



(RESEARCH ARTICLE)



A CROSS-SECTIONAL STUDY OF HOME ENVIRONMENT AND ACADEMIC ACHIEVEMENT AMONG SECONDARY SCHOOL STUDENTS OF BANGLADESH

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ABSTRACT

This study aimed at analyzing the relation between home environment and academic achievement of secondary students in Jashore district. This study was carried out in twelve secondary schools of Jashore district. For this study, data were collected from 750 students following convenience sampling and a structured self-reported questionnaire was used for the school survey. For analyzing the collected data, various statistical tests were executed, such as principal component analysis (PCA) was used to determine the dimensions of home environment. PCA result suggested ten distinct dimensions of home environment, including self-efficacy, rule bound, parental monitoring, regulatory activities, physical environment, parental modeling, acceptance and responsive, parents' activity, encouragement and support as well as variety of experience, and explained around 44 percent of the total variance with an internal consistency of (Cronbach's α) 0.931. Bivariate analyses suggested significant and positive relations between home environment and academic achievement. Ordinary least Square (OLS) regression explained 12 percent of the variance of academic performance. This study, therefore, concluded that a positive home environment – with healthy lifestyle and constant encouragement from parents – is a precursor for good academic achievement of the students in Bangladesh.

Keywords: Home Environment; Academic Achievement; Secondary Students; Parental Monitoring; Parental Modeling

1 INTRODUCTION

Education is extremely important for development of children's minds and its impact falls upon students' entire lives. Several key factors plague the education of children; home environment is one of the influential factors of them. Student's academic achievement has a positive relation with high aspirations and strong moral support of parents, educational and occupational (job circumstances) factors, social networks, parental educational background. Moreover,

there is a relation between intelligence and academic achievement scores at different levels of socio-economic status and family environment (1). Similarly, the home and family and relative school success and failure are not only relevant to educators and educational administrators and planners, they are also relevant to parents and home environment (2). It is also found that home environment is related to a wide array of developmental outcomes intelligence, language, health and growth, social competence, locus of control, behavior at home and school and school achievement (3).

A key prerequisite for developing a strong progressive nation is having a well-educated population across all educational levels. Bangladesh fully aligns with the Education for All (EFA) objectives, the Millennium Development Goals (MDGs), and international commitments. Bangladesh has achieved significant progress in the last twenty years by expanding access to education, particularly at the primary level and for girls. Besides reducing poverty, Bangladesh has achieved remarkable progress in increasing access to education. In 2021, the gross enrolment ratio for primary education rose to 105.72%, with a net enrolment rate of 97.42%. For secondary education, the gross enrolment ratio reached 75.52%, and the net enrolment rate was 70.25%. Bangladesh has also attained gender parity in educational access at both primary and secondary levels (4). Despite these successes, several challenges persist. Repetition rates and dropout rates remain high in Bangladesh, with only half of the children who start first grade reaching age 10. Approximately five million children aged six to thirteen—mostly from impoverished families, urban slums, and remote areas—are still out of school. Moreover, enrollment rates decrease further among poor students as they progress from primary to secondary education (5).

Home environment appears to be both a cause and an effect of academic achievement of the students. It is found that opportunities provided for learning in home environment is related with academic achievement of the students (6). It is also evident that parental involvement has positive influence on students' academic achievement. It is revealed in their study that parental aspiration/expectation for children's education achievement has the strongest relationship, whereas parental home supervision has the weakest relationship (7). There is a positive relation between intelligence, motivation, achievement with parent stimulation of the student and academic achievement (2). The aforementioned information show that home environment has a very influential role in students' academic achievement, which however remained unexplored in the context of Bangladesh. This study, therefore, examines the relation between home environment and students' academic achievement with a particular emphasis on Jashore district.

2 LITERATURE REVIEW AND RESEARCH GAP

Research on parenting styles indicates that authoritative parents—characterized by firm discipline that encourages self-regulation along with high warmth and nurturance—tend to have children with higher achievement levels compared to those with authoritarian parents (strict discipline but little warmth) or permissive parents (lax discipline with variable warmth) (8). Recent studies consistently show that children raised by authoritative parents tend to perform better academically compared to those with authoritarian or permissive parents (9). Both key aspects of parenting style—Parental responsiveness and parental authority/demandingness—individually contribute to positive achievement outcomes, even when considered separately (10).

Families significantly impact children's educational achievement mainly through supportive parental practices. (11). Students coming from middle-grade backgrounds, these practices include high parental educational aspirations for children, monitoring adolescent behavior at home, frequent parent-teen discussions about school and future education, and parental participation in school governance (12).

Parental involvement in areas such as interest in school (e.g., talking to their child about schoolwork), academic enrichment (e.g., reading for pleasure), and supervision of academics (e.g., ensuring homework is done) significantly impacts children's academic achievement (13).

Parents shape the 'intellectual climate' that influences their children's educational goals, motivation to succeed, and school performance. Factors like parent-child verbal interactions, reading aloud to children, early exposure to books, structured routines such as rules for TV viewing and bedtimes, parental reading habits, access to reading materials, and opportunities to read are crucial in shaping academic success. Active parental involvement in children's learning at home helps transform various forms of family resources into children's human capital (1).

The aforementioned studies tried to identify various factors of home environment that influence the academic achievement of the students. By reviewing these articles many inconsistencies, gaps and contradictions are identified. These studies particularly contribute to some specific factors of home environment and ignores some major dimensions that influence student's academic achievement. Moreover, these studies were conducted in the context of other countries. Therefore, this study was conducted to identify the major factors of home environment and the relation between home environment and academic achievement of the students.

2.1 Conceptual Framework

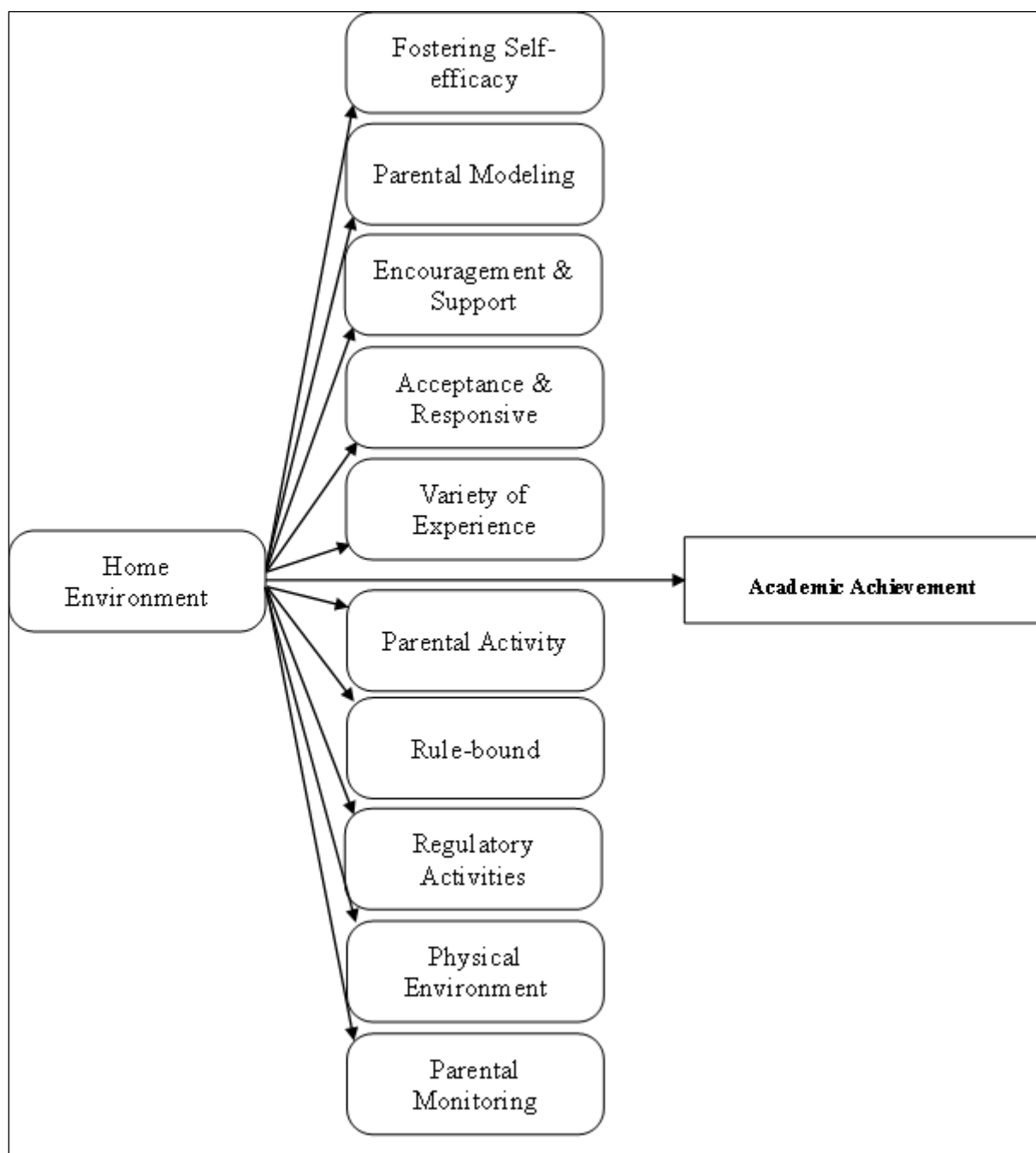


Figure 1: Conceptual Framework of the Study

3 THEORETICAL FRAMEWORK

The Potential Academic Socialization (PAS) theory of parental academic socialization enhances our comprehension of parental involvement by detailing the psychological processes through which parents influence their children's learning and academic development. Parents establish goals for their children and participate in interactions that promote internalizing these objectives. Such behaviors include school-related activities like attending parent-teacher conferences and volunteering in classrooms, along with home-based practices such as talking about school with children and helping with homework (14).

Based on family system theory, family relationships undergo the most significant changes when either individual members or the entire family experience shifts. Moreover, adolescents' cognitive growth boosts their self-efficacy, decision-making skills, and understanding of how academic and extracurricular pursuits support their goals and aspirations. Consequently, they require less direct parental involvement (15).

Family environment encompasses three types of capital— and those are physical or financial capital, human capital, and social capital—which are interconnected and should be addressed together. Physical capital includes tangible material resources like family income and wealth, indicating socioeconomic status. Human capital pertains to an individual's education level, covering their knowledge, skills, and ability to function within social structures. Social capital refers to the social resources a family can access within their community, encompassing relationship networks both within the family (within-family social capital) and linking the family to the wider community (between-family social capital). Together, the three kinds of family capital—physical, human, and social—reflect the quality of the home environment, which influences children's academic achievement (16).

4 METHODOLOGY

4.1 Study Area

The study was carried out in Jashore District, a district in the southern region of Bangladesh. About the educational infrastructure, there is one public university and a medical college, 432 *Madrasahs*, 3 government colleges, 86 non-government colleges, 662 government primary schools, 542 registered primary schools and 33 non-registered primary schools (Bangladesh Bureau of Statistics, 2013). Additionally, a total 513 secondary schools, i.e. combined 4 government secondary schools, 509 non-governments secondary schools are situated in Jashore district (17). Among the secondary educational institutions, most of the prestigious institutions are situated at urban area, i.e. Police Line Secondary School Jashore, Jashore Zilla School, Government Girls School Jashore and so on. Among these educational institutions, only twelve educational institutions, situated at urban and rural areas, were picked purposively.

4.2 Participants

This study aimed at exploring the relation between home environments of secondary students with their academic achievement. According to the objectives, some specifications have been made to identify the participants, to collect valid and reliable data from urban and rural areas of secondary level students. The specific attributes of the participants were – (i) the participants must be secondary students; (ii) enrolled in the educational institutions situated under Jashore District during data collection; and (iii) having at least a term final (for Class X students) or junior secondary certificate result (for Class IX students). Considering these criteria, a school-based census was carried out in the purposively picked secondary educational institutions with prior permission from the respective authority of these educational institutions to construct an inventory list of students. In addition, secondary information was collected from the authority, especially, from Zila educational office at Jashore. A total of 2,173 students were identified, enrolled in secondary level of different Upazilas under Jashore district, of which 1,065 were female students and the rest were male.

4.3 Sampling

A total of 750 students were picked following convenience sampling. This sampling involved the sample being drawn from that part of the population that was easily accessible and close to hand considering the convenience of the researcher. Despite the use of non-probability sampling, which may have some short comings, this study covers a representative sample $\{(750 \times 100) / 2,173\}$ 34 percent from the said population.

4.4 Data Collection

This study was carried out survey research method, and the information from the samples were collected by a structured questionnaire (also known as self-reported questionnaire) developed after reviewing relevant literatures related with various factors of home environment that influence the academic achievement of students and the data were collected from the secondary schools of both urban and rural areas in a three-month period.

4.5 Questionnaire

In this study, a structured self-reported questionnaire (SRQ) in English, later translated into *Bengali* to facilitate the data collection, was developed. Through an intensive review of relevant literatures appropriate variables useful to achieve the research objectives were identified and used to develop the self-reported questionnaire. The self-reported questionnaire, containing both open and close ended items, included four separate modules, each with distinct focus.

4.6 Pre-test

The consistency of the self-reported questionnaire was verified by pre-test after developing the questionnaire. Data for the pre-test were collected from 50 participants of Lions school & college by the already developed questionnaire, to minimize inconsistencies and to maximize validity and reliability of the instrument. It is important to note that the students, participated in the pre-test, were excluded from the actual fieldwork. After necessary modifications, particularly, deducting two variables (influence of neighbor, parenting style) in the home environment and lingual changes in section D, the self-reported questionnaire was finalized for field work.

4.7 Ethical Consideration

Permission of the authority of respective educational institutions was required for this study. Therefore, the study was carried out in the twelve educational institutions of urban and rural areas at Jashore District with a written approval letter from the Zila Educational Officer, Jashore to the Principal/Head of each institution for cooperation, and with their kind verbal consent, data were collected for this study. Prior to the actual fieldwork started, the researcher disclosed the nature and purpose of this research work and took verbal consent from the participants, willing to take part in this work voluntarily. The participants were free to decline from the study at any moment of the survey. To keep the anonymity of the participants, the names were not included in the questionnaire of the study.

4.8 Data Analysis

Data were entered into SPSS for statistical analysis. This study, explanatory by nature, executed both descriptive and inferential statistics. Through descriptive statistics, the personal attributes, parental attributes as well as household characteristics were described. Furthermore, Principal Component Analysis was implemented to identify the factors of home environment. To measure the consistency of the data, Cronbach's α was calculated. To strengthen the findings, ordinary least square (OLS) regression was executed as well.

5 FINDINGS/RESULTS

5.1 Principal Component Analysis

For PCA, ten principal components are considered with an eigenvalue of more than one, which all together explain about 44 percent of the total variation. The Kaiser-Mayer-Olkin (KMO) test indicated slightly over 87 percent accuracy of sampling adequacy. The Bartlett's test of sphericity was also significant [14702.074₂₀₈₀, ($p < 0.000$)]. Cronbach's alpha for this PCA was about 93 percent, which is good enough.

Based on the absolute values of the studied factor presented in Table 5, the first principal component, explaining just over 7 percent of the total variation with a Cronbach's α 0.791, denotes the features of access to books, materials for arts and crafts and collections, references materials, age specific books, computer or tablet, parents reading habit and sewerage and waste disposal system. The second principal component entails factors associated with the twelve different variables like parents' control over their temperament, use of simple and clear sentences, maintaining common courtesy, instructions, encouragement, advises to dealing with emergencies, assistance in academic activities, monitoring homework, praising children and speaking with a positive voice. This component explains slightly over 6 percent of the total variation with Cronbach's α 0.836. The third principal component, explaining around 6 percent of the variation (with a Cronbach's α 0.813), revolves around parents' interest in incidents happening in school, checking grade transcript, participation in outdoor activities, eating together, consciousness about physical fitness, parents' communication with the teacher, parents' response, parents' encouragement to get a good grade and knowledge, parents' appreciation.

Explaining around 6 percent of the variation (Cronbach's α 0.791), the fourth principal component refers to the structure of house, decorations, light and air flow, location of house, sufficient space, cleanliness, suitable place for studying and reading, living area and surroundings. Fifth principal component contribute to the total variance of 5 percent (Cronbach's α 0.667) represents five variables, parents' guidance for personal hygiene, instruction to sleep at home, weekly household responsibilities, discussion about substance abuse and parents monitoring about signs of drug use. The sixth principal component, comprising around 4 percent of the total variation (with a Cronbach's α 0.687) demonstrates the five factors associated with parents' arrangements for trip, visits to historical or art museum, fair (book fair, Tree fair, ICT fair etc.), relatives and sports events. Seventh principal component with an internal consistency of 0.5693 (Cronbach's α), explaining around 4 percent of the total variation, revolves around parents' allowance to children's privacy, contribution to parents' conversations, encouragement to visit outside and so on. Eighth principal component added 3 percent percent to the total cumulative proportion of variance with an internal consistency of 0.518 (Cronbach's α), explains parents' participation in adolescent-oriented organization, interaction with their friends and parents' interaction with children's peers. Ninth principal component with an internal consistency of 0.512 (Cronbach's α), explaining around 3 percent of the variation, entails various factors such as established procedures to check in with parents, rules to interact with peers and maintenance of a regular and predictable schedule. Lastly tenth principal component with a Cronbach's α 0.270, explaining just over 3 percent of the total variation, denotes the features as parents' positive reference for their children, access to equipment for outdoor games and opportunities to participate in co-curricular activities.

Table 1: Principal component analysis (N=750)

Items						Components				
	Fostering Self Efficacy	Parents Modeling	Encouragement and Support	Physical Environment	Parents Monitoring	Variety of Experiences	Acceptance and Responsive	Parents Activity	Rule Bound	Regulatory Activities
In our house, we have one full shelf of books on different issues	0.651	0.048	0.131	0.115	- 0.056	- 0.018	0.077	0.195	0.043	0.183
I have access to materials for arts and crafts and collections	0.646	0.033	0.049	0.059	0.059	0.136	0.109	0.000	- 0.067	0.145
I have access to home computer or Tablet	0.609	- 0.037	- 0.110	0.331	0.152	0.187	0.163	- 0.011	- 0.134	- 0.009
Our house has at least two types of references materials	0.602	0.039	- 0.045	0.158	0.114	0.051	0.090	0.064	0.043	0.070
My parents regularly read newspaper or magazine	0.584	0.135	0.136	0.091	- 0.016	0.118	0.052	0.131	- 0.059	- 0.118
My parents read at least two books during the past year	0.552	0.102	0.091	0.117	0.081	0.094	- 0.018	0.172	0.010	- 0.192
I have access to age specific books	0.458	0.075	0.052	0.226	- 0.100	- 0.040	0.104	0.154	0.197	0.289
There is a well-planned and designed drainage, sewerage and waste disposal system in our area	0.392	0.104	0.029	0.271	0.065	0.004	- 0.190	- 0.197	0.155	0.190
My parents participate in religious activities regularly	0.374	0.174	0.181	0.136	0.196	- 0.015	- 0.020	- 0.042	0.260	- 0.039
My parents do not lose temper more than once a week.	0.057	0.613	0.020	-0.080	0.045	0.131	0.073	0.044	0.037	- 0.041
My parents show positive response when other praise me	-0.008	0.587	0.292	0.157	- 0.108	0.014	0.303	0.039	- 0.024	- 0.098
My parents encourage me to do household chores	0.074	0.532	0.155	0.203	0.245	0.034	- 0.029	0.109	0.159	0.046
My parents converse in simple and clear sentences	0.010	0.523	0.122	0.256	0.353	0.020	- 0.163	0.044	0.025	0.034
My parents always maintain common courtesy	0.147	0.450	0.175	0.225	0.387	0.007	- 0.109	0.169	0.089	- 0.057
My parents monitor my homework regularly	0.139	0.441	0.408	0.052	0.175	0.077	0.028	- 0.032	0.155	0.155
My parents often assist me in academic activities	0.257	0.437	0.294	0.078	- 0.001	0.266	0.071	- 0.044	0.260	0.197
My family has a TV, and it isn't left on continuously	0.169	0.430	0.150	0.227	0.108	0.064	0.022	- 0.068	0.086	0.026
My parents' voice is always positive when they are speaking of or to me	0.027	0.414	0.210	-0.007	0.288	0.011	0.409	0.035	- 0.022	- 0.073
My parents discuss current events with me	0.172	0.406	0.083	0.005	0.257	- 0.025	0.223	0.405	- 0.008	0.184
My parents arrange special instruction and tuition outside of school for me	0.282	0.401	0.265	0.051	0.181	0.128	0.107	- 0.027	0.116	0.264

My parents taught me how to deal with emergencies	0.202	0.364	0.347	0.073	0.254	- 0.039	0.019	0.172	0.182	0.211
My parents regularly check my examination transcript/grade transcript	0.043	0.233	0.603	0.178	0.164	- 0.001	0.046	0.067	0.048	0.106
My parents are interested in everything happening in school	0.116	0.146	0.581	0.041	0.265	0.007	0.129	0.126	- 0.132	- 0.067
I spent quality time with my parents in the weekends	-0.083	0.260	0.536	0.058	0.096	0.295	0.177	- 0.069	- 0.003	0.106
My parents encourage me get to a good grade and knowledge	0.223	0.191	0.513	0.116	0.120	0.208	0.139	0.110	- 0.022	- 0.020
My parents frequently contact with the teachers (school/tuition)	0.294	- 0.058	0.489	0.091	0.007	0.161	0.050	0.178	0.231	- 0.184
My parents respond appropriately and cordially to me	-0.080	0.350	0.472	0.110	0.202	0.019	0.189	0.066	- 0.074	0.080
My parents usually appreciate my accomplishment	- 0.1240	0.437	0.469	0.110	- 0.094	0.035	0.207	0.035	0.069	- 0.010
My parents are well acquainted with all teachers	0.287	- 0.052	0.455	0.033	- 0.013	0.044	0.058	0.094	0.382	- 0.089
My Father regularly engages in outdoor activities with me	0.062	0.050	0.411	0.083	0.211	0.291	0.239	0.189	0.050	0.052
We often eat together especially at breakfast and at dinner	-0.107	0.169	0.398	0.287	- 0.060	0.325	0.086	- 0.048	0.158	- 0.043
My parents are conscious about physical fitness and often follow a routine of physical activities	0.302	0.215	0.356	0.172	0.225	- 0.057	0.048	0.142	0.132	0.113
The walls in my room are well built and decorated	0.147	- 0.037	- 0.002	0.653	0.112	0.183	0.164	0.119	- 0.156	- 0.019
Our house is well structured with sufficient light and air flow	0.146	0.103	0.174	0.646	- 0.027	0.047	0.154	0.136	0.051	0.054
Our house is located in a well-structured and well-planned neighborhood	0.191	0.064	0.013	0.641	0.116	- 0.001	0.022	0.021	0.118	0.022
Our house interior is not dark and dusty	0.055	0.211	0.123	0.599	0.119	- 0.130	- 0.126	0.036	0.049	0.107
Our house is spacious offering sufficient room for everyone	0.207	0.018	0.142	0.5084	0.190	0.171	0.096	0.009	0.012	0.104
Our house is kept clean and clear	0.091	0.215	0.251	0.543	0.323	- 0.071	- 0.154	- 0.053	- 0.005	0.121
I have access to suitable place for reading and studying	0.194	- 0.041	0.173	0.454	0.339	0.067	0.100	- 0.046	- 0.109	0.230
My parents do not consume non-prescriptive drugs	0.165	0.335	- 0.010	0.382	0.082	0.037	0.049	0.027	0.309	- 0.203
We are living in residential areas and the surroundings are not over noisy	0.166	0.114	0.109	0.294	- 0.013	0.010	- 0.173	- 0.067	0.187	- 0.036
I have access to two indoor games in my house	0.202	0.168	- 0.043	0.283	0.083	0.204	0.032	0.188	- 0.077	0.208
My parents provided guidance or advice with regard to personal hygiene	0.163	0.321	0.067	0.153	0.577	- 0.003	0.117	0.034	0.104	- 0.014
I am strongly instructed to sleep at home every single night	-0.021	0.186	0.179	0.142	0.573	0.083	- 0.071	- 0.047	0.116	0.092

I am responsible for weekly household responsibilities	-0.045	0.058	0.099	0.170	0.566	0.127	0.121	- 0.072	0.069	0.057
My parents periodically discuss substance abuse with me	0.303	0.179	0.075	0.084	0.399	0.078	0.194	0.161	0.105	- 0.095
. My parents knows and monitors signs of drug use	0.299	- 0.038	0.257	0.132	0.395	0.138	0.036	0.185	0.065	- 0.202
My parents took me to historical, or art museum during the past year	0.224	- 0.004	0.032	-0.015	0.295	0.679	0.017	0.060	- 0.058	0.067
My parents arranged an annual long trip from home during the past year	0.146	0.020	0.165	0.137	0.113	0.589	0.000	0.175	- 0.094	0.072
. My parents took me to fair (Tree fair, book fair, ICT fair etc.)	0.152	0.273	0.276	0.059	0.088	0.580	- 0.086	0.221	0.044	- 0.052
My family visits at my relatives place at least once a month	0.075	0.112	- 0.051	0.143	- 0.105	0.551	0.125	- 0.050	0.391	- 0.169
My family usually take me to sports events (cricket, football etc.) during past year	-0.028	0.071	0.171	-0.102	- 0.164	0.487	0.172	0.234	0.224	0.179
I often contribute to the conversation when it is necessary and appropriate	0.168	0.015	0.234	0.112	0.002	- 0.058	0.622	0.049	0.193	0.148
My parents allow to have some privacy for me	0.127	- 0.039	0.108	0.047	0.001	- 0.013	0.564	0.064	0.136	0.094
My parents encourage me during my visit to outside home	0.028	0.271	0.085	-0.107	0.059	0.279	0.517	- 0.001	- 0.035	- 0.003
I can disagree without being harshly rebuked	0.116	0.182	0.184	0.098	0.160	0.142	0.470	0.206	- 0.015	- 0.080
My parents participated in adolescent-oriented organization	0.148	0.000	0.070	-0.025	- 0.013	0.141	0.090	0.645	0.036	0.060
My parents regularly interact with their friends outside of work	0.193	0.132	0.139	0.277	- 0.076	0.049	0.009	0.620	- 0.010	- 0.049
My parents frankly interact with my peers and keeps them in contact	0.089	- 0.024	0.133	-0.039	0.081	0.211	0.075	0.503	0.203	0.122
I have to follow established procedures to check in with my parents	-0.045	0.132	0.020	-0.044	0.207	0.052	0.157	- 0.002	0.614	0.167
My parents establish rules to interact with my peers and confirmed that they are strongly followed	-0.138	0.166	0.015	0.086	0.157	0.030	0.102	0.354	0.527	- 0.020
My family maintains a fairly regular and predictable schedule	0.320	0.129	0.231	0.045	0.351	0.041	0.016	0.172	0.412	0.069
I have opportunities to participate in co-curricular activities	0.077	0.041	0.079	0.241	0.081	0.002	0.090	0.077	0.128	0.618
I have access to equipment for outdoor games	0.225	0.058	- 0.026	0.190	0.055	0.213	0.153	0.290	- 0.019	0.482
My parents do not refer to me in a derogatory way	0.142	0.141	0.100	0.151	0.272	- 0.027	0.248	0.087	0.193	- 0.352
Kaiser-Meyer-Okin Measure of Sampling Adequacy	0.873									
Bartler's Test of Sphericity	14702.074 ₂₀₈₀ ($p < 0.000$)									
Total variance explained	44.392									
Cronbach's α	0.931									

5.2 Ordinary least square regression predicting academic achievement (GPA in previous examination)

With a view assessing the connection of the ten dimensions with sixty-five variables, we conduct an ordinary least square regression. Table presented the relationship between students' academic achievement and home environment where independent variable was home environment. It is evident that home environment explained 12 percent of the variance of academic performance with $R^2 = 0.119$. Among the significant variables, parents' activity ($\beta = -0.05^{**}$), regulations ($\beta = 0.034^{**}$), were significantly influencing the academic achievement of the students.

Table 2: Ordinary least square regression predicting academic achievement

Variables	(CGPA in Average)
(Home Environment)	Model 1
Adjusted R Square	0.119
(Constant)	2.954(0.197)
Fostering Self Efficacy	0.021*(0.004)
Parental Modeling	0.002*(0.004)
Encouragement and Support	0.019* (0.005)
Parental Monitoring	0.034*(0.009)
Variety of Experience	-0.014*(0.006)
Parents Activity	-0.005**(0.011)
Rule Bound	-0.034**(0.012)
Regulatory Activities	-0.019*(0.013)

Significance at 1% level **. Significance at 5% level

6 DISCUSSION

The home environment plays a crucial role in a student's academic success. Factors such as the level and quality of stimulation, support, and physical surroundings all influence achievement. Additionally, personal attributes like parents' occupation and income are related to student performance. Academic success is positively associated with high aspirations and strong moral support from parents, as well as with educational and occupational factors, social networks, and parental educational backgrounds. This research indicates that parental involvement positively influences students' academic performance. It emphasizes that parental aspirations or expectations for their children's education show the strongest link, whereas home supervision shows the weakest. Key factors include parental educational goals, monitoring adolescent behavior, consistent discussions about school and future plans, and parents' participation in school governance. Most researchers agree that authoritative parenting styles, along with active parental engagement, are vital in improving academic outcomes across various grades, genders, and ethnic groups (18). For over 30 years, extensive research has examined how parenting style relates to academic success. Findings indicate that children with authoritative parents typically excel academically more than those with authoritarian or permissive parents. Recent studies continue to support this, showing higher achievement levels among children of authoritative caregivers. Parental influence manifests through activities like volunteering at school, engaging with teachers, helping with homework, attending school events, and participating in parent-teacher meetings. Moreover, the importance parents place on education—shaped by their aspirations, expectations, and attitudes—serves as a crucial element in their impact.

7 CONCLUSION

Various factors of home environment are correlated with the academic achievement of the students in different ways. It is evident that parental modeling, involvements with student's academic activities, monitoring, self-efficacy, rules bound, acceptance and responsive, regulatory activities play a vital role in determining students' academic achievement. The result of this study provides the knowledge for the parents that they should support their children by providing the right and most favorable home environment to enhance better academic achievement by the students.

Various studies regarding home environment are conducted around the world, but in Bangladesh there is no study regarding this issue. This study examined how home environments influence the academic achievement of secondary students in Jashore district, Bangladesh. However, further research is necessary to develop a supportive home setting

that not only fosters the child's potential but also enhances interpersonal relationships with parents. The home is crucial for a child's overall growth and development. Hence, the study recommends cultivating a positive home environment to improve students' academic performance.

STATEMENTS ON COMPLIANCE WITH ETHICAL STANDARDS

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Disclosure of conflict of interest

The authors declare no conflict of interest.

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