

Male Perpetration of Teen Dating Violence: Associations with Neighborhood Violence Involvement, Gender Attitudes, and Perceived Peer and Neighborhood Norms

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ABSTRACT *This study aims to examine the link between male perpetration of teen dating violence (TDV) and neighborhood violence, as well as associations with gender attitudes and perceived peer and neighborhood norms related to violence among a sample of urban adolescent boys. Participants of this cross-sectional study (N=275) were between the ages of 14 and 20 years and recruited from urban community health centers. Crude and adjusted logistic and linear regression models were used to examine TDV perpetration in relation to (a) neighborhood violence involvement, (b) perceptions of peer violence, (c) perceptions of neighborhood violence, and (d) gender attitudes. Slightly more than one in four (28%) boys reported at least one form of TDV perpetration; among boys who have ever had sex, almost half (45%) reported at least one form of TDV perpetration. In logistic and linear regression models adjusted for demographics, boys who reported TDV perpetration were more likely to report involvement in neighborhood violence (odds ratio (OR)=3.1; 95% confidence interval (CI)=1.7–5.5), beliefs that their friends have perpetrated TDV (OR=2.7; 95% CI=1.4–5.1), perceptions of violent activity within their neighborhood (OR=3.0; 95% CI=1.4–6.3), and greater support of traditional gender norms ($\beta=3.2$, $p=0.002$). The findings suggest that efforts are needed to address boys' behaviors related to the perpetration of multiple forms of violence and require explicit efforts to reduce perceived norms of violence perpetration as well as problematic gender attitudes (e.g., increasing support for gender equity) across boys' life contexts.*

KEYWORDS *Teen dating violence, Intimate partner violence, Gender norms, Neighborhood, Environmental factors*

INTRODUCTION

Intimate partner violence (IPV) is widely recognized as a public health and human rights issue affecting women worldwide.^{1–4} More recently, researchers and practi-

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tioners have also identified partner violence among teens, commonly called teen dating violence (TDV), as a similar and significant public health concern. Girls and younger women experience the highest per capita rates of physical and sexual violence from dating partners.^{5–8} Like IPV, TDV victimization is associated with multiple negative physical, sexual, and psychological health outcomes.^{9–11}

Investigations among youth are critical to inform efforts to *prevent* such violence from becoming a pattern of behavior within intimate relationships into adulthood—and to reduce early victimization and related health, social, and behavioral effects of such violence across the life course. While many studies have documented the impact of TDV victimization among adolescent girls, less is known regarding the factors associated with TDV *perpetration*, particularly among male adolescents.^{12–14} Such knowledge is critical to guide intervention efforts to reduce violence perpetration.

Within the existing small literature examining factors linked to perpetration, some studies have demonstrated the association of TDV perpetration with other forms of violence among adolescent males (e.g., involving family, peers, and neighborhood), particularly in urban areas.^{15–18} Given this link between multiple forms of violence perpetration in boys' lives, and the greater prevalence of such forms of violence within urban contexts,^{19,20} more work is needed to focus on contextual-level factors (i.e., investigation beyond individual risk characteristics) that are driving such high rates of violence within these contexts. While an increasing number of studies have shown the relevance of neighborhood characteristics to a multitude of health outcomes,^{21,22} less emphasis in both research *and* practice has focused on such contextual-level factors in determining violence perpetration. For example, current intervention efforts to address TDV perpetration among urban adolescents often only include individual-level responses (e.g., batterer's intervention, criminal justice system involvement) as opposed to community- or neighborhood-level prevention efforts. Social norms are an example of contextual influences that have been shown to be important in determining various forms of adolescent violence perpetration.^{23–25} Exposure to and involvement in violence across contexts (e.g., with dating partners, neighborhood contexts, gang involvement) are likely influenced by boys' perceptions of violence in these varied contexts. Among adult, urban samples of adult men, previous work has linked perpetration of IPV with perceptions of neighborhood violence.²⁶ Among adolescent samples, qualitative work has suggested that perceived violence in one's neighborhood as well as within boys' peer groups is relevant to TDV perpetration among adolescent boys,²⁷ further underscoring the role of perceived social and environmental norms in TDV perpetration. However, further quantitative study on such norms is needed among adolescent samples.

Previous work has also highlighted how gender-related attitudes, learned within boys' social and physical environment (e.g., exposure to peers who mistreat girls and/or perpetrate partner violence), inform boys' attitudes and behaviors toward girls with whom they are dating or having sexual relationships.²⁷ In particular, previous work has shown that males who report perpetration of TDV are also more likely to support traditional gender norms, beliefs in the inferiority of women and girls, and men's entitlement to control female partners via violence.^{28–31} However, to our knowledge, no such studies on gender attitudes and TDV perpetration have been conducted specifically among urban adolescents despite findings that both partner violence as well as traditional attitudes toward gender are often exacerbated within such urban contexts.²⁸ Furthermore, such findings would be extremely relevant to informing future TDV research and practice efforts, particularly given the increasing number of recent

publications arguing that gender is irrelevant to this important public health problem.^{32,33}

Thus, in order to address these limitations in existing literature, the current study objectives include examining the following relations among a sample of urban, adolescent males: (1) to further demonstrate evidence of an association between TDV perpetration and involvement in neighborhood violence and (2) to examine TDV perpetration in relation to (a) perceptions of peer violence, (b) perceptions of neighborhood violence, and (c) gender attitudes.

METHODS

Sample and Data Collection

The current study was conducted via an anonymous, cross-sectional survey of English- and Spanish-speaking males aged 14–20 years seeking health care in five clinics providing confidential services to adolescents in urban neighborhoods of Greater Boston between April and December 2006. Two clinics were located in public schools; one before was located within a community health center and two were based in other community settings (a post office building and a youth center). For the current study, 275 adolescent males who reported female dating partners and a subsample of 134 who reported ever having sex with a female partner were included in analyses (out of a total sample of 320 participants).

Data were collected in a private room via an audio computer-assisted survey instrument (ACASI), a self-administered computer program that allows participants to complete surveys on a laptop computer with questions read aloud to them over headphones. With demonstrated ability to improve data collection concerning sensitive behaviors,^{34,35} ACASI is recommended as the best method for obtaining valid and reliable data on IPV.³⁶ Following survey completion, all participants were screened by the research assistant at the conclusion of the survey for psychological distress and provided with a list of local relevant resources (e.g., violence victimization support services, mental health services). All study procedures were reviewed and approved by human subjects research committees at the Partners Health Care System, Cambridge Health Alliance, and the Harvard School of Public Health.

Measures

Single items assessed demographic characteristics including *age* (in years), *race/ethnicity*, *education level*, *nativity* (US-born), and *living situation* (e.g., living with family, friends, or partners).

TDV perpetration was assessed by combining boys' reports of (1) perpetrating sexual violence, (2) perpetrating physical violence, or (3) using psychological violence *and* threats of violence. Psychological violence measures and threats of violence items were highly correlated; however, to maintain a conservative approach in defining TDV perpetration, only boys reporting both were categorized as perpetrating TDV. Items asked boys to report these behaviors regarding girls they "have gone out with, hooked up with, or had sex with." *Sexual violence* was measured by four items asking boys whether they have ever had sex with a girl as a result of "playing mind games, using threats, using force, or she was too high/drunken to stop you." These four items were asked for different types of sexual activity, including vaginal sex, oral sex, anal sex, or other sexual activities. If boys reported any of these, they were categorized as having perpetrated sexual violence. *Physical*

violence was measured by four items assessing boys' reports of: (1) hitting, kicking, slapping, punching, shoving, or throwing something at a girl; (2) slamming a girl against a wall; (3) choking a girl; or (4) using a gun on a girl. Boys who reported one of these items were categorized as having perpetrated physical violence. *Psychological violence* was measured by boys' reports of any one of the following: excessive jealousy (telling a girl that "they better not call or talk to a friend of theirs or call or talk to other boys"), destroying the property of a partner, or swearing at or insulting a partner (calling them stupid, ugly, or fat). *Threats of violence* was measured by two items asking boys whether they had ever (1) threatened to hurt a girl physically or (2) threatened to rape them. These items related to TDV perpetration were developed based on findings from qualitative work related to adolescent TDV conducted by the authors previously.^{9,27}

Neighborhood violence variables included three items assessing boys' (1) fighting in the past year (with non-dating partners) and (2) involvement in gangs in the past year. Boys reporting at least one of these two items were categorized as having involvement in neighborhood violence.

Gender attitudes were measured using 13 items related to boys' perceptions of boys'/men's roles and expectations, particularly in relationships and around issues of sex.^{37,38} Examples include: "If they don't get sex from their girlfriends, boys/men will find someone else to have sex with"; "most boys/men do not stay faithful to their girlfriends for very long"; "boys/men need to have sex with many different girls/women, even if they are dating someone"; "if a boy/man has a baby with a girl/woman, he can have sex with her whenever he wants"; "boys/men are always ready for sex." Cronbach's alpha was 0.93 for these 13 items, indicating strong reliability. A summary score was used for these 13 items.

Perceptions of peer norms regarding TDV perpetration were measured by two items asking boys about their perceptions around whether their friends have (1) forced sex on a girl (got them to have sex with them when the girl didn't want to) and (2) physically hurt a girl ("hit, beat up, or pushed around"). Responses included a five-point Likert scale ranging from "almost all my friends" to "none of my friends;" variables were categorized as whether boys reported "almost all of my friends" or "many of my friends" versus "some, a few, or none" of my friends.

Perceptions of neighborhood violence norms were measured using three items asking boys to report their agreement with whether there is violent crime in their neighborhood, whether there are gangs, and whether they believe there are shootings in their neighborhood. Responses ranged from "strongly agree" to "strongly disagree." Similar to the peer norms measures, these items were categorized dichotomously as whether boys reported to "strongly agree" or "agree" versus "disagree" or "strongly disagree."

Data Analysis

Crude differences in the frequencies of demographics by TDV perpetration were evaluated using contingency table analysis; chi-square tests were conducted to test for statistically significant differences of association. Crude and adjusted logistic and linear regression models were used to examine TDV perpetration in relation to (a) neighborhood violence involvement, (b) perceptions of peer violence, (c) perceptions of neighborhood violence, and (d) gender attitudes. All demographic variables (i.e., age, etc.) were evaluated for association with TDV perpetration via bivariate analyses; those significant at $p < 0.05$ were included in all adjusted regression analyses. Only living situation (whether or not boys lived with family) satisfied such

criterion (likely because of this fairly homogenous sample). Additionally, findings were also presented from fully adjusted models controlling for demographics as well as the effects of other relevant study variables (neighborhood violence, perceptions of peer/neighborhood violence, and gender attitudes). Tests for multicollinearity were conducted to examine possible variance inflation of parameter estimates, which could mask significant findings for independent variables.

Findings were reported for all boys in the sample as well as for boys reporting having ever had sex; we conducted separate analyses in order to be able to include a thorough measure of sexual violence perpetration (e.g., boys who have not had sex would not be asked about forced vaginal, oral, or anal sex). Our measure of sexual violence perpetration is most applicable to boys who report having ever had vaginal, anal, or oral sex (notably, the majority of sexual violence was reported as forced/coerced vaginal sex), whereas boys who reported never having had sex could only respond positively to forcing “other types of sexual activity.” Findings from logistic regression models were presented as odds ratios with associated 95% confidence intervals, and significance of individual variables was evaluated using Wald chi-square tests. Linear regression findings are presented via parameter estimates (β), standard error, and associated p value. All analyses were conducted using SAS version 9.1 (SAS Institute Inc., Cary, NC).

RESULTS

Sample Characteristics

The mean age of the sample was 17 (SD=1.8 years). Fifty-four percent of boys reported their race/ethnicity as Black or African American, 9% reported to be White, and 3% reported Asian race/ethnicity. Forty-six percent identified as Hispanic or Latino. The majority of boys reported having been born in the USA (80%); 84% reported living with their parents or other family. Most sample characteristics did not vary by boys' TDV perpetration or involvement in neighborhood violence ($p>0.05$), with the exception of boys' living situation. Boys who lived with their families were less likely to report TDV perpetration ($\chi^2=11.6$, $p=0.0006$; Table 1).

Prevalence of TDV Perpetration

Slightly more than one in four (28%) boys reported at least one form of TDV perpetration; among boys who have ever had sex, almost half (45%) reported at least one form of TDV perpetration. (Table 2). Among boys who have had sex, 42% reported perpetrating any sexual violence; the majority of sexual violence reported was related to forced/coerced vaginal sex (37%). Among the boys who reported never having sex, few reported forcing “other types of sexual activity” (7%). Almost 10% of all boys and 13% of boys who have had sex reported perpetrating at least one form of physical violence (Table 2). Seven percent of all boys and 11% of boys reporting sex had perpetrated at least one form of psychological violence, i.e., threatening to physically hurt or rape a girl.

Prevalence of Neighborhood Violence Involvement, Perceptions of Peer TDV, and Perceptions of Violence in Neighborhood

Thirty-eight percent of the sample reported some form of involvement in neighborhood violence; in the 12 months prior to the survey, 27% reported being involved in a fight and 15% reported gang involvement. Almost 20% of boys

TABLE 1 Sample characteristics by TDV perpetration

Sample characteristics	Total sample (<i>n</i> =275)	Boys reporting TDV perpetration (<i>n</i> =77)	No reported TDV perpetration (<i>n</i> =198)
	Mean (SD)	Mean (SD)	Mean (SD)
Age	16.8 (1.8)	17.1 (1.7)	16.6 (1.9)
		$F=1.2, p=0.4$	
	% (<i>n</i>)	% (<i>n</i>)	% (<i>n</i>)
Race/ethnicity			
Black/African American	53.5 (147)	55.8 (43)	52.5 (104)
White	9.1 (25)	9.1 (7)	9.1 (18)
Asian	2.6 (7)	1.3 (1)	3.0 (6)
Other	34.9 (96)	33.8 (26)	35.3 (70)
		$\chi^2=4.2, p=0.7$	
Hispanic ethnicity			
Yes	45.8 (126)	52.0 (40)	43.4 (86)
No	53.5 (147)	48.1 (37)	55.6 (110)
		$\chi^2=2.2, p=0.5$	
Nativity			
US-born	80.2 (219)	86.8 (66)	77.7 (153)
Non-US-born	19.8 (54)	13.2 (10)	22.3 (44)
		$\chi^2=2.9, p=0.1$	
Living situation			
Live with family	83.6 (230)	71.4 (55)	88.4 (175)
Other living situation	16.4 (45)	28.6 (22)	11.6 (23)
		$\chi^2=11.6, p=0.0006$	

reported beliefs that their friends have engaged in some type of peer TDV perpetration, and 76% reported beliefs that violent activity is present in their neighborhoods (Table 3).

Relation of TDV Perpetration to Neighborhood Violence Involvement, Perceptions of Peer TDV, Perceived Neighborhood Violence, and Gender Attitudes

In logistic regression models adjusted for demographics, boys who reported TDV perpetration were more likely to report involvement in neighborhood violence (odds ratio (OR)=3.1; 95% confidence interval (CI)=1.7–5.5). Among boys who reported sex, stronger associations were observed between these variables (OR=5.3; 95%CI=2.5–11.4; Table 3).

In logistic regression models adjusted for demographics, TDV perpetration was more likely among both boys who reported beliefs that their friends have perpetrated TDV (OR=2.7; 95%CI=1.4–5.1). Stronger relations were found among boys reporting sex (OR=5.2; 95%CI=1.8–15.3; Table 3). Boys who reported TDV perpetration were also more likely to report perceptions of violent activity within their neighborhood (OR=3.0; 95%CI=1.4–6.3). Again, such relations were stronger among boys reporting sex (OR=4.0; 95%CI=1.6–9.9; Table 3).

In linear regression analyses adjusted for demographics, greater support of traditional gender norms was linked to TDV perpetration ($\beta=3.2, p=0.002$). This relation was also stronger among boys reporting sex ($\beta=2.8, p=0.0008$; Table 3).

TABLE 2 Prevalence of TDV perpetration: combined and by type of violence perpetrated

Forms of violence perpetration	Prevalence among total sample (<i>n</i> =275)	Prevalence among boys reporting sex (<i>n</i> =134)
Partner violence perpetration (total; report sexual violence or physical violence or psychological violence/threats)	28.0 (77)	44.8 (60)
Sexual violence (any; reporting at least one below)	–	41.8 (56)
Vaginal sex	–	36.5 (49)
Oral sex	–	14.9 (20)
Anal sex	–	4.5 (6)
Other sexual activities	7.6 (21)	12.7 (17)
Physical violence (any; reporting at least one below)	9.8 (27)	12.7 (17)
Hit, slap, punch, kick, shove, or throw something at	7.6 (21)	10.5 (14)
Slam against a wall	4.7 (13)	6.7 (9)
Choke	5.8 (16)	7.5 (10)
Use a gun	5.5 (15)	7.5 (10)
Psychological violence and threats of violence (report both of these)	6.9 (19)	10.5 (14)
Excessive jealousy, destroy property, call stupid or fat	21.8 (60)	28.4 (38)
Threaten to physically hurt or rape	7.6 (21)	11.2 (15)

– not applicable since this includes some boys who report not having ever had these forms of sex

Findings From Fully Adjusted Models (Adjusted for Demographics and Relevant Study Variables)

Upon adjusting for both relevant demographic variables and other study variables in Table 3, TDV perpetration remained significantly linked with both boys' neighborhood violence involvement and boys' support of traditional gender norms. This finding remained consistent among boys reporting sex as well.

DISCUSSION

Current study findings indicate that TDV perpetration and involvement in neighborhood violence were highly prevalent and correlated among this young clinic-based sample of urban adolescent males. TDV perpetration was particularly prevalent among those who reported having had sex (45%) and largely determined by the high proportion of boys reporting sexual violence perpetration (42%), particularly forced/coerced vaginal sex (37%). Our measures for identifying sexual violence perpetration were developed as a result of previous qualitative work among a similar sample of urban adolescent males.²⁷ However, the prevalence reported in our sample using these measures was much higher than reported elsewhere. Thus, more work is needed to confirm this high prevalence of sexual violence perpetration among urban adolescent males and to ensure the consistent use of measures tailored for this population of males. These findings may also highlight the need for future research and prevention efforts to further consider TDV perpetration among boys who report having sex; our findings suggest that not only are boys who report having ever had sex more likely to report forcing/coercing sexual activity but that these boys are also more likely to report other forms of TDV perpetration as well.

TABLE 3 TDV perpetration and relation to boys' neighborhood violence involvement, perceptions of peer TDV perpetration, perceptions of neighborhood violence, and support of traditional gender norms

	Total sample (<i>n</i> =275)		Boys reporting sex (<i>n</i> =134)		
	% (<i>n</i>)	Adjusted OR ^a	Fully adjusted OR ^b	Adjusted OR ^a	Fully adjusted OR ^b
Involvement in neighborhood violence or gangs, past year	37.8 (104)	3.1 (1.7–5.5)	2.7 (1.4–4.9)	5.3 (2.5–11.4)	3.3 (1.4–7.5)
Believe that friends have perpetrated TDV	19.3 (53)	2.7 (1.4–5.1)	1.5 (0.8–3.1)	5.2 (1.8–15.3)	2.8 (0.9–9.3)
Believe that neighborhood is characterized by violent activity (violent crime, gangs, shootings)	76.0 (209)	3.0 (1.4–6.3)	1.8 (0.8–3.9)	4.0 (1.6–9.9)	2.1 (0.8–5.8)
Support traditional gender norms	Score range, mean (SD) 0–13, 5.0 (4.6)	β coefficient, SE, and <i>p</i> value adjusted analyses ^a 3.2, 0.6, (0.002)	β coefficient, SE, and <i>p</i> value fully adjusted analyses ^b 1.5, 0.6, (0.02)	β coefficient, SE, and <i>p</i> value adjusted analyses ^a 2.8, 0.8, (0.0008)	β coefficient, SE, and <i>p</i> value fully adjusted analyses ^b 2.0, 0.9, (0.025)

For example, those who report involvement in neighborhood violence/gangs were 3.1 times more likely to report TDV perpetration in analyses adjusted for demographics and 2.7 times more likely to report TDV perpetration in analyses adjusted for both demographics as well as other variables in this table

^aAdjusted for living situation (live with family—yes/no)

^bFully adjusted model, adjusted for demographics as well as all variables in this table

Notably, to our knowledge, this study is among the first quantitative assessments to show the relevance of TDV perpetration to boys' gender attitudes and perceptions of violence within peer and neighborhood contexts among a sample of urban adolescent males. While an increasing number of studies have utilized multilevel methods to examine the link between partner violence perpetration and *actual* levels of neighborhood violence (or other neighborhood-related factors),^{39,40} the current study builds on such work and measured boys' *perceived* violence in both neighborhood and peer contexts, given that such perceptions of violence may be most directly influencing their attitudes and behaviors toward violence. Such analyses appear critical, given the high rates of beliefs regarding peer involvement in perpetration of TDV (20%) as well as perceptions of violent activity characterizing boys' neighborhoods (76%) reported in this sample.

The finding that TDV perpetration is associated with involvement in neighborhood violence is consistent with previous work among adolescent males.^{15–18} While more work is needed to identify temporality of such an association (i.e., whether one type of violence has an influence on the initiation of the other), it appears that boys who engage in violence perpetration in one context are likely to also report violence perpetration across other contexts. Much of the existing literature as well as programming to address violence perpetration often focuses on a single type of violence (e.g., school programs that address TDV, community programs that address neighborhood or gang violence); however, our study findings suggest that research and programming is needed that considers multiple forms of violence perpetration simultaneously (e.g., to have community- or neighborhood-based programs that address gang violence and neighborhood violence, as well as TDV perpetration all within the same program).

Findings of the current study indicating the contribution of both boys' perceptions of peer TDV perpetration and perceptions of neighborhood violence to boys' own TDV perpetration are congruent with previous work highlighting the influence of social and contextual norms in determining violence perpetration, particularly among adolescent boys.^{23–25,31} Such findings suggest that perceptions regarding violence occurring in environmental contexts are linked to boys' own behaviors; however, violent behaviors may also influence boys' perceptions of their context as well. More work is needed to understand these interrelations in order to best inform prevention and intervention approaches. However, this preliminary work further suggests the need for approaches that address TDV perpetration by altering environmental influences, particularly those that are most pertinent to urban contexts. Our findings suggest that future programs might benefit from taking a community-based approach and addressing an array of concerns affecting boys' *life contexts*, particularly in such urban environments often plagued with high levels of violence, both at home and on the street.

The finding that TDV perpetration is linked to boys' greater support of traditional gender norms, particularly norms related to relationships and sex, is also consistent with previous work among adult and non-urban adolescent samples.^{31,41} In contrast with recent studies negating the role of gender norms in conceptualizing TDV perpetration, this finding supports the need for a gendered approach within prevention programming (e.g., tailoring components by gender, focusing on social norms associated with boys' attitudes toward gender—particularly attitudes supportive of gender inequities). Additional related research on TDV is required to further inform a gender-based conceptual framework for ongoing work to address this issue. Notably, supportive attitudes toward traditional male gender norms are

also linked to a range of high-risk health behaviors among boys and threaten the lives of boys in immense ways (e.g., boys have greater rates of substance and tobacco use,^{42–44} unprotected sex,^{45,46} suicide,⁴⁷ unintentional injury,^{48–50} homicide, other injuries),⁴⁷ further showcasing the need to address social norms related to gender. These statistics related to poor morbidity and mortality among boys and men, as well as the current study findings linking such norms to TDV perpetration, together, indicate that more work is needed to address gender norms, particularly within the context of urban populations of male adolescents where support of more traditional gender norms often appears exacerbated.

Given study findings from the fully adjusted models, which highlight the relevance of boys' own neighborhood violence involvement as well as support of traditional gender norms to TDV perpetration (above and beyond other perceptions of violence in boys' environment), the current study supports interventions that focus efforts (1) to *prevent* multiple types of violent behaviors among boys across contexts and (2) to address inequitable gender attitudes. Such components appear to be particularly essential for the reduction of male perpetration of TDV and the multitude of negative health outcomes associated with such violence. Many of the existing programs are limited to TDV education or intervention counseling (e.g., school-based education/prevention programs, batterer's intervention programs working to reduce TDV perpetration among boys who have already perpetrated TDV) have addressed the issue of TDV using an individual-level approach; however, altogether, current findings highlight the potential utility of addressing this issue at the community/neighborhood level as well (e.g., developing interventions to change environmental factors that promote violence involvement, alleviating problematic social norms related to violence or gender).

These findings should be interpreted in light of several limitations. Our data rely on self-reported responses, and thus, items related to TDV perpetration as well as other items that may be considered stigmatizing may be underreported; despite this limitation, a high prevalence of each type of violence perpetration was observed. Additionally, prior studies on sensitive topics have found that ACASI improved reliability and accuracy in self-reported data collection.^{34,35} Furthermore, because a subset of analyses were limited to 134 boys who had reported sex, we had reduced statistical power to conduct these regression analyses; however, despite limited statistical power, we found extremely strong associations between multiple variables of interest. While the findings from the fully adjusted models in Table 3 may be influenced by collinearity between variables, we did conduct relevant tests to ensure that such analyses were suitable; however, more work is needed to confirm such findings related to TDV perpetration. Furthermore, clinics for this study were all selected from a single urban metropolitan area, and these sites primarily serve clients from low-income communities; thus, findings are most generalizable to lower income urban populations residing in similar metropolitan areas.

These limitations notwithstanding, the high prevalence of both TDV perpetration and involvement in neighborhood violence in this sample of male adolescents, particularly among boys who report having had sex (with almost half reporting TDV perpetration and almost 40% reporting neighborhood violence involvement), illustrates the critical nature of this problem across boys' life contexts, particularly within the context of urban neighborhoods. Our findings highlight the need for additional studies to further investigate the environmental factors (especially those that pertain to urban neighborhood contexts) that influence TDV perpetration among male adolescents. Findings suggest that *community-based interventions addressing neighborhood-level factors* are needed to reduce boys' behaviors related

to perpetration of *multiple forms* of violence as well as an array of other problematic aspects of boys' life contexts, including explicit efforts to reduce violence as a norm as well as problematic gender attitudes (e.g., increasing support for gender equity) among boys. In this way, study findings support the need for future programs to focus on *preventing the perpetrating behavior* in dating relationships (in addition to focusing on *education about victimization* as a way to prevent TDV, as often found in current published and evaluated TDV programs).^{51,52} While this approach has been widely instituted among non-TDV-related intervention efforts (e.g., addressing gang violence, violence between peers, bullying), more work is needed to incorporate an approach focused on changing or *preventing* the perpetrating behavior with the issue of partner violence as well—with an approach that addresses *multiple forms* of violence perpetration and exposures in boys' life contexts. Neighborhood- or structural-level interventions may likely be critical in order to address exposures to violence within varied contexts (e.g., peer, neighborhood) and related social norms that may be influencing boys' behaviors around violence involvement among such urban populations of adolescent boys.

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REFERENCES

1. Amnesty International. *It's in Our Hands: Stop Violence Against Women*. London: Amnesty International Publications; 2004.
2. World Health Organization. *Summary Report: WHO Multi-country Study on Women's Health and Domestic Violence Against Women*. Available at: http://www.who.int/gender/violence/who_multicountry_study/summary_report/summary_report_English2.pdf. Published: 2003. Accessed on: September 26, 2008.
3. Rand, Michael. (2008). Criminal victimization, 2007. U.S. Department of Justice Bureau of Justice Statistics. Available at: <http://www.ojp.usdoj.gov/bjs/pub/pdf/cv07.pdf>. Accessed on: September 16, 2009.
4. Garcia-Moreno C, Jansen H, Ellsberg M, Heise L, Watts C. Prevalence of intimate partner violence: findings from the WHO multi-country study on women's health and domestic violence. *Lancet*. 2006; 368(9543): 1260–1269.
5. National Crime Victimization Survey: Criminal victimization, 2007. US Department of Justice, Bureau of Justice Statistics; 2008. Available at: <http://www.ojp.usdoj.gov/bjs/pub/pdf/cv07.pdf>. Accessed on: September 16, 2009.
6. Halpern CT, Oslak SG, Young ML, Martin SL, Kupper LL. Partner violence among adolescents in opposite-sex romantic relationships: findings from the National Longitudinal Study of Adolescent Health. *Am J Public Health*. 2001; 91(10): 1679–1685.
7. Tjaden P, Thoennes N. Extent, nature and consequences of intimate partner violence: Findings from the national violence against women survey. Washington, DC: US Department of Justice; 2000, NCJ 181867.
8. Catalano, S. *Intimate Partner Violence in the United States*. U.S. Department of Justice, Bureau of Justice Statistics; 2007. Available at: <http://www.ojp.usdoj.gov/bjs/intimate/ipv.htm>. Accessed on: September 16, 2009.
9. Miller E, Decker MR, Reed E, Raj A, Hathaway J, Silverman JG. Male partner pregnancy-promoting behaviors and adolescent partner violence: Findings from a qualitative study with adolescent females. *Ambul Pediatr*. 2007; 7(5): 360–366.

10. Silverman JG, Raj A, Mucci LA, Hathaway JE. Dating violence against adolescent girls and associated substance use, unhealthy weight control, sexual risk behavior, pregnancy, and suicidality. *JAMA*. 2001; 286(5): 572–579.
11. Silverman JG, Raj A, Clements K. Dating violence and associated sexual risk and pregnancy among adolescent girls in the United States. *Pediatrics*. 2004; 114(2): e220–e225.
12. Silverman JG, Decker MR, Reed E, et al. Social norms and beliefs regarding sexual risk and pregnancy involvement among adolescent males treated for dating violence perpetration. *J Urban Health*. 2006; 83(4): 723–735.
13. Tilley DS, Brackley M. Men who batter intimate partners: a grounded theory study of the development of male violence in intimate partner relationships. *Issues Ment Health Nurs*. 2005; 26(3): 281–297.
14. Harper FW, Austin AG, Cercone JJ, Arias I. The role of shame, anger, and affect regulation in men's perpetration of psychological abuse in dating relationships. *J Interpers Violence*. 2005; 20(12): 1648–1662.
15. Malik S, Sorenson SB, Aneshensel CS. Community and dating violence among adolescents: perpetration and victimization. *J Adolesc Health*. 1997; 21: 291–302.
16. Bossarte RM, Simon TR, Swahn MH. Clustering of adolescent dating violence, peer violence, and suicidal behavior. *J Interpers Violence*. 2008; 23(6): 815–833 (Epub 2008 Feb 5).
17. Swahn MH, Simon TR, Hertz MF, et al. Linking dating violence, peer violence, and suicidal behaviors among high-risk youth. *Am J Prev Med*. 2008; 34(1): 30–38.
18. Rivera-Rivera L, Allen-Leigh B, Rodríguez-Ortega G, Chávez-Ayala R, Lazcano-Ponce E. Prevalence and correlates of adolescent dating violence: baseline study of a cohort of 7,960 male and female Mexican public school students. *Prev Med*. 2007; 44(6): 477–484.
19. Morenoff JD, Sampson RJ, Raudenbush SW. Neighborhood inequality, collective efficacy, and the spatial dynamics of urban violence. *Criminology*. 2001; 39(3): 517–560.
20. Robinson PL, Boscardin WJ, George SM, Teklehaimanot S, Heslin KC, Bluthenthal RN. The effect of urban street gang densities on small area homicide incidence in a large metropolitan county, 1994–2002. *J Urban Health*. 2009; 86(4): 511–523.
21. Browning CR, Cagney KA. Moving beyond poverty: neighborhood structure, social processes, and health. *J Health Soc Behav*. 2003; 44(4): 552–571.
22. Sallis JF, Saelens BE, Frank LD, et al. Neighborhood built environment and income: examining multiple health outcomes. *Soc Sci Med*. 2009; 68(7): 1285–1293.
23. Palmeri Sams D, Truscott SD. Empathy, exposure to community violence, and use of violence among urban, at-risk adolescents. *Child Youth Care Forum*. 2004; 33(1): 33–50.
24. Rosario M, Salzinger S, Feldman RS, Ng-Mak DS. Community violence exposure and delinquent behaviors among youth: the moderating role of coping. *J Community Psychol*. 2003; 31(5): 489–512.
25. O'Keefe M. Predictors of dating violence among high school students. *J Interpers Violence*. 2007; 12: 546–568.
26. Reed E, Silverman JG, Welles SL, Santana MC, Missmer SA, Raj A. Associations between neighborhood violence and intimate partner violence perpetration among urban, African American men. *J Community Health*. 2009; 34(4): 328–335.
27. Reed E, Silverman JG, Raj A, et al. Social and environmental contexts of adolescent and young adult male perpetrators of intimate partner violence: a qualitative study. *Am J Mens Health*. 2008; 2(3):260–271.
28. Santana MC, Raj A, Decker MR, La Marche A, Silverman JG. Masculine gender roles associated with increased sexual risk and intimate partner violence perpetration among young adult men. *J Urban Health*. 2006; 83(4): 575–585.
29. Murnen SK, Wright C, Kaluzny G. If boys will be boys, then girls will be victims? A meta-analytic review of the research that relates masculine ideology to sexual aggression. *Sex Roles*. 2002; 17: 359–375.
30. Anderson VN, Simpson-Taylor D, Hermann DJ. Gender, age and rape-supportive rules. *Sex Roles*. 2004; 50(1–2): 77–90.

31. Silverman JG, Williamson GM. Social ecology and entitlements involved in battering by heterosexual college males: contributions of family and peers. *Violence Vict.* 1997; 12(2): 147–165.
32. Reed E, Raj A, Miller E, Silverman JG. Losing the "gender" in gender-based violence: the missteps of research on dating and intimate partner violence. *Violence Against Women.* 2010; 16(3):348–354.
33. Reed E. Intimate partner violence: a gender-based issue? *Am J Public Health.* 2008; 98(2): 197–198.
34. Ghanem KG, Hutton HE, Zenilman JM, Zimba R, Erbeling EJ. Audio computer assisted self interview and face to face interview modes in assessing response bias among STD clinic patients. *Sex Transm Infect.* 2005; 81(5): 421–425.
35. Metzger DS, Koblin B, Turner C, et al. Randomized controlled trial of audio computer-assisted self-interviewing: utility and acceptability in longitudinal studies. HIVNET Vaccine Preparedness Study Protocol Team. *Am J Epidemiol.* 2000; 152(2): 99–106.
36. Abbey A. Lessons learned and unanswered questions about sexual assault perpetration. *J Interpers Violence.* 2005; 20(1): 39–42.
37. Pulerwitz J, Barker G. Measuring attitudes toward gender norms among young men in Brazil: development and psychometric evaluation of the GEM Scale. *Men and Masculinities.* 2007; 10(3): 332–338.
38. Verma RK, Pulerwitz J, Mahendra V, et al. Challenging and changing gender attitudes among young men in Mumbai, India. *Reprod Health Matters.* 2006; 14(28): 135–143.
39. Cunradi C, Caetano R, Clark C, Schafer J. Neighborhood poverty as a predictor of intimate partner violence among White, Black, and Hispanic couples in the United States: a multilevel analysis. *Ann Epidemiol.* 2000; 10(5): 297–308.
40. Koenig MA, Stephenson R, Ahmed S, Jejeebhoy SJ, Campbell J. Individual and contextual determinants of domestic violence in North India. *Am J Public Health.* 2006; 96(1): 132–138.
41. Forbes GB, Adams-Curtis LE, Pakalka AH, White KB. Dating aggression, sexual coercion, and aggression-supporting attitudes among college men as a function of participation in aggressive high school sports. *Violence Against Women.* 2006; 12(5): 441–455.
42. Zaleski M, Pinsky I, Laranjeira R, Ramisetty-Mikler S, Caetano R. Intimate partner violence and contribution of drinking and sociodemographics: the Brazilian National Alcohol Survey. *J Interpers Violence.* 2010; 25(4): 648–665.
43. Temple JR, Weston R, Stuart GL, Marshall LL. The longitudinal association between alcohol use and intimate partner violence among ethnically diverse community women. *Addict Behav.* 2008; 33(9): 1244–1248.
44. Feingold A, Kerr DC, Capaldi DM. Associations of substance use problems with intimate partner violence for at-risk men in long-term relationships. *J Fam Psychol.* 2008; 22(3): 429–438.
45. Decker MR, Seage GR 3rd, Hemenway D, et al. Intimate partner violence functions as both a risk marker and risk factor for women's HIV infection: findings from Indian husband–wife dyads. *J Acquir Immune Defic Syndr.* 2009; 51(5): 593–600.
46. Raj A, Reed E, Welles SL, Silverman JG. Intimate partner violence perpetration. Risky sexual behavior and STI/HIV diagnosis among heterosexual African American men. *Am J Mens Health.* 2008; 2(3): 291–295.
47. CDC. Homicides and suicides—national violent death reporting system, United States, 2003–2004. *MMWR.* 2006; 55(26): 721–724.
48. Chen GX. Nonfatal work-related motor vehicle injuries treated in emergency departments in the United States, 1998–2002. *Am J Ind Med.* 2009; 52(9): 698–706.
49. Centers for Disease Control. Men's Health at CDC. Available at: <http://www.cdc.gov/Features/MensHealthatCDC>. Accessed on: February 6, 2011.
50. US Department of Transportation, National Highway Traffic Safety Administration (NHTSA). (2008). Traffic safety facts 2006: alcohol-impaired driving. Washington, DC:

NHTSA. Available from: <http://www-nrd.nhtsa.dot.gov/Pubs/810801.PDF>. Published: 2008. Accessed on: September 16, 2009.

51. Wolfe DA, Crooks C, Jaffe P, et al. A school-based program to prevent adolescent dating violence: a cluster randomized trial. *Arch Pediatr Adolesc Med*. 2009; 163(8): 692–629.
52. Foshee VA, Bauman KE, Ennett ST, Linder GF, Benefield T, Suchindran C. Assessing the long-term effects of the Safe Dates program and a booster in preventing and reducing adolescent dating violence victimization and perpetration. *Am J Public Health*. 2004; 94(4): 619–624.