

## Knowledge and Practice of Health Risk Behaviors among Secondary School Students in Bangladesh

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### Abstract

*Background:* Secondary school students (SSS) are a period of transition from childhood to adulthood also called adolescent. One fifth of the world's population is represented via them. In Bangladesh there are 29.5 million adolescents, including 14.4 million girls and 15.1 million boys, together representing nearly one-fifth of the country's total population (USAID 2017). Secondary School Students (Adolescent) is a time of life marked by numerous organic, cognitive and social changes taking vicinity simultaneously and contributes to constructing personality, being an important manner of human development. *Objectives:* To explore the Knowledge and Practice of Health Risk Behavior among Secondary School Students in Bangladesh. *Method:* This is a descriptive study design. Total 100 Secondary School Student were recruited in this study using convenient sample technique. A self-reported structured questionnaires was use for data collection. Data was analyzed by using SPSS version 23. *Result:* The mean age of the participant was 14.61 years. The knowledge mean score was .90 in 29 yes/no questions. Practice means score was .46 in 3 point rating scale. Secondary School Student (SSS) knowledge significantly correlated with their gender, father occupation and their family income. Age of the SSS, religion, class and also family income were statically significant with SSS practice of Health Risk behavior. *Conclusion:* The statistically significant relation were found knowledge related to gender, father's occupation and monthly family income. Also significant practice related to age, religion, class of education and monthly family income. There is no relation was found between knowledge and practice of health risk behavior.

**Key words:** Knowledge, Practice, Health Risk Behavior, Secondary School Students

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### I. Background and Significance of the study

The age of secondary school students is usually adolescence a period of transition from childhood to adolescence who had a high risk of health behaviors. One 5th of the world's population is represented via them(USAID, 2017). Health-risk behavior can be defined as any activity undertaken by people with a frequency or intensity that increases risk of disease or injury ( Kinchen et al., 2005; Nelson, Patience & Donald 1999). The six priority health risk-behaviors according to the Centers for Disease Control and Prevention (CDC) Health Risk Behavior is the leading cause of mortality and morbidity of yong adolescent around the world specially in the developing country. The term Health Risk Behavior has been used to describe behaviors with potentially negative effects on health. This include substance use, early onset of sexual activity or unsafe sexual practices, risky driving, violent or suicidal behaviors, antisocial behaviors, disordered eating, alcohol and drug abuse. This may contribute to unintentional injuries and violence including suicide, tobacco use, unhealthy dietary behaviors, physical inactivity including sports, and sexual behaviors that leads to unintended teen pregnancy (Centers for Disease Control and Prevention. 2009; Suri 's, 2008).

Secondary School Students (Adolescents) that is the transitional period from childhood to adulthood is one of the most important processes in the life of individual (Turhan, İnand, Ozer & Akoglu 2013). This period is extremely important as a period in which the phenomenon of personality is defined and the first encounter with the material often occur (Sahin. 2007). Secondary School Students are discussed as a risk group all over the world because of social, biological and psychological characteristics. Some reason such as the impact of fellowship, striving to prove himself, negative or negligent attitude of the family can take a lap the young people to the dangers of alcohol and drug abuse (Gun et al., 2004).

In Bangladesh there are 29.5 million adolescents, including 14.4 million girls and 15.1 million boys, together representing nearly one-fifth of the country's total population (USAID. 2017). The overall prevalence of ever cigarette smokers in Bangladeshi students was about 9%, which was more than 3 times higher in boys compared to girls (15.8% versus 4.8%). Almost 4 in 10 students start smoking before the age of 10 in Bangladesh (Islam, Mainuddin, Bhuiyan & Chowdhury 2016). The International Centre for Diarrheal Disease Research, Bangladesh (ICDDR, B) shows that 64.8 percent of the drug users in the country were adolescent. Among them 56.1 percent are students, and 95.4 percent are smokers. About 85.7 percent get into consuming drugs under the influence of friends, while 65.8 percent get addicted to various codeine-laced cough syrups, (Dayli star. 2013). Secondary school students is a time of life marked by numerous organic, cognitive and social changes taking vicinity simultaneously and contributes to constructing personality, being an important manner of human development, chronologically understood as during 10 to 19 years. Over the last decade, adolescent health hazard behavior issues have increasingly been on national agendas. Fitness unstable behaviors are mostly acquired all through early life and their results are pondered directly to adulthood, and also have an impact on cognitive performance, feelings, and common first-rate of lifestyles. (WHO. 2010). Given the specificity of being a teenager, Secondary School Students are in a critical period where various habits and behaviors are established. This lifestyle, understood as behaviors adopted day-to-day, can cause health problems and disorders in adolescence or adulthood, but also trigger chronic non communicable diseases (Centre for Disease Control and Prevention, 2013) which leads in adulthood that has impact on personal, social, familial and national.

In Bangladesh there have been a few study regarding Health Risk Behavior of adolescent. But no study was found in Knowledge and Practice of Health Risk Behaviors among Secondary School Students in Bangladesh. The objective of this study to explore the knowledge and practice of health risk behavior among secondary school students in Bangladesh. The findings of the present study may provide massage for the nurses in Bangladesh who help the Secodary School Students to improve the knowledge and practice regarding health risk behavior.

### **Objectives of the Study**

#### General Objective

To explore the knowledge and practice of health risk behavior among secondary school students.

#### Specific Objectives

1. To describe the socio demographic characteristics of secondary school students.
2. To assess the knowledge and practice of health risk behavior among secondary school students.
3. To examine the relationship among socio demographic characteristics, knowledge and practice of health risk behavior among secondary school students.

## **II. Literature Review**

The aim of the literature review is to describe the theoretical review, to explore and discuss the existing researched on knowledge and practice of health risk behavior among secondary school students. The review of literature were included the prevalence of health risk behavior in secondary school students, the effect of health risk behaviors among secondary school students, factor study related to health risk behavior and preventive program to minimize the health risk of secondary school students.

### 1. Prevalence of Health Risk Behavior

Prevalence of health risk behaviors among secondary school students is day by day increasing specially in developing country like Bangladesh. In Canada, with approximately 5% of male youth and 12% of female youth aged 12-19 years having experienced at least one major depressive episode (Canadian Mental Health Association, 2010). The relationship between mental health and health-risk behaviors is well-recognized in the adult population who suffer from Severe Mental Illness (SMI), such as major depression and schizophrenia (Allison et al., 2009). Rates of obesity, substance abuse, and physical inactivity are disproportionately higher in persons with Severe Mental Illness(SMI) than in the general population (Allison et al., 2009; Jerome et al., 2009; Kalman, Morissette, & George, 2005). In Morocco, the prevalence of smoking in adolescents was estimated as 16.1% and cannabis use recorded the highest lifetime prevalence of 8.1%, and alcohol 4.3% (Nejjari et al., 2016).

In India the prevalence of smoking tobacco in urban 2.92% and in rural 2.50% of adolescents, drinking alcohol in urban 2.08% and in rural 1.25% (Nagendra & Koppad 2018).

In Bangladesh the overall prevalence of ever cigarette smokers students was about 9%, which was more than 3 times higher in boys compared to girls (15.8% versus 4.8%). Almost 4 in 10 students start smoking before the age of 10 in Bangladesh. In addition to current cigarette smoking, another 6% also reported to use other tobacco products currently. Nine in 10 current smokers reported that they had ever received help to stop

smoking. More than 4 in 10 students were exposed to smoke from other people in public places. Among current smokers, 38.3% reported that they usually buy tobacco in a store and of which 97.8% reported that they were not refused cigarette purchase because of their age (South Asian J Cancer, 2016). One study showed that reading and math scores of third and fourth grade students who received comprehensive health education were significantly higher than those who did not received health education (Allison et al., 2009).

Health risky behavior adopted by secondary school students can be understood as activities that may compromise health, such as alcohol consumption, smoking, poor eating habits, physical inactivity, unprotected sex, among others. This form of understanding, acts and positions itself towards the reality that is influenced by the family and social context, as a school, community, friends and the media. Thus, in view of the seriousness of these behaviors, it is important to identify and incorporate prevention and health promotion of adolescents early in order to avoid problems in adult life (Rio, 2013).

## 2. The Status of Health Risk Behavior

The status of health risk behavior is used to describe behaviors with potentially negative effects on health. such as substance use, early onset of sexual activity or unsafe sexual practices, risky driving, violent or suicidal behaviors, antisocial behaviors, and disordered eating, among others. (Suri's et al, 2008) There is evidence that health risk behaviors tend to cluster together, with similar risk factors for many different risk behaviors 2–7 often exploratory 8 risk behaviors can be considered a normal aspect of adolescent development. (Steinberg & Morris 2001). Underage drinking is widely recognized as a leading public health and social problem in the United States and is associated with the 3 leading causes of death among youth, unintentional injury, homicide, and suicide. (Centers for Disease Control and Prevention, 2005).

A study in United States found that of high school students in the 38.7% of adolescents consumed alcohol, 18.1% had smoked cigarettes, 4.8% did not eat fruit and 5.7% did not eat vegetables. In Portugal, 38.8% had a low level of physical activity, 48.7% inadequate consumption of fruits and 62.7% of vegetables. In Brazil, 27.3% of students consumed alcohol, 6.3% were smokers and only 43.1% were considered physically active (Janeiro, 2009). In India, for dietary issue, occurrence of high-risk behavior was more in urban students (11.4%) than their rural counterpart (1.8%). Regarding the violence and unintentional injury issue, overall occurrence of high-risk behavior was higher among urban students (18.8%) than students from the rural background (6%) (Das, Chattopadhyay, Chakraborty, Dasgupta & Akbar 2015). National Youth Risk Behavior Survey conducted in USA in 2009 revealed a negative association between health risk behaviors and academic achievement among high school students after controlling for sex, race/ethnicity and grade level (Centers for Disease Control and Prevention, 2009). It was reported that in Philippines, four out of ten important causes of deaths among youth and young adults aged 10-24 years are attributable to health risk behaviors (Karl & Supa 2011).

## 3. Effect of Health Risk Behaviors among Secondary School Students

The term health risk behavior has been used to describe behaviors with potentially negative effects on health, such as substance use, early onset of sexual activity or unsafe sexual practices, risky driving, violent or suicidal behaviors, antisocial behaviors, and disordered eating, among others (Rles Suri's, 2008). are alcohol and drug abuse, behaviors that contribute to unintentional injuries and violence including suicide, tobacco use, unhealthy dietary behaviors, physical inactivity including sports, and sexual behaviors that contribute to unintended teen pregnancy (Centers for Disease Control and Prevention, 2009).

Development of knowledge and attitude takes region at some stage in this area, which can have lifelong outcomes on the man or woman, family and society. Modifications inside the sample of wondering mindset, relationships, moral standards and skills take area in this period (Lancet et al. 1995).

Inappropriate alcohol use among adolescents has been associated with significant behavioral problems, such as aggressiveness or violent behavior, impaired/unsafe driving with subsequent police arrests, and lethal events, the majority of which are due to motor vehicle crashes, self-injuries and suicide. The onset of multiple risk behaviours, such as smoking, anti-social behaviour, hazardous alcohol consumption and unprotected sexual intercourse, cluster in adolescence and are associated with increased risk of poor educational attainment, future morbidity and premature mortality. These behaviours go beyond pure 'risk-taking' behaviours and embrace behaviours which are ubiquitous in society, such as low levels of physical activity. These behaviours shape adult behaviour and the consequences are costly to society and young people. Further, people who engage in any one risk behaviour are likely to engage in others, there may be shared biological and environmental factors which influence the development of these multiple behaviours, and so prevention and treatment interventions may impact on more than one outcome. (Kipping et al., 2012).

#### 4. Factors related to Health Risk Behavior

A number of studies have shown the harmful health and social consequences of underage drinking, such as neglecting responsibilities, getting into fights or arguments, missing school, driving after drinking, engaging in suicidal behavior, and engaging in risky sexual behavior.<sup>3–5</sup> Underage drinking is also associated with carrying weapons, using illicit drugs, and having unprotected sexual activity at 6–8 years (Allison et al., 2009). Some long-term effects of alcohol use during adolescence include increased risk of alcohol dependence, learning impairments, and memory impairments. (Miller et al. 2004). Another study was done in Brazil where they found highest prevalence rates included: engagement in physical fight (32.1%); threatened/injured with a weapon (19.9%); feelings of sadness/hopelessness (32.2%); current cigarette use (13.6%) (Springer, Selwyn & Kelder 2006).

A major reason for concern pertains to the preventable nature of most causes of adolescent morbidity and mortality. Homicide suicide and accidental injury are responsible for three quarters of all adolescent death. (American Pediatric Journal.1992). More than 1.1 million adolescents aged 10-19 years died in 2016, Over 3000 every day, mostly from preventable or treatable causes. Road traffic injuries were the leading causes of death among adolescents in 2016. Half of all mental health disorder in adult start by age 14 but most cases are undetected and un treated (WHO. 2016)

#### 5. Health Risk Behavior Preventive Program

knowledge of health risk behavior is very important for secondary school students. it can be provided through school health education program. Health education builds students' knowledge, skills, and positive attitudes about health. Health education teaches about physical, mental, emotional and social health. It motivates students to improve and maintain their health, prevent disease, and reduce risky behaviors. (Islam et al. 2019). In general, healthy students learn better. Numerous studies have shown that healthier students tend to do better in school. They have higher attendance, have better grades, and perform better on tests. (Suri's, Michaud, Akre & Sawyer 2019).

### III. Methods

This chapter describes the methodological part of this study. This include the study design, the study participants , instruments, data collection methods and data analysis. It also present the setting of the study, population for the study, sample and sampling technique, validity and reliability of instruments.

#### 1. Study Design

A descriptive study design was used to explore the relationship of Socio Demographic Charecteristics, Knowledge and Practice of Health Risk Behavior among Secondary School Students.

#### 2. Study Participants

The study subject was the secondary school student at Mirpur Mofid E Aam School and College Aminbazar Savar Dhaka. A convenient sampling technique was used to select the participant. Following inclusion criteria were used ; Secondary school students who currently study in class eight, Nine and ten; can communicate this study; those students were present at the data collection day; the age between 13 to 17 years. The sample size was calculated by using G power analysis with an significance level of ( $\alpha$ ) of 0.05 an expected power of 0.80 ( $1-\beta$ ) and an estimated effect size of population 0.30( $\gamma$ ). Thus the estimated sample size was 77 including 20% attration rate. Thus the sample size of this study was 100. The gender of the students are both male and female.

#### 3. Instruments

A self- reported structured questionnaires (Appendix A) was developed by the researcher based on literature review. The instrument was contain three parts: Part 1- is socio demographic characteristic; Part 2-is knowledge of health risk behaviors, and Part 3-is practice of health risk behaviors.

Part 1. Demographic Characteristics of Secondary School Students: This part contains 14 items like age, gender, education, occupation, family income, number of family member illness hislory etc.

Part 2. Knowledge on Health Risk Behavior of Secondary School Students: Secomdary school students knowledge related questionnaire consists of the concept of HRB. It contains 29 items self reported structured questionnair and the response options was yes/no. This questionnair was developed to exclude the level of knowledge regarding HRB of SSS.. For each correct answer researcher assigned one (1) score and for an incorrect answer researcher assigned zero (0) score. The total score ranged from 0-29. The higher score indicates the heigh level of knowledge and the lower score indicate the lower level of knowledge. There was no negative question in this part which was reversed during data analysis.

Part 3. Practice on Health Risk Behavior of Secondary School Student: A 10 item self reported structured questionnaire was developed based on literature review. A three (3) point numerical rating scale was used to measure the level of practice of SSS. It ranges from 0 to 2. (never=0, sometimes=1, always=2). The total score ranged from 0 to 20. In this ten items there were positive and negative questions. Three (3) questions were negative item no 5,9 and 10 and they were reversed during data analysis. The lower level of score indicates the higher practices.

The original questionnaire was developed in English language. Then it was translated to Bengali following a back translated method. The English questionnaire was directly translated into Bengali version by a translator who was expert in both English and Bengali language. Then it was again translated into English language. The original questionnaire and the last English questionnaire were compared for the linguistic competence by a medical consultant from pediatric department.

The contents of the questionnaire was validated by three experts. Two experts from the NIANEER faculty and one from pediatric specialist from Mugda Medical College Hospital who were experienced in conducting research and instrument development. The expert team assessed the content validity of the instrument. They assessed by the following criteria: strongly relevant, partial relevant, and not relevant in the variable of the study. The researcher then further modify the questionnaire based on their recommendations. The internal consistency of the knowledge related questionnaire on HRB was tested by the formula of Cronbach's alpha coefficient. The reliability score was 0.70.

#### 4. Data Collection Methods

Researcher obtained approval from the IRB of NIANER and BSMMU, (Appendix B) and permission (Appendix C) from Director of NIANER for data collection. A written permission (Appendix D) from the principal of Mirpur Mofid E Aam School and College Aminbazar Savar Dhaka. Researcher was selected participant according to set criteria by the help of teacher. After obtained informed consent (Appendix E) researcher was distributed self-reported structured questionnaires to the participants. They were instructed to fill up the questionnaire individually and independently without any sharing with others. It was taken around 30 minutes. The questionnaire was returned back by the researcher one by one. At the time of returning questionnaire researcher checked its completeness and/or any missing information. The data collection period was December 2018 to January 2019.

#### 5. Data Analysis

The collected data was put in to a computer software manually (SPSS version 23). After putting the data it was again three times checked by the researcher for its correctness. Descriptive statistics such as frequencies, percentages, means, and standard deviations was used to describe the Socio Demographic Characteristics of the study participants. Also a descriptive statistics was done for the knowledge and practice of the participants. Inferential statistics including Pearson's product moment correlation (r), T-test and ANOVA were used to examine the relationship of knowledge and practice on health risk behavior with socio-demographic characteristics.

### IV. Result

#### 1. Characteristics of Secondary School Students

Table 1 expresses, the mean age of the respondent that was 14.61 years and SD 1.004. The range age was 13 to 17 years. In gender 69% was female and 31% male. Most of the participants were Muslim (98%) and rest of Hindus 2%. The participant were studied in class ten 38%, class nine 37% and class eight (25%). The educational qualification of their father HSC 39%, SSC 31%, PSC 19%, Degree 10% and Masters 1%. Their mother education primary 22%, SSC 56%, HSC 19%, degree 1% and masters 2%. The occupation of the SSS father; most of them are doing business (46%) and service was 30% and others 24%. Mother Housewife 95% and service only 5%. The mean family member was 4.60 and SD 1.14 maximum number of family member 11 and minimum 3. The monthly income range was less than 20000/-to more than 50000/-tk. The most of the family monthly income was <20000/-TK (45%); then 21000/- to 30000/-Tk 26%; 31000/-to 40000/-Tk 11%; and lowest is 41000/-to 50000/-TK 8%. The SSS are most of them from single family (72%), joint family 24% and from single parent family 3%. The family member are suffering chronic disease is 34% and most of them are suffering with DM 19%, HTN 5%, Kidney disease 5%, cancer 1% and others 4%. The parent smoking behavior is every day 23% sometimes, 9% and never smoke 68%. The history of alcohol or drug abuse was only 4% and 96% was no history of alcohol or drug abuse.

**Table 1.** Distribution of Socio Demographic Characteristics of SSS (N-100).

Variable	Categories	n(%)	Mean ± SD
Age (years)			14.61(1.00)
Gender	Male	31(31)	
	Female	69(69)	
Religion	Islam	98(98)	
	Hindu	02(02)	
Class of Students	Class Eight	25(25)	
	Class Nine	37(37)	
	Class Ten	38(38)	
Fathers` Education	Primary	19(19)	
	SSC	31(31)	
	HSC	39(39)	
	Degree	10(10)	
Mothers` Education	Masters	01(01)	
	Primary	22(22)	
	SSC	56(56)	
	HSC	19(19)	
Fathers` Occupation	Degree	01(01)	
	Masters	02(02)	
	Service	30(30)	
	Business	46(46)	
Mother`s Occupation	Others	24(24)	
	Housewife	95(95)	
Monthly Income	Service	05(05)	
	< 20000/-	45(45)	
	21000-30000/-	26(26)	
	31000-40000/-	11(11)	
	41000-50000/-	08(08)	
	> 50000/-	10(10)	

Table 1. (Cont')

Variable	Categories	n(%)	Mean ± SD
Number of Family Members			4.59 ± 1.138
Type of Family	Single Family		
		72(72)	
	Join Family	24(24)	
	Single Parent Family		
The chronic disease of the Family member		04(04)	
	DM	19(19)	
	HTN	05(05)	
	Kidney disease	05(05)	
	Cancer	01(01)	
Parents Smoking	Others	04(04)	
	Every day	23(23)	
	Sometimes	09(09)	
Family Member Having History of Alcohol or Drug Abuse	Never	68(68)	
	Yes	04(04)	
	No	96(96)	

## 2. Knowledge of Health Risk Behavior among Secondary School Students

Table 2 explores the total mean of knowledge .90 and SD was .094. The total score was 0 to 29 regarding knowledge on Health Risk Behavior (HRB). In orderly the yes answer of respondent are following; the use of alcohol or sedative may cause accident during driving (98%); over speed can make accident (100%); use of seat belt can prevent accidental injury (97%); use of helmet during bicycle and motor cycle may prevent serious head injury (96%); reduction of personal behavior can help to prevent violence (85%); about the health risk of tobacco use (99%); cigarette smoking even one or two puffs is harmful for health (96%); passive smoker is more affected than active smoker (77%); use of smokeless tobacco such as tamak pata, gull, jordda, may cause serious harm to your health, (96); knowledge about sexually transmitted disease (eg HIV/AIDS) (89%); knowledge about unprotected sex is highly risky for STD and RTD (80%); multiple sex partners are at high risk of STD and RTD (79%); knowledgw about teen age pregnancy (88%); knowledge on unwanted or physically forced sexual intercourse may cause serious injury,unwanted pregnancy, or ethical violence (82%); timely and regular intake is essential for good health (94%) food produce in nature is good for health (97%); food without

preservatives and additives are healthy food (79%); fast food or junk food is harmful for health (93%); cold drinks and beverage can cause over weight (78%); alcohol and narcotic drug may cause serious harm in health (94%); alcohol and drug may cause overweight and obesity (82%); use of drugs may cause serious violence in the society (96%); The alcohol and drug will not increase the self confidence (89%); alcohol have negative influence sexual behavior (73%); the benefit of sports and other physical exercise (97%); the physical activity will keep you healthy (98%); less physical activity will gain over weight (87%); Physical activity will help to produce immunity against disease (97%); and the physical activity will help you to keep mentally well (93%). Heighest score was 100% and lowest score was 77% .

**Table -2.** Distribution of Knowledge of Health Risk Behavior among SSS (N=100).

Items	Yes No(%)
Do you know -	
The use of alcohol or sedative may cause accident during driving	98(98)
Over speed can cause vehicle accident	100(100)
The use of seat belt help to prevent accidental injury	97(97)
The using helmet during bicycle and motor cycle driving may prevent serious head injury	96(96)
The reduction of personal risk behavior can helps to prevent violence	85(85)
About the health risk of tobacco use	99(99)
Cigarette smoking, even one or two puffs is harmful for your health	96(96)
The passive smoker is more affected than active smoker	77(77)
The smokeless tobacco such as gull, tamak pata, jordda, may cause serious harm for your health	96(96)
About sexually transmitted disease(eg,HIV/AIDS)	89(89)
Unprotected sex is highly risky for STD and RTD	80(80)
The multiple sex partner is at high risk of STD and RTD	79(79)
About the risk of teen age pregnancy	88(88)
The un wanted or physically forced to have sexual intercourse may causes serious injury, un wanted pregnancy or, ethical violence	82(82)
The timely and regular food intake is essential for good health	94(94)
The food produced in nature is good for health	97(97)
Food without preservatives and additives are healthy food	79(79)
The fast food or junk food is harmful for health	93(93)
The Cold drinks and beverage (fencidil) can cause over weight	78(78)
The alcohol and narcotic drug may cause serious harm to your health	94(94)
The use of alcohol and drug may causes overweight and obesity	82(82)
Use of drugs may cause serious violence in the society	96(96)
The alcohol and drug will not increase the self confidence	89(89)
Do you know alcohol has negative influence on sexual behavior	73(73)
Table 2 (cont`)	
Item	Yes no/(%)
The benefit of sports and other physical exercise	97(97)
The physical activity will keep you healthy	98(98)
Less physical activity will gain over weight	87(87)
Physical activity will help to produce immunity against disease	97(97)
The physical activity will help you to keep mentally well	93(93)
Total Mean	0.90±.094

### 3. Practice of Health Risk Behavior among Secondary School Students

Table 3 shows the total mean score of practice was .46 and (SD.1610). The SSS practice score ranged from 0 to 20. In orderly the response from the participant are as following; during the past 30 days tried cigarette smoking even one or two puffs; never 99%, sometimes 1%; during the past 30 days use chewing tobacco never 97%. Sometimes 3%; fast food or junk food last 30 days never 55%, some times 38% and always 7%; have taken junk food or fast food last week never 49%, sometimes 44% and always 7%; during the past 7 days had

breakfast timely and regularly always 28%, sometimes 35% and never 37%; in past 30 days drank alcohol or substance never 95%, sometimes 5%; last month used a needle to inject any narcotic drug into the body for several times; never 96%, sometimes 4%; during the last one month were in a physical fight never 84% and sometimes 16%; used protective method during physical exercise always 48%, sometimes 38% and never 14%; used helmet during bicycle and motor cycle driving always 13%, sometimes 30% and never 57% of the participants.

**Table 3.** Distribution of Practice of Health Risk Behavior among Secondary School Student (N=100)

Item	Never	Sometimes	Always	Mean± SD
	0 n(%)	1 n(%)	2 n(%)	
During the past 30 days I have tried cigarette smoking, even one or two puffs	99(99)	1(1)	0	.01±.100
During the past 30 days, I have use chewing tobacco	97(97)	3(3)	0	.03±.171
I had fast food or junk food last 30 days	55(55)	35(38)	7(7)	.52±.627
I have taken fast food or junk food last week	49(49)	44(44)	7(7)	.58±.622
During the past 7 days, I had breakfast timely and regularly	37(37)	35(35)	28(28)	1.09±.805
I drank alcohol or substance abuse in past 30 days	95(95)	5(5)	0	.05/.219
Last one month, I used a needle to inject any narcotic drug into my body several times.	96(96)	4(4)	0	.05±.219
During the last 1 month, I was in a physical fight	84(84)	16(16)	0	.16/.368
I use protective method during physical exercise.	14(14)	38(38)	48(48)	.66±.714
I use helmet during bicycle and motor cycle driving.	57(57)	30(30)	13(13)	1.44±.715
Total Mean(SD)	0.46±.161			

#### 4. Relationship between Socio Demographic Characteristics, Knowledge and Practice of Health Risk Behavior among Secondary School Student

Table 4 expresses that the age of the participants was statistically significantly positive correlation with practice of health risk behavior ( $p < 0.001$ ). The result expresses that the gender of participant are statistically has negative correlations with the participants knowledge ( $p = .041$ ). The practice was statistically positive correlation with the religion of the respondent ( $p = .002$ ). Statistically positive correlation of students class and practice of health risk behaviors ( $p < 0.001$ ). The fathers' occupation also had significantly positive correlation with the knowledge of health risk behaviors ( $p = .048$ ). Monthly family income ( $p = .028$ ) was significantly correlated with Knowledge and practice of health risk behaviors among secondary school students ( $p = .028$ ) & ( $p = .020$ ). While no statistical relationship was observed between knowledge of health risk behaviors among secondary school students with their demographic characteristic like parents' education, mothers' occupation, number of family member, types of family, chronic disease of family member, parents smoking, alcohol or drug abuse in the family.



**Table 4.** Relationship among Socio Demographic Characteristics, Knowledge, and practice of Health Risk Behavior among Secondary School Student (N=100).

Variables & Category	Knowledge		Practice	
	M(SD)	t /r/ F/(p)	M(SD)	t /r/ F/(p)
Age	14.61(1.004)	.079(.434)	14.61(1.004)	.355(<0.001)
Gender				
Male	.441(.199)		.44(.200)	
Female	.466(.173)	-2.073(.041)	.47(.174)	.628(.531)
Religion				
Islam	.90(.095)		.46(.183)	
Hindus	.98(.024)	-1.263(.210)	.40(.000)	3.254(.002)

  

Table 4. (cont`)				
Variable & Category	Knowledge		Practice	
	M(SD)	t/r/F(p)	M(SD)	t/r/F(p)
Class of Students				
Eight <sup>a</sup>	.919(.060)		.03(.011)	13.759
Nine <sup>b</sup>	.892(.104)	.671(.514)	.05(.016)	(<0.001)
Ten <sup>c</sup>	.893(.098)		.05(.020)	c>b>a
Fathers` Education				
HSC & higher	.901(.091)		.05(.019)	
SSC & lower	.898(.098)	.182(.856)	.04(.018)	9.36(.352)
Mothers` Education				
HSC & higher	.900(.089)		.04(.018)	
SSC & lower	.899(.110)	.086(.932)	.05(.020)	-.799(.426)
Fathers` Occupation				
Business <sup>a</sup>	.92(.075)		.44(.181)	
Service <sup>b</sup>	.90(.106)	3.135(.048)	.43(.149)	1.042(.357)
Others <sup>c</sup>	.86(.103)	a>b>c	.49(.134)	
Mothers` Occupation				
Housewife	.900(.094)		.05(.019)	
Service	.897(.106)	.075(.940)	.05(.011)	.013(.990)
Monthly Family Income				
<20000/- <sup>a</sup>	.88(.098)		.50(.018)	
21000-30000/- <sup>b</sup>	.88(.099)	2.84(.028)	.39(.036)	3.069(.020)
31000-40000/- <sup>c</sup>	.97(.031)		.33(.021)	
41000-50000/- <sup>d</sup>	.90(.086)	c>e>d>b>a	.49(.063)	a>d>e>b>c
>50000/- <sup>e</sup>	.93(.074)		.46(.071)	
Number of Family Member	4.59(1.13)	-.037(.717)	4.59(1.13)	.055(.589)
Type of Family				
Single Family	.90(.096)		.44(.182)	
Joint Family	.90(.084)	.345(.709)	.50(.182)	1.513(.225)
Single Parent Family	.86(.141)		.55(.129)	
Chronic Disease of Family Member				
DM	.90(.093)		.45(.212)	
HTN	.95(.039)		.44(.207)	
Kidney Disease	.89(.075)	1.134(.351)	.48(.084)	.684(.569)
Others	.85(.121)		.58(.084)	
Parents Smoking				
Everyday	.91(.086)		.40(.180)	
Never	.87(.092)	1.194(.242)	.49(.203)	-1.275(.121)
History of Alcohol or Drug Abuse				
Yes	.85(.095)	-1.0(.320)	.45(.173)	-.101(.920)
No	.90(.094)		.46(.183)	
Knowledge			.46(.161)	-
				.090(.372)

## V. Discussion

The study objectives to identify the knowledge and practice of Health Risk Behavior and also find the relationship between knowledge and practice of Health Risk Behavior with socio-demographic characteristics of Secondary School Students.

The study was undertaken among 100 Secondary School Students (mean age was 14.61 years both for male and female) by convenient sampling. The researcher developed a structured and self introduced questionnaire based on literature review for the data collection. The findings of the study has been compared with the other relevant studies somewhere else and describe the present study result.

In demographic findings of this study the mean age of the participants was 14.61 years. Most of the participants were muslim because Islam is the main religion of this country and also most of the students were muslim in that school.

This study showed that 90% secondary school student have adequate knowledge of health risk behavior (.90). A similar study was done in Nijeria in urban area where 78% Secondary School Student have adequate knowledge of Health Risk Behavior. (Jibril et al, 2018) which is lower than this study.

The findings of this study shows that age of the participants was significantly ( $p < 0.001$ ) related with their practice of health risk behaviors the mean age of secondary school students was 14.61 (SD=1.00) which ranges from 13 years to 17 years. This indicates that they were relatively young and in adolescence period when they were present in health risk behavior and also shows that with the increase of age the practice also increase. A similar study was done in Nigeria which is consistent with this study (Gambari et al., 2017). In gender around  $\frac{3}{4}$  of the respondent were female and significant negative relation with their knowledge. The researcher found that the female are more present during the data collection period. Because in Bangladesh education for female students is totally free of cost up to college level. Although female participants are more in this study but they have less knowledge comparing with male. In this context similar study was conducted in Nijeria which is consistence with this study (adeleye, rohan, paula & shamin, 2009; john, opirite & Eeme.2012).

In this study majority (98%) of the participants were muslim because Islam is the main religion in Bangladesh. The study revealed that muslim has more practice comparing with hindus. In Islam there are some religious believes and restriction regarding some health risk practice like smoking, tobacco use, drug abuse, agrassive driving, extra marital relations etc. which help to maintain a healthy life. A study was conducted in India which is inconsistence with this study (Das et al., 2015). The majority of the participants from calss nine and ten (IX&X) 75%. Statistically significance practice was observed in class ten comparing with class eight and nine. A group comparison was done between higher and lower class group where higher has goog practice comparing with others. In this context (Gambari et al., 2017) state that there is no relation between class. The occupation of their father, was significantly related with their knowledge. This study shows that those father was doing business they have good knowledge comparing with other occupation (Das et al., 2015) state that parent occupation is has great impact on their child risk behaviors. Findings of this study explore that family income was related with the knowledge and practice of health risk behavior among secondary school students. In this context higher income group has significant knowledge ( $p = .048$ ) comparing with others and it shows income increases then knowledge is also increase. In family income lower income has significant practice comparing with others group. Although knowledge is higher in those increased income but they have not significant practice because they are not aware of health risk behavior. This is consistent with the study done by (Macro et al., 2001).

The main limitation of this study was the prior to data collection. The study was conducted in one semi urban school. The sample selection was not randomly. The data was collected within the class time where the student have poor concentration regarding this study.

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## VI. Conclusion And Recommendation

### Conclusion

This study findings with the increased age knowledge increases. Also explore that the higher class students has more knowledge than the lower class students. Those family income is more their knowledge and practice is also good comparing to lower income family. Statistically significant knowledge related to gender, father's occupation. Other variable (father's education, mothers's education, mother's occupation, number of family members, type of family, chronic disease of the family member, parent smoking, alcohol and drug abuse) was not significant with the knowledge and practice. There is no relation between knowledge and practice of health risk behavior.

In this study the knowledge of the participant is high but the practice is poor according to knowledge. Thus we need to improve the awareness of the adolescent students regarding health risk behaviors.

### Recommendation

Therefore based on the strength and limitation the researcher would like to suggest the following recommendation for the future researchers: (1) This study will include two public school in different setting English and Bengali medium School; (2) the study title would be awareness and practice of health risk behavior in different setting (Urban and Rural); (3) the data collection should be the middle of the year. In this study the knowledge of the participant was good but practice was very poor regarding health risk therefore recommended awareness creation among parents, community members, school staff, and the students by media to bring about behavioural changes in terms health risk behavior.

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