Gender, Poverty and Physical Abuse in Schools in Bangladesh

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Abstract

This paper analyzes the patterns and correlates of physical abuse among school adolescents with teachers as perpetrators. In particular, the purpose of this paper is to assess variability in the prevalence of physical abuse among school adolescents and explore the role of poverty and gender in explaining this variability. The data for the present analysis are taken from a nationally representative survey of young people between the ages and 10 and 24 living in 20,000 households conducted in 2005 in Bangladesh. The results of the analysis provided a solid understanding about the level of physical abuse in schools and helped to identify some key factors that can be addressed in terms of teacher training to decrease the overall prevalence of beating in schools.

"On Tuesday, July 5, 13-year-old Dipu Islam died in hospital. He was buried the same day, and it wasn't until Dipu's doctors informed journalists and the latter publicised the case that the police took it up. Despite rumours that he was ill -- which were in any case refuted by his family -- the autopsy report confirmed that Dipu's death had been caused by the injuries still visible on his head, face and body, when it was exhumed a few days later." – The Star Weekend Magazine, Volume 4, Issue 55, July 29, 2005

Introduction

The death of a fourth-grader called much attention to the harsh consequences of physical abuse of children. Dipu's death was covered in the local papers in Dhaka for days. However, the reality that teachers routinely use corporal punishment to discipline students, a factor that undoubtedly contributed to the tragic death, is not commonly debated. Rather, corporal punishment at school is everyday affair and acceptable in Bangladeshi society. Teachers are highly respected, teaching practices are seldom questioned and children are encouraged to accept any treatment meted out unconditionally. The "Guru-shirsha" (teacher-student) relationship is sacrosanct and second only to parents-child relationships. (http://www.crin.org/docs/resources/treaties/crc.28/UNICEF-SAsia-Subm.pdf).

In addition to the extreme consequence of death as described in the case presented above, there may be other everyday implications in terms of poor enthusiasm for school, as well as longer term effects such as aggression and depression (Straus 1994; Straus et al. 1997), increased incidence of child abuse, lower economic achievement and physical abuse on spouses on later life (Giles-Sims, Straus, & Sugarman, 1995; Simons et al. 1994; Straus and Yodanis, 1996; Zigler & Hall, 1989).

Attitudes and laws on corporal punishment of children vary between countries and from one culture to another. Whilst the practice is accepted and embraced in many countries, several countries have made efforts to ban all forms of corporal punishment. Most European countries, China and Taiwan have taken steps to deem corporal punishment against children illegal in the school system. Many states within the United States of America allow corporal punishment in schools.

Relatively little is known about the actual prevalence of physical punishment in Bangladesh. Although the country is a signatory to a recent UN convention of the Rights of the Child that discourages the practice (UN CRC), a recent survey on young people in selected rural areas of three districts of Bangladesh suggests that adolescent boys and girls are equally likely to be beaten at schools and home (Amin, Mahmud and Huq, 2002). Even though there was marked difference in the nature of abuse suffered by boys and girls, neither male nor female students were exempt from physical abuse in school.

Much of the body of evidence on abuse internationally is focused on the detrimental consequences in terms of the negative behavioral and psychological affects of corporal punishment on children. Research on the determinants of corporal punishment is less common. Even less is known about corporal punishment in educational settings compared to similar punishment at home. Some studies (Xu et. Al. 2000; Coohey & Braun, 1997) have attempted to formulate a comprehensive theoretical framework to understand the determinants of corporal punishment at home; but, to the best of our knowledge, there is no comprehensive attempt to examine physical abuse at school with teachers as the perpetrators. Limited evidence from existing studies, however, identifies several key factors that are associated with physical abuse in school.

For instance, a study conducted by Youseef et al. (1998a) in Egypt found that older individuals are less likely to get punished physically in school compared to younger ones and the probability of experiencing physical punishment decreases with increasing age of the victims. This study also noted gender difference in physical abuse where boys are more likely to get physical punishment relative to girls (Youseef et al.1998a). These findings were similar to findings of studies conducted in the US (Gregory 1995; Shaw & Braden, 1990) documenting racial difference in the use of corporal punishment in US public schools where African--American students were more likely to report physical discipline relative to Caucasians.

Although there is no documented evidence on the quality of school or types of school in explaining levels of physical abuse in school, evidence exists on some characteristics of students which explain who gets punishment and who do not. For instance, students who were found to be disobedient, untruthful and were verbally aggressive to other students were more likely to receive corporal punishment (Youseef et al. 1998a). This Egyptian study also found, a significant elevated risk among those characterized as being disrespectful to their teachers disrupted class disciplines as well as those who did poorly in academic tasks. The authors interpret this association to imply that individuals are more prone to be beaten because of their own attributes, such as disobedience (Youseef et al. 1998a). The causality can also very well go in the reverse direction, that is to say, people who are poorly treated are likely to manifest negative social attributes.

Even though there is no published evidence on the role of family background or economic status on the level of corporal punishment at school, evidence exists on their roles in explaining physical abuse at home. It has been documented that the risk of being subjected to corporal punishment increased with decreasing level of education of fathers and mothers (Youseef et al. 1998b). Parental use of corporal punishment also varied according to father's occupation; children born to semiskilled or unskilled workers were more likely to get corporal punishment relative to those born to professionals or semi-professionals. Regarding the effect of economic status, the children from high income family were less likely to be physically punished compared to those whose family income was less. This study also finds that students who report corporal punishment at home are three times more likely to be punished at school.

Owen (2005) examined the role of social capital in explaining corporal punishment in US public schools. Using Putnam's (2000) theoretical concept of social capital that emphasizes the role of interpersonal networks to promote morality, norms of reciprocity and trustworthiness, his research documented that there is an inverse correlation between amount of social capital and rate of school corporal punishment. This study suggested that there is significant regional variation in the rate of school corporal punishment and the states that allow school corporal punishment have significant lower levels of social capital. Using a similar but restricted definition of social capital, Xu et.al (2000) explored the effect of social capital on parental corporal punishment and found that if

parents received help with household work from existing social network, the propensity for them to physically abuse their children was low.

With this backdrop, our paper explores correlates of physical abuse among Bangladeshi school adolescents with teachers as perpetrators. In particular, the purpose of this paper is to assess variability in the prevalence of physical abuse among school adolescents and explore the role of poverty and gender in explaining this variability.

We hypothesize that while certain individual attributes may be important, such as age and gender, it is also important to explore the prevalence of beating in a multilevel approach. Accordingly we consider individual, household and community attributes and discuss how they interact.

Girls are likely to be protected from physical violence when school teachers are men because touching girls' body is viewed as inappropriate. We expect that girls are less likely to be beaten at school than the boys. Moreover, taking evidence from the literature that girls' conducts are seldom provocative or problematic (Berger 1990; Kaplan & Sadock, 1988), we theorize that girls are less subjected to physical punishment at school than boys.

We also posit that adolescents who come from poor family are more subjected to physical punishment at school compared to those who are from better off family. It is possible that adolescents from poor family have less ability to pay school fees, buy books and stationeries needed for school and spend less time preparing to meet expectations of school teachers because of competing demands on their time because of their need to engage in productive work. Moreover, young people who were born and raised in poor families might have a different socialization process compared to those who are from well off families and are less capable to adjust to social environments like schools and are thus more likely to get physical punishment from teachers. Adolescents from poor families also have less human and social capital and are more likely to get punished in school. It is also possible that economic status works through factors such as type and quality of school they attend and thus affects the probability of getting beaten by their teachers.

We argue that there might be other individual, family, school and community level factors that either act directly or indirectly on the likelihood of a young person to be beaten at school, however, our main purpose in this paper is to see the net effect of gender and/or poverty in explaining beating at school after controlling the effects of all these factors.

Data and Method

The data for the present analysis are taken from a nationally representative survey of young people between the ages and 10 and 24 conducted in 2005 in about 20,000 households in Bangladesh. The sample was drawn using a sampling frame provided by the Bangladesh Bureau of Statistics. The survey was conducted in the same Primary Sampling Units (PSU) as the 2003-04 Bangladesh Demographic and Health Surveys. A two-stage probability proportion to size (PPS) sampling technique was used. Each administrative division was stratified into rural areas, statistical metropolitan areas (SMA), municipality areas and other urban areas. In total, 361 PSUs (clusters) were randomly selected out of which 275 in rural, 42 in SMAs, 29 in municipalities and 15 other in other urban areas. Each cluster contained approximately 200 households. Household information was collected from all selected households within a cluster; however individual level information was collected from only one adolescent per household using Kish method yielding a sample of 14,942 adolescents for the study.

Given our interest in school beating, we limited our sample primarily to adolescents aged 10-19 years, currently enrolled in school (grade 1 to 10) and never married (N=6071). The outcome variable of interest is adolescents who reported being beaten by school teachers in the previous year. For one component of our analysis we also explored reports of beating at home for a separate group of adolescents age 10-19 years who are not enrolled in school and never married (N=2508). For this group of sample our outcome of interest is adolescents who were beaten at home.

We incorporate a multi-level approach by conceptualizing four distinct sets of explanatory variables that correspond to individual, family, school variables and community factors. At the individual level, age, sex, religion and paid work are included in the analysis. As over 90% of people in Bangladesh are Muslims, we have created two

categories for religion -- Muslim and other. We have certain attitudinal variables such as attitude towards child abuse and gender roles. These attitudinal indicators were used to assess whether the individuals who have liberal views are more or less likely to be beaten compared to those who have conservative views. We also have two indicators as measures of social capital in the analysis. These include perception of getting help from others during crisis, and whether the people in the area trust each other.

At the family level, our key variables of interest are mother's education, mother's occupation and father's occupation, number of siblings, household economic status and household membership to any non-government organization. Even though we have information on mother's grades of education from a number of adolescents, a significant proportion were not certain about the grades completed and thus recorded as unknown. Therefore, a better way to take into the effect of mother's education was whether mothers can read and write letters, and which gave us reasonably good answer to include them in the models. We have created economic wealth index by using information on ownership of household assets and land ownership pattern, as well as several measures of self-assessed poverty indicated by sufficiency of food and clothing for the household following Filmer and Pritchett (2001) approach. As urban and rural households have different sets of assets and have different living standards, thus urban and rural households are ranked separately.

School level indicators include type of school (government, non-government, religious school or BRAC school) and quality of school in terms of availability of physical facilities such as electricity, pure drinking water, latrine facility and roof of the school building is intact or broken. We have a combined score of 0 to 8 for the school quality index and grouped them into two categories, taking 1-6 into one category signifying not so good quality school and 7 and 8 into the other category with highest quality. We have also created a binary variable on whether the individual have any private tuition from any source or not.

Community level indicators include type of area such as rural or urban, level of area like village, *thana sadar*, municipality and city. All area categories other than village are classified as urban areas by the census bureau. We also have greater administrative

division of geographic areas termed as 'Division', which divide the whole country into six parts.

Logistic regression analysis was conducted to identify independent effect of different factors on physical abuse after controlling the effect of other factors in the model. Forward step-wise inclusion technique was used and variance decomposition helped us to identify collective effect of different factors in explaining outcome variable as well as precedence of one set of factor over others in explaining physical abuse outcome.

We have tested three different models. The first model includes individual level variables such as age group, sex, religion, attitude towards certain gender and cultural norms and individual's social capital in terms of perception about getting help from others, and trusts of the community. The first model also includes two school level factors – the type and the quality of school. Model 2 includes family factors including economic status in addition to all other variables included in the Model 1. Finally the last and the final Model 3 includes all variables of Model 2 and adds additional community level factors such as level of area and location of area.

An important part of our analysis is to see whether the factors that predict adolescent beating at school also predict adolescent beating at home to the same extent. However, because the way information was collected, we have information on single perpetrator for the last event of beating, not on all perpetrators who beat the victim in the previous year. It is not unlikely that adolescents who were beaten by teachers last time were also beaten by some others previously. But because of limited nature of data, we cannot directly investigate the claim in literature that adolescents who are beaten at school are more likely to be beaten at home as well. In the third stage of our analysis, we want to investigate whether factors affecting beating at school also predict beating at home in the same population.

For this purpose, we have identified a separate group of adolescents from the survey who were 10-19 years old, not enrolled in school and never married and were beaten at home by parents or siblings in the previous year. Applying the same factors that were included in the final model with beating at school as the outcome variable, we attempted to see whether the factors that predict adolescent beating at school also predict adolescent

beating at home to the same extent. By doing so, we verified the claim made in the literature that there are some factors inherent in some adolescent's characteristics that make them victims of physical abuse.

Results

Table 1 shows the distribution of the explanatory and outcome variables used in the analysis. Overall, 32% of our sample reported beating experience at school during the previous year. Our sample is mostly concentrated in the younger age group; more than half were 10-14 years old, whereas only 2% were 18-19 years old. Difference in proportions in different age groups may be because older adolescents are more likely to drop out from school as they get married or work for pay. Our sample is limited to school adolescents which might explain younger age group in our sample.

About half of the study sample is female and 87% are Muslims and remaining 13% are Hindu, Christian and other religion. About a quarter is involved in any form of paid work.

About one third say they believe they would get help from families or friends if they have any form of crisis. Most adolescents (89%) perceive that they live in areas where people trust each other. More than half have tolerant attitude towards child abuse and find it alright to beat children 10 years and older if they do wrong leaving only 41 to perceive that it is not okay to beat children.

Thirty percent adolescents reported that their mother can read and write letters. Ninety-nine percent have mothers who report doing only household work and are not involved in any form of paid work. Thirty-six percent adolescent's fathers work in agriculture and another 6% are day laborers. About a quarter have less than three siblings whereas 13% have six or more siblings.

Table 1. Summary statistics of explanatory and outcome variables			
Characteristics	%	Characteristics	%
Beaten at school	32	No of siblings	
		0-2	26
Age		3-5	61
10-11	41	6 or more	13
12-14	38		
15-17	18	School type	
18-19	2	% in Primary schools	37
		% in Secondary schools	47
% Female	51	% in BRAC schools	3
% Muslim	87	% in Madrasha	13
% involved in paid work	23		
		% attending 'high' quality school	17
% expect support from family/ friends during crisis	32	% having private tuition	41
% live in areas where people trust each other	89		
% thinks it is not okay to beat children 10 years & above (if they do wrong)	43	Geography	
		% from Barisal	9
		% from Chittagong	19
% perceives women have right to divorce	41	% from Dhaka	28
		% from Khulna	14
		% from Rajshahi	26
		% from Sylhet	4
% of HHs having SES top 40%	45		
% mothers who can read/write letter	38	Sample area	
% mothers who do housework	90	% Village	79
% fathers who do agriculture	36	% City	5
% fathers who are laborers	6	% Pourashava	12
% father who do other works	57	% Thana Sadar	3

Seventy percent of sample lives in villages that are considered as rural and the rest live in urban areas such as *thana sadar (*formerly rural police stations that have recently been reclassified as urban areas because of significant infra-structural development), Pourashavas (district town municipalities) and metropolitan cities. The majority of adolescents study in primary or secondary school, whereas 13% study in religious school called Madrasha, and only 3% study in non-governmental schools operated by a large Bangladeshi NGO, BRAC. Seventeen percent study in schools that have at least seven of the eight possible physical amenities by which quality is assessed. However, there are

large differences in school quality level depending on the type and location of the school. For example, 53% of schools in urban cities are of highest quality whereas only 11% of village schools are in the same group. Similarly, 22% of schools in Dhaka division are highest quality and the same figure is 10% for Barisal Division.

Table 2 presents summary findings of logistic regression analysis with beaten by teachers as the outcome variable. Three different models are tested to see how much variability in beating in school is explained by three different sets of variables namely individual socio-demographic, attitudinal variables and school factors, family factors and community factors.

The findings suggest that females are less likely to be beaten in school compared to males; females have about 50% less change of being beaten when the effects of other factors are controlled and the odds of beating remained unchanged in all three models. It is likely that as the majority of school teachers are males and touching girls' body is viewed as inappropriate, girls are less prone to beating at school than the boys.

The odds of being beaten at school decreases with increasing age of adolescents. It is likely that as young people get older they become better socialized to conform to school norms and values and thus less likely to get punished. It is also likely that teachers are more respectful, perhaps even fearful of consequences, about older children, particularly boys, and therefore less likely to discipline them with physical punishment.

Two measures of social capital acted in two different directions. For example, having people around who trust each other is found to be risky whereas people who expect family or friends assistance during crisis are found to be protective against beating in school. As the percentage of people who trust each other in the community is found to be skewed in one direction, the risky nature of this variable as suggested by the analysis is difficult to interpret. However, the effect of other variable can be explained by the fact that people who expect help from others live in a community who feel close to each other and develop some kind of social fabric which might promote building good morale among the community members. This morale might in turn act as protection against hurting each other physically including beating at school.

Table 2: Odds Ratio from Logistic Regression (beaten by teachers as outcome)				
Characteristics		**Model 1**	**Model 2**	**Model 3**
Individual variables				
Age	10-11 (Omitted)	-	-	-
	12-14	1.00	1.00	1.00
	15-17	0.64*	0.64*	0.64*
	18-19	0.30*	0.30*	0.30*
Sex	Female	0.42*	0.41*	0.43*
Paid work	Yes	0.88**	0.86*	0.93
Religion	Muslim	0.94	0.95	1.01
'People in my area do not trust each other'		0.72*	0.71*	0.74*
'My household expects support from family/friends in times of crisis'		0.84*	0.85*	0.88**
'It's not ok to beat children aged 10 or older if they do wrong'		0.83*	0.82*	0.80*
'Women have rights to divorce'		0.79*	0.80*	0.80*
School type & quality				
School type	Primary	1.06	1.00	1.00
	Secondary (Omitted)	-	-	-
	BRAC school	0.74**	0.71**	0.68*
	Madrasha	1.44*	1.35*	1.31*
School quality (school assets)	High	0.82*	0.95	0.98
Household variables				
Economic status	Top 40% SES	-	0.95	0.96
Mother's education	Can read/write letter	-	0.85*	0.86*
Father's occupation	Daily Labor	-	1.29*	1.36*
	Agriculture (Omitted)	-	-	-
	Other	-	1.09	1.13**
Number of siblings	0-2 (Omitted)	-	-	-
	3-5	-	1.02	1.04
	6 or more	-	0.95	0.99
Community variables			-	
Type of area	Village (Omitted)	-	-	-
	City	-	-	1.00
	Pourashava	-	-	0.45*
	Thana sadar	-	-	1.45*
Geographic division	Dhaka (Omitted)	-	-	-
	Barisal	-	-	1.81*
	Chittagong	-	-	0.82*
	Khulna	-	-	1.30*
	Rajshahi	-	-	1.11
	Sylhet	-	-	1.57*
-2 Log likelihood		3591	3407	3357
R^2		.05	.06	.07
df		14	21	28
N		6071	5802	5802

*P<0.05 ** P<0.10

Comparing the odds ratios in Models 1, 2 and 3 associated with each of the individual level factors allows us to explore to what extent household and community characteristics attenuate or influence individual behavior. The individual estimates remain more or less stable even after the inclusion of household and community characteristics. The noteworthy exceptions are the effects of religion, both of which have diminished effects when community variables are introduced.

Two types of schools have significant effects on the odds of beating at school. In the final model when the effects of other factors are controlled, adolescents who study in Madrasha – a form of religious school, have 30% more chance of being beaten compared to those study in secondary schools. Some Madrashas follow a separate government approved school curriculum while others do not. Madrasha teachers are also usually clerics and religious leaders of the village and actively involved in mosque related organizations. The survey did not collect information on the type of Madrasha. The higher propensity towards beating may be a reflection of a different educational philosophy among Madrasha teachers, but it is also possible that Madrashas are more selective of underprivileged children who are attracted to Madrasha education. There has been a rapid increase in Madrasha education in some rural areas of Bangladesh. Madrashas are uncommon in urban settings and places where schooling is highly prevalent and Madrasha education is most common among the poorest children.

Studying in BRAC schools is found to be slightly protective in Model 2 & 3. Studying in highest quality schools has slight protective effect against beating compared to those who study in schools which have less physical facilities, however, this effect is diminished when family factors and community factors are introduced in Model 2 and 3 respectively. BRAC schools are targeted towards the poorest children and give preferential enrolment to children of landless and near landless households. The school curricula and school policies are designed to fit the needs of poor children who may have to work while attending school. BRAC invests extensively in the development of a culturally appropriate yet liberal curriculum. Singing and dancing is encouraged as is active class participation. There is likely to be a confounding affect with school quality, because BRAC schools typically lack basic amenities such as concrete structures, electricity. The

fact that attending such schools is mildly protective suggests that there is something about the BRAC school philosophy that directly discourages corporal punishment.

Out of the four family factors added in Model 2, mother's education is found to have protective effect at $p<0.05$ level. In particular, adolescents whose mother can read and write letters are slightly protected compared to those whose mother cannot. Father's occupation, especially working as laborer and sectors other than agriculture has negative impact of the odds of being beaten. It is possible that occupation has direct implications on children's aspirations and school performance and thus affects how the children are treated in school. Children whose father's are in occupations where economic returns to schooling are not high, may have a lower appreciation of schooling for themselves and this results in poor treatment in the hands of teachers. The variable indicating whether the student reports paid work suggest that working for pay is mildly protective. Parent's occupation interpreted in light of the protective effect of paid work suggests that parental education does not work through the occupational expectations or through the competing demands on children's time.

Economic status does not show any significant effect on the level of beating in the final model. This could be due to the sample selection process we employed in our analysis. As logical, we have limited our sample to school adolescents only and excluded adolescents who are dropped out from school or had never enrolled in school. However, adolescents who do not attend school are more likely to be poor and thus including only school adolescents automatically excluded samples that are relatively poor and thus diminished the effect of economic status on beating.

The effect of living in urban areas depends on the type of area adolescents live. For example, living in Pourashavas is protective against beating, whereas if someone lives in *thana sadar*, it increases the odds of beating by 50% compared to those living in rural areas. Living in cities also seems to be risky, however, not significant at $p<0.05$ level. Living in two specific divisions, Barisal and Sylhet are risky; adolescents who live in Barisal are 78% more likely to be beaten at school compared to those living in Dhaka division. Young people living in Sylhet division also have higher risk of beating whereas living in Chittagong division is protective. It is interesting to note that adolescents

enrolled in Madrasha are highest in Barisal division but studying in Madrasha as well as living in Barisal division, both have independent risky effect on beating after controlling the effects of other variables in the final model.

When comparing the relative effects of three different sets of factors, individual factors including school factors explained the most at 5% of variability in adolescent beating at school. Family factors including economic status of the household do not add much to the explanation and added only one percent more to the total variability. Community factors add another 1% to the variability that is explained by individual and family factors together, that means, the final model, which included all related variables from three different domains explained 7% variation.

An important part of our investigation is to see whether the factors that are predictors of beating at school are predictors of beating at home. Table 3 presents predictors for beating at school and predictors for beating at home and their odds ratios. It should be noted that some of these factors are significant for one form of beating but not for the other as indicated in the table. The results are presented only for the final models.

Table 3 suggests that only a few factors that are predictive of beating in school are also predictive of home beating in the same direction. For instance, odds of beating has negative relation with increasing age for home beating as well as for beating at school. Girls are also less likely to be beaten in both settings. Similarly, adolescents having an opposing view about child abuse and having progressive attitude towards women's rights to have divorce, are less likely to be beaten at school as well as at home.

Some factors, such as perceptions about living in communities where people trust each other and living in Pourashavas are found to be protective for school beating but are risky for home bearing. Living in cities is found as significant for home beating, however the same variable is not found as significant for beating in school. On the other hand, living in different geographic regions are found to be significant for school beating but not for home beating. It is interesting to note that none of the family level variables including economic status are found to be significant for beating at home.

Table 3: Factors affecting beating in school and beating at home			
Characteristics		**Odds for beating in school**	**Odds for beating at home**
Individual variables			
Age	10-11 (Omitted)	-	-
	12-14	1.00	0.41*
	15-17	0.64*	0.17*
	18-19	0.30*	0.07*
Sex	Female	0.43*	0.50*
Religion	Muslim	1.01	0.52*
Paid work	Yes	0.93	0.81
'People in my area do not trust each other'		0.74*	1.46**
'My household expects support from family/friends in times of crisis'		0.88**	0.75**
'It's not ok to beat children aged 10 or older if they do wrong'		0.80*	0.71*
'Women have rights to divorce'		0.80*	0.77*
School type & quality			
School type	Primary	1.00	NA
	Secondary (Omitted)	-	NA
	BRAC school	0.68*	NA
	Madrasha	1.31*	NA
School quality (school assets)	High	0.98	NA
Household variables			
Economic status	Top 40% SES	0.96	0.92
Mother's education	Can read/write letter	0.86*	1.07
Father's occupation	Daily Labor	1.36*	1.04
	Agriculture (Omitted)	-	-
	Other	1.13**	0.88
Number of siblings	0-2 (Omitted)	-	-
	3-5	1.04	1.12
	6 or more	0.99	0.68**
Community variables			
Type of area	Village (Omitted)	-	-
	City	1.00	1.99*
	Pourashava	0.45*	1.38
	Thana Sadar	1.45*	1.44
Geographic division	Dhaka (Omitted)	-	-
	Barisal	1.81*	1.31
	Chittagong	0.82*	1.49*
	Khulna	1.30*	1.36
	Rajshahi	1.11	1.22
	Sylhet	1.57*	1.40
-2 Log likelihood		3357	907
R^2		.07	.15
df		28	24
N		5802	2207

*P<0.05; **P<0.10; NA=Not applicable

Table 4 shows predicted probabilities based on the regression results presented in Model 3 of Table 2. There is considerable variation in reported physical abuse. The table shows predicted probabilities for three sets of assumed characteristics for boys and girls separately. To give an idea of the range of possibilities we generated the most protective and the highest risk categories. In the most protected category the risk is low at 2% and in the most risky category the risk is as high as 81%.

Table 4. Predicted probabilities for beating in school (based on 'full' logistic regression model)

	'Most protective'	'Typical BRAC student'	'Highest risk (in Madrasha)'
Individual level variables			
Age	18-19	12-14	10-11
Muslim	No	Yes	Yes
Engages in paid work	Yes	No	No
Individual variables: attitudes			
'People in my area do not trust each other'	Agree	Agree	Disagree
'My household expects support from family/friends in times of crisis'	Agree	Agree	Disagree
'It's not OK to beat children aged 10 or older'	Agree	Agree	Disagree
'Women should have rights to divorce'	Agree	Agree	Disagree
School type & quality			
School type	Secondary	BRAC	Madrasha
School quality (school assets): 'high'	Yes	No	No
Household variables			
Top 40% SES	Yes	No	No
Mother can read/write letter	Yes	No	No
Father's occupation	Agriculture	Agriculture	Labour
Number of siblings	6 or more	3-5	3-5
Ecological variables			
Urban/rural category	**Pourashava**	Rural	*Thana sadar*
Division	Chittagong	Dhaka	Barisal
Predicted probability of beating			
BOYS	**0.04**	**0.26**	**0.81**
GIRLS	**0.02**	**0.13**	**0.65**

Discussion

The principal contribution of this paper is that it provides actual estimates of the prevalence of physical punishment in Bangladeshi schools. Using a nationally representative survey of adolescents age 10-19 the paper estimates that overall one in three children are beaten in school. However there is significant variability. Exploring individual, family and community factors that may explain variation in the propensity of reporting physical abuse we find that in addition to the expected effects of gender and age, attitudinal indicators are strongly associated with beating. Any interpretation of reported beating has to be cognizant of the overall level of prevalence. It is likely that because beating is common and acceptable form of discipline, reports of beating, while generally reflecting negative experience, is perhaps not as negatively experienced by children because it is so common. There are important sources of variation on who is likely to report an episode of beating in the hands of school teachers. The youngest respondents reported the highest levels of beating.

The prevalence of beating is much lower for girls. The lower prevalence of beating among girls attending school deserves further exploration. One explanation may be that it reflects greater caution and sensitivity to gender norms. However, it may also be that girl's education has recently received considerable attention. A secondary school scholarship scheme has been implemented for girls and as part of this program there have been extensive attempts to improve the quality of teaching in girl's schools. These interventions have not been made available to boys. It is possible that the lower prevalence of beating is a marker of success of the investments that have been made for girls schools and the higher prevalence of beating among boys reflects the lack of such attention to boys in school.

Beating prevalence is associated with urbanization and school quality. The prevalence of beating is remarkably high in religious schools and attendance in NGO schools is mildly protective. Among individual characteristics, conforming to liberal social attitudes is associated with lower probability of abuse. Mother's education is mildly protective while father's education does not seem to have a similar affect. Paid work is surprisingly protective. It is surprising that going to a metropolitan school is not as protective as going

to a Pouroshava school—Pourashavas are smaller cities and this finding is consistent with other indicators of generally favorable quality of life indicators in small towns compared to rural areas or big cities (NRC, 2003).

The type of school clearly plays an independent role. While it is plausible to hypothesize that school type represents selective enrolment, the fact that BRAC and religious schools represent such divergent experience and our understanding of school policies in these two systems suggests that school policy can play an important protective role in terms of encouraging or discouraging corporal punishment.

While school policy can set the ground against beating in school premises, the role of teachers in the prevention of school beating cannot be ignored. Madrasha teachers holding a different philosophy of education might contribute to the higher level of beating experience by Madrasha students, whereas BRAC's philosophy of serving underserved population can be accounted for lower level of beating in BRAC schools. Training of teachers can enhance their basic understanding of negative effects of physical punishment and can assist in building a liberal attitude towards providing corporal punishment in school.

Our expectation was that girls are less likely to report physical violence and this is borne out by the data. Our other prior was that poverty would make children more vulnerable. Household economic status did not prove to be a significant predictor of physical abuse in school. As we discuss this may be because of the selective retention of better performers among the low SES children in school. Retention rates in school are higher in the higher SES and it is likely that greater rates of dropout occur among poor children who are more likely to be beaten. This is suggested by other data on reasons for school dropout which suggest that poor children are more likely to report they dropped out of school because of maltreatment.

Despite some limitations, our study provided a solid understanding about the level of physical abuse in schools and helped to identify some key factors that can be addressed in terms of teacher training to decrease the overall prevalence of beating in schools. New studies can enhance our understanding about the types and severity of beating experiences and help us to identify factors that make some teachers as perpetrators.

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Appendix 1. Summary statistics from samples used for home beating analysis			
Characteristics	%	Characteristics	%
Beaten at home	18	% of HHs having SES top 40%	29
		% mothers who can read/write letter	15
Age		% fathers who do agriculture	33
10-11	8	% fathers who are laborers	9
12-14	30	% father who do other works	58
15-17	38		
18-19	24		
		Sample area	
% Female	36	% Village	75
% Muslim	87	% City	9
% involved in paid work	64	% Pourashava	12
		% *Thana Sadar*	4
% expect support from family/ friends during crisis	25		
% perceives they live in areas where people trust each other	88		
% thinks it is not okay to beat children 10 years & above (if they do wrong)	42	Geography	
		% from Barisal	8
% perceives women have rights to divorce	50	% from Chittagong	21
		% from Dhaka	31
		% from Khulna	10
No of siblings		% from Rajshahi	22
0-2	14	% from Sylhet	8
3-5	60		
6 or more	26		