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Youth Risk Behaviour among Medical Students in a Medical College in Bengaluru

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Abstract

Risk taking behaviour is common amongst youth, who comprise of individuals between 15-24 years. They are in the formative stage of life and are vulnerable to developing habits that could be precursors to development of communicable and non communicable diseases. This study was undertaken to assess the risk taking behaviour among first year medical students as they will be the role models to the community. A cross-sectional study, using a semi-structured questionnaire, was conducted among first year medical students in RajaRajeswari Medical College over a one month period in 2015. The study revealed that most students had risk taking behaviour, especially with regard to unhealthy diet and lack of physical activity. There was a statistically significant association between consumption of junk food and obesity and between BMI and action taken to alter weight. A small percentage of students displayed risk taking behaviour contributing to unintentional injuries, substance abuse and physical inactivity. Behaviour change communication on health risk behaviours and life skills training among the future doctors will go a long way in bringing a change in the community as they will be the role models.

Key Words: Youth, Risk Behaviour, Medical Students

Introduction

With the emergence of rapid urbanization and modernization, our youth have been exposed to choices that are potentially harmful.[1] Priority health-risk behaviours, which are behaviours that contribute to the leading causes of morbidity and mortality among youth and adults, often, are established during childhood and adolescence, extend into adulthood and are interrelated and preventable.[2]

The Youth Risk Behavior Surveillance System (YRBSS) monitors six categories of priority health-risk behaviors among youth and young adults: 1) behaviors that contribute to unintentional injuries and violence; 2) tobacco use; 3) alcohol and other drug use; 4) sexual behaviors that contribute to unintended pregnancy and sexually transmitted diseases (STDs); 5) unhealthy dietary behaviors and 6) physical inactivity.

The 2011 national YRBS indicated that many high school students were engaged in priority health-risk behaviors associated with the leading causes of death among persons aged 10-24 years in the United States. [2] World Health Survey - India reported that among individuals aged 18 to 24 yr, 3.9 per cent were infrequent heavy drinkers and 0.6 per cent were

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frequent heavy drinkers. The NFHS-3 survey revealed that 1% women and 11 % men aged 15-19 yr and 1.4% women and 28.8% aged 20-24 yr consumed alcohol.[3] The Health Behavior Study in Bangalore covering nearly 10,000 individuals aged 18 to 45 years from urban, rural, slum and transitional areas reported that 30 per cent had more than five behaviors/conditions existing in the same individual.[4]

Most of the research into epidemiological profile of risk taking behavior among youth has been conducted in developed countries. This indicates the need for more Indian studies to aid in comparison and help in building larger picture on the epidemiology and prevention of morbidity and mortality related to risk taking behavior among youth. Hence this study was taken up to assess the risk taking behavior among medical students.

Objective

To assess the risk taking behavior among first year medical students of RajaRajeswari Medical College and Hospital (RRMCH), Bengaluru

Materials and Methods

A cross-sectional study was conducted among first year medical students in RajaRajeswari Medical College and Hospital, Bengaluru after obtaining institutional ethical clearance. This was over a one month period from 15th November to 15th December 2015. A Semi-structured Questionnaire was used which incorporated the health risk behaviours as per the Youth Risk Behavior Surveillance System (YRBSS) which monitored six categories of priority health-risk behaviors among youth namely 1) Behaviors that contribute to unintentional injuries and violence; 2) tobacco use; 3) Alcohol and other drug use; 4) Sexual behaviors that contribute to unintended pregnancy and sexually transmitted diseases (STDs); 5) Unhealthy dietary behaviors and 6) Physical inactivity.[5] The questionnaire was administered to the 100 First year MBBS students, all of whom gave a written informed consent to take part in the study. The questionnaire consisted of a total of 45 questions under the six categories of priority health-risk behaviours.

The data was collected and compiled in MS Excel sheet and analyzed by using SPSS version 21.0. All qualitative variables were presented as frequency and percentages. Chi square test was applied to know the association between the variables.

Results

In this study, out of 100 participants, majority were females (63%) as compared to males (37%) as depicted in Fig. 1.

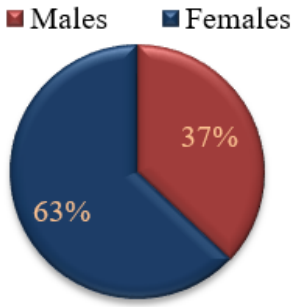

Figure 1: Gender wise distribution of participants

Fig. 2 shows that most of the study participants were above 18 years (94%)

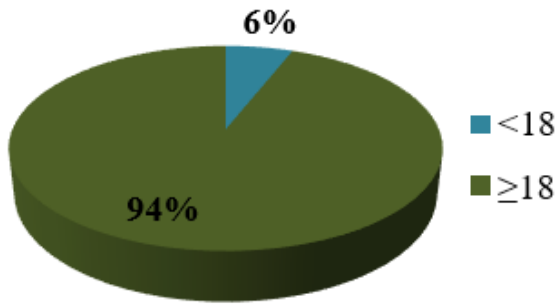

Figure 2: Age wise distribution of participants

Table 1 reveals that in this study, most of the students had some risk taking behavior.

Of the 100 participants, not all travelled by 2 wheelers or drove cars. 67 participants had used 2 wheelers to travel, of whom only 11(16.4%) participants wore helmets always. The use of helmet was almost same among males 6(54.5%) as compared to female participants 5(45.4%).

72 students used a car to commute to college of whom 18(25%) always wore seat belt. Females using seatbelts 11(15.3%) were more as compared to their male 7(9.7%) colleagues.

11% of participants had indulged in drinking and driving, 6(54.5%) of them were males and 5(45.5%) females.

Of the 11 students who were involved in physical fights, 6(54.5%) sustained injuries. Majority of students involved in physical fight were males (83.3%).

Occasional tobacco use was found amongst 5% of the students of whom 4(80%) were males.

Three male students (3%) reported experimenting with recreational drugs 1-2 times.

Of the 100 participants, 4% reported having sexual intercourse with multiple partners. All of them reported utilizing protection. Majority were males (75%).

Table 1: Distribution of medical students according to Risk Behaviour

Risk behaviour	Percentage	Total Number of participants
Not wearing helmet	27	67*
Not wearing seat belt	53	72**
Drinking and driving	11	100
Physical fight	11	100
Tobacco use	5	100
Alcohol consumption	10	100
Drug use	3	100
Junk food	52	100
Aerated drinks	39	100
Lack of exercise	61	100

*only 67 participants travelled by 2 wheelers

**only 72 participants had utilized 4 wheelers for transportation.

Of the 100 students, 24% had a BMI of 25 and above thus falling into the obese category according to Asia Pacific Classification. Of them 14 were females and 10 were males.

Most of the students (94%) consumed junk food, of whom 58 consumed occasionally and 36 consumed multiple times a day. More number of girls 66.7% (24) consumed junk food than boys 33.3% (12) on a daily basis.

Out of those who were overweight, 23.1% consumed junk food and 32.7% of those who were obese consumed junk food. This was found to be statistically significant as shown in table 2.

Table 2: Association of BMI with Junk Food

Junk food	BMI			
	Normal	Overweight	Obese	Total
Not consumed	35 (72.9%)	6 (12.5%)	7 (14.5%)	48
Consumed	23 (44.2%)	12 (23.1%)	17 (32.7%)	52
Total	58	18	24	100

$X^2 = 8.503$, DF = 2, P<0.01

7% of students, 4 males and 3 females consumed aerated drinks multiple times a day.

When it came to consumption of high sugar drinks, more number of females 34% consumed it as compared to males 19%. Of them 38.2% females and 21% males consumed high sugar drinks multiple times a day.

Regular exercise was done by 21% of students whereas 22% never exercised. More numnber of females 14 out of 21 did regular exercise as compared to 7 males.

Long hours of sitting in front of television or computer was also assessed as risk factor for obesity. It was found that 38% of students never watched television, whereas 16% of of the students sat in front of television for more than two hours everyday. More number of females 13 out of 16 spent long hours in front of the television compared to 3out of 16males.

15% of students spent more than 2 hours everyday in front of the computer out of whom eight were males and seven were females.

The perception of the students regarding their weight mainly revealed that 50% of the students wanted to lose weight. Of them there were more

females 64% wanting to lose weight as compared to males 36%. 11% of students wanted to gain weight, among whom 3 were females and 8 were males. But amongst them only 2 (one female and one male) were underweight as per their BMI.

Of those who were overweight or obese, 56.8% had taken action to lose weight. However, 28.6% of the overweight or obese medical students were not inclined to take any action. This was statistically significant as depicted in table 3.

Table 3: BMI and its association with action taken to alter weight

Action On weight	BMI		
	Normal	Overweight or obese	Total
Lose weight	22 (43.1%)	29 (56.8%)	51
No action	35 (71.4%)	14 (28.6%)	49
Total	57	43	100

$X^2 = 8.503$, DF = 1, P<0.01

Discussion

This study on youth risk behavior among medical students covered six priority risk behaviour areas namely behaviors contributing to unintentional injuries and violence, tobacco use, alcohol and drug consumption, sexual behaviors leading to STDs and unhealthy dietary behaviours.

Behaviours that contribute to unintentional injury and violence include road safety measures like wearing a seatbelt and helmet while travelling. The current study revealed that 16.4% (11) participants wore helmets always. The use of helmet was almost same among males 6(54.5%) as compared to female participants 5(45.4%). This differed from the YRBS 2013 Vermont state study in which 27% of students always wore helmet while riding a bike.[6]

The use of seatbelts while driving a 4 wheeler was 25 % among the students in the current study whereas 53% never wore seatbelts. This trend was opposite to that seen in the 2013 Vermont study where 75% students always wore seat belt and only 3% never or rarely used seatbelts.[6]

The current study revealed 11% of students had travelled in or driven a vehicle under the influence of alcohol. Youth Risk behavior studies conducted in Vermont 2013 and in South Africa 2002 revealed a higher percentage 21% and 34.5% of youth driving under the influence of alcohol.[6, 7]

In this study 11% students had been in a physical fight in the last month and 6% had sustained injuries. There were more males (83% of those with injuries) as compared to females involved in physical fights. This was much less compared to other studies conducted in South Africa national YRBS 2002, YRBS 2011 in USA and YRBS Vermont 2013 surveys where 30.2%, 32.8% and 43% participants were involved in physical fights respectively. In the South African national YRBS 2002 study 29.3% of those involved in physical fights sustained injuries requiring treatment, which is much more than in the current study.[2, 6, 7]

Tobacco use amongst youth even occasionally can lead to lifelong habituation and is a risk for cancers and cardiovascular diseases. The present study revealed that 5% of students, all males had used tobacco occasionally and 1% had used tobacco on a daily basis. This was similar to the results of studies conducted by, Sutapa et al, YRBS Vermont 2013 and Singh Sunita et al where 3.3%, 9% and 11.2% of students respectively, had tried tobacco in some form.[3,6,8] Sutapa et al's study further showed that 1.2% of the students smoked tobacco on a daily basis.[8] The South African YRBS study differed from the current study as there was a higher percentage, 30.5% of students, who had tried tobacco and 21.1% used tobacco daily.[7]

The current study revealed that 10% of students had consumed alcohol in the month preceding the study. Of them 60% were males and 40% were females. 1% of students had consumed alcohol on all days. This was in accordance with World health survey India where 3.9% of youth were found to be infrequent drinkers and 0.6% heavy drinkers.[9] Our study differed from the results of NFHS 3 where only 1% of females and 11% males consumed alcohol.[10] YRBS 2011 study conducted in USA revealed 38.7% youth consumed alcohol.[2] YRBSS 2015 revealed 33% youth to have consumed alcohol, 18% youth had had more than 5 drinks in a single session.[11] 49.1% of

youth in South Africa YRBS study were found to be occasional drinkers, 23% had consumed more than 5 drinks on a single day.[7] These were much higher than the results found in our study.

Marijuana and opium have been found to be the commonly used recreational drugs. The current study revealed 3% of the students, all males, had smoked marijuana one or two times. This was similar to the findings of YRBS 2013 where 3% students smoked marijuana and Chaturvedi et al's study where 2.3% males and 0.3% females had consumed opium occasionally.[6,12] YRBS 2011 and 2015 studies in US revealed a much higher percentage of use of marijuana 23.1% and 22% respectively, in the month prior to the study, among youth.[2,11]

In the present study 4% of the students were currently sexually active and all of them had more than 4 sexual partners. There were more males 75% as compared to females 25% among the students who were sexually active. All the students reported having used condoms during sexual intercourse. Our findings varied from the YRBS 2011, Vermont YRBS study 2013 and the South African YRBS 2002 where 33.7%, 33% and 70.2% were currently sexually active respectively.[2, 6, 7] Vermont study and the US YRBS 2011 revealed 12% and 15.3% of students had more than 4 partners, which was different from our study where all the students had more than 4 partners.[2, 6] Use of condoms was similar to Vermont 2013 study where 85 % students had used condoms or birth control pills.[6] In the US YRBS 2011 study and South African YRBS study only 60.2% and 44.8% sexually active students used a condom which was lesser than in our study.[2, 7]

Consumption of junk food by youth in the current study revealed that 52% of the students consumed junk food and 36% consumed it multiple times a day. Junk food eating was more among females 66.6% as compared to males 33.4%.This was much more than in the studies conducted by Nayak RK et al, Nitin Joseph et al where the daily consumption of junk food or fast foods were 16% and 3.6% respectively.[13,14] The present study showed a strong association between consumption of junk food and obesity among the study participants which was similar to the results of Nithin et al where students who consumed fast foods more than once a day had greater proportion of being overweight or obese.[14]

YRBS Vermont study 2013 showed that 17% youth consumed high sugar drinks daily which was the same as in this study where it was 17%.[6]

Physical inactivity is determined by factors like exercise and sitting for long periods in front of television or computer. In our study, prevalence of obesity was 24%, slightly more than the YRBS 2013 study where 13% students were obese.[6]

In the current study, 21% students exercised regularly whereas 22% students never exercised. More number of female students 59% did not exercise compared to 41% males. The results were similar toYRBS 2013 study where 25% students did some physical activity for an hour regularly.[6] The South African YRBS data showed 44% of youth had participated in vigorous physical activity regularly, which is much more than in our study.[7]

When sitting for long hours was assessed, 16% students were in front of the television for more than two hours in a day (81.2% females and 18.8% males) and 15% students (almost equal number of males and females) used the computer for recreational purpose for more than two hours in a day. Physical activity of youth in the 2015 YRBS report differed from our study as more students (35%) watched television for three or more hours per day.[11, 15]

42% used a computer for things other than academic work in 2015 YRBS study and 31.1% had played video or computer games for three or more hours on an average working day in YRBS 2011study. These findings were much more than in our study.[2, 11, 15]

Conclusion

Risk taking behaviour was predominant with regard to unhealthy diet and lack of physical activity.

In spite of legislations, 26-28% students did not adhere to safety measures while driving a two wheeler or four wheeler.

Substance use was found to be 3% (narcotic drugs), 5% (tobacco) 10% (alcohol).

Early detection and behaviour change communication of health risk behaviours among the future doctors will go a long way in bringing a change in the community as they will be the role models.

Ethical Clearance- taken from Institutional Ethical Committee, Rajarajeswari Medical College and Hospital, 2016.

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Conflict Of Interest- None

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