Family Structural Pattern and Class Attendance Affecting Primary School Achievement

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Article Info

Abstract

The present study examines the relationships between family structure and class attendance affecting primary school achievement in Bangladesh. In so doing, the study randomly selected 465 students (e.g., class 5) from the Underprivileged Children’s Educational Program in Rajshahi city, Bangladesh. The questionnaire method was used for data collection. Descriptive and correlation techniques were used for data analysis. Descriptive findings revealed that most of the students who came from mother-only families than two-parent families had less class attendance and likely had poor school achievement. The results of Spearman’s rank-order correlation analysis suggested that family structural patterns and class attendance during class five were significantly and positively associated with students’ primary school achievement in Bangladesh. In addition, the mother’s education, occupation, and family size were positively and significantly associated with children’s primary school achievement. The findings of the study may have implications for further research and social policy to improve children’s primary school achievement with changes in family structural patterns and mother’s socioeconomic status in Bangladesh.

Keywords: Family structure, primary class attendance, primary school achievement.

Introduction

Every child, according to the Constitution of Bangladesh, has the fundamental rights to education. Despite constitutional rights and recognition, research shows that about 20% of the children cannot enter formal primary school associated to family poverty, low socioeconomic status (SES), negative attitude toward children’s education etc. (Uddin, 2017, 2021). Relevant studies have shown that primary schooling or lower achievement is significantly associated with persistent family poverty (Wagmiller et al., 2006), mother-only-family (e.g., Biblarz & Gottainer, 2000; Fomby & Cherlin, 2007; Uddin, 2009a), low-SES (Blau & Duncan, 1967; Crosnoe & Cavanagh, 2010; Uddin, 2009b), over-family size (Blake, 1989; Polit, 1982) and disadvantaged neighborhood (Buckner, 2008; Haber & Toro, 2004; Samuels, Shinn & Buckner, 2010). Of the background factors, family structure plays an important part for children’s education (Artis, 2007; Brown, 2004). For example, Artis (2007) found that compared to two biological parent families, single-parent families or parental union instability affected academic participation and school outcomes among kindergarten-age children, independent of the economic status of the family, involvement with children, and maternal depression. Based on the resource dilution hypothesis, Blau and Duncan (1967) found that...
as the numbers of children increase in a family, so familial limited resources available to an individual child decrease, and thus less sibling’s life chances for education occur. Although family structure, family size, and class attendance play a vital role in children’s education (Uddin, 2010b, 2010c), few studies have directly focused on family structure and class attendance affecting children’s primary school achievement. The purpose of the study is to examine family structural patterns and children’s class attendance influencing primary school achievement in Bangladesh.

**Literature review**

**Family structure and primary school achievement**

Family structure conceptualized as biological-parent-family, step-father or step-mother family, cohabiting family, single-mother family or single-father family has far-reaching effects on child development and educational achievement (Astone & Melanahan, 1991; Ono & Sanders, 2010; Wu et al. 2015). The family structural hypothesis posits that a disruptive family structure or unstable family structure than other family structures is more like to interrupt children’s cognitive development and learning activities inside and outside the family, regardless of their SES and caregiving to the children. Family disruption theory by Biblarz and Gottainer (2000) and Fomby and Cherlin (2007) suggests that children in disruptive families (e.g., single-mother families, step-parent’s families) experience more transitions and instability in their life than children in first married biological parent families (Raley, et, al. 2005). These family transitions prevent children from engaging in comprehensive learning activities and deep concentration in reading. They also get less emotional and material support from either step-mother or step-father families than stable family structural patterns. Previous research indicates that children with single or divorced mothers or step-father or step-mother families, compared to biological parent families or joint or extended families, achieve lower class attendance and likely lower grade attainment across the educational levels (Brown, 2004; Ginther & Pollak, 2004; Martin, 2012; Sandefur, et, al. 2006). Both these studies and others (Manning & Brown, 2006) argue that structural deficits, lower socioeconomic resources, and lack of parental involvement are key disadvantages that children face in single-mother or step-mother or step-father families than in biological parent or other forms of families. Artis (2007) found that compared to two biological parent families, single-parent families or parental union instability affected academic participation and outcomes among kindergarten-age children, independent of the economic status of the family, involvement with children, and maternal depression.

**Class attendance and primary school achievement**

The term compulsory school attendance refers to the state legislative mandates for attendance in public schools by children within certain age ranges for specific periods of time within the year (Duckworth, 1992). Each country in the world has compulsory primary school attendance (CPSA) to develop children’s cognition, social skills, and academic achievement. Theory and research suggest that CPSA positively influences disadvantaged children’s performance and achievement than advantaged children (Ready, 2010). Although previous
cross-sectional studies have analyzed relations between family structure and children’s school achievement, few studies have explicitly focused on family structure and primary class attendance affecting primary school achievement (Ready, 2010). Some cross-sectional studies have found that school absence is significantly related to poor academic achievement (Caldas, 1993; Lamdin, 1996; NCES, 2007). For example, using cross-sectional data, the National Assessment of Educational Progress (NAEP, 2007) discovered that 21% of the eighth-graders who were absent three or more days from school per month than the students with regular class attendance achieved lower scores. Researchers suggest that the students with less class attendance have low motivation and performance in the class, and likely they have poor achievement.

Using hierarchical linear modeling for early longitudinal study data, Ready (2010) found that socioeconomically disadvantaged children who had regular class attendance rates achieved good literacy skills than their higher SES peers during kindergarten and first grade. Gormley et al. (2005) examined whether access to and attending to expanding universal kindergarten educational programs in Oklahoma, U.S. impact on four years children’s academic achievement. Using the regression-discontinuity method, they found that the children who come from low income and single-mother families experienced substantial gains in language skills, applied problem-solving in math, and general knowledge than higher-income children. Weiland & Yoshikawa (2013) obtained similar findings, assessing the impacts of universal prekindergarten attendance on 4-year-old children’s literacy and numeracy in Boston. They found that regular class attendees gained more in receptive vocabulary, early reading, working memory, and inhibitory control than those who did not attend preschool. Less research has been conducted on the crucial issues in Bangladesh.

**Bangladesh context**

Family structure is the fundamental unit of social structure in Bangladesh (Uddin, 2010b). Although family with two biological parents is a social norm, mother-only family or father-only family or unstable family pattern is gradually increasing day by day in this country (Uddin, 2010a). In a Muslim community Mashreque (1984) found that out of 228 families, the nuclear family was 54.38 percent, the sub-nuclear family was 3.07 percent, the supplementary nuclear family was 6.58%, joint family was 18.42%, and complex joint was 17.54%. In a study, Sarker (1997) explored that out of 132 families, the Muslim nuclear family was 56.8%, the supplementary nuclear family was 12.1%, joint family was 24.9%, and the extended family was 6.2%. Rahaman (1995), in another Muslim community, examined and found that out of 203 families, simple family was 75.37%, and complex family was 24.63%. Current review and empirical studies reveal that joint family patterns are gradually transforming into nuclear and conjugal family patterns in both rural and urban areas (Uddin, 2009a, 2009b, 2010a, 2010b). Bangladesh Bureau of Statistics (BBS, 2018) has found a significant increase in the ratio of female-headed households to male-headed ones because of increasing divorce rates in the country. During 1994 through 2014, the rate of increase in female-headship had been modest- from 8.7% to 12.5%. Further research shows that the rate of female-headed households has increased from 12.5% in 2014 to 14.5% in 2018. Recent
report shows that it has increased up to 18.5% (BBS, 2020). Relevant research shows that family structural patterns and family size are significantly related to primary school achievement (Hossain, 2016; Uddin, 2010c). For example, Hossain (2016) found that mother-only family or father-only family in comparison to two-biological parent family had negative effects on working children’s non-formal primary school achievement. The research also found that poor class attendance in English, Bengali, and math course was significantly related to poor English, Bengali, and math scores during the fifth-grade final exam. Based on the above-mentioned review, we examined the following research questions in Bangladesh:

1. Are there significant and positive associations between family structural patterns and children's primary school achievement?
2. Are there significant and positive associations between children's primary school attendance and their primary school achievement?
3. Are there significant and positive associations between family sociodemographic status and primary school achievement in the Bangladesh context?

Method

Sample
This study to examine the above-mentioned questions was conducted in the Underprivileged Children's Educational Program (UCEP) at Rajshahi city, Bangladesh. In doing so, the present researcher purposefully selected UCEP’s five schools of the city where most of the students (81%) came from disadvantaged families and mothers of the families would work outside the family. First of all, I frequently visited the UCEP’s schools, and then I selected the students who enrolled in class 5 in 2019. Following the school enrollment list, I found 450 students in class 5. Using simple random sampling, about 225 (50%) of the students and their parents (mothers and fathers) were selected to conduct the study. The age range of the students was 11–12 years old.

Measure

Family structure-Mother-only family compared to a step-father or step-mother family or both biological parents family is the risk factor for child development and educational achievement (Uddin, 2012). Following this evidence, we asked our parents: Which family structure is your child (who read in UCEP's school) living in? This question was coded 1 for child’s living with mother (58.9%), 2 for with both biological parents (31.4%), and 3 for step-parents (9.7%).

Primary class attendance-Students’ class attendance and involvement in extra-curriculum activities influence academic achievement. Previous research shows that children living in advantaged family status have regular class attendance, while children from disadvantaged families attend classes irregularly and engage less in extra-curriculum activities. This study used class attendance in Bengali, English and Math classes in class 5. In order to measure class attendance in the three courses, I collected data from registrar books of the class 5 from UCEP schools and then collected data that were numerically accounted for analysis (see Table 1).
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Mathematics

Primary school achievement—Wentzel (1991) suggested that school marks reflect learning in wider social context of the classroom in which the students perform in any particular course or courses. School marks also require effort and persist over long periods of time, while the standardized test is not. For this reason, we obtained the selected students’ Bengali, English and Math marks in class 5 from UCEP’s schools. The schools’ marks were in GPA forms (A+, A-, B+, B-, C, D, E, F). These GPA marks in Bengali course were coded 1 for C and lower grades (15.7%), 2 for B+ & B- (60.6%), and 3 for A+ & A- (23.7%). In the English course, 36.8% of the students obtained C or lower grades, 52.9% B grades, and 10.3% A. In math, 41.9% achieved C, or lower grade, 49% B, and only 9% got an A grade. The average scores of the courses were used as school achievement.

Background Characteristics—We also included and measured background characteristics such as mother’s age, education and occupation, family size, and home status. Mother’s (Mean = 34.23, SD = 4.45) and child’s age (Mean= 11.43, SD = 2.12) was measured in year. But mother’s education (coded as 0 = Illiterate, 1= Primary pass) and occupation (coded as 0 housewife + non-formal job, 1= Housewife + formal job), and home status (coded as 0 = Owned house, 1= Rented house) were categorically measured (see, Table 1). Family size (Mean = 3.11, SD = .98) was numerically measured. These background findings were controlled in the correlation model (see Table 2).

Procedure

This study used a cross-sectional survey design to analyze relationships between family structure, class attendance, and non-formal primary school achievement in the three courses. For this, a structural questionnaire with open-ended and close-ended questions (e.g., Which family type did you live in? How many days did you attend class in the past year? What Grade Point Average (GPA) did you obtain in the primary final exam?) was designed, following from several studies’ instruments. We also collected data on background characteristics such as age, sex, mother’s education, occupation, and home status. As most of the parents and students come from low-income families, the interview technique with the questionnaire was applied for data collection. According to the questionnaire, each parent and student was asked relevant questions.

Fieldwork for this research was conducted from January to December 2019. In order to collect data using the questionnaire, the researcher built up rapport with the parents to create consciousness about the research purposes and objectives, make it easy for them for conversations, and encourage them to actively participate in the research process. I continued this process until the data collection was completed. During the first month (January-February, 2019) of data collection, I built up a rapport with the selected parents and school teachers, especially head of the schools, and next four months (March-June, 2019), I collected final data. Most of the working-class parents would work from morning to mid-day and sometimes round the day in the workplaces in the city, the necessary data were collected in the afternoon when the respondents were leisured, and the present researcher met with the respondents within their family setting where they were intensively interviewed. In addition,
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school marks in mathematics, English, and Bengali were collected from schools in December 2019.

Data analysis

The statistical analyses were conducted by SPSS version 20. First of all, I used descriptive statistical tools (e.g., Percentage, Means, SD) to distribute and present the variables (see Table 1). Second, I used Spearman’s rank-order correlation techniques to analyze significant associations between three types of variables, such as family structure, class attendance, and primary school achievement, after accounting for background characteristics. The bivariate correlation tests suggest that poor primary school achievement was significantly associated with family structure and class attendance after controlling for background factors (see Table 2).

Results

Descriptive analysis

Before answering the research questions mentioned above, it is necessary to know about descriptive findings on the nature, patterns, and trends of family structural patterns, primary class attendance, and primary school achievement in the Bangladesh context. The results of descriptive findings describing the nature, patterns, and trends of family structural patterns, primary class attendance, and primary school achievement and background characteristics of the students studied in Rajshahi city, Bangladesh, are presented in Table 1.

Table 1 shows data on the distribution of family structural patterns such as mother-only family, biological parent family, and step-father family. We found that 40% of the children were growing up with their mother-only families, 46.67% were with both biological parent families (e.g., father and mother), and 13.33% were with step-father families. We also found that out of 275 classes, most of the students (60%) attended 80 classes, and 40% attended 199 classes during class five. In primary school achievement, we discovered that 33.33% of the students obtained C grade, 44.44% obtained B grade, and the rest of them had a grade A. In addition, the background characteristics of the mothers show that most of the mothers were illiterate (55.56%). They were engaged in unskillful jobs (66.67%), and their family size was also large. In particularly, 65% of the parents would dwell in a rented house in the study area.

Table 1. Descriptive findings for the students

<table>
<thead>
<tr>
<th>Variables</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
</table>
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Family structure
- Mother-only family: 90, 40.0
- Biological parents family: 105, 46.67
- Step-parent’s family: 30, 13.33

Primary school attendance
- Number of class attendance in class 5
- M=175.05, SD=31.27, Mini=80, Maxi=199

Primary School Achievement
- C grade (49 & below): 75, 33.33
- B grade (50-79): 100, 44.44
- A grade (80-100): 50, 22.22

Mother’s education
- Illiterate: 125, 55.56
- Primary+: 100, 44.44

Mother’s occupation
- Housewife+ non-formal job: 150, 66.67
- Housewife+ formal job: 75, 33.33

Over-family size
- 1: 55, 24.44
- 2: 105, 46.67
- 3+: 65, 28.89

Housing disadvantage
- Owned house: 80, 35.56
- Rented house: 145, 64.44

Correlation analysis
The findings of Spearman’s rank-order correlation coefficients (\(\rho\) or \(r_s\)) are presented in Table 2. The results of the study revealed that family structural pattern was positively and significantly associated with children’s academic achievement (\(r_s = 0.13, p < .05\)) and primary class attendance (\(r_s = 0.46, p < .05\)) during class five. Likely, class attendance during class five was also significantly and positively associated with poor primary school achievement (\(r_s = 0.55, p < .01\)). Of the family background factors, mother’s education (\(r_s = 0.20, p < .05\)), mother’s occupation (\(r_s = 0.15, p < .01\)), family size (\(r_s = 0.12, p < .01\)) and housing status (\(r_s = 0.19, p < .05\)) were positively associated with poor class attendance and primary school achievement among the students in the study area. Overall, the findings suggested that associations between family structure and class attendance during class five significantly affected primary school achievement after controlling for background characteristics. In addition, family sociodemographic factors contributed to the correlational model of family structural pattern and primary class attendance with primary school achievement.

Table 2. Results of Spearman’s Correlation Coefficients between Family Structure, Class Attendance, and Primary School Achievement among Students

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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</thead>
<tbody>
<tr>
<td>1. Family structure</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>2. Class attendance</td>
<td>.46**</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3. Primary school achievement</td>
<td>.13**</td>
<td>.55*</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Mother’s education</td>
<td>.02</td>
<td>.05</td>
<td>.20**</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Mother’s occupation</td>
<td>-.08</td>
<td>.05</td>
<td>.15*</td>
<td>.01</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>6. Family size</td>
<td>-.11*</td>
<td>.08</td>
<td>.12*</td>
<td>-.03</td>
<td>.31**</td>
<td>1.00</td>
</tr>
<tr>
<td>7. Home status</td>
<td>-.10*</td>
<td>-.05</td>
<td>.19**</td>
<td>-.04</td>
<td>-.31**</td>
<td>-.09</td>
</tr>
</tbody>
</table>

Discussion
The purpose of this study was to analyze the relationship between family structure and class attendance during class five affecting students’ primary school achievement in Rajshahi city, Bangladesh. In so doing, I randomly selected 225 students from UCEP’s schools located at
Rajshahi city. Questionnaire method was used for data collection from January through December, 2019. The findings from the descriptive analysis revealed that mother-only family and step-father family than biological parent family was more likely to affect children’s class attendance and their achievement scores during class five. Overall, the results from correlation analysis suggested that both family structural patterns and poor class attendance were positively and significantly associated with children’s poor primary school achievement at Rajshahi city, Bangladesh.

These findings are consistent with previous research studies (Brown, 2004; Ginther et al., 2004; Martin, 2012; Sandefur et al., 2006). These studies have found that children growing up with single or divorced mother or step-father or step-mother family, compared to biological parent family or joint or extended family, have poor class attendance and likely have lower grade (e.g., grade C) across the educational levels (Brown, 2004; Ginther et al., 2004; Martin, 2012; Sandefur et al., 2006). These studies and others (Manning & Brown, 2006) argue that structural deficits, lower socioeconomic resources, and lack of parental involvement are the key disadvantages that children face in single-mother or step-mother or step-father families than in biological parent or other forms of families. Most notably, Artis (2007) found out that compared to two biological parent families, single-parent families or parental union instability affected academic participation and outcomes among kindergarten-age children, independent of the economic status of the family, involvement with children, and maternal depression. Ready (2010) argued that socioeconomically disadvantaged children who had regular class attendance achieved good literacy skills than their higher SES peers, while the children who had poor class attendance achieved poor educational performance during kindergarten and first grade. Gormley et al. (2005) examined whether access to and attending to expanding universal kindergarten educational programs in Oklahoma, U.S. impacted on four years children’s academic achievement. Using the regression-discontinuity method, they found that the children from low-income and single-mother families experienced substantial gains in language skills, applied problem-solving in math, and general knowledge than the higher-income children. Weiland et al. (2013) also obtained similar findings, assessing the impacts of universal prekindergarten attendance on 4-year-old children’s literacy and numeracy in Boston. They found that regular class attendees gained more on receptive vocabulary, early reading, working memory, and inhibitory control than those who did not attend preschool. Hossain (2016) from Bangladesh found that mother-only family or father-only family in comparison to two-biological parent family had negative effects on working children’s non-formal primary school achievement. The research also concluded that poor class attendance in English, Bengali, and math course was significantly related to poor English, Bengali, and math scores during fifth grade.

**Conclusion and implication**

This study analyzed the relationship between family structure and class attendance during class five affecting students’ primary school achievement and selected 225 students from UCEP’s schools in Rajshahi city, Bangladesh. The questionnaire method was used for data collection for 12 months. The findings from the descriptive analysis revealed that mother-only...
family and step-father family than biological parent family was more likely to affect children’s class attendance and their achievement scores during class five (Hossain, 2016). The results from correlation analysis suggested that both family structural patterns and poor class attendance were significantly associated with children’s poor primary school achievement in Rajshahi city, Bangladesh. These findings may have implications for changing mother-only families into perfect families or improving relationships in step-father families. Moreover, the findings may have implications for social support for mother-only-family or step-father-family in which children grow properly and achieve at primary school (Uddin, 2017). These changes in deficit family structural patterns may enhance children’s class attendance and likely their school success. Further research should be conducted on how changes in family structural patterns and class attendance affect children’s school achievement over time.

**Conflict of interests**

The author(s) declare no conflict of interest.

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