1. This study did not use one of the four scales included in the Longitudinal Study of Violence Against Women, namely the Disapproval of Female Sexual Initiative scale, for two major reasons. First, this scale assessed a relatively specific set of gender role attitudes, whereas the Chivalry and Traditional Gender Role Stereotypes scales examined more general sets of attitudes related to gender roles. Hence, the Female Sexual Initiative scale was excluded because it did not fit into our overall conceptualization and research design of our study, which focused on more general gender role attitudes. Second, the inclusion of attitudes related to chivalry, traditional gender role stereotypes, and male heterosexual violence was supported at least to some extent by the existing literature on physical violence between intimates; on the other hand, the current body of research regarding physical assault within intimate relationships did not support the incorporation of attitudes regarding female sexual initiative scale into our analyses.

2. Two independent-samples t tests were conducted to examine the relationship between gender and attitudes accepting of male violence both before (Wave 1) and at the end (Wave 2) of students' freshman year of college. The first t test examined this relationship for attitudes at Wave 1. This test was significant, $t(1457.897) = 18.508$, $p < .001$, and demonstrated that males were significantly more likely than females to hold attitudes accepting of this type of violence. The second t test examined gender differences in attitudes at Wave 2. This test was also significant, $t(723.132) = 26.854$, $p < .001$, and again showed that males were significantly more likely to accept male violence than females. Means for these attitudes are displayed in Table 2.

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