Watching Television and its Impact on Students' Academic Performance

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Abstract

This study intends to estimate the impact of watching television on students' academic performance, as well as to find out which programs have the great impact. This study is explanatory in nature and uses to bit model for analysis. Grade point average (GPA) is used to measure the academic performance for the students who have passed Secondary School Certificate (SSC) and Higher Secondary Certificate (HSC) examinations in 2017. Khulna city has been surveyed as urban and Paikgacha Upazila has been surveyed as rural area. Total 174 students have participated in the study, where the data set is constructed out of a structured questionnaire survey. The result of the study shows that students view television for 164 minutes (2.73 hours) per day on average, which has a negative impact on students' GPA in general, but program specific impact discloses that educational programs have positive and significant impact on students' academic achievement. The study found that one hour increase in viewing television per day decreases 0.10 point of GPA, but watching an extra hour of movies, drama and sports per day reduce GPA by 0.12, 0.12 and 0.11 point respectively. Government and media partners can take selective decisions to reduce telecasting harmful programs and increase educative one. Present study provides an important insight into the policy makers on determining the nature and type of student friendly programs to be broadcasted in the television.

Key Words–Academic performance, Telecast, Watching television.

1.1 Introduction

Pervasive access to electronic gadgets by the young generation especially the students raises concern over not only their academic performance, but also their

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psycho-social development. Although watching television exerted a positive impact in terms of receiving acquaintance to contemporary events and updated knowledge, too much engagement with it ensues reduced study time, which in turn affects their academic performance.

Apart from identified positive impact as evident by empirical studies, social scientists pointed out numerous harmful effects of watching television on a young viewer's mind set, which ultimately generates a disastrous ending in case of academic performance. Two prominent relevant theories are cultivation theory and social learning theory. The cultivation theory propounded by George Gerbner in 1976 suggests that the contents exhibited in the television/social media influence the mindset and behavior of massive viewers in longer period of time. In that case, they tend to believe that real world is analogous to the virtual world and hence recognizes the significant relationship between the exposure to television and attitudes, beliefs, and perceptions they hold in their mindset (Gerbner, 1998). In this way, the values they develop within themselves turns to be the mirror image of the televised contents, which is supposed to distract the mindset of youngsters from their study.

According to social learning theory developed by Albert Bandura in 1977, television is a very powerful platform of social learning. Given the suitability of execution in the defined environment, children or young people tend to reproduce the content that they observe in the television. Thus acquisition of modified behavior borrowed from virtual world may sometimes hinder their capability to think independently (Bandura 1977), which restrict their potential to be successful achievers in their academic life.

Available evidence stated that the impact of television on the education of children is controversial. Webster (1998) reported a positive impact of television on students' socialization as it has enormous potential of teaching due to its massive coverage. However, numerous studies indicated negative relationship between watching television and academic achievement (Williams and Haertel, 1982; Furu, 1968; Himmelweit et al., 1958; Murray and Kippax, 1978; Sharif and Sargent, 2006). In addition, some other studies have shown influence of television programs on children's behavior (Pagani et al., 2010). According to Crespo et al., (2001), watching television deteriorate health by limiting physical activities (Crespo et al., 2001; Lucas et al., 2011). However, it can be concluded that there exists a debate on impact of watching television on a student's life and performance. Such studies are available in both developed and developing countries. But, in Bangladesh such study is quite rare.

Studying is assumed as the prime concern of a student's life which has a direct link with academic performance of students. Watching television is regarded as an all-time favourite activity of the students as a source of entertainment and passing leisure times which might have an impact on the academic performance. Keeping these facts into consideration, the present study aims to attain two important objectives: (i) to estimate the impact of watching television on students' academic performance (GPA); and (ii) to find out which programs impact academic performance most.

1.2 Television Watching and its Impact on Students' Academic Performance: Empirical Evidences

According to a study by Hedley et.al. (2013), American children whose age is between 2 and 11 years, watch almost 30 hours of television a week and teenagers for 25 hours per week on average. However, the study found that watching television is a 'discontinuous', often interrupted, and frequently nonexclusive activity which cannot be measured in a fixed boundary of hours or minutes. Again, these measures are also average, and individuals differ widely.

A study by Khan (2012) had observed a slightly positive relationship between watching television and academic achievements of the students. He conducted a Causal- Comparative or ResearchEx Post- Facto research and found that the students who watch television have higher grades than who do not. Among them females and students from urban areas, (private, English medium and large schools, and upper socio-economic levels) have comparatively better academic achievements than others. However, this is for those students who spend only one hour to two per day, but watching beyond that time may deteriorate academic achievements.

Television watching is known to affect children's verbal physical, cognitive, and emotional development. A study by Takeuchi et al., (2013)examined cross sectional correlations between the duration of watching television and regional grey/white matter volume among 133 boys and 143 girls and longitudinal changes that occurred a few years later among 111 boys and 105 girls. The results show that watching television has positive impact on regional grey/white matter volume and negative effects on watching television on verbal intelligence quotient (IQ). It also shows these anatomical correlates may be linked to previously known effects of watching television on verbal competence, aggression, and physical activity. Studies by Furu (1968), Himmelweit (1958) found that watching television has acute impact on a child's daily activities. More time engaged in watching television decreases the time devoted to playing with friends, sleeping, homework, and involvement in other media. On the other hand, another cross sectional analysis among 282 families shows that there may be a rise in social involvement as television has an ability to provide communal topics of conversation and a focal point for shared activities (Murray and Kippax, 1978).

Dietz and Strasburger (1991) conducted a rigorous review study in the United States to see the impact of television viewing on children and adolescents. They found a strong relationship between watching television and other factslike health and cognitive development, which claims that watching more television has negative impact on health, study, and learning. Another study involving prospective analysis reported that 26 percent of US children spend four or more hours per day on watching television and 67 percent watched for at least two hours (Lucas et al., 2011).

A study by Pagani et al. (2010) examined the impact of watching television on academic, psychosocial, and physical well-being of early childhood and middle childhood of students. The study was a prospective longitudinal study and it followed

a series of ordinary least-squares regression in which children's academic, psychosocial, and lifestyle characteristics are linearly regressed on early and preschool television exposure. Adjusting for individual socio-economic characteristics and personal factors, the results show that every additional hour of watching television for 29 months corresponded to 7 percent decrease in classroom attendance, 6 percent decrease in math achievement, 10 percent increases in victimization, 13 percent reduction in time spent on weekend physical activities and 9 percent decrease in activities involving physical labour. The study also indicates that watching an extra hour of television increases consumption of soft drinks and consumption of snacks by 9 percent and 10 percent respectively; and 5 percent increase in body mass index. Study by Crespo et al. (2001) used nationally representative cross sectional survey to show the impact of watching television on obesity. The study depicts that watching television is positively associated with obesity among girls, even after controlling for age, race/ethnicity, family income, weekly physical activity, and energy intake. Another study proves this fact that boys and girls who watch television for four or more hours each day had greater body fat and body mass index than those who watch less than two hours per day (Lucas et al., 2011). Likewise, Sharif and Sargent (2006) conducted a population-based cross-sectional survey of middle school students (grades 5–8) in the North-eastern United States using ordinal logistic regression analysis to test the effects and found that poorer school performance increases with increasing weekday television watching time. This issue is accelerated by cable movie channel availability and decreased with parental restriction of watching television content. The study found that television watching time has detrimental impact on school performance.

The impact of watching Television Habit (TVHa) may have an impact on cognitive skill. Ngwoke and Julie (1998) executed a study applying Ex-Post Facto design on 429 students, 187 intense viewers, 128 moderate viewers and 114 low viewers. The results of the study revealed that there were significant mean differences in the Test of Acquisition of Basic Verbal Reasoning Skills among these three study groups. Children who showed moderate TVH a exhibited superior performance on the TABVRS, while intense TVH a impacted negatively on children's development of basic verbal reasoning skills.

Another study, conducted by Swain et al. (2010) has found strong evidence that students who watch more television have lower GPA on average. Correlational analysis and linear regression analysis shows two ways that this might happen in this case. First, clearly the more time a student spend on TV, the less time he has to study. The student who spent 30 hours a week watching TV was spending approximately 25 percent of his waking hours on it. After classes, meals and showers that just cannot leave much time for studying. Second, it is suspected that the demonic, heroine-like influence of this loathsome scourge on humanity which turns the brain to Styrofoam would be to lower mental acuity and hurt GPA. Notwithstanding the fact, access to television has been increasing rapidly and provides a potential mechanism for influencing health behaviour. Again, Rahman et al. (2017) analysed data from two large national surveys (2010 and 2011) based on

reproductive women. The study examined the association between women's TV watching and five reproductive health behaviour using both bivariate and multivariate analyses. It found that fertility is lower and maternal healthcare is higher among television watchers than non-watchers in Bangladesh. Moreover, TV watching is potentially an important driver of health behaviour in Bangladesh. However, there is no such study considering the impact of increased television watching pattern on student's academic performance in Bangladesh. Thus it creates enough room for conducting a study that portrays how watching television impact student's academic performance.

2. Materials and Methods

The authors have selected Khulna district as the study area where *Paikgacha* Upazila is selected as the rural area and Khulna city as the urban area. The study area selection has been purposive based on survey convenience. A large number of students who passed SSC and HSC in 2017 in this two area have been the population of the study. Among them a total number of 174 students have been drawn as the study sample using proportionate random sampling technique. The study tried to balance the proportion of rural and urban area students (86 for each), SSC and HSC students (43 for each section of each area) and the proportion of male and female students (21 for each group for each section of each area). But the number got changed a little due to non- response. The selection procedure is portrayed in Figure 1.
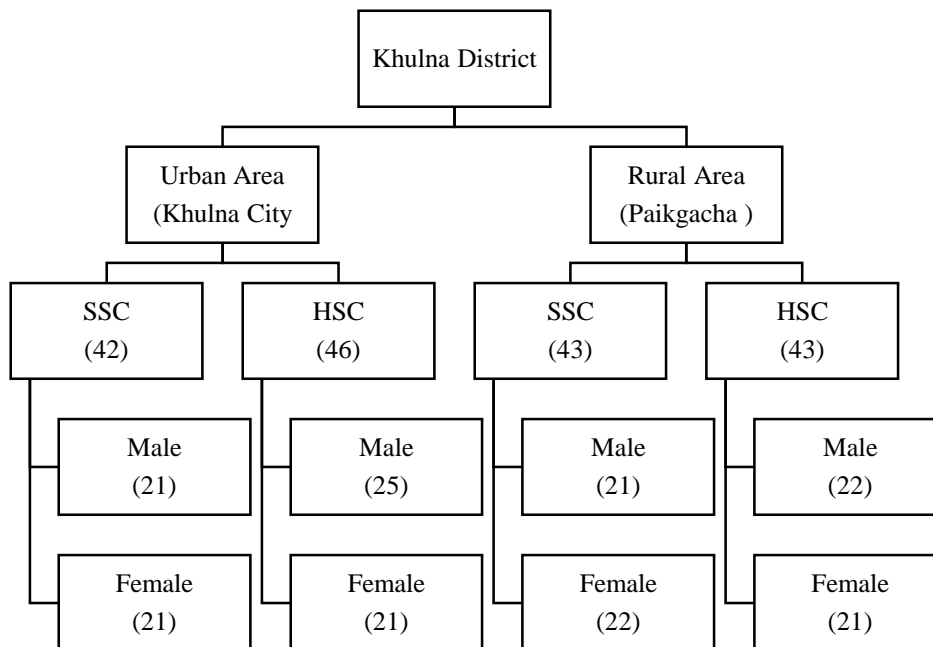

Figure 1: Sample Selection

Source: author's compilation based on field survey, 2018

This study used primary data, hence collected from field survey. A questionnaire was constructed incorporating all relevant issues. Questions were mainly close ended and based on recall data, which was again collected back from the respondents and the information got sorted in a dataset. Respondents were served with the questionnaire and they filled it out themselves.

Both descriptive and inferential statistics have been used for analysis. Socio-economic, academic profile, watching television and perception profile needed for the research are presented by using descriptive statistics. Data is processed in Microsoft Office Excel and STATA and are presented using tables and graphs.

2.1 Empirical model

First objective of the study is to estimate the impact of watching television on students' academic performance (GPA). To attain this objective, a Tobit regression model wasrun. The study first intended to use Ordinary Least Square (OLS). But, the value of dependent variable (GPA) is within a range and needed respective censoring. Here, the assumption of OLS that is the normal distribution criteria of the dependent variable is violated. Tobit model can address this issue and censoring (Foster and Kalenkoski, 2013). Equation 1 has been formulated as regression 1 to attain the first objective-

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \beta_4 X_{4i} + \beta_5 X_{5i} + \beta_6 X_{6i} + \beta_7 X_{7i} + \beta_8 X_{8i} + \beta_9 X_{9i} + \beta_{10} X_{10i} + \beta_{11} X_{11i} + \mu_i \dots\dots\dots\dots\dots\dots(1)$$

Here,

$i = 1,2,3,\dots\dots,n$

Y = Grade Point Average;

X_1 = Current Educational Status;

X_2 = Gender;

X_3 = Region;

X_4 = Household Member;

X_5 = Mothers' Occupation;

X_6 = Household Income;

X_7 = Time Spent on Household Chores

X_8 = Time Spent on Private Tuition

X_9 = Time Spent on Extracurricular Involvement;

X_{10} = Time Spent on Social Media

X_{11} = Time spent on Watching Television;

μ = Error Term

Second objective of the study is to find out which programs affect most the academic performance. For that, another Tobit regression was run. Hence, following equation has been formulated as equation 2. First 10 independent variables are same as equation 1.

$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \beta_4 X_{4i} + \beta_5 X_{5i} + \beta_6 X_{6i} + \beta_7 X_{7i} + \beta_8 X_{8i} + \beta_9 X_{9i} + \beta_{10} X_{10i} + \beta_{11} X_{11i} + \beta_{12} X_{12i} + \beta_{13} X_{13i} + \beta_{14} X_{14i} + \beta_{15} X_{15i} + \mu_i$ …………………(2)

Here,

i= 1,2,3,……,n

Y= Grade Point Average;

X_{11}= Time Spent on Watching Educative Program

X_{12}= Time Spent on Watching Reality Show

X_{13}= Time Spent on Watching Sports

X_{14}= Time Spent on Watching Drama Serial

X_{15}= Time spent on Watching Movie

μ= Error Term

Table 1 shows the used variable for regression equation 1 and 2 with unit of measurement.

Table 1: Variables used in Regression

Variable	Variable Description	Unit of Measurement	References
Y	Grade point average	In point	Sawin et al. 2010
X_1	Current educational Status	Dummy (SSC= 0, HSC= 1)	Author's compilation
X_2	Gender	Dummy (female=0, male=1)	Khan, 2012
X_3	Region	Dummy (rural=0, urban=1)	Author's compilation
X_4	Household member	In number	Takeuchi et al., 2013
X_5	Mothers' occupation	Dummy(housewife= 0,paid job=1)	Khan, 2012
X_6	Household income	BDT (in thousands)	Takeuchi et al., 2013
X_7	Time spent on private tuition	Hours per day	Murray and Kippax, 1978
X_8	Time spent on extracurricular activities	Hours per day	Murray and Kippax, 1978
X_9	Time spent on household chores	Hours per day	Murray and Kippax, 1978
X_{10}	Time spent on social media	Hours per day	Murray and Kippax, 1978
X_{11}	Time spent on watching television	Hours per day	Dietz and Strasburger, 1991; Khan, 2012; Takeuchi et al., 2013
X_{11}	Educative	Hours per day	Murray and Kippax, 1978
X_{12}	Reality show	Hours per day	Murray and Kippax, 1978
X_{13}	Sports	Hours per day	Murray and Kippax, 1978
X_{14}	Drama serial	Hours per day	Murray and Kippax, 1978
X_{15}	Movie	Hours per day	Murray and Kippax, 1978

3. Results

3.1 Socio-Economic Profile of the Respondents

From Table 2, it is seen that 51 percent students (respondents) have passed HSC and the others have passed SSC examination. Similarly, 51 percent students are male and the rest are female. However, 50 percent students are from urban area and the rest are from rural area. Results also show that most of the families are nuclear and average household size is five. Father's educational status is almost 10 years of schooling on average, and mother's educational status is less than that. The study shows that average household income is BDT 22,626 which seems better and matches the status of 'lower middle income' country.

Table 2: Summary Statistics of Socio-economic Variables

Variable	Frequency	Percentage (%)	Mean	SD
Current educational status (HSC)	89	51.15	-	-
Location of institution (urban)	88	50.57	-	-
Gender (male)	89	51.15	-	-
Family type (nuclear)	144	82.75	-	-
Household member (in number)	-	-	4.94	1.431549
Father's educational status(in number of years)	-	-	9.89	4.404502
Father's occupational status(agriculture)	71	40.80	-	-
Mother's educational status(in number of years)	-	-	7.98	3.496446
mother's occupational status (housewife)	151	86.78	-	-
Household income (in BDT)	-	-	22626	12564.45

Source: Field survey, 2018

3.2 Grade Point Average of the Students

Figure 2: GPA of Students
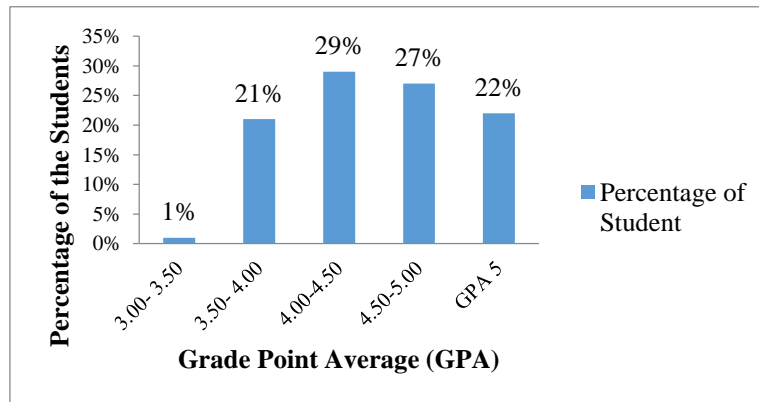
Source: Field survey, 2018

Figure 2 shows the GPA of both SSC and HSC students of this study, which indicates that only one percent of the students have got GPA between 3-3.5; 29

percent students have got the GPA between 4-4.5 which is the highest in the sample. Another 22 percent of the students have got GPA 5 indicating that the students are doing better in academic performance.

3.3 Student's Daily Time Distribution Profile

Field survey shows that out of 174 students, 17 percent students do not have any private tuition. On the other hand, rest of the students have private tuition and they spend time in this purpose. There are 41 percent students who have only one private tuition and of them 10 percent students spend one hour, 25 percent students spend two hours and six percent spend three hours in private tuition. Again, 34 percent students have two private tuitions, four percent students have three private tuitions, three percent have four private tuitions, and only one percent student have five private tuitions. It is seen that there are few students who spend more than four hours for private tuition.

With regard to time spent on study, we found that there are some students who do not have any private tuition and they spend time on studying at home. There are 12 percent students who spend two or less than two hours in total for study, 37 percent spend three to four hours, and 39 percent spend five to six hours for study. On the other hand, only two percent of the students spend more than eight hours on study.
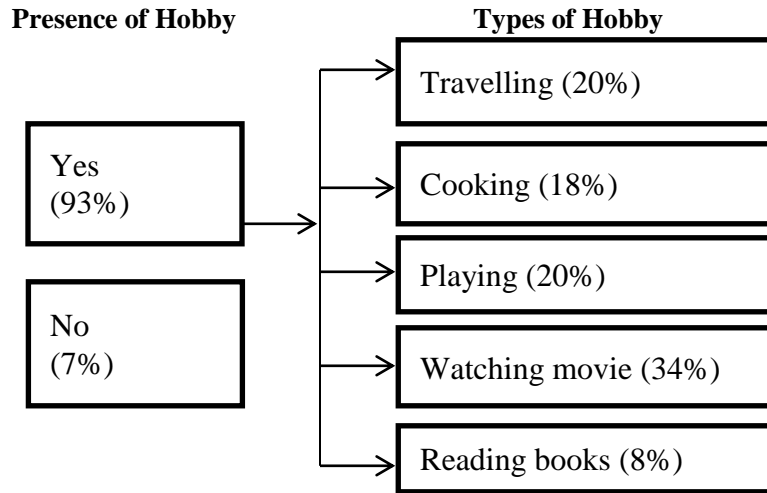
Field survey shows that 45 percent of the students are involved in different types of extracurricular activities and their average time spent on these activities is 1.48 hours or 89 minutes per day. From the students who are involved in extracurricular activities, 67 percent are involved in sports, 13 percent in cultural activities, 4 percent in debate, 6 percent in photography and 10 percent involved in painting. Students who are engaged in playing are generally male. In other extracurricular activities, both male and female students engage equally.

In case of time spent on other works, results show that 76 percent of the students do not read any type of novel, poem or other non-academic books daily. Six percent students spend less than one hour, 17 percent spend one hour and only 1 percent spend two hours per day in reading non-academic books. Therefore, it is clear that students have less interest in non-academic books. 39 percent students do not participate in household chores. Above figure shows that, 6 percent spend less than one hour, 26 percent spend one hour, 13 percent spend two hours and 16 percent spend more than three hours in household chores per day.

Social media is a very important source of entertainment and pass time for the students at present. Both rural and urban area are connected with social media. Field survey shows that 81 percent students are involved in social media whereas 24 percent spend one hour, 41 percent spend two hours and the rest spend three or more hours per day in social media. It is clear that students spend more time in social media than household chores and reading non-academic books.

Again 93 percent students have responses about their hobbies (Figure 3). After analysing their responses, we found that, most of the students are eager to watch movie in their free time. On the other hand, travelling, cooking, playing and reading books are also consideredas hobbies where playing is male specific, cooking is female specific and the rest are fond of by both.
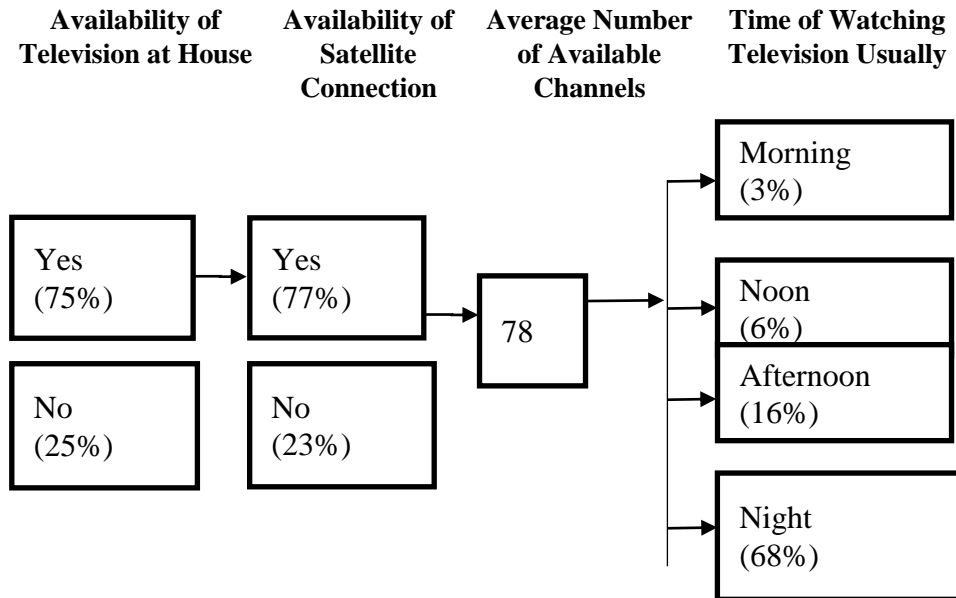
Figure 3: Hobby of Students

Presence of Hobby   Types of Hobby

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                                    ┌──────────────────────────────┐
                                    │   Travelling (20%)           │
                    ┌───────────→   └──────────────────────────────┘
┌──────────────┐    │               ┌──────────────────────────────┐
│  Yes         │    │───────────→   │   Cooking (18%)              │
│  (93%)       │────┤               └──────────────────────────────┘
└──────────────┘    │               ┌──────────────────────────────┐
                    │───────────→   │   Playing (20%)              │
                    │               └──────────────────────────────┘
┌──────────────┐    │               ┌──────────────────────────────┐
│  No          │    │───────────→   │   Watching movie (34%)       │
│  (7%)        │    │               └──────────────────────────────┘
└──────────────┘    │               ┌──────────────────────────────┐
                    └───────────→   │   Reading books (8%)         │
                                    └──────────────────────────────┘
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Source: Field survey, 2018

3.4 Television Viewing Profile

Figure 4 shows that, 75 percent students have television at home and the rest do not although they watch television from other sources. It also shows that those who have television at home, 77 percent have satellite connection and on average they have access to 78 channels. Generally, most of the students watch television at night and few watches in some other times.

**Figure 4: General Issues on Television Viewing at a Glance**

Availability of Television at House	Availability of Satellite Connection	Average Number of Available Channels	Time of Watching Television Usually

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                                                          ┌──────────────┐
                                                          │  Morning     │
                                                          │  (3%)        │
                                                          └──────────────┘
┌──────────┐    ┌──────────┐                              ┌──────────────┐
│  Yes     │───→│  Yes     │    ┌────────┐                │  Noon        │
│  (75%)   │    │  (77%)   │───→│        │──────┬────────→│  (6%)        │
└──────────┘    └──────────┘    │   78   │      │         ├──────────────┤
                                │        │      ├────────→│  Afternoon   │
┌──────────┐    ┌──────────┐    └────────┘      │         │  (16%)       │
│  No      │    │  No      │                    │         └──────────────┘
│  (25%)   │    │  (23%)   │                    │         ┌──────────────┐
└──────────┘    └──────────┘                    └────────→│  Night       │
                                                          │  (68%)       │
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Source: Field survey, 2018

3.4.1 Daily Viewed Programs and Time Distribution

Field survey shows that most of the students prefer to watch entertaining programs like movie (36 percent), sports (33 percent), drama (29 percent), comedy (12 percent), cartoon (10 percent)and reality show (95 percent) rather than educative ones like news (9 percent), religious (7 percent) and other educational programs (95 percent).

Again, the study found that, on average, a student spends 164 minutes (2.73 hours) for watching television per day. There is a gender-wise variation in choice of programs and average time spent on viewing those (Figure 5).

**Figure 5: Daily Viewed Programs and Time Distribution: Gender- wise Distribution**
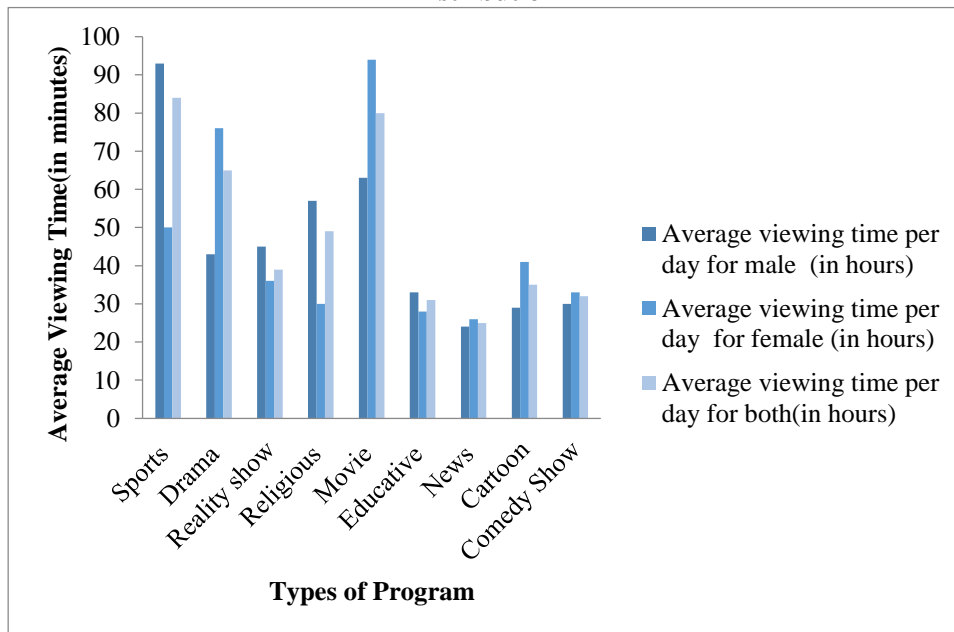
Source: Field survey, 2018

It is found that students spend 84 minutes on average per day in viewing sports whereas it is 50 minutes for female and 93 minutes for male. Students spend 65 minutes on average per day in viewing drama where female students spend 76 minutes and male students spend 43 minutes. On the other hand, average time spent by the students on watching movie is 80 minutes comprising 94 minutes for female and 63 minutes for male. Students spend approximately same time in other programs such as educational, cartoon, comedy and news. Hence, it is clear that male students spend more time on watching sports and less time on watching drama and movie than the female students.

3.5 Perception on Watching Television

Although few students watch television for knowledge, information and education, most of them watch it for entertainment and enjoying their leisure time, which seems to be effective to serve important meanings of life. These findings suggest that television bears a prowess to overcome the monotony of day to day life and provides varieties of knowledge and information to the respondents. Thus watching television is supposed to have a positive effect on students' social, cognitive and emotional development although the stated constructive impact of television is to be, in many cases, compromised with the lower GPA, channelled through diminished study time of the students at secondary and higher secondary levels. This is especially the case for massive viewers, who are typically habituated with drama serials, sports and movies.

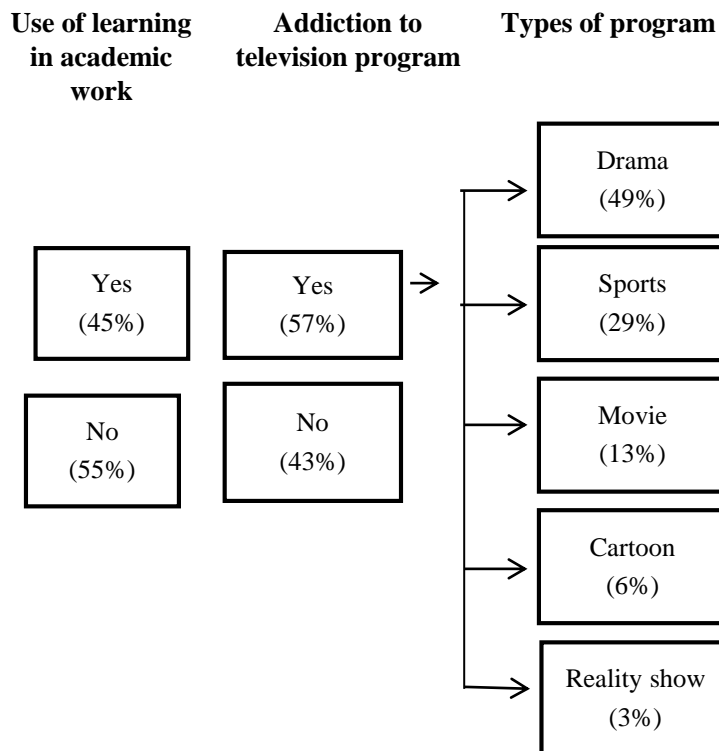**Figure 6: Perception on Usefulness of Television Watching**
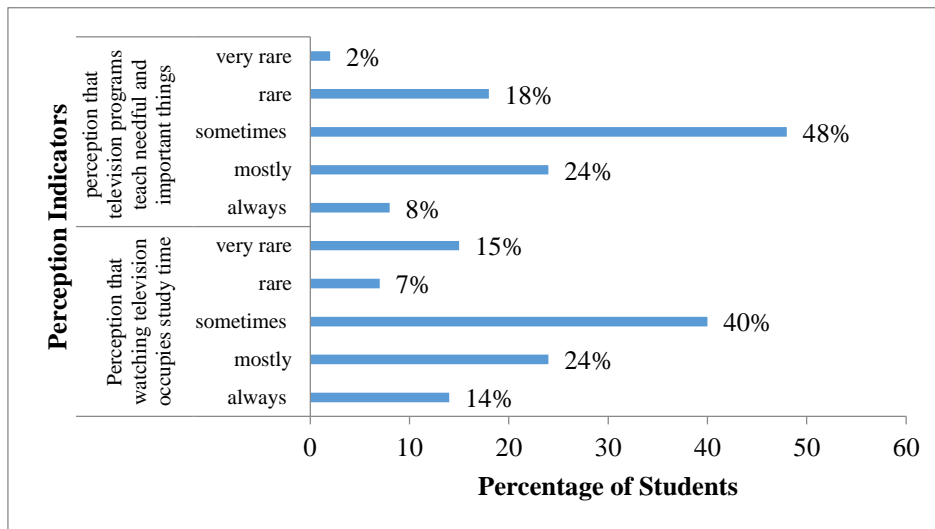
Source: Field survey, 2018

Figure 6 indicates that overall students embrace a decent perception on watching television and only a few students do not think that television programs teach them useful and important things. Almost 79 percent of the students perceive that television is a source of important teaching and knowledge to them, which signifies an enormous positive role of television on students' life. As against the strong positive insight on discernment of television, a greater majority (almost 75 percent) of them believe that watching television occupies study time on different scales. Hence, the respondents admit the significance of efficacy of television, but their collective actual actions are not conducive enough to exert a positive impact of watching television on their academic achievement.

3.5.1 Implementation of Learning and Addiction

Almost 45 percent students learn academically from watching television. Figure 7 also shows that, 57 percent students feel addicted in different types of programs. Most of the students are addicted to drama serials, 29 percent students are addicted to viewing sports, 13 percent to movies and a few are addicted to cartoons and reality shows.
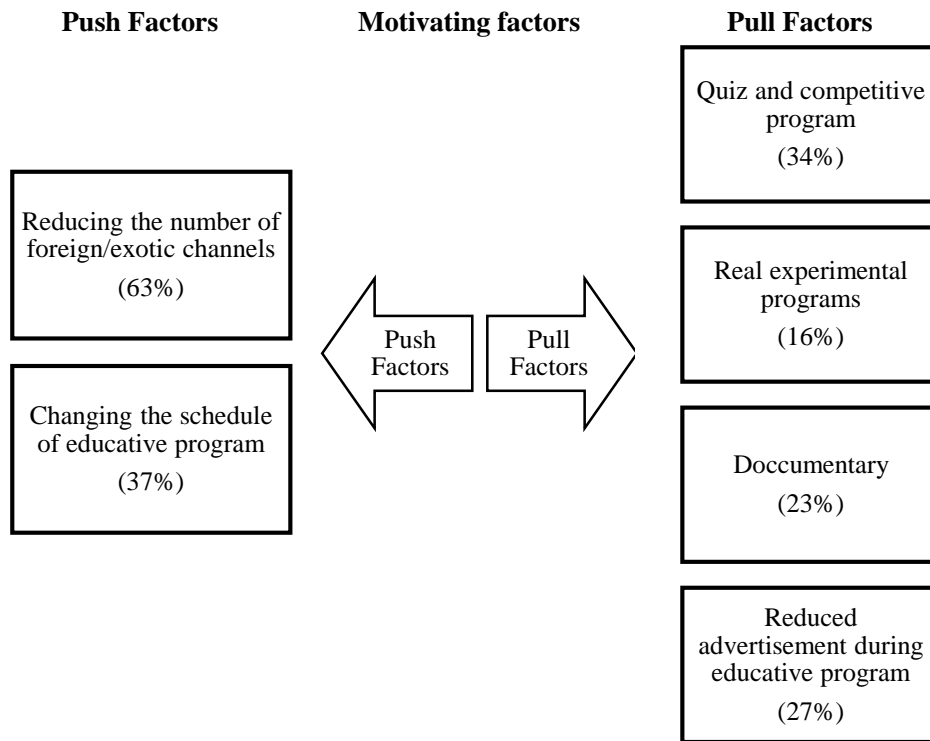
Figure 7: Implementation of Learning and Addiction to Programs

Use of learning in academic work	Addiction to television program	Types of program

Drama (49%)

Sports (29%)

Movie (13%)

Cartoon (6%)

Reality show (3%)

Yes (45%)

Yes (57%)

No (55%)

No (43%)

Source: Field survey, 2018

3.5.2 Motivating Factors towards Educative Programs

The study investigated the reasons behind not watching educational programs more. According to the respondents, there are some push and pull factors which motivate students towards educational programs. Figure 8 shows the factors briefly.

Figure 8: Factors that can Motivate Students towards Educative Programs

Push Factors   **Motivating factors**   **Pull Factors**

Quiz and competitive program (34%)

Reducing the number of foreign/exotic channels (63%)

Push Factors   Pull Factors

Real experimental programs (16%)

Changing the schedule of educative program (37%)

Doccumentary (23%)

Reduced advertisement during educative program (27%)

Source: Field survey, 2018

Above figure shows that lowering the number of channels is regarded as push factors, meaning that if the number of foreign channels is reduced then 63 percent students will be motivated towards educational programs and if the broadcasting educational programs is scheduled in free times (at afternoon or evening) then 37 percent will be motivated towards them. On the other hand, from the pull factors, 34 percent students think that, quiz and competitive programs can be the effective motivators to watch them. Real experimental programs, documentary and reduced advertisement during educational programs can be effective and can attract students towards the educational programs.

3.2 Empirical Model

3.2.1 Impact of Watching Television on Academic Performance

Table 5 shows the estimated result of first Tobit regression model. The results show the estimated coefficients for each independent variable used in the regression, and p value shows the significance value for the coefficients. From the table, it is seen that all the coefficients have expected signs. Six of the variables are found significant at the one percent level.

Table 3: Estimated Result for Regression 1

Variable	Coefficient	Std. error	t value	p value
Current educational status	0.037099	0.046182	0.8	0.423
Gender	-0.0945	0.062685	-1.51	0.134
Location	0.055815	0.045514	1.23	0.222
Household member	-0.01103	0.015359	-0.72	0.474
Mother's occupation	-0.14544	0.045858	-3.17	0.002
Household income	0.058544	0.020166	2.9	0.004
Time spent on household chores	-0.12424	0.022197	-5.6	0.000
Time spent on private tuition	0.093658	0.014689	6.38	0.000
Time spent in extracurricular activities	-0.03188	0.02793	-1.14	0.255
Time spent on social media	-0.10104	0.028328	-3.57	0.000
Time spent on watching television	-0.10691	0.022541	-4.74	0.000
Dependent variable = GPA				
Number of observation= 174				
Log- likelihood = -24.469				
Pseudo R^2= 0.8133				
Prob> chi^2= 0.0000				
LR chi^2 (11)= 213.24				

Source: Field survey, 2018

Results show that the students of HSC have higher GPA than the SSC students, female students have better GPA than male students, urban students have higher GPA than rural students. Results (GPA) of students deteriorate with the increment of household members and with increased amount of time spent on extracurricular activities. All these variables show expected sign but they are not significant.

Estimated results show that increased household income has a positive impact on GPA and it is significant at the one percent level. If household income increases by BDT 1000, then on average, student's GPA increases by 0.06 point. The underlying fact of such results can be the increased number of tuition and better educational equipment provided with increased amount of household income. Again, it is seen that if a student's mother has a paid job, then GPA decreases by 0.14 point. Because mothers who are housewives can concentration more on their children' education. Whereas, working mothers often get less time to look after their children resulting in them ending up with poor academic performance.

The study shows that if time passed on household chores of a student increases by one hour per day, then GPA decreases by 0.12 point. If time spent on social media increases by one hour per day then GPA decreases by 0.10 points. It is also seen that if time spent on private tuition increases by one hour per day, then GPA increases by 0.09 point. The result is significant at one percent level. The results indicate that if a student passes more time on study than doing more household chores and passing more time on social media, then he/she can achieve higher GPA.

The results also reveal that watching television has a negative impact on academic performance. One hour increase in watching television per day decreases GPA by 0.10 point. In other words, if a student watches television for five hours per day, he

or she will get 4.50 instead of GPA 5.00. The result is significant at the one percent level.

3.2.2 Model Estimation for Objective 2

Estimated results for regression 2 are shown in Table 7. It is seen that the sign and the coefficient values for the variables used in previous regression model is similar. This new regression controls for all those variables and gives results for the impact of specific programs on student's GPA. It shows that watching educational programs i.e. debate, quiz, news one hour per day increases GPA of students by 0.14 point and the result is significant at the five percent level. These programs contain important information and enhance students' knowledge base. Even watching reality shows can increase GPA by 0.07 point. Reality shows (i.e. dance or singing contest programs) are broadcast once in a week, hence it occupies less time than other types of programs. They refresh the mind of students and develop a competitive mind set. Though the results are not significant, watching this type of programs has positive impact on student's GPA. But, the programs other than educational and reality show have negative impact on student's academic performance and these results are significant at the one percent level.

Table 4: Estimated Result for Regression 2

Variables	Coefficient	Std. error	t value	p value
Current educational status	0.067012	0.046937	1.43	0.155
Gender	-0.09559	0.073956	-1.29	0.198
Location	0.034142	0.044774	0.76	0.447
Household member	-0.00299	0.015619	-0.19	0.849
Mother's occupation	-0.15049	0.047179	-3.19	0.002
Household income	0.050487	0.021098	2.39	0.018
Time spent on household chores	-0.09851	0.027362	-3.6	0.000
Time spent on private tuition	0.098082	0.014438	6.79	0.000
Time spent in extracurricular activities	-0.01847	0.029649	-0.62	0.534
Time spent on social media	-0.09647	0.028307	-3.41	0.001
Educative	0.145728	0.071289	2.04	0.043
Reality show	-0.07341	0.090856	-0.81	0.42
Sports	-0.11583	0.043037	-2.69	0.008
Drama serial	-0.12112	0.042598	-2.84	0.005
Movie	-0.12933	0.036176	-3.58	0.000
Dependent variable = GPA				
Number of observation= 174				
Pseudo R^2=0.7902				
LR chi^2 (14)= 207.16				
Prob> chi^2= 0.0000				
Log likelihood= -27.508				

Source: Field survey, 2018

For example, increase in watching drama (serials), movie and sports by one hour per day decreases GPA by 0.11, 0.12 and 0.12 point respectively. The impact is high and intuitive. Generally, the students who watch drama serials, sports and movies often get addicted to them, which lowers their GPA.

4. Discussion

The results of the study show that watching television has immense and unavoidable impact on student's academic performance. The result is highly consistent with that of the past studies which indicate that watching more television deteriorates academic performance. The students who watch television more have to limit the available time for the other activities like study, sports, household chores and personal works. Himmelweit, (1958); Furu, (1968) and (Hedley et.al., 2013) also agree to the statement revealing that watching television affects and alters a student's daily activities. More time engaged in viewing television decreases the time devoted to playing with friends, sleeping, homework, and involvement in other media. Swain et al. (2010) also states that the more time a student spends on television the less time he has for study. The students who spent 30 hours a week watching television was spending approximately 25 percent of his working hours on it. Thus he/she cannot be left with much time for study after doing other necessary day to day works. In this study, it is also found that on average, a student devotes 164 minutes (2.73 hours) per day on watching television that is almost 16 percent of his working hours. Again, most of the students watch television at night, which is usually considered as the time for studying. Therefore, they curtail time available for other important activities like study to adjust time for watching television, which in turn creates negative impact on their results. The study suggests that, one hour increase in watching television per day decreases GPA by 0.10 point. The impact is negative with high level of significance. This finding can be justified by the study of Khan (2012) and Pagani et al. (2010). According to Khan (2012) watching television beyond two hours a day deteriorates academic achievements; and according to Pagani et al. (2010), every additional hour of watching television for 29 months corresponded to 7 percent decreases in classroom attendance and 6 percent decrease in math achievement. There are some more studies that support that there is negative relationship between watching television and academic achievement of a student (Himmelweit et al., 1958; Furu, 1968; Murray and Kippax, 1978; Williams and Haertel, 1982, and Sharif and Sargent, 2006).

In addition to this, 77 percent of the students' households have access to cable television network, which modifies the type of program views and increases the time spent on watching television. A study done by Sharif and Sargent (2006) found that poorer school performance is increased and accelerated by cable movie channel availability and decreased with parental control of television content restriction. Moreover, the type of programs watched has impact on student's academic performance to a great extent (Dietz and Strasburger, 1991). The study found that most of the students watch television for entertainment and they most likely watch

movie, sports and drama which means they prefer entertaining programs over educational ones. The number of students who watch educationalprograms are very few and only half of them use what they learnt from viewing television in academic work. Now, when the students watch educational programs, they can gather knowledge which they can use to achieve academic excellence. But when they enjoy the programs that rarely contain educational elements, the amount of time they are engaged in it goes in vain. The analysis also reveals similar results. It shows that watching educational programsfor one more hour per day increases the GPA of students by 0.14 point, while increase in watching drama (serials), movie and sports by one hour per day decrease GPA by 0.11, 0.12 and 0.12 point respectively. The impact is high and intuitive. Generally, the students who watch drama serials, sports and movies often get addicted to them and use to watch them for hours. Most of the female students revealed that they are addicted to drama serials while their male counterparts are addicted to viewing sports programs. They spend more time in watching those programs leaving study. As a consequence, their academic performance gets negatively affected.

However, the study also discloses the students' opinion that how the educative programs can be turned into more entertaining to grasp their attention. They think that reducing the number of overseas channel and rescheduling the educational programs can push them to watch educational programs more on television. Again, increasing the number of quiz and competitive programs, real world experimental programs and reducing advertisements during the programs can draw their attention towards watching more educational programs.

5. Conclusion

The study findings contribute to the important and contemporary social implications. It reveals that television appears as an influential source of entertainment to the respondent students, who again find their diminished study time due to enjoying different non-educational programs mostly, for example, drama serials, sports and movies. But the impact of watching educational programs are dominant and requires special attention to analyse, which conveys a compelling message to the policy makers about the normative sense of telecasting educative programs more on television. Hence, one valuable finding derived from the study is that the association between the programs viewed on television and the academic performance of the student is particularly related with the motivation of the concerned student, frequency of using television and relative worth of the programs to the concerned student. In connection to this, it is formidable to mention that all the positive impacts of watching educative programs on GPA is mostly true for constricted viewers of television rather than the massive viewers as the massive viewers are getting addicted to non-educative programs. Under this backdrop, it can be noted that in Bangladesh, television leaves a pronounced opportunity to introduce diverse learning style for the mass pupils, over whom educational television has an imperative bearing over their social, emotional and cognitive development.

Considering the importance of watching television and also the harmful impact of some specific programs, some corrective measures may be taken to reduce the negative impact. First of all, educational programs have to be more in number and also entertaining. The study has found that students demand more educative programs like debate, quiz, and documentary to be telecasted in television. These programs can enhance the knowledge base of students in one hand and can entertain them in other. Both the public and private channels can take this responsibility. The second option can be restricting those foreign channels, which telecast drama serials. Now-a-days, many foreign channels telecast varieties of drama serials which barely contain educative material and moral sense. This is true for the sports. In this era, sports have become a medium of business rather than a source of entertainment and different channels telecast sports all the day long and students watch then keeping the study aside. Hence, the government and respective authority must limit this type of channels so that students do not become addicted to these programs. Parents should play an effective role in solving this problem. They should take care of the program selection and viewing time of their children. By imposing a ban on watching television is not a solution. Students should be motivated to choose such programs that have the ability to entertain and educate them and also watch for a limited time per day. Thus, television watching will be part of their academic success, not failure**.**

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