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Research Article

How do College Students in India Respond to Gender-Based Violence (GBV)?

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Abstract

Rates of gender-based violence remain high during college in India, a time of adolescent malleability where gender norms, gender perspectives, and responses to violence are open to change. Few gender-based violence interventions focus on college students and even fewer on bystander intervention as a preventative approach - a concept novel to India.

This cross-sectional study reached 603 college students in India to examine current gender norms and perspectives, bystander intervention behaviours, and discussion of gender-based violence on campuses. Statistically significant differences were found between male and female college students in all scenarios of bystander intervention response and frequency of discussion of gender-based violence. Multinomial logistic regression analysis showed significant differences in those who had never seen violence or had a positive bystander intervention response, compared to those who responded negatively. Given the findings, targeting college students appears a promising approach to change the narrative of gender-based violence and norms in India.

Keywords:
Gender-Based Violence; Bystander Intervention; College Students; Gender Norms; India

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Introduction

Gendered perspectives of power and social norms establish themselves in adolescence, as boys and girls begin to form senses of self, obligation, and goals during this period of rapid development. In the Indian context, adolescent socialization on gender roles and how to dress, behave, and interact with the opposite sex are established by parents and may be enforced by physical violence [2]. Gender inequitable norms are often vertically transmitted from parent to child, demonstrated in parent-child concordance found between mothers and daughters on a girl's right to choose when to marry, marital contraceptive use, and acceptability of marital violence [15]. Though these gendered perceptions are built from early childhood, the period of 'youth' from age 15-24, when boys and girls participate in higher education, provides a unique opportunity where individual perceptions of gender norms remain malleable [17] This is also a time when adolescents have the opportunity to question and stimulate critiques of their actions, attitudes and perceptions of gender – many of which were taught to them as children [4,10].

Adolescence and early adulthood are high-risk periods for sexual harassment, trafficking, and honour killing in South Asia, as the onset of puberty brings girls out of the home and gives a new identity of independence [16]. Nearly thirty percent of women in India have experienced physical or sexual violence since age 15, most often committed by intimate partners [7]. Indeed, a recent study of adolescent boys in India showed that 78.1% of participants somewhat or highly condoned violence against girls, and 14.4% had previously perpetrated violence against girls [6]. In tandem to this increased risk of violence, social norms historically have discriminated against women's educational attainment due to their responsibility as caregivers and wives [1].

Fortunately, the roles of women in Indian society have been shifting rapidly. There are currently 17.4 million women, more than ever in history, participating in higher education in India and increasing in almost all cities [8]. Gender parity in Indian education is currently 0.97, a large increase from 0.86 in 2010 [8]. This means that more female college students than ever are exposed to the risk of gender-based violence (GBV) based on campus culture, first time experiences with independence, and the building of social networks (including romantic relationships) outside the family sphere of influence [9]. In a rapid assessment of India, Natarajan found widespread harassment experienced by 70% of female college student participants, who reported taking 20 different precautionary steps to avoid eve teasing[1,14]. Furthermore, in a study of 21 countries, India was found to have consistently high patterns of physical assault and sexual coercion reported by university students [3].

A bystander intervention occurs when someone who witnesses a possible situation or act of gender-based violence then *intervenes* to prevent initial or continued harm of violence [5]. The bystander intervention approach is novel in its efforts to prevent violence through witnesses of the act, compared to prevention through victims or perpetrators. Though bystander intervention is a newly burgeoning field in gender-based violence prevention in the United States, similar studies and interventions are rare or non-existent internationally. In a literature review of gender-based violence studies in India, only two studies on bystander intention to intervene were found. The first focused on a men's-only athletic gender-based violence prevention training program in Mumbai [11] and the other was dedicated to comparing factors affecting bystander intervention in multiple countries [9].

An understanding of the unique risks, causes, and situations related to gender-based violence on college campuses is critical to help with prevention of violence. Perpetration of violence against women and girls in India has been found to be strongly correlated with gender norms and perspectives that support inequitable attitudes towards women, such as harmful notions of masculinity, femininity, and expectations of female accommodation to male needs [6]. Unfortunately, few studies have been completed in India on the existing gender norms and perspectives of college students or how they react to gender-based violence in real time (such as bystander response and intervention).

This cross-sectional study analysed the data collected from a large sample of male and female college-students in India to examine current gender norms and perspectives, attitudes towards bystander intervention, and knowledge and discussion of gender-based violence on college campuses in India. College students, at the cusp of adolescence and young adulthood, must be incorporated into current strategies to prevent gender-based violence in India.

Materials and Methods

Study Design

A cross-sectional, convenience sample of male and female college students in India (primarily Delhi and Hyderabad), were recruited for a quantitative survey via university administrators and snowball sampling with students (primarily in Hyderabad and Delhi). Though there were no age limits placed on participation, participants ranged from 16 to 24 years of age, which reflects the common demographics of Indian college students. The researchers utilized a snowball sampling strategy, encouraging students to share the survey with their friends and classmates to reach a larger sample size. The survey and study design were reviewed and approved by the Institutional Review Board (IRB) at the George Washington University Office of Human Research (IRB#180620).

Instrument and Measures

Data was collected using a 24-item, anonymous online questionnaire, taking less than 12 minutes to complete in entirety. The survey instrument was developed in English and was either self-administered by participants or administered in class by university officials (such as professors) who provided some direct translation from English to the local language. No identifying information was collected from college students on the survey.

There were five sociodemographic questions included, asking age, gender, living location, college, and marital status. The remainder of the survey collected data on gender equitable attitudes, perception of gender norms and violence, knowledge and discussion of gender-based violence, bystander intervention behaviours, and social media usage.

Gender Equitable Attitudes

To determine gender equitable attitudes and perceptions among college students in India, the survey adapted six gender equitable statements developed by Vyas et al. for the evaluation of the Girl Rising gender-sensitization program in India (2019)[10,13,17]. Participants were asked if they strongly agreed, agreed, disagreed, or strongly disagreed with the six gender equitable attitude statements. The statements were: (1) *The traditional view that a man is the head of the family and responsible for providing economically for the family is still correct; (2) A wife should always obey her husband; (3) Men cannot take care of children as well as women can; (4) A woman should tolerate violence in order to keep her*

family together; (5) Teasing is harmless fun; and (6) Girls should be allowed to decide when they want to marry. Responses to the gender equitable attitude statements were collapsed into agree (1 = positive gender attitude) and disagree (0 = negative gender attitude) categories. Negatively worded statements were reverse coded. Based on the summation of the statements, a 'gender equitable attitude' score was calculated ranging from 0 (completely negative gender attitude response) to 6 (completely positive gender equitable response).

Prevalence and Communication of Gender-Based Violence

Participants were asked if they knew anyone at their college who has faced gender-based violence. This question was asked as a proxy measure to measure the prevalence of gender-based violence on college campuses taken from the Global Early Adolescent Study [4]. Finally, participants were asked if they very often, sometimes, rarely, or never discussed the topic of gender-based violence with their friends.

Bystander Intervention Behaviors

This study adapted three intention to intervene questions from the "Coaching Boys into Men" (CBIM) study conducted in Sacramento County, CA on physical, sexual, and cyber gender-based violence [12]. For each of the three instances of gender-based violence witnessed among peers or friends, survey participants were asked to report how they responded to said behavior the last time they saw it happen. Participants were given a list of two positive ("I reported it to the police or other authorities"; and "I felt really bad and I stopped the act in the moment"), three negative ("I joined them"; "This is normal, it happens all the time, I did not do anything"; and "I did not feel good about it, but I did not do anything"), and one neutral response ("I have never-seen this happen") to choose from. Responses were categorized by positive, negative, or never-seen responses per situation.

Data Analyses

All data cleaning and quantitative analysis were conducted with IBM SPSS Statistics Version 25. Descriptive analysis was conducted to understand the characteristics of the study sample, check for normality and confirm test assumptions, note missing data, and evaluate variable variance. Bivariate and multivariable statistical analysis was conducted using chi-square, t-tests, and ANOVA to assess differences in indicators by age, living situation, marital status, gender, and city. Spearman's correlation analysis was run at the 0.01 level (2-tailed) to determine associations between age and continuous outcomes, such as frequency of gender-based violence discussion. Multinomial logistic regression analysis was conducted to examine those who had taken a positive vs. a negative bystander intervention, controlling for those who reported having never seen gender-based violence previously.

Results

(Table 1), below, represents the sociodemographic characteristics of the 603 study participants, all of whom were college students in India. Though 603 participants took the survey, only 505 completed the survey in its entirety. The proportion of male to female participants was 30.7% to 69.3%, respectively; given the stronger representation of females in the data sample, all analysis was disaggregated by gender. The majority of participants attended college in Delhi (26.9%) or Hyderabad (47.3%). Approximately 25.8% of participants came from other cities in India where representation in the sample was less than 5%, such as Bhubaneswar (4.48%), Cuttack (3.98%), and Mumbai (1.99%). The mean age of participants was 19.02 (SD = 2.141), with females being approximately a year younger on average than males (18.75, SD 2.025 compared to 19.63, SD = 2.271, respectively). Nearly all (98.3%) of participants reporting their marital status as single. Regarding current living context, most of the participants (63.5%) were still living at home with their family, despite attending college.

Gender Equitable Attitudes

Based on the summation of the six gender equitable statements, as previously noted, a 'gender equitable attitude' score was calculated ranging from 0 (completely negative gender attitude response) to 6 (completely positive gender equitable response). Table 2 shows the results of the gender equitable attitude score tabulation, broken down by demographics. The mean gender equitable score demonstrated that, on average, participants responded equitably to at least 4 of the 6 statements, resulting in a participant

Table 1. Participant Sociodemographic Characteristics (n=603)

	Delhi % (n) or Mean (SD) (n=162)	Hyderabad % (n) or Mean (SD) (n=285)	Other* % (n) or Mean (SD) (n=156)	Total % (n) or Mean (SD) (n=603)
Gender				
Male	25.3% (41)	27.0% (77)	42.9% (67)	30.7% (185)
Female	74.7% (121)	73.0% (208)	57.1% (89)	69.3% (418)
Mean Age (years)				
Male	20.41 (1.673)	17.99 (1.577)	21.03 (2.074)	19.63 (2.271)
Female	19.63 (1.259)	17.45 (1.281)	20.58 (2.230)	18.75 (2.025)
Total Sample	19.83 (1.412)	17.60 (1.385)	20.78 (2.169)	19.02 (2.141)
Marital Status				
Single	99.4% (161)	98.6% (281)	96.8% (151)	98.3% (593)
Married	0.6% (1)	0.4% (1)	3.2% (5)	1.2% (7)
Divorced/Separated or Widowed	0% (0)	1.0% (3)	0% (0)	0.5% (3)
Living context				
At home with my family	53.1% (86)	73.3% (209)	56.4% (88)	63.5% (383)
At my college hostel	17.3% (28)	17.5% (50)	30.1% (47)	20.7% (125)
With friends but not at my college	14.2% (23)	3.2% (9)	7.1% (11)	7.1% (43)
By myself but not at my college	6.2% (10)	1.4% (4)	3.2% (5)	3.2% (19)
Other	9.3% (15)	4.6% (13)	3.2% (5)	5.5% (33)

* Other represents those participants attending colleges in Indian cities from which there were <5% total participants represented.

average score of 4.69 (SD = 1.384). Female college students reported slightly higher scores than males with a mean score of 4.69 (SD = 1.384) compared to the mean score for males which was 4.44 (SD = 1.516), though the difference was not statistically significant.

There was a strong positive correlation between age and gender equitable score, which was statistically significant (r_s = 0.367, p<0.001), demonstrating a potential association between increase in age and increase in gender equitable attitudes. There were also statistically significant differences between mean gender equitable attitude scores by city, with Delhi having the highest mean score (5.50, SD = 0.779) and Hyderabad reporting the lowest mean score (3.92, SD = 1.444). Participants currently living away from family reported a slightly higher mean score (4.63, SD = 1.439) compared to participants still living with their family (4.57, SD = 1.422), though those differences were not statistically significant.

Prevalence and Communication of Gender-Based Violence

A direct measure of prevalence of gender-based violence through individual participant experiences was not taken through this survey. Instead, participants were asked whether or not they knew someone at their college who had faced gender-based violence, the results of which are depicted in Table 3. Approximately 24.7% of participants stated that they knew someone at their college who had experienced

Table 2. Gender Equitable Attitudes Score

	Gender Equitable Attitudes Score (Scale 0-6) Mean (SD) or r_s (p-value)* (n = 521)
Gender	(p = .064)
Male	4.44 (1.516)
Female	4.69 (1.384)
Total Sample	4.61 (1.428)
Age (years) ***	0.367 (p<0.001)
City ***	(p<0.001)
Delhi	5.50 (0.779)
Hyderabad	3.92 (1.444)
Other	4.92 (1.300)
Housing Location	(p = 0.083)
Living with family	4.57 (1.422)
Not living with family	4.68 (1.439)

Statistical Significance:
* p<.05;
** p<.01;
*** p<.001
* Spearman's Correlation tabulated at the 0.01 level (2-tailed).

gender-based violence. On average, college students who reported knowing someone who had faced gender-based violence (19.77, SD = 2.015) were approximately a year older than those who did not report knowing anyone (18.68, SD = 2.049), and this difference was statistically significant (p<0.001).

In Delhi, more than 38% of participants reported knowing someone who had faced gender-based violence compared to 13% in Hyderabad (p<0.001). College student participants who were no longer living at home with their family were 7% more likely to report knowing someone at their campus who had faced gender-based violence, but this difference was not statistically significant.

Participants were also asked how often they discussed the topic of gender-based violence on a Likert scale of never (1), rarely (2), sometimes (3), and very often (4). Table 4 represents the average frequency of discussion of gender-based violence per demographic category of participant responses. Overall, participants reported a mean frequency of 2.66 (SD = 0.847) talking about gender-based violence, in between rarely and sometimes discussing gender-based violence with friends. Male college students reported discussing gender-based violence with friends less frequently than female college students in India (2.51 vs 2.72, p <.01). There was a negative correlation between age and frequency of discussion, which was statistically significant (r_s = -0.225, p<0.001). Participants from Hyderabad discussed gender-based violence the least frequently (2.46, SD = 0.805) and from Delhi the most frequently (2.86, SD = 0.793), on average, out of the city categories (p <.001). Participants living with family spoke about gender-based violence about as frequently as those who did not, though the finding was not statistically significant.

Table 3. Prevalence and communication of gender-based violence (GBV)

	Do you know someone at your college who has faced GBV?		Discussion of GBV
	Yes % (n) or Mean (SD) (n=133)	No n (%) or Mean (SD) (n=405)	Frequency Mean (SD) or r_s (p-value) * (n=316)
Gender	(p=0.664)		(p = 0.008)
Male	23.2% (38)	76.8% (126)	2.51 (0.861)
Female	25.4% (95)	74.6% (279)	2.72 (0.833)
Total Sample	24.7% (133)	75.3% (405)	2.66 (0.847)
Age (years) ***	(p<0.001)		(p<0.001)
	19.77 (2.015)	18.68 (2.049)	-0.225
City ***	(p<0.001)		(p<0.001)
Delhi	38.4% (56)	61.6% (90)	2.86 (0.793)
Hyderabad	13.1% (33)	86.9% (219)	2.46 (0.805)
Other	31.4% (44)	68.6% (96)	2.80 (0.899)
Housing Location	(p = 0.077)		(p = 0.265)
Living with family	22.2% (75)	77.8% (263)	2.69 (0.862)
Not living with family	29.0% (58)	71.0% (142)	2.61 (0.820)

Statistical Significance:
* p<.05;
** p<.01;
*** p<.001
* Spearman's Correlation tabulated at the 0.01 level (2-tailed).

Bystander Intervention Behaviors

The bystander intervention behaviors in the survey asked students to report what they did the last time they saw people their age or friends committing one of three different acts of gender-based violence: (1) eve teasing (i.e., howling, whistling, or eve teasing a girl or group of girls); (2) cyber-bullying (i.e., showing other people sexual messages or sexual pictures of a girl on a cell phone or the internet); and (3) physical abuse (i.e., pushing, grabbing, or otherwise physically hurting a girl). Table 4 reports the frequency of positive, negative, and never-seen bystander response in relation to participant demographics.

Differences in frequency of positive, negative, or never-seen bystander response by males and females were statistically significant across all three scenarios. Female college students were more likely than males by at least 9% in all three situations to have last intervened when they saw any of the three behaviors happening. In the case of eve teasing, both male (32.9%) and female (36.3%) participants who had ever witnessed an example of this type of gender-based violence were more likely to have had a negative than a positive bystander response (p<0.05). In the case of cyber-bullying, males were almost twice as likely as females to have had a negative bystander response (33.6% vs 14.2%, p<<0.001). Regarding witnessed physical abuse, both male and female students reported the highest frequency of positive bystander responses of all three abuse types, at 30.3% and 43.6% of participants, respectively.

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Table 4. Bystander Intervention Behaviors (Positive Response, Negative Response, or Never-Seen)

	Eve Teasing % (n) or mean (SD) (n = 505)			Cyberbullying % (n) or mean (SD) (n = 505)			Physical Abuse % (n) or mean (SD) (n = 505)		
Gender	**Positive Response**	**Negative Response**	**Never Seen**	**Positive Response**	**Negative Response**	**Never Seen**	**Positive Response**	**Negative Response**	**Never Seen**
Total Sample	33.3% (168)	35.2% (178)	31.5% (159)	32.1% (162)	20.0% (101)	47.9%(242)	39.6% (200)	11.1%(56)	49.3% (249)
Male	27.0% (41)*	32.9% (50)	40.1% (61)	25.7% (39)***	33.6%(51)	40.8%(62)	30.3% (46)**	9.9%(15)	59.9%(91)
Female	36.0% (127)	36.3% (128)	27.8% (98)	34.8% (123)	14.2%(50)	51.0%(180)	43.6% (154)	11.6%(41)	44.8% (158)
Mean Age (years)	18.79 (2.156)	19.09 (2.012)	18.89 (2.030)	18.99 (2.178)	19.05 (1.889)	18.84 (2.065)	18.88 (2.102)	18.54 (1.716)	19.05 (2.105)
City									
Delhi	22.1% (31)*	40.7% (57)	37.1% (52)	24.3% (34)**	27.9%(39)	47.9%(67)	32.1% (45)**	5.7%(8)	62.1%(87)
Hyderabad	38.8% (90)	30.6% (71)	30.6% (71)	32.3% (75)	15.9%(37)	51.7%(120)	41.8% (97)	14.7%(34)	43.5% (101)
Other	35.3% (47)	27.1% (36)	27.1% (36)	39.8% (53)	18.8%(25)	41.4%(55)	43.6% (58)	10.5%(14)	45.9%(61)
Housing Location									
Living with family	33.6% (108)	33.3% (107)	33.0% (106)	31.2% (100)	20.6%(66)	48.3%(155)	37.7% (121)	11.2%(36)	51.1% (164)
Not living with family	32.6% (60)	38.6% (71)	28.8% (53)	33.7% (62)	19.0%(35)	47.3%(87)	42.9% (79)	10.9%(20)	46.2%(85)

Statistical Significance:
* p<.05;
** p<.01;
*** p<.001

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The majority of students responded that they had witnessed an example of eve teasing (68.5%), cyber-bullying (52.1%), and physical abuse (50.7%) as described. In all abuse types, at least 30% of the total sample reported never having witnessed an example of that type of gender-based violence – that is, 32.1% reported never witnessing eve teasing, 47.9% reported never witnessing cyber-bullying of the kind described, and 49.3% reported never witnessing physical abuse of a girl. Males were more likely than females to report never witnessing a situation of eve teasing by 12.3% (40.1% vs 27.8%, $p<0.05$) or physical abuse by 15.1% (59.9% vs 44.8%, $p<0.01$).

Differences in frequency of negative, positive, or never-seen response across city categories were statistically significant across all three scenarios. Participants who attended college in Delhi were more likely than those in Hyderabad or Other to have last had a negative bystander response to eve teasing (40.7%) or cyber-bullying (27.9%). However, participants attending college in Hyderabad were 9% more likely than those in Delhi to have had a negative bystander response to physical abuse (14.7% vs 5.7%, $p<0.01$). Differences in positive, negative, and never-seen bystander response to the three scenarios were not statistically significant for age or current housing location.

(Table 5) below presents the multinomial regression for each type of gender-based violence (eve teasing, cyber bullying, and physical abuse) to examine those who reported not witnessing or having a positive bystander response, compared to those who had a negative bystander response. Statistically significant results were found across all three scenarios.

Eve teasing. As the mean for gender equitable attitude scores increases (OR 1.27; 95% CI 0.84 – 1.13), participants were more likely to have not witnessed eve teasing than to have had a negative bystander

Table 5. Multinomial Regression for Type of Violence

	Eve Teasing OR (CI)	Cyberbullying OR (CI)	Physical Abuse OR (CI)
Never Seen			
Age	0.97 (0.84 – 1.13)	1.09 (0.93 – 1.29)	0.98 (0.82 – 1.21)
Gender Equitable Attitude Score	1.27 (1.04 – 1.55)*	1.63 (1.31 – 2.03)***	1.60 (1.26 – 2.04)***
Frequency Scale – GBV Discussion	0.70 (0.53 – 0.93)*	0.91 (0.66 – 1.24)	1.02 (0.70 – 1.49)
Male	1.6 (1.0 – 2.22)*	0.31 (0.18 – 0.53)***	2.04 (1.02 – 4.08)*
Delhi	1.34 (0.73 – 2.47)	0.51 (0.26 – 1.00)	2.23 (0.84 – 5.94)
Hyderabad	1.39 (0.68 – 2.84)	2.53 (1.13 – 5.67)**	0.94 (0.38 – 2.37)
Do you know someone at your college that has faced GBV?	0.45 (0.25 – 0.80)**	0.65 (0.37 – 1.17)	0.40 (0.20 – 0.83)
Positive Bystander Response			
Age	1.0 (0.89 – 1.15)	1.12 (0.95 – 1.31)	1.03 (0.85 – 1.25)
Gender Equitable Attitude Scale	0.89 (0.78 – 1.17)	1.00 (0.81 – 1.24)	1.19 (9.94 – 1.49)
Frequency Scale – GBV Discussion	1.13 (0.85 – 1.49)	1.23 (0.91 – 1.75)	1.14 (0.78 – 1.67)
Male	0.77 (0.47 – 1.27)	0.26 (0.15 – 0.46)***	0.90 (9.45 – 1.82)
Delhi	0.58 (0.31 – 1.07)	0.34 (0.1 – 0.70)	2.22 (0.84 – 5.94)
Hyderabad	1.32 (0.68 – 2.54)	1.11 (0.49 – 2.52)	0.94 (0.38 – 2.37)
Do you know someone at your college that has faced GBV?	1.28 (0.77 – 2.12)	0.55 (0.30 – 1.04)	0.40 (0.20 – 0.83)**

Statistical Significance:
* $p<.05$;
** $p<.01$;
*** $p<.001$

response. Compared to a negative bystander response, as participants had more discussions on gender-based violence (OR 0.70; 95% CI 0.53 – 0.93), they were 30% less likely to have reported not witnessing eve teasing. Males (OR 1.6; 95% CI 1.0 – 2.22) were 60% more likely than females to report not having witnessed eve teasing compared to having had a negative bystander response to the same. Finally, those participants who knew someone in college who had faced gender-based violence (OR 0.45; 95% CI 0.25 – 0.80) were less likely to have never witnessed eve teasing compared to having a negative bystander response to eve teasing.

Cyberbullying. Participants with a higher gender equitable attitude score (OR 1.63; 95% CI 1.63 – 2.03) were more likely to not have witnessed cyberbullying compared to having a negative bystander response for this type of violence. Furthermore, males (OR 0.31; 95% CI 0.18 – 0.53) also were less likely than females to not have witnessed cyberbullying compared to engaging in a negative bystander response. Moreover, males (OR 0.26; 95% CI 0.15 – 0.46) were significantly less likely than females to have a positive bystander response than a negative one to cyberbullying. Finally, those participants living in Hyderabad were more likely to never have witnessed cyberbullying among their peers when compared to having had a past negative bystander response to cyberbullying than the other cities, including Delhi.

Physical Abuse. Participants with a higher gender equitable attitude score (OR 1.60; 95% CI 1.26 – 2.04) were more likely to not have witnessed physical abuse compared to those who had engaged in a negative bystander response for this type of violence. Males (OR 2.04; 95% CI 1.02 – 4.08) were more likely than females to have never seen physical abuse compared to those who had a negative bystander response for this type of violence. Finally, those participants who knew someone in college who had faced gender-based violence (OR 0.40; 95% CI 0.20 – 0.83) were less likely to not have seen physical abuse compared to having a negative bystander response for this type of violence.

Discussion

This cross-sectional study draws attention to the prevailing gender attitudes and stereotypes on college campuses in India, while also highlighting the strong potential for bystander intervention training to combat gender-based violence. The foundation for gendered attitudes, violence, and bystander response to witnessed violence is built through the years of youth and adolescence, structured by family, societal norms, attitudes [2,6,10,15,17].

Researchers have found that construction of gender attitudes and perceptions continues through the age where Indian students normally enter college [10].

Without intervention, these inequitable behaviors and attitudes will persist into adulthood. However, with focused preventative efforts, such as gender sensitization programs, college can instead be a period of significant positive change for these adolescents. Indeed, the unique risks faced by girls entering higher education in India are paralleled by the unique opportunities for change in gender norms and perspectives through gender sensitization and bystander intervention programming.

A critical finding of the study is that over 25% of participants in each given scenario of gender-based violence reported positive bystander intervention – either by reporting the violence to the police or stopping it in the moment. Interestingly, females were more likely than males in instances of eve teasing or physical abuse to have had a negative bystander response. This finding is in line with previous studies which discovered mothers as the primary actors in socializing adolescents in gendered behaviours, roles, and attitudes [2,15]. Since there was only one example of bystander intervention training in India found related to male athletes [11], more research is warranted on the effectiveness of bystander intervention training targeted at both male and female college students in India, as a preventative method for gender-based violence.

However, the number of participants who report having "never-seen" the surveyed scenarios of violence is concerning. Given the reported prevalence of these types of violence in India, it is unclear from the study findings if participants having "never-seen" the given scenarios of gender-based violence have truly never witnessed or simply do not know how to recognize these types of violence in their community. This is one interpretation of the multinomial regression models, where there was much more statistical significance amongst those participants in all three scenarios of gender-based violence that had never seen that type of violence compared to those participants who had a negative bystander

response for all three types of violence. Since women are more often the targets of gender-based violence, it is unsurprising that more female than male college students both know someone who has faced violence on their college campus (25.4% vs 23.2%) and report having witnessed two of the three scenarios of gender-based violence (72.2% vs. 50.9%, $p<0.05$ for eve teasing and 55.2% vs. 60.1%, $p<0.01$ for physical abuse). If these students are not recognizing violence and their community due to lack of knowledge and awareness as to what constitutes gender-based violence, then it points to a strong need for gender sensitization and prevention of bystander intervention training in those communities. In the multinomial logistic regression analysis, the results also demonstrated that male students were more likely than female students to have not witnessed the surveyed scenarios of gender-based violence compared to having a negative bystander response. Outside of the potential aforementioned explanation that men simply do not know how to recognize gender-based violence when they see it, these results also support the context that women are much more often the victim of these types of violence. More research should be done to provide more evidence for, as well as a baseline understanding of, gender-based violence experiences and risks on college campuses in India.

The study results also mirrored previous findings about male adolescents prior to college and their gender inequitable attitudes. Male college students reported lower gender equitable scores than females in this study, as well as lower frequency of discussion of gender-based violence with their friends. In tandem with other research on adolescents in India [2,6,10,15,13] these findings strengthen the argument that males must be included in the conversations of gender-based violence prevention. Sensitizing these adolescent boys on how they can be a positive change-maker in situations of violence may well change the narrative of gender-based violence and gender attitudes on college campuses.

Finally, the statistically significant differences in gender attitudes and bystander intervention responses demarcate that more work must be done to understand the unique contexts of each Indian city. Across the study results, Delhi, Hyderabad, and the Other city categories had statistically significant differences in gender attitudes and bystander intention to intervene. Delhi, for example, had a higher percentage of negative bystander intervention intentions than did Hyderabad and Other for the first two scenarios (eve teasing and cyberbullying). It may then be unsurprising, based on data from previous studies which demonstrate gender-based violence is strongly correlated with inequitable attitudes [6] , that Delhi also had the highest prevalence of exposure to gender-based violence. It is unclear from the data what these differences are due to, but this points to the need for interventions focused on gender-based violence prevention to be contextualized to the city environment so as to be effective, instead of using a "one-size-fits-all" approach.

Harmful gender norms and inequities passed on from parents are often perpetuated in the college and higher education environment. Few interventions have focused on college students as a primary target audience to break the cycle of gender inequity, and even fewer studies have focused on bystander intervention as a preventative approach to gender-based violence. Given the findings of the study, programming targeting college students during this time of malleability, in partnership with institutions of higher education, may be a promising approach to change the narrative of gender attitudes and gender-based violence. Furthermore, because bystander strategies engage others in the prevention of gender-based violence, through increasing awareness of gender-based violence and the behaviors to safely intervene, training should be provided to students on these interventions to better understand gender-based violence and safely intervene. This approach is novel to India – and yet has proved promising in the United States and can be easily adapted to the Indian context. As more women than ever break away from the cycle from father to husband, college provides a unique environment in which adolescents can challenge the gender norms passed on from their families – changing the narrative of gender equity for generations to come.

Limitations

The findings of this study are elucidating and have important implications for future work and research conducted related to gender-based violence, norms, and perceptions of college students in India. That being said, there are several limitations to this study that should be highlighted. The survey instrument was not directly translated into the local language, and thus respondents may have had readability and understanding issues when filling out the survey. Furthermore, many college students in India do not

have mobile phones, computers, or internet access – and therefore may not have been able to fill out surveys, potentially skewing the sample. Due to these barriers to filling out the survey, as well as the use of a convenience sample, the generalisability of these findings to college students outside of Hyderabad and Delhi is limited. Gender equity as a concept is well known across India; thus, it is possible that the social desirability of answering "correctly" may have affected respondent choices for the survey. This bias was likely small in scope since the surveys were anonymous and taken individually. Finally, this was a cross-sectional study which means that causal inferences cannot be drawn from the data.

Affiliations

All authors were at The George Washington University during their primary contribution to this study.

Ethics

All procedures for this study, including protection of human subjects, were reviewed and approved by the Institutional Review Board (IRB) at the GW Office of Human Research.

Competing Interests

The authors have declared that no competing interests exist.

This manuscript has not been published elsewhere and is not under submission elsewhere.

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Euphemism used throughout South Asia for public sexual harassment in India.

References

1. Andres, L. A., Dasgupta, B., Joseph, G., Abraham, V., & Correia, M. (2017). Precarious Drop: Reassessing Patterns of Female Labor Force Participation in India. https://doi.org/10.1596/1813-9450-8024
2. Basu, S., Zuo, X., Lou, C., Acharya, R., & Lundgren, R. (2017). Learning to Be Gendered: Gender Socialization in Early Adolescence Among Urban Poor in Delhi, India, and Shanghai, China. *Journal of Adolescent Health*, 61(4, Supplement), S24–S29. https://doi.org/10.1016/j.jadohealth.2017.03.012
3. Chan, K. L., Straus, M. A., Brownridge, D. A., Tiwari, A., & Leung, W. C. (2008). Prevalence of Dating Partner Violence and Suicidal Ideation Among Male and Female University Students Worldwide. *Journal of Midwifery & Women's Health*, 53(6), 529–537. https://doi.org/10.1016/j.jmwh.2008.04.016
4. Chandra-Mouli, V., Plesons, M., Adebayo, E., Amin, A., Avni, M., Kraft, J. M., … Malarcher, S. (2017). Implications of the Global Early Adolescent Study's Formative Research Findings for Action and for Research. *Journal of Adolescent Health*, 61(4), S5–S9. https://doi.org/10.1016/j.jadohealth.2017.07.012
5. Coker, A. L., Bush, H. M., Fisher, B. S., Swan, S. C., Williams, C. M., Clear, E. R., & Degue, S. (2016). Multi-College Bystander Intervention Evaluation for Violence Prevention. *American Journal of Preventive Medicine*, 50(3), 295–302. https://doi.org/10.1016/j.amepre.2015.08.034
6. Das, M., Ghosh, S., Verma, R., O'Connor, B., Fewer, S., Virata, M. C., & Miller, E. (2014). Gender attitudes and violence among urban adolescent boys in India. *International Journal of Adolescence and Youth*, 19(1), 99–112. https://doi.org/10.1080/02673843.2012.716762
7. IIPS/India, I. I. for P. S.-, & ICF. (2017). India National Family Health Survey NFHS-4 2015-16. Retrieved from https://dhsprogram.com/publications/publication-FR339-DHS-Final-Reports.cfm

8. India Ministry of Human Resources Development. (2018). *ALL INDIA SURVEY ON HIGHER EDUCATION 2017-18* (p. 296). Department of Higher Education, Government of India.
9. Kamimura, A., Trinh, H. N., Nguyen, H., Yamawaki, N., Bhattacharya, H., Mo, W., … Olson, L. M. (2016). Bystander Attitudes to Prevent Sexual Assault: A Study of College Students in the United States, Japan, India, Vietnam, and China. *The Journal of Sex Research*, 53(9), 1131–1138. https://doi.org/10.1080/00224499.2016.1184605
10. Landry, M., Vyas, A., Malhotra, G., & Nagaraj, N. (2019). Adolescents' development of gender equity attitudes in India. *International Journal of Adolescence and Youth*, 0(0), 1–10. https://doi.org/10.1080/02673843.2019.1590852
11. Miller, E., Das, M., Tancredi, D. J., McCauley, H. L., Virata, M. C. D., Nettiksimmons, J., … Verma, R. (2014). Evaluation of a gender-based violence prevention program for student athletes in Mumbai, India. *Journal of Interpersonal Violence*, 29(4), 758–778. https://doi.org/10.1177/0886260513505205
12. Miller, E., Tancredi, D. J., McCauley, H. L., Decker, M. R., Virata, M. C. D., Anderson, H. A., Silverman, J. G. (2012). "Coaching boys into men": a cluster-randomized controlled trial of a dating violence prevention program. *The Journal of Adolescent Health: Official Publication of the Society for Adolescent Medicine*, 51(5), 431–438. https://doi.org/10.1016/j.jadohealth.2012.01.018
13. Nagaraj, N., Vyas, A., Landry, M. (2019). Adolescents' Perceptions of Gender Discrimination in India: Do Perceptions Differ for Boys and Girls? *Journal of Public Health international*, 2(1), 1-12. https://doi.org/10.14302/issn.2641-4538.jphi-19-2995
14. Natarajan M. Rapid assessment of "eve teasing" (sexual harassment) of young women during the commute to college. 2016. In India. Crime Science, 5(1): 1-6. https://doi.org/10.1186/s40163-016-0054-9
15. Raj, A., Ghule, M., Battala, M., Dasgupta, A., Ritter, J., Nair, S., … Balaiah, D. (2014). Brief report: Parent–adolescent child concordance in social norms related to gender equity in marriage – findings from rural India. *Journal of Adolescence*, 37(7), 1181–1184. https://doi.org/10.1016/j.adolescence.2014.08.006
16. Solotaroff, J. L., & Pande, R. (2014). *Violence against women and girls: lessons from South Asia*. Washington, D.C: World Bank.
17. A N Vyas, Malhotra G, N C, Landry M. Gender attitudes in adolescence: evaluating the Girl Rising gender-sensitization program in. 2019. *India. International Journal of Adolescence and Youth* 25(1):126-139. https://doi.org/10.1080/02673843.2019.1598450

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