The linkages between witnessing and experiencing violence in private and public spaces and violence related attitudes and behaviours among adolescent boys: Evidence from a prospective study in rural Bihar, India

Author: Dr. Sharmistha Basu

Abstract

This paper explores the linkages between adolescent boys' exposure to violence, as defined by witnessing and experiencing violence in private and public spaces, and their attitudes about men's entitlement to perpetrate violence against girls, their perpetration of violence against girls and boys.

Data are from a prospective study of boys aged 13-21, youth clubs' members, in rural Bihar. Total of 566 boys were interviewed at baseline, of these, 517 were re-interviewed about 20 months following the first interview.

As many as 34 percentage of the participants had witnessed the perpetration of violence in the home or community, and 62 percent had been subjected to violence. Findings highlight that witnessing violence had a milder effect than experiencing violence in private or public spaces. Additionally, the findings highlight the role of the family in engendering boys' attitudes about violence against women, as well in promoting or inhibiting their perpetration of violence against women.

Introduction

In India, available evidence confirms that large proportions of young men engage in perpetrating verbal, physical and/or sexual violence against women and girls. For example, a study of youth aged 16-24 years in three large states documents that 42 percent had perpetrated physical violence and 67 per cent had perpetrated sexual violence against their wife, as compared to 39 percent and 43 percent, respectively, of older men (aged 36 to 50 years), in the 12 months preceding the interview (ICRW, 2002). Likewise, in the Youth in India study, 17 percent of 15-19 year-old boys and 25 percent of young men aged 20-24 reported having perpetrated non-consensual sexual touch or forced sex against a woman or girl (IIPS and Population Council, 2010). Young men also hold attitudes that justify men's entitlement to perpetrate violence against their wife in certain situations. For example, the Youth in India survey found that overall 54 percent of young men aged 15-24 believed that a man is entitled to perpetrate violence against his wife in at least one situation; similar findings were observed in an analysis of NFHS data from 2005-06 of boys aged 15-19 years (IIPS and Population Council, 2010; Dalal et. al., 2012).

Less well documented is the culture of violence among unmarried boys and young men, namely, their perpetration of gender-based violence on the one hand, and their perpetration of violence against younger or physically weaker boys (herein referred to as bullying) on the other. Also poorly understood in the Indian context are the factors that place young boys at risk of perpetrating violence against women and girls, and against other boys, and notably the role of exposure to violence while growing up, a factor consistently shown to have a significant effect in studies in developed nations (Reed, et. al. 2011; Wright et. al. 2013; Stoddard et. al. 2015; Davis et.al. 2015). The few studies that have examined the link between exposure to violence and gender role attitudes and perpetration of violence in India have relied on cross-sectional data drawn from boys aged 10-19 years in urban settings in Mumbai and Delhi (Das et al 2014; Peitzmeier et. al. 2016), and have concluded that witnessing inter-parental violence and experiencing violence in the home or community were associated with the perpetration of violence. While these studies have explored exposure to violence in the private, that is, in the home and public spheres, that is, in the community, they have not explored whether the linkages between exposure to violence while growing up on the one hand and gender role attitudes and perpetration of violence against girls and bullying on the other differed by the setting in which boys had been exposed to violence, that

is, private sphere compared to public sphere and whether the such linkages differed by the type of exposure, that is, witnessing compared to experiencing violence.

The objective of this paper is to explore the linkages between adolescent boys' and young men's exposure to violence, as defined by witnessing and experiencing violence in private spaces (i.e., within the home) and in public spaces (i.e., outside the home), and their attitudes about men's entitlement to perpetrate violence against women and girls, their perpetration of violence against girls and their perpetration of bullying.

Study setting

Our study was conducted in a rural setting in the state of Bihar. Bihar is the third largest state in the country and has a population of 104.1 million, constituting nine percent of India's population (in 2011). Young people in Bihar hold norms that condone violence against women and girls and the perpetration and experience of violence is also evident among them. As many as 20 percent of young men and women in Bihar had witnessed their father beating their mother, and 55 percent and 11 percent, respectively, had experienced violence perpetrated by a parent (IIPS and Population Council, 2009). Attitudes of the young continue to justify violence against women and girls: indeed, 44 percent of young men and 58 percent of young women agreed that women should be beaten in some circumstances.

Our study was based in Patna district, the district housing the state capital. Patna district constitutes six percent of the state's population, and about three-fifths of the district's population resides in rural areas.

Methods

Study design and participants

Our study draws on data from the evaluation of an intervention project titled 'Do Kadam' that focused on promoting egalitarian gender role attitudes and abhorrence of violence against women and girls among boys and young men aged 13-21. A panel design was employed for the evaluation, with surveys conducted before launching the intervention (baseline) and at its completion (endline) in intervention and control arms. The baseline survey was conducted during May–July 2013 and 1,149 boys in ages 13–21 from 30 clubs were interviewed. Following the baseline survey, clubs were randomised, with boys in 15 clubs designated to receive the intervention, and those in the remaining 15 clubs receiving no such intervention. In order to minimise loss to follow-up at the time of the endline survey, we undertook a tracking. Our endline assessment consisted of a follow-up survey of boys who had participated in the baseline survey (now in ages 14-23) and was conducted in January-March 2015, following the completion of the intervention programme (completed in December 2014). Here, we restrict our sample to boys and young men who were interviewed in the control arm; at baseline, 566 boys were interviewed and of those, 91 percent were re-interviewed 20 months following the baseline interview (N=517). We note that the sample size calculation in the larger study was based on the assumption that the intervention would reduce the proportion of boys in the ages 13–21 who condoned violence against women and girls, one of the main outcomes that the intervention sought to affect, by at least 20 percent. We also assumed an intra-cluster correlation of 0.05, an average cluster size of 10 boys per club, 80 percent power and a 95 percent confidence interval for our main outcome indicator, a 15 percent non-response, and 30 percent loss to follow-up at the endline survey. Thus, we estimated that we would require a minimum of 15 clubs and a minimum sample of 225 target boys per treatment arm. However, while in the field for data collection, we found that there were far more members in each club than we had assumed, and, as a result, we ended up interviewing 1,149 boys in ages 13–21 from 30 clubs. This increased sample size makes us confident about the robustness of outcome estimates.

The study protocol, including the questionnaires and the consent forms, was reviewed and approved by the Population Council's Institutional Review Board.

Measures Outcome Variables Our outcome variables included adolescent boys' and young men's attitudes toward violence against women and girls; their perpetration of violence against girls; and their perpetration of violence against boys who were younger or physically weaker than them, as assessed at the time of the endline survey.

We measured boys' attitudes about violence against women and girls by posing twelve statements that reflected attitudes justifying violence against women and girls. In order to identify items that grouped together, a principal component factor analysis was performed using variables representing each of the traditional attitudes justifying violence against women and girls. Twelve items grouped together: there are times when a girl/wife deserves to be beaten at times; a girl deserves to be beaten in a range of circumstances, such as, if she talks to a boy, if she goes out to play, if she stays out late, if she doesn't help in household chores, if she doesn't obey elders, and if she has an affair with a boy; and a man has the right to beat his wife in selected situations, such as, if he suspects her of being unfaithful, if she goes out without telling him, if she disobeys him, or if she makes a mistake. We created a summary measure by summing the number of situations in which a boy expressed attitudes rejecting a man's or boy's right to perpetrate violence on a woman or girl. Our index ranges from 0 to 12, with 0 reflecting greatest adherence to inegalitarian attitudes, and 12 reflecting greatest rejection of violence against women and girls (Cronbach's alpha : 0.89).

We assessed boys' perpetration of violence against girls by asking about various situations in which the respondent had perpetrated noncontact and contact forms of violence against girls in the 12 months preceding the endline interview. Noncontact forms of violence included, for example, passing comments, making obscene gestures, singing provocative songs as girls passed by on their way to school or a shop; staring at girls in a way that made them feel uncomfortable, following/stalking girls, shouting/yelling/using abusive language with at girl. Contact forms of violence included slapping a girl; kicking or pushing a girl, pulling her hair, hitting a girl with an object, beating up a girl; forcing a girl to watch pornographic movies or see pornographic printed materials, touching a girl in a sexual way or try to kiss them without her consent, forcing a girl to touch his private parts, and any attempt to force sex on a girl, whether or not sexual intercourse actually took place. We summarised all of these indicators into a dichotomous indicator reflecting whether the respondent had perpetrated any of the above forms of violence against a woman or girl in the previous 12 months.

We also measured boys' perpetration of violence on other boys. Specifically, we asked the respondent whether had had bullied, teased or beaten boys who were younger or physically weaker than him in the 12 months preceding the endline interview. We summarised all of these indicators into a dichotomous indicator reflecting whether the respondent had perpetrated any of the above forms of violence against another boy in the previous 12 months.

Explanatory variables

Our primary explanatory variables included: boys' witnessing contact forms of violence in the private and/or public space, and boys' experience of contact forms of violence in the private and/or public space, as measured in the baseline survey. Specifically, witnessing violence in the private space was captured by two questions: whether the participant had ever witnessed his father beating his mother and whether he had ever witnessed his mother beating his father. Experience of violence in the private space was captured by two questions: whether he had been beaten by his father and/or mother between the age of 12 and the time of the baseline interview as well as whether he had been beaten by his father and/or mother in the 12 months preceding the baseline interview. Questions on witnessing violence in public spaces included whether the participant had witnessed a friend or anyone else assaulting, abusing or sexually or molesting a girl, physically forcing a girl to have sex with him, hitting or beating his girlfriend, and using physical force to make his girlfriend have sex with him in the 12 months preceding the interview. Experience of any violence in the public spaces was captured by asking respondent whether he had been teased or beaten by another boy;, kicked or pushed him, pulled his hair, hit him with an object, beaten him up, threatened him with a knife or weapon, touched him in a sexual way against his will or forced him to touch someone else's private parts; and forced or threatened him to engage in sex in the 12 months preceding the interview. We created two separate summary indicators, with each having four categories. One of these indicators measured witnessing the perpetration of violence (did not witness violence in private or public spaces, witnessed violence in private spaces only, witnessed violence in public spaces only and witnessed violence in both private and public spaces). The second indicator captured respondent's experience of violence (did not experience in private or public spaces, experienced violence in private spaces only, experienced violence in public spaces only and experienced violence in both private and public spaces only and experienced violence in both private and public spaces only.

We controlled for the following confounding factors, also drawn from the baseline survey: the boy's age (13-14 years, 15-21 years), religion (Hindu, Muslim), caste (scheduled caste/scheduled tribe/other backward castes, and general castes), schooling (continuous variable measuring years of schooling completed), and household economic status measured by a wealth index composed of household asset data on ownership of selected durable goods (index scores ranged from 0 to 56). In the analysis of the two perpetration indicators, we also controlled for indexes of boys' gender role attitudes and notions of masculinity as well as their reports of perpetration of violence against girls and bullying, respectively, as expressed at baseline. Likewise, in the analysis of indicator regarding attitudes towards violence against women and girls, we controlled for baseline measure of boys' attitudes about violence against women and girls.

Analysis

In order to assess linkages between adolescent boys' and young men's exposure to violence at baseline, and their attitudes about men's entitlement to perpetrate violence against girls, their perpetration of violence against girls and their perpetration of bullying at endline, we used Generalised Estimating Equations (GEE) models. GEE models provide a method of individual-level regression modelling that allows for clustering without incorporating additional terms in the model for estimating cluster effects. GEE models assume that observations within the same cluster are correlated and adjust for such correlation (Hayes and Moulton, 2009).

We used STATA 13.0 software for data analysis.

Results

Characteristics of study participants

The baseline survey revealed that on average, boys were 16 years old, were Hindu (89%), and belonged to socially disadvantaged castes (85%). About half of the boys came from households with low or average economic status (mean score of 23 of a maximum of 56 on the household wealth index). Boys had completed ten years of schooling on average.

One-quarter of all boys had witnessed physical violence between parents at home (27%) and one-half had been beaten by a parent between the time they were 12 and the time of the baseline interview (51%; Table 1). Likewise, 2-9% had witnessed the perpetration of various forms of violence on a woman or girl by a peer or someone else from their community in the 12 months preceding the baseline interview, and considerable proportions had experienced various incidents of violence perpetrated by men or boys from the community, including verbal abuse or beating (28%), and to a lesser extent, physical or sexual violence (1-11%).

Background characteristics	
Socio-demographic characteristics	
Mean age (years)	15.6
Religion: % Hindu	89.4
Caste: % from scheduled castes or other backward castes	85.1
Mean years of schooling	9.9
Currently studying in school/college (%)	94.3

Engaged in paid work in the last 12 months (%)	18.0
Mean score, household wealth index (range 0–56)	22.7
Witnessed violence in private space	
Witnessed father beating mother (%)	25.9
Witnessed mother beating father (%)	1.0
Witnessed violence in any of the above situations	26.5
Experienced violence in private space	
Beaten by parents between the age of 12 and the time of the interview (%)	50.5
Experienced violence in any of the above situations	50.5
Witnessing violence in public spaces	
Witnessed a boy/man in his community perpetrating the following acts in the last 12 months preceding the interview	
Ever witnessed a friend/boy/man assaulting or abusing a girl sexually, or molesting her(%)	9.0
Ever witnessed a friend physically forced a girl to have sex (%)	4.6
Ever witnessed a friend hit/beat his girlfriend(s)(%)	2.1
Ever witnessed a friend forced his girlfriend to have sex(%)	2.1
Witnessed violence in any of the above situations (%)	12.7
Experience of violence in the 12 months preceding the interview outside home by persons other than parents	
Ever been teased or bullied in school by another boy (%)	27.7
	11.0
Ever been kicked/pushed/ had hair pulled by someone in the community (%)	11.0
Ever been kicked/pushed/ had hair pulled by someone in the community (%) Ever been beaten up or hit with an object by someone in the community(%)	11.0
Ever been beaten up or hit with an object by someone in the community(%)	11.2
Ever been beaten up or hit with an object by someone in the community(%) Ever been threatened with a knife/weapon by someone in the community(%)	11.2 1.6
Ever been beaten up or hit with an object by someone in the community(%) Ever been threatened with a knife/weapon by someone in the community(%) Ever been forced to touch someone's private parts by someone in the community(%)	11.2 1.6 2.9
Ever been beaten up or hit with an object by someone in the community(%) Ever been threatened with a knife/weapon by someone in the community(%) Ever been forced to touch someone's private parts by someone in the community(%) Ever been physically forced or threatened to engage in sex* (%)	11.2 1.6 2.9 1.3

Exposure toviolence in private and public spaces (baseline)

Figure 1 shows that one third of the boys had witnessed violence in either private or public space (34%). Specifically, 22% of the participants had witnessed violence in the private spaces only, that is, the home; 8% had witnessed violence in public spaces only, that is, the school or at community-level, and 5% had witnessed violence both in private and public spaces. Most boys (66%) had not witnessed violence in the home or outside the home.

On the other hand, most boys (62%) had experienced violence in the home or outside the home. One-fourth (25%) of the participants had experienced violence in the private space only, another onequarter had experienced in both private and public space, and 12% had experienced violence in public spaces only, that is, the school or at community-level (Figure 2). About two-fifths (38%) had not experienced violence in the home or outside the home.

Figure 1: Boys who witnessed violence in private and public spaces

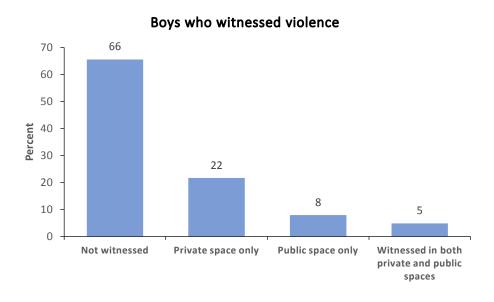
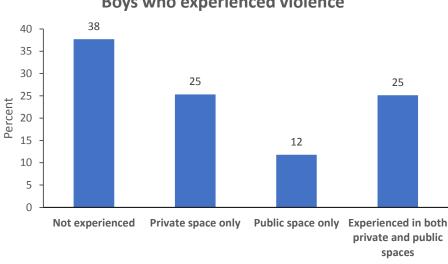


Figure 2: Boys who experienced violence in private and public spaces



Boys who experienced violence

Linkages between witnessing and experiencing violence at baseline and violence related attitudes and behaviours at endline

With regard to attitudes rejecting violence against women and girls, boys who had not witnessed any form of violence at baseline rejected the majority of statements condoning violence (7.2 of 12 statements), while boys who witnessed violence in just one of the two spaces rejected about 6-7 statements, and those who witnessed violence both at home and outside home both rejected just 6 statements (Table2). Overall, more than three-fifths (63%) of the boys reported having perpetrated at least one form of violence against girls, ranging from teasing a girl to forcing her to have sex with the participant 9in the 12 months preceding the endline interview. About one in three boys (31%) acknowledged perpetrating violence against other boys. Those who witnessed violence in both public and private spaces were most likely to have perpetrated violence against girls (83.3%) and against other boys (33.3%), compared to fewer of those in the remaining three categories (Table2).

Similarly when we look at experiencing violence at baseline with regard to attitudes rejecting violence against women and girls, boys who had not experienced any form of violence at baseline rejected as many as 7.7 of 12 statements, while boys who experienced violence in just one of the two spaces rejected about 6 statements, and similarly those who experienced both in private and public space rejected just 6 statements (Table 3). Those who experienced violence in both public and private spaces were most likely to have perpetrated violence against girls (70%) and against other boys (43.1%), compared to fewer of those in the remaining three categories (Table3).

Explanatory variables	Outcome indicators								
	Mean score, index of attitudes rejecting violence against women and girls (range: 0-12, Cronbach's alpha: 0.89) ¹	-	Perpetration of violence against other boys (% ²) **						
Not witnessed violence in private or public spaces	7.2	57.5	26.6						
Witnessed violence only in the private space	5.6***	66.1	42.9						
Witnessed violence only in public spaces	7.2	81.0	(35.7)						
Witnessed violence in both private and public spaces	6.4	(83.3)	(33.3)						
Number of respondents		517							

 Table 2 Bivariate associations between violence witnessed as reported at baseline and violence related attitudes and behaviour reported at endline

Note: ¹ t-test and ² chi-square test were used;*, ** and *** are significant at p<0.05, p<=0.010 and p<=0.001, respectively; () percentage based on less than 25cases

Table 3 Bivariate associations between violence experienced as reported at baseline and violence related attitudes and behaviour reported at endline

Explanatory variables	s Outcome indicators							
	Mean score, index of attitudes rejecting violence against women and girls (range: 0-12, Cronbach's alpha: 0.89) ¹	violence against	-					
Not experienced violence in private or public spaces	7.7	55.4	24.6					
Experienced violence only in the private space	6.7*	62.6	24.4					
Experienced violence only in public spaces	6.5	68.9	41.0					
Experienced violence in both private and public spaces	5.7***	70.0	43.1					
Number of respondents		517						

Note: ¹ t-test and ² chi-square test were used;*, ** and *** are significant at $p \le 0.05$, $p \le 0.010$ and $p \le 0.001$, respectively

Multivariate associations

Table 4 presents the multivariate associations between violence witnessed in private and/or public spaces at baseline and attitudes rejecting violence against women and girls on the one hand, and subsequent perpetration of violence against girls and other boys on the other, as reported at endline.

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The associations between witnessing violence in private and/or public spaces at baseline and perpetration of violence against girls, and other boys remained statistically significant even after adjusting forpotentially confounding covariates described earlier. Those boys who had witnessed violence only in public space and those boys who witnessed violence both in private and public spaces were significantly far more likely to have perpetrated violence against a woman or girl (odds ratio, 2.81 and odds ratio, 3.01 respectively). Compared with boys who had not witnessed any violence, those who had witnessed violence in the private space were slightly more likely to have perpetrated violence against a woman or girl in the 12 months preceding the endline interview, though the association was not significant. Associations with regard to the perpetration of violence against other boys, were somewhat weaker. It was boys who had witnessed violence only in private space, i.e intra-parental violence at home were significantly more likely than boys who had not witnessed any violence to have perpetrated violence against other boys in the 12 months preceding the endline survey (odds ratio, 1.5). Attitudes were clearly not affected by boys' witnessing violence in public and/or private spaces.

Similarly Table 5 presents the multivariate associations between violence experienced in private and/or public spaces at baseline and attitudes rejecting violence against women and girls on the one hand, and subsequent perpetration of violence against girls and other boys on the other, as reported at endline.

Experiencing violence had more significant effect than witnessing violence at public and/or private space in terms of perpetrating violence against girls and boys as well as attitudes rejecting violence against women and girls.

The findings suggest that even after confounding factors were controlled, boys who had experienced violence in the home (private space) were significantly less likely than those who had not experienced violence to hold attitudes rejecting violence against women. Those who had experienced violence in both private and public spaces were even more less likely to express such attitudes (GEE regression coefficients ranged from -0.75 among those who experienced violence only in the home to -1.04 among those who experienced violence in both spaces).

Similar to witnessing, (Table 4) the associations between experiencing violence in private and/or public spaces at baseline and perpetration of violence against girls, and boys remained statistically significant even after adjusting for potentially confounding covariates described earlier. Compared with boys who had not experienced any violence, those who had experienced violence in the private space were significantly more likely to have perpetrated violence against a woman or girl in the 12 months preceding the endline interview. While those who had witnessed violence only in the home were mildly more likely to have done so (odds ratio, 1.5), those who had experienced violence only in public and both private and public spaces were significantly far more likely to have perpetrated violence against a woman or girl (odds ratio, 1.7 and odds ratio, 1.9.2 respectively). Associations with regard to the perpetration of violence against other boys were somewhat milder. It was only boys who had experienced violence in only public space and both private and public spaces who were significantly more likely than boys who had not experienced any violence to have perpetrated violence against other boys in the 12 months preceding the endline survey (odds ratio, 1.9 and odds ratio 1.7). Those boys who experienced violence only in private space on the other hand were slightly more likely to perpetrate violence against other boys than those who had not experienced any violence.. However, this relationship was not significant.

Table 4: GEE regression coefficients/odds ratios showing associations between boys who witnessed violence at baseline and their attitudes about violence, and their perpetration of violence against women and girls, and other boys at endline

Indicator violence	of	exposure	to	Attitudes Perpetration of violence						ce		
				Attitudes against wo	rejecting	•	Perpetrated violence against girls			Perpetration of violence against other boys		
				Coefficie nts	p-value	[95% Conf. Interval]	Odd ratios	p- value	[95% Conf. Interva l	Odd ratios	p- value	[95% Conf. Interv al

Witnessing violence in private or public spaces, Ref category: Not witnessed)	l								
Violence witnessed only in the	1		-1.96-			0.79-			1.02-
private space	-0.87	0.121	0.22	1.36	0.255	2.33	1.55	0.040	2.3
Violence witnessed only in			-1.05-			1.16-			0.79-
public spaces	-0.05	0.914	0.95	2.81	0.021	6.76	1.46	0.218	2.68
Violence witnessed in both	1		-1.89-			1.19-			0.42-
private and public spaces	-0.33	0.674	1.22	3.01	0.019	7.57	1.02	0.954	2.46
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Number of respondents		517			517			517	

Table 5: GEE regression coefficients/odds ratios showing associations between boys subjected to violence at baseline and their attitudes about violence, and their perpetration of violence against women and girls, and other boys at endline

Indicator of exposure to violence		Attitudes								
				-	Perpetrated violence against girls			Perpetration of violence against other boys		
	Coefficie nts	p-value	[95% Conf. Interval]	Odd ratios	p- value	[95% Conf. Interva l	Odd ratios	p- value	[95% Conf. Interv al	
Experiencing violence in private or public spaces, Ref					\Box					
category: Not exposed										
Experienced violence only in the			-1.52-			1.03-			0.59-	
private space	-0.75	0.058	0.02	1.50	0.034	2.18	1.05	0.855	1.88	
Experienced violence only in			-1.42-			0.92-			1.02-	
public spaces	-0.52	0.246	0.03	1.70	0.085	3.11	1.89	0.040	3.49	
Experienced to violence in both			-2.04-			0.94-			1.24-	
private and public spaces	-1.04	0.040	-0.04	1.94	0.069	3.99	1.74	0.001	2.43	
Number of respondents	517			517			517			

Discussion

Our findings underscore the violence that pervades young boys' life while growing up: As many as 34 percent of the study participants had witnessed the perpetration of violence in the home or community, and 62 percent had been subjected themselves to such violence. The findings consistently suggest that exposure to violence in both public and private spaces is associated with attitudes upholding men's and boys' entitlement to perpetrate violence against women and girls, and elevates the likelihood of perpetrating violence against girls as well as other boys. These findings support other evidence that highlights the important role that exposure to violence in the family and the community environment play in placing boys at risk of perpetrating violence, both against girls, as well as against other boys (Menard et. al. 2014; Das et al 2014; Peitzmeier et. al. 2016).

Our study has gone beyond previous studies by assessing the relative roles of exposure to violence in private and public spaces Witnessing violence seem to have milder effects compared to experiencing violence on outcome like their attitudes about men's entitlement to perpetrate violence against women and girls, their perpetration of violence against girls and their perpetration of violence against boys younger or physically weaker than them at a later point in time Findings also highlight the role of the family in perpetuating or engendering boys' attitudes about violence against women and girls, as well in promoting or inhibiting their perpetration of violence against girls. They also suggest however that the association gradually become stronger when exposure to violence in the home is compounded by exposure to violence in the public space. Findings underscore the need for messaging to parents and

peers/teachers about the deleterious effects of violence in the home and outside home on the attitudes and behaviours of boys.

Study limitations must be noted. We acknowledged that study participants were members of youth clubs in Bihar, and therefore, their perspectives and experiences may not be representative of those of boys in Bihar more generally. We also note that while exposure to violence reflected the period prior to the baseline survey, and attitudes toward and the perpetration of violence reflect the situation in the year preceding the endline interview, the interval between the two interviews was roughly one year, making it difficult to shed light on how childhood exposure to violence affects attitudes and practices in later adolescence.

Despite these limitations, our study extends, in several ways, past work on the contribution of exposure to violence in private and public spaces on conditioning violent behavior and attitudes of adolescent boys and young men. For one, it focuses on unmarried adolescent boys aged 13-21 who have been studied lesser. Second, it focuses not only on the effect of violence within the home, but also the violence experienced and perpetrated in public spaces as well, and perpetrated against women and girls as well as against younger boys. Finally, unlike other studies that have drawn conclusions from cross-sectional data, this study draws on longitudinal data to explore the ways in which violence experienced while growing up influences gender role attitudes and practices at a later point in time.

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