Research Article

Assessment of school absenteeism: A community-based study among children aged 7–18 years in a slum of Kolkata

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ABSTRACT

Background: Education is one of the basic needs for human development and going to school regularly is crucially important for advancement of a student's academic and social skills. **Objectives:** The main purpose of this study was to assess the magnitude and causes of school absenteeism and analyze the predictors of absenteeism among children in a slum community of Kolkata. **Materials and Methods:** A cross-sectional, community-based study was conducted in a slum of Chetla, Kolkata, where 192 subjects were surveyed. A pre-tested structured interview schedule was used for data collection. Data were analyzed using descriptive statistics and logistic regression. **Results:** In this study, 43% of the children who were going to school had been absent for more than 2 days during the previous month and the chief reasons for their irregularity were illness (18.98%), rainy days (16.45%), and social or family occasions (11.28%). Multivariable logistic regression shows that higher age of the student odds ratio (OR) (confidence interval [CI]) 2.62(1.0-6.8) and higher edsucation level of student OR (CI) 2.67 (1.2–6) and lower education level of their mothers OR (CI) 2.96 (1.2–7.4) have significant association with school absenteeism. **Conclusion:** Around half of students were chronically absent which reflects a very poor academic involvement. Repeated Information Education Communication awareness programme regarding the importance of regular school attendance should be start at the community level so that attendance status can improve along with enrolment.

KEY WORDS: School Attendance; School Absenteeism; Academic Performance

INTRODUCTION

Education is one of the basic requirements for human development. It is the principal factor in the development and growth of a child in preparing him/her to be a responsible and capable citizen. As per the planning commission report on India Vision 2020 - successful education policy would play a major role in different fieldss of national development.[1]

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Globally, the number of out-of-school children of primary school age declined from 99 million to 59 million between 2000 and 2013, but the world has missed the Millennium Development Goal of achieving universal primary education (UPE) by 2015.[2] There is still a long way to go before achieving UPE in some regions. The challenge is most acute in Sub-Saharan Africa, West and Central Africa, where the out-of-school children rate accounts highest, worldwide.[3]

In India, access and quality of primary education is gradually increasing through government initiatives like Sarva Shiksha Abhiyan (SSA - launched in 2000-01)[4] and "right of children to free and compulsory education bill, 2008,"[5] which ensures free and compulsory relevant education to all children in the 6–14 age group. There are also other non-governmental initiatives to send educational facilities in all

the geographical areas. In spite of different initiatives, the quantity as well quality of education still remains a great challenge for this nation.

Going to school regularly is crucial for a student's education and social skills. Irregular students not only miss their critical stages of social development but also simultaneously limit their academic progress which leads to illiteracy, poverty, poor nutrition, substance abuse, and criminal activity all these leading to a sick society.[6] Many factors can contribute to school absenteeism which again differs from region to region, school to school, and so on.[7] It is far more difficult and costly to reach children once they leave school than to address and intervene them within the precincts of the school. Chronic absence is the preliminary important "early warning sign" for a student who is at risk for school failure or dropout.[8]

Hence, a study on the burden of absenteeism and its related factors is very important because such a study can evolve with some significant issues which when dealt with will improve school attendance and even reverse the process of school dropout. Moreover, there is a paucity of literature related to school absenteeism, especially in this part of the country. With this backdrop, a study was conducted in a slum area of Kolkata to assess the magnitude and reasons of school absenteeism along with predictors of poor attendance, the main aim of this study was to get a better understanding of the problems of school absenteeism and dropout so that appropriate interventions may be initiated to overcome this major impediment to the progress and development of this country.

MATERIALS AND METHODS

Study Setting

A community-based study was conducted with 3 months duration of 2016 in Chetla slum of Kolkata, which is the urban field practice area of All India Institute of Hygiene and Public Health, Kolkata.

Study Population

It was a cross-sectional, observational study conducted among children aged 7–18 years after taking informed consent from their parents. Severely ill, and those who refused to participate were excluded from the study.

Now, considering estimated prevalence of 48%[9] and with 10% absolute error, the sample size calculated was 96 after applying the formula -sample size = $Z_{\alpha/2}{}^2PQ/d^2$ (here P [prevalence] = 0.48; Q = [1-P] = 0.52; d = allowable error). With a design effect of 2, the final sample size calculated was 192.

There are three units (A, B, and C) under service area of UHU and TC Chetla having. One unit (Unit A) was chosen randomly for sampling purpose and one unit (Unit C) was used for pretesting purpose.

In Unit A, line listing was done for children age group of 7–18 years from the register maintained in UHU and TC Chetla. A total of 970 such participants were identified. After reaching one such locality under unit A, one child was selected randomly as the first respondent. Systematic random sampling was performed with a sampling interval of five. Thus, every 5th child was included till the desired sample size was obtained. If the child was in the exclusion criteria or if any parent refused to participate, the next child was chosen.

Study Tool

The tool used in the study for data collection was developed by the researchers. The face and content validity of the tool was established by consultation with experts of the Department of Preventive and Social Medicine, All India Institute of Hygiene and Public Health, Kolkata. The schedule included - questions regarding sociodemographic profile, questions to ascertain the duration of absence, and the causes for absenteeism, information regarding dropout if any and school activities other than studies. This tool was translated into the local language (Bengali) maintaining semantic equivalence and pretesting was done in same community but in another population (Unit C). Necessary modifications were made and the final Bengali schedule was used for the study.

The dependent variable was chronic absenteeism and independent variables were sociodemographic and economic factors.

To elicit absenteeism - caregivers were asked to report the number of school days their child had been absent during the previous month.

The reasons for dropout or chronic absenteeism were put in a close ended structured format and the responses were noted accordingly.

Method of Data Collection

Data were collected from community by house-to-house visit by interviewing the caregiver of study subjects. Informed consent was obtained from them after explaining the objectives and procedure of the study. They were also informed regarding the confidentiality of their responses and their right to refuse to participate at any point of the study.

Working Definitions Relevant for this Study

Current attendance status

The current attendance status refers to whether a person is currently attending any educational institution or not.[10]

Out-of-school children

Out-of-school children are those in the official school-age group who are not enrolled in school or any other alternative schooling facilities available, i.e., Education Guarantee Scheme, back to school campus, etc.[10]

Definition of the concept of absenteeism

Although there is no standard definition, student's absenteeism is defined as "temporary cessation of the student, when his presence is expected." This is critical because it is how many days a student misses that matters, not why they missed (including both excused and unexcused reasons).[11] The average absenteeism of 3 or more days in previous month was defined as significant absenteeism, for our study. This concept of previous month recall was adopted from a similar study.[12]

Discontinuation

If a person has completed the upper primary level but does not enroll for higher education, he/she is considered as a case of discontinuation (not considered a dropout).[10]

Dropout

If the person enrolls for the secondary level but does not complete it, he/she is considered a dropout when secondary level is considered as specific level.[10]

Data processing and analysis

Data were analyzed using the SPSS statistical software program (version 16). Descriptive statistics were performed. Moreover, binary logistic regression and multivariable logistic regression analysis was performed to identify predictors associated with school absenteeism with a confidence interval (CI) of 95%, $P < 0.05$.

RESULTS

The mean age of study subjects was 12.1 years where 68% were adolescents, 56.3% were boys while 55.7% belonged to joint family. The mean age of mother and father of study subjects was 34.3 years and 39.2 years, respectively. 89.6% of subjects were Hindus and rest were Muslims. 56.3% of the participants belonged to general caste. In case of current educational status, median class of schooling for the study subjects was Class 6, while the median academic qualification of their mother and father was 7th and 8th class pass, respectively. Most of the mothers were housewife (73.4%) and driving was the most common occupation (33.6%) among the fathers. 70.4% of family belonged to socioeconomic Class 3 (according to modified BG Prasad scale 2016). Among the school going children, 4% did some other jobs and among the subjects who were currently not attending school, majority stayed at home while others worked for a living (driver, labor, tailor, or guard).

In this study, 56% of this student currently had access to food facilities provided by school but out of them only around 32% actually consumed regularly. Again, 20.5% students did not get any food from their schools as they attended private schools. Others (23.5%) who did not receive any food were the ones who were not eligible to receive food since they were studying in Class 9 or beyond. Only 27% students could respond to the query on their school health check-up.

Table 1 summarizes the educational status of study subjects. Most (88.5%) of the study subjects were students while 10% subjects had dropped out or discontinuer their institutional studies and 1.5% never attended school. Among 170 children who were attending school, 73 (43%) students were absent for 3 or more days during the last month who were considered as chronic absentee.

Table 2 summarizes different causes of chronic absenteeism or school leaving. Illness, adverse weather condition, social, or family occasion were the most frequent cause of school absenteeism during the mentioned study period. Lacks of interest in study, failure in school examination, and financial problems were the other most mentioned causes for school leaving.

Table 3 summarizes the relationship between chronic school absenteeism with various related factors. Multivariable logistic regression shows that higher age of the student, higher education level of student, and lower education level of their mothers have significant association with school absenteeism. The final model is fit for predicting the variation for chronic absenteeism as Hosmer Lemeshow statistics ($P = 0.70$) is not significant. 29.4% variation of absenteeism was explained by the variables considered. (Nagelkerke $R^2 = 0.294$).

Figure 1 shows there is sharp increase in proportion of absenteeism and school leaving (discontinuation or dropout) among the students in higher class (secondary-70.2% and 16.3%) in comparison to those who were in lower class (below primary-20.4% and 2.1%). Middle level (41.6%

Table 1: Distribution of study subject as per current educational status (n=192)

Current educational status of subject	Subarea frequency (%)	Total (%)
Attending school		
Regular	97 (57.1)	170 (88.5)
Chronic absentee	73 (42.9)	
Not attending school		
Discontinue	13 (59.1)	22 (11.5)
Dropout	6 (27.3)	
Out-of-school children	3 (13.6)	

Table 2: Reasons for chronic school absenteeism, dropout/discontinue/out-of-school (*n*=95)

Reasons	Predominant domains	Sub-areas #	Number	Total (%)
Chronic school absentee (*n*=73)	School	Lack of interest in any academic activities	22	29 (39.7)
		Classes being held irregularly	7	
	Family	Help in house job	10	25 (34.3)
		Illness of other family member	8	
		Death of family member	7	
	Personal	Illness	30	104 (142.5)
		Rainy day	26	
		Preference to study at home	9	
		Social or family occasion	18	
		Out of station	12	
	Financial	Financial support for self and family	9	9 (12.3)
Dropout/discontinued/out of school (*n*=22)	School	Lack of interest in academic activities	11	17 (77.2)
		Failure in school examination	6	
	Family	Help in house job	5	15 (68.2)
		Following father's death	6	
		Further, education not considered necessary	4	
	Financial	Lack of finance	9	14 (63.5)
		Financial support for self and family	5	
	Personal	Shift to a new area	2	3 (13.6)
		Got married	1	

#Multiple response

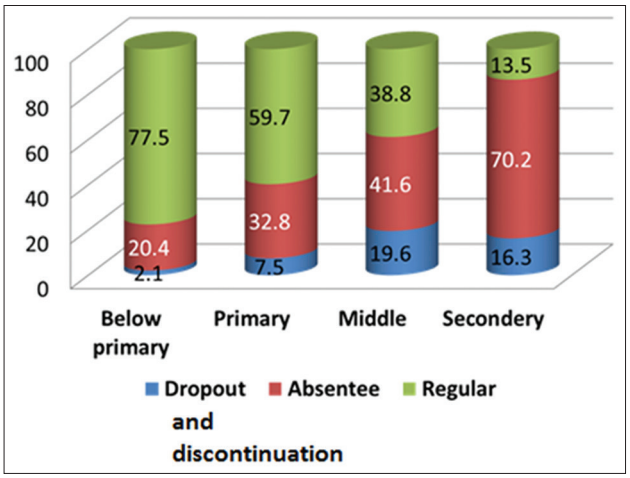

Figure 1: Bar diagram showing distribution of study subject as per attendance or dropout at different educational level (*n*=189)

and 19.6%) also had a large number of absenteeism and dropouts.

DISCUSSION

In this study, 10% of study subjects were school dropouts while 1.5% never attended school. As per National Family Health Survey (NFHS)-3, about 14% of the children never attended the school and 11% dropped out of school for various reasons. School attendance decreased from 83% (6–10 years) to 75% for children aged 11–14 years and is only 41% for children age 15–17 years.[13]

Although there is no standard definition of chronic absenteeism, it is often defined as missing 10% or more of school days that is in practical term 18 days in a year.[11] Several states define chronic absenteeism as missing for more than 15 days, 20 days, or a month, of school days.[11] In this study, 43% of students were absent for more than 2 days in last month reported as chronic absence. In Delhi, 48% children were absent for more than 2 days per month on an average.[9] In a study conducted in the US reported - 11% were absent for 1 to 3 days and 2% of student were absent for 4 or more days in past 30 days.[14]

This study showed illness, unfavorable weather condition, and social or family occasions were the most frequent causes of school absenteeism during the mentioned study period. The students missed their school due to the rain since the study was conducted during the rainy season. Again being the rainy season they complained of more frequent illnesses for which they were unable to attend school. Similarly, various studies showed that ill health was an important reason for absenteeism.[6,15]

Lacks of interest in studies, failure in school examination, and financial reasons (burden) were the most mentioned cause for school leaving. A study by Tomorrow's Foundation, KMC schools showed most of the children (a total of 45.8%) dropped out due to poor economic status of family and poor school environment. Other significant reasons for dropping out were marriage and family related problems.[16] Various

Table 3: Univariate and multivariable logistic regression for predictors of chronic school absenteeism (*n*=170)

Variables	Number of student (*n*=170)	Absentee number (%) (*n*=170)	OR[c] (95% CI[d])	AOR[e] (95% CI)
Subject				
Children	59	12 (20.3)	1	1
Adolescent	111	61 (55)	*4.77 (2.28–9.97)	*2.62 (1.01–6.8)
Gender				
Boys	97	42 (43.3)	1	
Girls	73	31 (42.5)	0.96 (.52–1.78)	
Religion				
Hindu	155	69 (44.5)	1	
Muslim	15	4 (26.7)	0.45 (0.13–1.48)	
Caste				
Others	37	14 (37.8)	1	
SC, ST and OBC	133	59 (44.4)	0.66 (0.36–1.32)	
Subject education				
Primary and below	110	32 (29.1)	1	1
Above primary	60	41 (68.3)	*5.26 (2.65–10.40)	*2.67 (1.16–6.15)
Mother age				
≤35 (median age)	110	37 (33.6)	1	
>35	60	36 (60.0)	*2.96 (1.54–5.67)	
Mother education				
Above primary	63	15 (23.8)	1	1
Primary and below	107	58 (54.21)	*3.79 (1.89–7.58)	*2.96 (1.17–7.43)
Father age				
≤38	94	30 (31.9)	1	
>38	76	43 (56.6)	*2.78 (1.48–5.21)	
Father education				
Above primary	102	37 (36.3)	1	1
Primary and below	68	36 (52.9)	*1.98 (1.06–3.96)	
Socioeconomic class				
Class 2 and 3	110	32 (29.1)	1	
Class 4	60	41 (68.3)	1.51 (0.81–2.76)	
Mother occupation				
Home maker	132	53 (40.2)	1	
Working woman	38	2052.6)	1.65 (0.81–3.42)	

[c]OR: Odds ratio, [d]CI: Confidence interval, [e]AOR: Adjusted odds ratio. *Statistically significant (P<0.05), Nagelkerke R^2-0.29

other studies showed that unemployed parents and poverty as the main causes of dropout.[17,18]

As per data from NFHS-3,[17] parental educational level plays a significant role for possibility of dropout. In this study, especially mother's education level was independently associated with absenteeism which was also similar with the result of another study done in Norway.[11] In contrast, father's level of education was significantly related to dropout behavior in other studies.[19,20] Age and education level of student and age of their mother also had significant association with absenteeism in this study. Similarly, only age of the student was found as to be an important factor for school absenteeism in a study done by Uppal *et al*.[8] As students move from lower to a higher class, the proportion of absentee also increase which is similar to report by A. Choudhury.[19] According to a report by Upendranath,[21] Indian education suffers with high incidence of dropout at middle level which is also true in this study.

Various other studies also showed that poor economic condition[8,22] and gender differentials, increasing birth order, school phobia, and family reasons[8] also were reported as predictors of absenteeism in other studies. On the other hand, student of large family size, higher number of siblings and those belongs to minority population had more propensities to miss school.[22]

This study tried to minimize selection bias by employing community-based approach. As age range (7–19) is quite

large, this study could examine the trend of school attendance of students of different educational level. Furthermore, this study had the advantage of having multivariable models for predicting relevant risk factors for absenteeism. Inaccessibility to administrative or institutional school data on absence or discontinuation leaves no scope for cross checking the information reported by caregiver. This research work investigated the physical factors related to irregularity but could not enlighten the subjective aspects of the student such as school phobia, school climate, or family climate.

CONCLUSION

In this study, 43% of students were labeled as chronic absentee. Illness, adverse weather condition, social, or family occasion were the important mentioned causes of school absenteeism. Age and education level of the student and their mother were significantly associated with absenteeism.

Repeated Information Education Communication awareness programme regarding the importance of regular school attendance should be start at the community level so that attendance status can improve along with enrolment. Tracking of dropout student is being done to make sure that each and every children attend his or her school. These will ultimately being cent percent literacy which is the best answer to the advancement of this nation in leap and bound.

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