

## ORIGINAL ARTICLE

# Adolescent's life style behavior in relation to mother's education level

S Paroi<sup>1</sup>, ABMA Islam<sup>2</sup>, SMM Iqbal<sup>3</sup>

### Abstract

**Background:** Unhealthy life style behavior of adolescents in developing countries like Bangladesh creates a tremendous public health burden. Mother's education is a particularly important factor affecting adolescent's life style behavior development.

**Objectives:** The study was done to find out the adolescent's life style behavior and their relation with mother's education level that reflected their knowledge level.

**Methodology:** This was a cross sectional descriptive study. Two hundred seventeen students were selected by systematic sampling method from adolescent (10-16 year) which was carried out among the students of Rev. Paul's high school, Khulna city from January 2015 to December 2015.

**Results:** Among 217 students, 81.1% student have good personal hygiene practices which was statistically tested that revealed that there was positive relation between mother's knowledge level and adolescent's personal hygiene behavior. It was found that majority (56.7%) have no sedentary habit, among them 62.9% respondent's mother have higher educational knowledge level. So it was revealed that higher education level of mother decreased their child's sedentary habit. It was found that 53.2% child did not like to read book which was statistically not significant. From this result it was found that 56% mothers who have higher educational knowledge level, there children liked to have exercise practice that was statistically significant.

**Conclusion:** The result might be helpful for developing awareness among adolescents as well as parents regarding unhealthy life style behavior of adolescents to reduce the risk of unusual health outcome.

**Key words:** Adolescent, Life style behavior, Education level.

### Introduction

It is believed that the rise of unhealthy life style behavior of adolescents in developing countries is likely to create a tremendous public health burden.<sup>2</sup>

Parental education seems to be a particularly important factor affecting adolescents' life style behavior development. We used mother's education to determine adolescent's life style behavior. This was decided because most childhood and adolescence risks are strongly associated with the mother's level of education, which is a stronger predictor of student performance than father's education.<sup>7,8</sup>

Those life style behaviors are closely related with some health problems like sexually transmitted disease, AIDS, skin disease, respiratory tract infections, tuberculosis and other infectious communicable disease and also some non

communicable disease like obesity, diabetes, hypertension, cardiovascular disease, cancer, psychological problems such as anxiety neurosis, depression, suicidal tendency, accidents.

The result of this study will be helpful to parents to know how the mother's knowledge level related to adolescents life style behaviors. This study will be also helpful to the adolescents to know about their unhealthy life style behavior and make them more aware. This study will be helpful for society and health professionals to reduce the risk of unusual health outcome. Therefore the aim of this study was to ascertain the life style behaviors of adolescents associated with mother's educational level and the relation with it.

### Methods

The research was done following the ethical guidelines of the research such as-first of all the

1. Silvia Paroi MPH, Assistant professor, Dept of Com Med, Addin Akij Medical College, Khulna. (Email: sp11bd@yahoo.com)

2. ABM Ariful Islam MPH, Assistant professor, Dept of Com Med, Rangpur Army Medical College.

3. SM Masum Iqbal MPH, Assistant professor, Dept of Com Med, Khulna Medical College, Khulna.

permission from authority of selected school was obtained to carry out the research work. Then the study, its purpose, objectives, methodology and benefits was explained to the respondents as well as their guardian. Then informed consent was taken from respondents. Prior to the commencement of the study, the research protocol was approved by the research proposal approval committee of the dept. of community medicine and finally clearance from ethical review committee of Rajshahi Medical College was obtained.

It was a cross sectional descriptive study which was carried out among the students of Rev. Paul's high school, Gallamari, Khulna city with a view to assess the relation of adolescent's life style behavior with their mother's education level (that reflected their knowledge level). The sample size was 217 which were selected by systematic sampling method from adolescent (10 year-16 year) students of that school from January 2015 to December 2015. Data was collected according to a partially structured questionnaire by face to face interview administered by interviewer. The frequency distributions of the entire variables were checked by using SPSS 16.0 windows program. For data presentation tables and charts were used. Chi square test was applied to find out the association between adolescent's life style behaviors with their mother's education level. Statistical significance was found by applying relevant statistical tests at appropriate probability level (p value <0.05 was considered as significant).

**Results**

It was observed that 47.9% mothers had secondary educational knowledge level and only 11.1% had primary school level knowledge (Figure 1).

It was found that majority (56.7%) have no sedentary habit, among them 62.9% respondent's mother have higher educational level (Figure 2). This relation was statistically tested that revealed that there was statistically no significant positive relation between mother's qualification and adolescent's having sedentary habit.

Among 217 participants 45.0% respondents liked to read book but surprisingly it was found that 53.2% mothers who have secondary educational knowledge, their child did not like to read book (figure 3). So statistically there was no significant relation found between mother's knowledge level and adolescent's reading behavior.

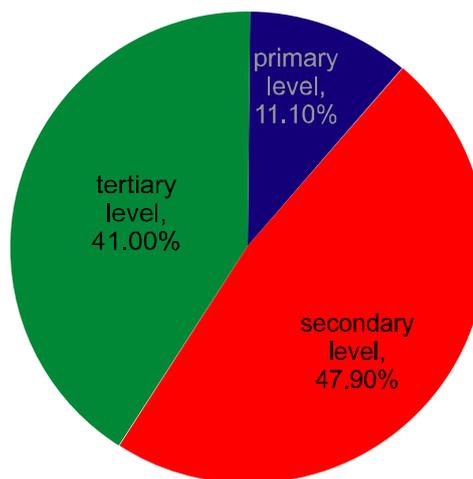
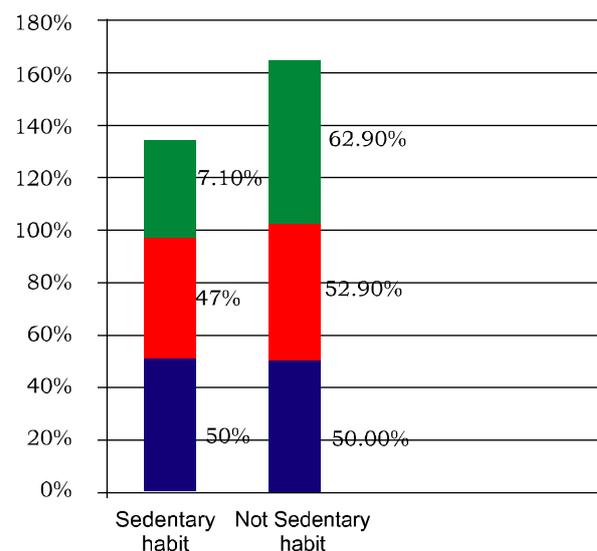
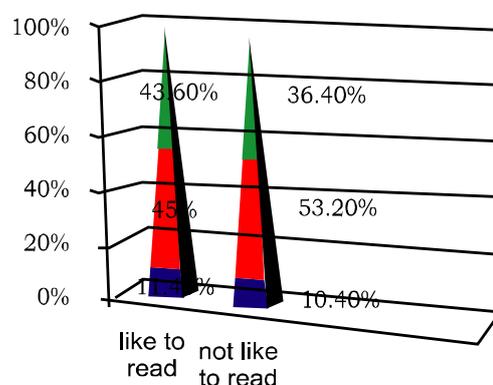


Figure 1. Distribution of the respondents by their mother's education.



Blue-primary, Red-secondary, Green-tertiary.

Figure 2. Relation between Mother's education and sedentary habit of adolescents.



Blue-primary, Red-secondary, Green-tertiary.

Figure 3. Relation between mother's education and reading habit among respondents.

**Table I**

Relation between mother's education and personal hygiene among respondents.

Personal hygiene	Mother's education N(%)			Total	Inference P< 0.05
	primary level	secondary level	tertiary level		
Good	15(8.5)	88(50.0)	73(41.5)	176(81.1)	
Bad	9(22.0)	16(39.0)	16(39.0)	41(18.9)	
Total	24(11.1)	104(47.9)	89(41.0)	217(100.0)	

Among 217 students 81.1% student was found to have good personal hygiene practices and 50% of their mothers had secondary educational knowledge (Table 1). This relation was statistically tested which revealed that there was positive relation between mother's knowledge level and adolescent's personal hygiene behavior.

**Table II**

Relation between mother's education and exercise among respondents.

Exercise	Mother's education N(%)			Total	Inference P< 0.05
	primary level	secondary level	tertiary level		
Yes	2(2.2)	38(41.8)	51(56.0)	91(41.9)	
No	22(17.5)	66(52.4)	38(30.2)	126(58.1)	
Total	24(11.1)	104(47.9)	89(41.0)	217(100.0)	

From this result it was found that mothers who had higher educational knowledge level about 56.0%, there child's liked to have exercise practice. Though maximum adolescents 58.1% didn't have exercise practice, among them only 30.2% adolescent's mother had higher educational knowledge level (Table II). This relation was statistically tested using the Pearson's correlation method. The test revealed that there was statistically significant positive relation between mothers educational knowledge level with adolescents exercise behavior.

**Discussion**

The knowledge and skills attained through education may increase health literacy and make individuals more receptive to health education messages, and therefore, maternal education may influence the attitudes of offspring regarding the value of health and engagement in life style behaviors.<sup>4</sup>

The time spent by adolescents in electronic screen based activities has been associated with obesity and other adverse health outcomes; however, little is known about screen based behaviors in Asian adolescents.<sup>19</sup> In this study approximately 79% of the adolescents had high recreational screen time that is associated with commuting to school by car, consumption of fast food >3 times/week, having sleep disturbance, and high family income.<sup>19</sup>

Parental educational and profession levels have also been associated with adolescents' sedentary behavior.<sup>5</sup> That finding also similar to the finding of this study-majority (56.7%) of respondents have no sedentary habit, among them 62.9% respondent's mother have higher educational knowledge level. So it was assumed that according to increasing education level of mother, decreasing their child's sedentary habit.

Current children and adolescents fail to meet the recommended physical activity level (at least 1 h/day of moderate-vigorous physical activity),with more time spent on sedentary behaviors (£2 h/day of total screen time).<sup>3</sup> In another study carried out by Uddin R, it was found that seventeen percent (17%) of the participants were meeting moderate to vigorous physical activity (MVPA) recommendations with a significantly higher proportion of males than females (27 vs. 6%, p<.000 1). Four out of five young adults in Dhaka City did not meet the physical activity recommendations.<sup>18</sup>

The World Health Organization in 2010 mentioned inactivity as the fourth leading risk factor for global mortality.<sup>17</sup> Physical activity offers physical and psychosocial health benefits that are important during young adulthood and later in life.<sup>18</sup> It is also suggested that regular engagement in physical activity is beneficial for young people's mental health and self-esteem and for improved Cognitive performance and scholastic achievement.<sup>12,16</sup>

In a study by Kantomaa MT, it was found that about 14% of adolescents had a highly educated mother. Boys with highly educated mother were more often physically active (54.0%) compared with boys whose mothers had only basic education (43.0%) (P = 0.016). The association was similar among girls (37.4 versus 23.4%, respectively) (p<0.001).<sup>6</sup> That was in line with my study result where it was found that mothers who have higher educational knowledge (about 56.0%), there children liked to have exercise practice. Though maximum adolescents (58.1%) don't have exercise practice, among them only 30.2% adolescent's mother have higher educational knowledge level.

Poor personal hygiene practices play a major role in the increment of communicable disease burden in developing countries.<sup>10</sup> Hossain MA in 2012 reported that more than 50% of the children did not wash hands with soap before meal intake and after defecation. Moreover, taking open food, open place defecation and latrine use without shoes were quite prevalent among them.<sup>20</sup>

In this study 81.1% students were found to have good personal hygiene practices and 50% of their mothers have secondary educational knowledge. The finding is in line with the study carried out by Sarker M. in which statistically significant association was observed between practices of personal hygiene among the primary school children and the literacy status of their mother ( $p < 0.001$ ).<sup>11</sup> Rahman MM et al. reported on their study that about 95%, 74% and 67% learned on health behavior from family, teachers and text books respectively.<sup>21</sup> So it was revealed that parents mainly mothers are the first teacher of their children.

During this study it should be borne in mind that the data collected in this survey were self reported by participants, and that self reporting may introduce some errors like recall bias (in the frequency of physical activity, sedentary behaviors and exercise and reading habit) which could influence the statistical relationships.

The study population not reflected the result on whole people of the Khulna city. Further studies on other samples will be needed in order to confirm and generalize these results. The sample was taken from one school so there was no opportunity to compare the influence of school environment on the adolescent's behavior. Questionnaires have inherent limitations, mainly because they are subjective in nature. One bias could be that all responses of questionnaires were filled in by adolescents; however, doubts were solved immediately in the classroom by interviewers (interviewer bias). Self report of physical activity can lead to over report the physical activity due to a social desirability bias.

## Conclusion

Adolescent's life style behavior such as physical exercise, sedentary behavior and personal hygiene practice are significantly associated with parental education level. Parent's habit has strong influence on shaping children's healthy life style behavior. So, continuing health education program directed to the parents will play important role to improve the health habits of their children.

## Reference

1. Crespo CJ, Smit E, Troiano RP, et al. Television watching, energy intake, and obesity in US children: results from the third National Health and Nutrition Examination Survey, 1988-1994. *Arch Pediatr Adolesc Med.*2001; 155: 360-65
2. Giacomo L, Elena A, Andrea P, Rita S, Veronica M, Mariano VG. Factors associated with unhealthy behaviours and health outcomes: a cross sectional study among tuscan adolescents. *International Journal for Equity in Health* 2014; 13: 83-90
3. Tammelin T, Ekelund U, Remes J, Nayha S. Physical activity and sedentary behaviors among Finnish youth. *Med Sci Sports Exerc* 2007, 39: 1067-74
4. Galobardes B, Shaw M, Lawlor D. Indicators of socioeconomic position (part 1). *J Epidemiol Community Health* 2006; 60: 7-12
5. La Torre G, Masala D, De Vito E, Langiano E, Capelli G, Ricciardi W. Physical Activity and Socio Economic Status collaborative group. Extra-curricular physical activity and socioeconomic status in Italian adolescents. *BMC Pub Health* 2006; 6: 22
6. Kantomaa MT, Tammelin TH, Demakakos P, Ebeling HE, Taanila AM. Physical activity, emotional and behavioural problems, maternal education and self reported educational performance of adolescents. *Health Education Research* 2010; 25: 368-379
7. McLeod JD, Kaiser K. Childhood emotional and behavioral problems and educational attainment, *Am Sociol Rev* 2004; 69: 636-58
8. Knowledge and Skills for Life. First Results from the OECD Programme for International Student Assessment (PISA) 2001 Paris, France OECD.org
9. Brown HE, Corder K, Atkin AJ, and Esther M.F. Childhood predictors of adolescent behaviour: The prospective association of familial factors with meeting physical activity guidelines. Published online First: 23 March 2017
10. Tamiru D, Argaw A, Gerbaba K Ayana G, Nigussie A, Jisha H and Belachew T. Enhancing Personal Hygiene Behavior and Competency of Elementary School Adolescents through Peer-Led Approach and School-Friendly: A Quasi-Experimental Study. *Ethiop J health Sci* 2017; 27: 245-254
11. Sarkar M. Personal hygiene among primary school children living in a slum of Kolkata, India. *JPMH* 2013; 54: 153-158
12. Ekelund U, Luan J, Sherar LB, Esliger DW, Griew P, Cooper A. Moderate to Vigorous Physical Activity and Sedentary Time and Cardiometabolic Risk Factors in Children and Adolescents: International Children's Accelerometry Database (ICAD) Collaborators, *JAMA* 2012; 307: 704-712.

13. Hills A.P., Andersen L.B., Byrne N.M. Physical activity and obesity in children. *Br. J. Sports Med* 2011; 45: 866-870
14. Boreham CA, McKay HA. Physical activity in childhood and bone health. *Br. J Sports Med.* 2011; 45: 877-9
15. Biddle SJ, Asare M. Physical activity and mental health in children and adolescents: a review of review. *Br J Sports Med* 2011; 45: 886-95
16. Wilks D.C., Sharp SJ., Ekelund U. Objectively measured physical activity and fat mass in children . a bas adjusted meta analysis of prospective studies *PLoS One* 2011; 6:
17. World Health Organization Global Recommendations on Physical Activity for Health 2010
18. Uddin R, Khan A, and Burton NW. Prevalence and sociodemographic patterns of physical activity among Bangladeshi young adults. *J Health Popul and Nutr* 2017. 36: 31
19. Khan A, Burton NW. Screen Based Behaviors of Adolescents in *Phys Act Health.* 2016; 13: 1156-1163
20. Hossain MA. A study on knowledge and practice of personal hygiene among school children in rural areas of Bangladesh *Research Evaluation and Dissemination, Plan International Bangladesh, Dhaka, Bangladesh.* APHA Online Program; October 31, 2012.
21. Rahman MM, Rahman A, Sajoni TT, Kabir SB, Nahar J, Mehrin F. Knowledge and Health Problems Related to Health Behavior among the Secondary School Children in Rural Community of Dhamrai Upazila, Dhaka *AKMMC J* 2014; 5: 18-22