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Research article

A STUDY INTO THE FACTORS INCREASING RISKY BEHAVIOR AMONG YOUTHS

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ABSTRACT

In Mumbai metropolitan region, male are involved in driving vehicles, smoking cigarettes, physical fight, rinking alcohol. The females are depressed and malnourished. The logistic regression for multiple risky behaviors shows that those youths walk to college, spend more time in college, travel by train and car at home have multiple risky behaviors. There is need to teach youth about ethical behavior in respect of driving, drinking and smoking. Parents can play a proactive role in educating them about the norms of life. Long term policies at household, society and regional level are required to reduce the risky behaviors of youths.

Keywords: Nutrition, Household, Health care
JEL Classification:

INTRODUCTION

Youth are vital human asset for family, society and nation. It is well known evident in literature that youth are important for future growth of India. Therefore government of India formulated youth policy. India is now recognized as emerging world economic power. It is experiencing the demographic transition where working population is continuously increasing as compare to dependent population. Therefore youth need to actively participate in growth and development process. Their skills, habits, behaviors and ambitions are important for social, economic and cultural change. Youths are powerful agent of the change in society. They are more alert of different changes at national and global level. As a future active labor force, youths should be healthy, skilled and knowledgeable. Globalization has positive effect on economic growth and technical change. Globalization demands technical skills from youths rather than ordinary traditional skills. Youths are also going under the different stages of transitions such as learning, work, health, family, and citizenship. In this stage, youth learn to drive vehicle, smoke with friends, sexual activity involvement. They often feel depressed with the number of events occurring with them. The physical, mental growth and surrounding environment make them vulnerable without proper guidance and suggestions. All good decisions at younger age lead to future development and safeguard of human capital. Adolescence is one of the most important and crucial phase of learning and development.

Risk behaviors among youth

Risk-taking is considered as one of the characteristics of adolescence. Income of the parents has also increased over the period of time. The parents of youths are highly educated and working in skilled labor market. Household size is small therefore nobody has time to observe, monitor the activities and spend time with each other. Parents do not pay attention on different risky activities of youths. Youths enjoy different risky activities with friends. Youths drive vehicle of parent without license. Youths are not mature drivers for different kinds of vehicles. Their body is not suitable for driving vehicles. They pay less attention on traffic signals, directions, prohibited areas and parking of vehicle. Some youth work in labor market with minimum skills and earn money. Money earned at such jobs is used for enjoyment and drinking alcohol and smoking with friends. As the age of youth rises, they get more depress because of carrier tension and study.

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Introduction

Youths fight physically with their friends on various reasons. If they have car and bike then the quarrels related to over speed, crossing lane and parking are much higher. It is their aggressive behavior which causes to fight with friends. Sometimes the physical fight also takes place in groups. It becomes the matter of police case. It affects on their study and overall household environment. Youths have different kinds of friends. Some youth's have opposite sex attraction. They are involved in romantic relationship with opposite sex. They develop relationship over the period of time and enjoy the romantic relations during college life. After college hours they visit's restaurants and watch movies. They want to experience romantic relationship which is shown in movies. They visit gardens and beaches in city where they come across with sexual relations. They do not have knowledge of sexual and reproductive transmitted diseases. They do not use contraceptive during sexual activity. Such risky activities lead to pregnancies among girls. It leads to abortion and further health consequences. Such girls cannot spend time in educational institution for attending lectures and reading books in library. Educational system has been greatly reformed by introducing grading system. Students face greater anxiety due to continuous evaluation system. They easily get depressed because of small failure or any kind of difficulty. Youths living in slums do not have access to basic civic amenities. It is affecting on their quality of life. The gain of investment in health and education of youths are more to parent but it is for society and nation. There is link between foetal under-nutrition and increased risk of various adult chronic diseases. Nutrition challenges continue throughout the life cycle, particularly for girls and women (World Health Organization, 2006). Government and society must look youth into different perspectives. Migrant youth and youth live in unsettled circumstances are required special attention (United Habitat 2003). The age of involvement in risky activities is different from country to country. For example an experience of sexual initiation sometime during adolescence, the relative timing during adolescence varies (Madkour Aubrey Spriggs et.al. 2010). But adolescent sexuality and inclination to experiment may leads to physical as well as a psychological risk. The risk of unplanned pregnancies and contracting sexually transmitted diseases (STDs) is much higher. The sexual preference and pregnancy at early age leads to psychological disorders (Kishore *et.al.*1999). Most of the youths do not pay attention on their study and move in city. Failure in exam forces such youths to leave education and join unskilled jobs. They fall under the vicious cycle of unskilled job, lower income and poverty in long term.

DATA AND METHODOLOGY

This study is based on primary data collection of youths in Mumbai Metropolitan Region (MMR). The data were collected from 1002 youths from Mumbai, Thane city and Thane district. A detailed schedule was administered to youth in Mumbai Metropolitan Region. The youths were asked about different questions related to risky behaviors. Incidence of different risky behaviors is compared according to different suburbs, city and district. Finally, a logistic model is used to find the impact of the socio-economic antecedents separately for the whole sample and in each region. Finally, a logistic model was estimated by pooling the whole sample together for different kinds of risks in Metropolitan Region. Our central hypothesis implies that the coefficients of different risky behaviors should not positive and significant. If it is, then adjusting for all other factors, youths with risky behavior is associated with a higher incidence in metropolitan region.

Logistic Regression Model

A simple logistic function can be shown as follows:

To obtain logistic model from logistic function, we write z as the linear sum á plus $\hat{a}_1$ times x_1 plus $\hat{a}_2$ times x_2 and so on to $\hat{a}_k$ time's x_k. The x_s are independent variables of interest and á and the $\hat{a}_1$ are constant terms representing unknown parameters.

In short, z is an index that combines the x's

We can substitute the linear sum expression for z in the right hand side of the formula for f (z) to get the expression f (z) equal 1 over 1 plus e to minus the quantity á plus the sum of $\hat{a}_1 x_1$ for i ranging from 1 to k. The logistic model can be written as:

The logistic model was used for different risks among youths. The independent variables were the personnel, family, social and economic factors.

RESULTS AND DISCUSSION

Incidence of risky behaviors among youths

In Mumbai Metropolitan Region, youths were involved in different risky behaviors. In Metropolitan Region, 39.21 percent youth drive two wheelers. In total 36.30 and 43.73 percent of male and female drives two wheelers, respectively. At the overall level, 21.46 percent of the youths were driving four wheelers. The respective figures for male and female were estimatred to be 21.78 and 20.97, respectively in Mumbai Metropolitan Region. On an average 12 percent youths were found to be smoking cigarettes. The incidence of smoking among the males was higher as compare to females.

The results revealed that the 12.54 and 10.99 percent of the males and females, respectively, were found to be drinking alcohol in metropolitan region. It was found that 33.09 percent youths are in depression due to number of reasons. The incidence of depression was higher among female (48.59 percent) as compare to males (23.10 percent).

Total 27.28 percent youth are involved in physical fight with their friends. The incidence of physical fight in male was 23.26 percent. The corresponding figure for female acme out to be 33.5 percent. It means female fight more as compared to male.

Nearly 8.52 percent youths were involved in sexual activities in past. Sexual involvement among male and female was estimated to be 10.23 and 5.88 percent, respectively. At the overall level, 14.64 percent youths were found to be malnourished. The malnourishment was higher among the females (22.5 percent) as compared to males (9.57 percent).

Specific risky behaviors according to region

Driving vehicles

The results presented in Table 2 revealed that in Eastern suburb, only 33.87 percent of males were having driving license but almost 50 percent of males were driving two wheelers. The respective figures for females,were estimated to be 10.53 and 36.84 percent from Western suburb. The male those drive four wheelers are 44.44 and 26.87 percent in Western suburb and Thane city, respectively. The license of four wheelers issued to males was lowest in Thane district (19.75 percent). Similar trend was observed in the feamles of Thane district.

The incidence of driving friends vehicles among males was highest in Western suburb (61.11 percent). The corresponding figure for female was observed in Thane district (28.91 percent). The incidence of driving parents vehicles among males was highest in Western suburb (44.44 percent). The corresponding figure for female was observed in Thane city (40.23 percent). The respective figures for relatives vehicle in respect of male and female were estimated to be 44.44 percent in Thane district and 20.69 percent in Thane city. It was found that 23.88 percent male were injured while driving vehicles in Thane city and 16.41 percent female in Thane district.

The results presented in Table 2 revealed that the lowest proportion of the male and female who were driving vehicle without helmet was 58.21 and 39.08 percent in Thane city, respectively. The highest percenatges of males and females who drives on highway were 46.27 and 22.99 percent in Thane city, respectively. The highest figure for racing on highway was 27.78 percent of males and 10.53 percent for female in Western suburb. Major accident

while driving vehicle among male was observed as 16.67 percent in Western suburb. For female, it was 5.54 percent in Central suburb. The highest propration of smoking while driving among males and females was observed to be 8.06 and 5.26 percent in Eastern suburb. The highest incidence of alcohol consumption while driving vehicle among males and females was observed as 5.56 and 10.53 percent in Western suburb, respectively.

Characteristics of smoking in different regions

The perusal of Table 2 revealed that the incidence of smoking among male was highest in Eastern suburb (27.42 percent), whereas, the corresponding figure for females was 10.53 percent in Western suburb. The incidence of smoking because of friend among males and females was highest in Eastern suburb (20.97 percent) and Thane district (6.25 percent), respectively. The habit of smoking acquried because of parents was 4.84 and 1.67 percent among male and females in Eastern suburb, respectively. The highest figures for smoking because of relatives was 4.87 percent among male in Eastern suburb and 1.56 percent among females in Thane district.

In Western suburb, 11.11 percent male said that their parents support smoking. Among female, it is only 1.67 percent in Eastern suburb. It means family do not support for smoking of female. Family members shared smoking with youths was estimated to be 8.06 and 1.56 percent among male in Eastern suburb and females in Thane district, respectively.

The friends who shared smoking with male was 14.52 percent in Eastern suburb. Among female, it was only 5.26 percent in Western suburb. Most of the youths smoke cigarettes because of depression. the smoking due to this was 9.68 percent among males in Eastern suburb and 2.34 percent among females in Thane district. The tobacco chewing was observed to be 5.56 and 5.26 percent among males and females, respectively in Western suburb.

Alcohol consumption among youths according to regions

Alcohol is consumed by youth at different occasions. There is less support by family members for alcohol consumption but youth drink alcohol with their friends. The highest proportion of the incidence of alcohol drinking was found to be 22.22 percent each among males in Western suburb and Thane district. Among female, it was only 15.79 percent in Western suburb. Because of smoking, there are many health related problems faced by the respodents. Among the males, health problems faced on account of alcohal consumption was reported by 5.56 percent of respondents in Western suburb. Similarly, 0.78 percent of the female respondents faced health problems due to alcohaol consumption in Thane district. Contraceptive use among male during sexual activity after drinking was reported by only 6.17 percent in Thane district. It was found that a very few females drink alcohol and involve in sexual activity. Similarly, it was found that 3.70 and 0.74 percent among males in Thane district and females in Central suburb met with accident while driving vehicles after drinking alcohol.

Depression among youth according to region

The results presented in Table 2 revealed that trhe incidence of depression among males and females was 55.56 percent in Western suburb and 44.83 percent in Thane city. Occasional depression among male was reported by 33.33 percent of the respodents in Western suburb. The figure for females was found to be 36.78 percent in Thane city. Medical treatment for depression is an important issue. It was found that 7.41 and 6.25 percent of males and females sought medical treatment in the Thane district. The tendency of suicide because of depression was found to be 6.17 and 7.03 percent among males and female, respectively in Thane district. In Eastern suburb, 6.45 percent male have taken drugs to relive depression, while the figure for female respondents was 1.48 percent in Central suburb.

Physical fight according to different regions:

The results pesented in Table 2 revealed that 34.80 percent of the male respodents were involved in physical fight with others in Central suburbs. Among female, it was 29.85 percent in Thane city. Injury because of fight was reported by 23.04 percent male in Central suburb. The corresponding figure for female respondents was 15.79 percent in Western suburb. The incidence of filing police case due to physical fight was reported by 5.88 percent among male in Central suburb and 5.26 percent among the females in Western suburb. Medical treatment received for injury among male was 7.46 percent in Thane city and 3.69 percent for female in Central suburb.

Sexual behavior of youth according to region

The perusal of Table 3 revealed that 37.31 percent of male respondents have girlfriend and 37.93 percent of female respondents were having a boyfriend in Thane city. Broken affair was experienced by 18.52 and 25.29 percent of males and females in Thane district.

Sex in the past was reported by 17.28 percent male in Thane district, whereas 25.29 percent female respondents had sex in past in Thane city. Nearly 16.67 percent youths were involved in sex in current period in western suburb. Among female, it was 4.60 percent in Thane city. During sexual activity, nearly 5.97 percent male used contraceptives. For female, it was 1.67 percent in Eastern suburb. It means very few females participate in sexual activity and use contraceptives. The RTI/STI knowledge among male was 77.78 percent in Western suburb. while among female respondents, it was 61.67 percent in Eastern suburb. Knowledge of HIV aids was reported by 88.89 percent of male in Western suburb and 60.92 percent of females in Thane city. There were 5.56 percent of male respondents reported the health problem due to sex. whereas, the corresponding figure emales respondents were for 4.60 percent in Thane city. Forced sex among male was 8.64 percent in Thane city. Among female, it was 3.33 percent in Eastern suburb. There were 61.11 percent of male respondents of Western suburb watched porn movies. whereas, only 21.05 percent of the female respondents watched porn movies in Western suburb. There were some friends and relatives who force to watch porn movies to youth. It was found that 16.05 and 7.81 percent of males and females were forced to watch porn films in Thane city.

Malnutrition among youths according to region

Youth are malnourished because they do not eat proper balanced diet or they eat outside food. Malnourished youth were unable to concentrate on their studies properly. Consequently they scored less marks in examination. Malnutrition among males and females was reported by 44.44 and 36.84 percent respondents in Western suburb, respectively. The physical problem due to malnutrition was faced by 10.29 percent of the males in Central suburb. while the corresponding figure for females was 18.33 percent in Eastern suburb. Males with weakness were 40.74 percent in Thane district. Among female, weakness was 40 percent in Eastern suburb. There were 14.71 percent of males in Central suburb and 23.33 percent of females in Eastern suburb had visited health care facility. The male received medical treatment was 9.88 percent in Thane district and 15 percent of females in Eastern suburb. Most of the respondents prefer to eat home cooked food in metropolitan region. Their proportion was 96.57 percent in the case of males and 96.31 percent in the case of females in Central suburb. During college hours, youths also eat outside food. It was found that 44.78 percent of the males in Thane city and 44.53 percent of females eat outside food in Thane district.

14.31 lakh male would be driving two wheelers. Such youth travel to college or other work by two wheelers. Around 7.47 lakh female were driving two wheelers. In Greater Mumbai, 0.99 lakh male were driving 4 wheelers. Nearly 5.46 lakh male were smoking cigarettes. Nearly 1.53 lakh female were smoking cigarettes.

Logistic regression result

The logistic regression to understand the socio-economic factors related to risky behaviors. The co-efficient of the independent variables have explained for each type of risky behavior. The results of different risky behaviors are presented for metropolitan region.

Driving vehicles among youth in metropolitan region

Driving is risky habit for the youths. It is negatively co-related with sex of the youth. Nearly 38 percent females were less likely to drive vehicles as compared to males. Number of hours spend in college was positively co-related with driving. Those youths drive vehicles were spending 12 percent more time in college. Those youth (42 percent) help in household tasks were negatively co-related to driving of vehicles. Slums were negatively co-related to driving vehicles by youths. It was because youths who were driving vehicles do not stay in slums. The access and availability of computer, car and bike was positively co-related to driving. Those who drive vehicle, there was 61 percent chance that they have computer at house. Those youth drive vehicles and the ownership of car of family was

two times more. Bike ownership increases the chance by 12 percent more than that of youth drive it than non bike ownership.

Smoking cigarettes among youth

Smoking cigarettes is widely prevalent among youths in Mumbai Metropolitan Region. Smoking by youth was negatively co-related to sex of the youths. Female were less likely to smoke as compared to boys. The relationship of auto rickshaw travel was positively co-related to smoking. It means youths have more money and they easily spend on auto rickshaw as mode of transport. Number of hours spent in college was positively co-related to smoking. Youths who were smoking spend more time in college and their percent was 16..

It is peer effect which helps youth to smoke with friends. The time spent with parents was negatively co-related with smoking. Those youth smoke, the parents spend 36 percent less time. the household size was negatively co-related with smoking. It is observed that if there were few members in family then youths smoke more cigarettes. The household size was 28 percent smaller where the youth were smokers. Father's education was positively co-related with smoking. Youth smoke with higher education of father is only 8 percent. It means fathers provide more freedom and undue sadvantage was taken by youths and indulge in smoking. It was was noticed that those youth smoke cigarettes whose family stay in rented house and percent was higher as compared to those whe had their own house. Youths with ownership of parent's car, the smoking was 64 percent higher as compared to parents having no car.

Alcohol consumption among youths

Alcohol consumption was positively co-related with age of the youth. The older youth consume 22 percent more alcohol than the younger youth. But the sex of the youth was negatively co-related with alcohol. Females were 60 percent more likely to smoke than boys. Those youths travels by train were taking more alcohol and was statistically significant. Youth work after college hours weredrinking alcohol. The working youth 3.56 times were more likely to smoke. Mother's education was positively co-related with alcohol consumption. Mothers with higher education their childern likely consume more alcohol by 8 pecent. The per capita income was statistically significant and positively co-related with alcohal consupmtion.

It was found that the high and low per capita income of households has not restained youths not to drink alcohol. The car ownership was positively co-related with alcohol consumption. The ownership of car with family of induce youth to consume alcohol more by 3 times.

Depression among youths

Youths in the metropolitan region are depressed because of carrier, study and higher expectations. Depression among youth was positively co-related to age of the youth. As age of youth rises, he/she becomes more depressed because of carrier and financial problem. Depression with aged was 16 percent (Table 4).

Those youths who were walking were more depressed than the non-walkers. The working youths were more depressed. It is related to financial problem. Depression among working youth was 69 percent more. Similarly, youths those travel by train were depressed as compared to youth do not travel by train. It may be because of crowding and long distance from home and college. Spending time was negatively co-related to depression. Nearly 42 percent parents spend less time with depressed youth. Parents and youths do not spend time with each other.

Loan taken by parents was positively correlated to depression. Those families which have taken loans, the youths were more likely to be depressed. It was more related to financial problem of family. The depression was positively influnced by non-availabilty of toilet facilty and likely to increase depression among the youths by more thas 2 times (Table 4).

Physical fight among youth in metropolitan region

Youth in Mumbai Metropolitan Region were fighting with their friends on different accounts. Physical fighting was negatively co-related with sex of youth. The perusal of Table 5 revealed that nearly 36 percent female were less likely to fight physically as compared to the male. Car ownership was positively co-related to physical fight. Youth

with ownership of car was 66 percent more likely to fight physically. It was clearly related to higher standard of living of youths. Ownership of bike has 11 percent more chances of physical fights among youths.

Sexual involvement of youths in metropolitan region

Sexual activity was negatively correlated with sex of the youth. The resulta presented in Table 5 revealed that females were 72 percent less likely to involve in sexual activity as compared to males. Those youth walk, they were involved more in sexual activity. But it was only one percent higher as compared to non-walkers. Youths those are not spending time in college are more likely to involve in the sexual activity.

Youth involved in sexual activity were spending 10 percent less time in college. Those youths which were working were more likely to involve in sexual activity. Those youth who were working were likely involved in sexual activity by nearly two times more. Electricity access at home was negatively co-related with sexual activity. Youth involved in sexual activity have 26 percent more access to electricity. The toilet facility was positively co-related to sexual activity. The ownership of car was positively co-related with sexual activity. It means that youths with ownership of car involved more in sexual activity.

Malnourishment among youths

Youths from Metropolitan region eat outside food. Their food preferences were not fulfilling the requirement of balanced diet. Malnourishment among youth was negatively co-related with train travel. Healthy youth were 2 percent more likely to travel by train. But malnourished youth were weak and get tired of traveling by train. Local trains are crowded and travel may be completed by bus. Therefore, they do not travel by train. The per capita income was negatively co-related with malnourishment. Healthy youth have one percent more per capita income as compared to malnourished youth. Those households have taken loans, the youth were malnourished. Loans put additional financial burden on family. Malnourished youth with parents taken loan was 43 percent higher as compared to parents have not taken loan. It affects on physical capital of youth. They become weak due to lack of healthy diet (Table 5).

Multiple risks and regression result

Multiple risks means youths are involved more than one risk activity. Multiple risks are negatively co-related to sex. th eperusal of Table 5 revealed that female were 48 percent less involved in multiple risks. Waking was positively co-related to multiple risks. Those who walk to college were 13 percent more involvement in multiple risks. Travel by train was also positively co-related to multiple risks. Those who travel by train have 8 percent more multiple risks. The time spent in college was positively co-related to multiple risks. Those spend more time in college have 16 percent more multiple risks. Youths with multiple risks do not spend quality time with parents. Those parents do not spend more time with youth have 50 percent more of multiple risks. The per capita income has no effect on multiple risks. Ownership of car was positively co-related with multiple risks. Those youth have car at home, they were 94 percent more likely to involve in multiple risks. The study revealed that the likelihood of engaging in sexual intercourse increases with the frequency of alcohol use. In particular, frequent drunkenness-related drinking increased the probability that the teenager had experienced sexual intercourse.

The likelihood of engaging in unprotected sex and/or having multiple sexual partners was many-fold for adolescents drinking frequently until they were in a state of drunkenness. Particularly for girls, weekly drunkenness-related drinking was associated with multiple partners. The vast majority of sexually experienced under-aged adolescents drink alcohol, many of them until they are drunk (Lavikainen *et al.* 2012). It is difficult to find the different multiple risks of youths with repeated risk behavior. But multiple risks among youths certainly reduce the academic achievements.

CONCLUSION

Youths need special attention in terms of education and health. It is the responsibility of the parents to tell the youths not to drive vehicles without their permission. The young men were nearly twice as likely as young women to have a serious offence and half again as likely to have had a serious crash (Shope, Jean T. et.al 1999). It was also found that mandatory seatbelt laws significantly reduced traffic fatalities and serious injuries (Carpenter Christopher S. Mark Steer 2007). In small families, parents must spend more time with youth. Preventing smoking among young

people is critical to ending the epidemic of diseases related to tobacco use (Nakajima, Ryo 2007). Health experts, economists, psychologist, educational experts should work together to reduce risky behaviors among youths. Household environment must be healthy and non violent. Parents should teach non violence to youths and they should act accord to it. Families must take care of the youth and give them good food and medical care. The results show that the share of male current drinkers and smokers is by far greater than that of females (Podhisita, Chal, et.al. 2001). As far as malnourishment is concerned then the role of parents is important (Hao Lingxin et.al. 2005) but it is not true with socio-economic status of parents (Sutherland, A. 2012). The study suggests that alcohol use prevention policies may be effective tools in reducing suicide attempts among youth (Chatterji P.et.al 2003). Such alternative policies will help to reduce some extent of risky behaviors among youths in Mumbai Metropolitan Region.

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Table 1: Incidence of risky behaviors among youth in metropolitan region

Risky Behaviors	Male	Female	Total
Drive two wheelers	36.30	43.73	39.21
Drive four wheelers	21.78	20.97	21.46
Smoking cigarettes	13.86	8.95	11.93
Alcohol consumption	12.54	10.99	11.93
Depression	23.10	48.59	33.09
Physical fight	23.26	33.5	27.28
Sexual involvement	10.23	5.88	8.52
Malnourished	9.57	22.50	14.64

Table 2: Risky driving behavior, Incidence of smoking, drinking, depression and physical fight among youth according to region

(Percent)

Particulars	Western		Central		Eastern		Thane city		Thane district	
	M	F	M	F	M	F	M	F	M	F
Drive										
Drive two wheelers	50.00	36.84	47.55	31.00	50.00	21.67	58.21	33.33	54.32	29.69
Drive four wheelers	44.44	15.79	32.84	15.50	29.03	16.67	26.87	19.54	25.93	7.81
License of two wheeler	33.87	10.53	35.78	14.39	33.87	11.67	49.25	28.74	30.86	15.63
License of four wheeler	38.89	10.53	27.45	10.33	30.65	6.67	26.87	14.94	19.75	3.91
Vehicle of										
Friend	61.11	21.05	52.45	25.83	48.39	13.33	58.21	27.59	58.02	28.91
Parent	44.44	26.32	39.71	26.94	35.48	20.00	41.79	40.23	32.10	23.44
Relatives	38.89	15.79	40.20	19.19	30.65	11.67	29.85	20.69	44.44	18.75
Injured while driving	5.56	15.79	21.57	15.50	22.58	8.33	23.88	12.64	22.22	16.41
Wear seatbelt/helmet	50.00	36.84	50.49	32.10	40.32	25.00	58.21	39.08	48.15	19.53
Drive on highway	27.78	15.79	37.75	16.24	38.71	15.00	46.27	22.99	39.51	14.06
Racing on highway	27.78	10.53	13.73	3.32	11.29	0.00	14.93	4.60	9.88	3.13
Major accident	16.67	5.26	9.80	5.54	6.45	0.00	4.48	2.30	7.41	4.69
Smoke and drive	0.00	5.26	5.39	1.11	8.06	0.00	1.49	0.00	4.94	1.56
Alcohol and drive	0.00	5.26	3.92	1.85	6.45	1.67	1.49	2.30	3.70	0.78
Drink drive accident	5.56	10.53	3.92	2.21	4.84	1.67	2.99	2.30	3.70	0.78
Incidence of smoking										
Smoking	11.11	10.53	18.63	6.64	27.42	3.33	13.43	4.60	22.22	7.03
Because of friend	11.11	5.26	17.16	5.54	20.97	1.67	17.91	4.60	16.05	6.25
Parents	0.00	0.00	0.98	0.37	4.84	1.67	1.49	1.15	2.47	1.56
Relatives	0.00	0.00	1.47	0.00	4.84	0.00	1.49	0.00	2.47	1.56
Accompany	11.11	0.00	0.00	0.00	12.90	0.00	11.94	3.45	3.70	0.78
parent support	11.11	0.00	1.47	0.00	4.84	1.67	0.00	1.15	1.23	1.56
Family share	5.56	0.00	6.86	0.37	8.06	0.00	4.48	0.00	1.23	1.56
Friends gives cigarettes	11.11	5.26	0.00	0.00	14.52	0.00	0.00	0.00	0.00	0.00
Depression	5.56	0.00	6.86	1.11	9.68	1.67	4.48	1.15	7.41	2.34
Chew tobacco	5.56	5.26	1.47	0.00	3.23	0.00	0.00	0.00	0.00	0.00
Drink Alcohol										
Alcohol consumption	22.22	15.79	16.67	4.06	16.13	3.33	14.93	14.94	22.22	10.94
Health problem	5.56	0.00	4.41	0.00	1.61	0.00	4.48	0.00	2.47	0.78
Sex after drink alcohol	5.56	0.00	0.00	0.00	0.00	0.00	1.49	1.15	4.94	0.78
Contraceptive use	0.00	0.00	1.96	0.00	4.84	1.67	0.00	1.15	6.17	0.78
Drink drive accident	0.00	0.00	0.49	0.74	1.61	0.00	0.00	0.00	3.70	0.00
Depression										
Sad/hopeless	55.56	42.11	29.90	26.57	29.03	40.00	31.34	44.83	37.04	36.72
Occasional depressed	33.33	15.79	18.63	19.93	19.35	33.33	20.90	36.78	32.10	26.56
Medical treatment	0.00	0.00	6.37	4.43	3.23	3.33	2.99	4.60	7.41	6.25
Suicide tried	0.00	0.00	5.39	4.06	6.45	3.33	0.00	5.75	6.17	7.03
Drugs to relive depression	0.00	0.00	1.96	1.48	6.45	0.00	0.00	1.15	2.47	0.78
Physical Fight										
With friends	33.33	26.32	34.80	20.30	30.65	18.33	29.85	28.74	30.86	27.34
Injured	11.11	15.79	23.04	7.01	16.13	8.33	11.94	8.05	20.99	12.50
Police case	5.56	5.26	5.88	2.21	0.00	1.67	1.49	2.30	3.70	1.56
Medical treat	0.00	0.00	5.39	3.69	4.84	5.00	7.46	2.30	7.41	3.13

Table 3: Sexual behaviour and Incidence of malnutrition among youth according to region (Percent)

Particulars	Western		Central		Eastern		Thane city		Thane district	
	M	F	M	F	M	F	M	F	M	F
Sexual Behaviour										
Boyfriend/girlfriend	33.33	26.32	29.41	19.93	24.19	18.33	37.31	37.93	29.63	26.56
Broken affair	5.56	5.26	14.71	8.49	14.52	5.00	16.42	25.29	18.52	14.06
Sex in past	5.56	5.26	14.22	3.69	14.52	6.67	13.43	2.30	17.28	4.69
Now sex activity	16.67	0.00	9.31	2.21	11.29	3.33	7.46	4.60	6.17	2.34
Single/multiple	5.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contraceptive use	5.56	0.00	4.41	0.00	4.84	1.67	5.97	0.00	2.47	0.78
Know RTI/STI	77.78	47.37	60.78	54.61	62.90	61.67	56.72	56.32	66.67	52.34
Know HIV Aids	88.89	52.63	57.84	49.08	53.23	58.33	50.75	60.92	67.90	51.56
Health problem	5.56	0.00	3.92	2.58	1.61	0.00	4.48	4.60	4.94	3.13
Forced sex	5.56	0.00	5.39	2.58	4.84	3.33	5.97	1.15	8.64	0.78
Porn watched	61.11	21.05	33.82	13.28	46.77	15.00	43.28	18.39	46.91	14.84
Forced to watch	5.56	0.00	8.82	4.43	8.06	5.00	10.45	5.75	16.05	7.81
Nutritional status										
Malnourished	44.44	36.84	19.12	23.99	3.23	6.67	10.45	8.05	2.47	3.91
Any physical problem	5.56	0.00	10.29	8.49	3.23	18.33	5.97	12.64	7.41	10.94
Weakness	22.22	21.05	23.53	22.14	12.90	40.00	20.90	21.84	40.74	25.78
Health care facility	11.11	0.00	14.71	16.24	4.84	23.33	8.96	14.94	11.11	14.06
Treatment taken	5.56	0.00	5.88	7.01	0.00	15.00	5.97	9.20	9.88	6.25
Inside food	88.89	84.21	96.57	96.31	93.55	91.67	91.04	93.10	95.06	91.41
Outside food	27.78	10.53	39.71	38.38	33.87	36.67	44.78	39.08	41.98	44.53

Table 4: Odd ratio of variables regarding driving, smoking, alcohol consumption and depression

Variables	Odd ratio	SE	Z-value
Driving			
Sex	0.42*	0.06	-6.04
Hours in college	1.12*	0.06	2.23
Help in HH	0.58*	0.13	-2.23
Per capita income	1.00*	0.00	2.70
Slums	0.74*	0.08	-2.44
Computer	1.61*	0.35	2.23
Car	2.34*	0.37	5.28
Bike	1.27*	0.15	2.06
Log likelihood = -593.58961	*Pseudo R^2 = 0.1046*	*LR chi^2 = 138.63*	*Prob > chi^2 = 0.0000*
Smoking			
Sex	0.28**	0.06	-5.68
Travel by Rickshaw	1.02	0.01	1.73
Hours in college	1.16**	0.06	2.67
Spending time	0.56	0.19	-1.68
HH size	0.82**	0.07	-2.01
Fathers education	1.08	0.04	1.89
Rental house	1.74**	0.48	1.99
Car	1.64**	0.36	2.27
Log likelihood = -325.12	*Pseudo R^2 = 0.09*	*LR chi^2 = 69.31*	*Prob > chi^2 = 0.00*
Alcohol Consumption			
Age	1.22*	0.10	2.36
Sex	0.41*	0.09	-4.03
Travel by train	1.00*	0.00	3.34
Work	3.56*	0.91	4.95
Mothers education	1.08*	0.04	2.27
Per capita income	1.00*	0.00	3.30
Car	3.04*	0.67	5.06
Log likelihood = -313.76	*Pseudo R^2 = 0.133*	*LR chi^2 = 96.80*	*Prob > chi^2 = 0.0000*
Depression			
Age	1.16*	0.06	2.70
Walk	1.00*	0.00	2.19
Travel by train	1.00*	0.00	2.29
Work	1.69*	0.34	2.62
Spend time	0.58*	0.14	-2.11
Loan	1.63*	0.24	3.26
Toilet	2.86*	0.86	3.49
Log likelihood = -604.64	*Pseudo R^2 = 0.04*	*LR chi^2 = 54.25*	*Prob > chi^2 = 0.0000*

* and ** Significant at 1 and 5 percent

Table 5: Odd ratio of variables regarding physical fight, sexual invovement of youth, malnutrition and multiple risk behaviour

Variables	Odd ratio	SE	Z-value
Physical fight			
Sex	0.64*	0.09	-3.06
Car	1.66*	0.26	3.22
Bike	1.11	0.07	1.70
Log likelihood = -569.62	*Pseudo R^2 = 0.02*	*LR chi^2 = 25.45*	*Prob > chi^2 = 0.0000*
Sexual involvement			
Sex	0.28*	0.07	-4.83
Walk	1.01*	0.00	2.08
College time	0.90*	0.04	-2.07
Work	*2.68**	*0.74*	*3.57*
Electricity	0.26*	0.15	-2.27
Toilet	2.49***	1.33	1.71
Car	1.62**	0.41	1.90
Log likelihood = -259.16	*Pseudo R^2 = 0.10*	*LR chi^2 = 62.40*	*Prob > chi^2 = 0.0000*
Malnutrition			
Travel by train	0.98*	0.00	-3.12
Per capita income	0.99**	0.00	-1.83
Loan	1.43**	0.27	1.89
Log likelihood = -405.73	*Pseudo R^2 = 0.02*	*LR chi^2 = 18.37*	*Prob > chi^2 = 0.0000*
Multiple risk behaviour			
Sex	0.52*	0.07	-4.76
Walk	1.13***	0.07	1.89
Travel by train	1.08**	0.04	1.90
College time	1.16*	0.08	2.19
Per capita income	1.00**	0.00	1.95
Car	1.94*	0.29	4.42
Log likelihood = -653.41	*Pseudo R^2 = 0.046*	*LR chi^2 = 63.37*	*Prob > chi^2 = 0.000*

*,** and *** Significant at 1, 5 and 10 percent