

Original Research Article

BEHIND THE WHITE COAT: RISKY BEHAVIOURS AMONG YOUNG MEDICAL STUDENTS IN RURAL TELENGANA

Koney Supraja¹, Gudipudi Bhargavi Krishna², Bharatesh Devendra Basti³, Ravishankar M⁴

¹Postgraduate student, MD Community Medicine, MNR Medical College and Hospital, Sangareddy, Telangana, India.
 ²Postgraduate student, MD Community Medicine, MNR Medical College and Hospital, Sangareddy, Telangana, India.
 ³Professor, Department of Community Medicine, MNR Medical College and Hospital, Sangareddy, Telangana, India.
 ⁴Associate Professor, Department of Radiodiagnosis, BGS Global Institute of Medical Sciences, Bengaluru, Karnataka, India.

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Corresponding Author: Dr. Bharatesh Devendra Basti,

Professor, Department of Community Medicine, MNR Medical College and Hospital, Sangareddy, Telangana, India. Email: bharateshb74@gmail.com

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ABSTRACT

Background: Risky behaviours among youth medical students, potentially expose people to harm which prevent them from reaching their full potential. **Objectives:** To assess risky behaviours like unsafe driving, violence related, sad feeling, smoking, dietary, physical activity among medical students.

Materials and Methods: Cross-sectional study among rural Telangana medical students. Sample Size was 345 using the formula $n=Z^2PQ/d^2$. After ethical committee clearance, pretested questionnaire was administered to students. Responses were collected and analysed using SPSS 18.

Results: Risky behaviours among males related to safety, violence, smoking, physical consumption, inadequate alcohol and activity were 82(64.1%),69(53.9%),23(18%),27(21.1%) and 61(28.1%) respectively which were significantly higher compared to females (p<0.05). Risky Behaviours like hopeless/sad feeling, feeling of poor mental health, and inadequate consumption of fruits/vegetables were 90(41.5%),127(58.9%) and 105(48.4%) among females respectively, which was significantly higher compared to males(p<0.05). Bullying, sleep disturbance was more among males. Mobile usage, considering to attempt suicide was higher among females which were not statistically significant.91(51.7%) of those with BMI>25 wanted to reduce weight vs 68(71.5%) with BMI <25. 29(74.3%) with BMI <18.5 wanted to gain weight vs 45(30.6%) with BMI>18.5. These were highly statistically significant(p<0.0001).

Conclusion: High prevalence of risky behaviours including unsafe driving, dietary, physical inactivity, poor mental health was found among both male and female medical students, the next generation doctors. Multi-component health intervention on war footing is needed. Coordinated, comprehensive lifestyle education and life skills training is needed.

Keywords: Medical students, youth, risky behaviours, safety behaviours, Poor mental health.

INTRODUCTION

"Youth" including the medical student is best understood as a period of transition from the dependence of childhood to adulthood's independence.^[1] Youth, the productive and dynamic section of the population, is considered the most valuable human resource for fostering economic, cultural and political development of a nation. The World Health Organization (WHO) defines youth as age group 15–24 years. This period is marked with immense physiological, psychological and behavioural changes coupled with varying patterns of social interactions and relationships. This also leads to engagement in multiple risky behaviours.^[2] Risky behaviours are those that potentially expose people to harm or significant risk of harm. These may prevent youths from reaching their potential in life and can cause significant morbidity or even mortality. On reaching high school or university youths face rapid changes in biological, emotional, cognitive, and social development which influence their behavior.^[3] Problems in this age group are multi-dimensional.^[3]

With the emergence of rapid urbanization and modernization, our youth have been exposed to choices that are potentially harmful.^[4] Alcohol and other substance use is a global problem and has become a public health concern. Tobacco is the single most common cause of preventable mortality.^[5] Substance use is associated with numerous undesirable short- and long-term consequences. There is considerable evidence that substance abuse among youth is widespread6. Substance abuse had been proven to cause various non-communicable disease (WHO, 2018). 5.4% of the global burden of disease is contributed by Alcohol and illicit drug use. Alcohol and tobacco are the most commonly abused substances among adolescents and medical fraternity. The role of addiction in family and peer pressure are also some of the major causes of initiation of substance abuse5. Physical inactivity is an important risk factor for the development of many noncommunicable diseases like hypertension, obesity, diabetes, coronary artery disease etc. The existing literature indicates a greater risk of suicide among medical students and professionals than the general population. The estimated risk of suicide, including medical students, among doctors, is 2.5 times higher than the general population.^[7] A recent crosssectional study about the lifestyle and eating preferences of medical students at the University of Dammam was carried out, which reported that despite being medical school students, the percentage of students consuming a large amount of fast food and soft drinks was high. On the other hand, the percentage of medical students who exercise regularly was reported to be low.^[8] High rates of psychological morbidity are experienced by medical students and doctors due to their work and study environment. Stress may be a contributing factor for unhealthy behaviours and co-morbidities. Medical students are future physicians. Risky behaviors like unsafe driving, violence related, smoking/alcohol consumption, hopeless/sad feelings, poor mental health, bullying, sleep disturbances acquired in early life can directly impact their optimal development, clinical performance and affect reaching their full potential.^[9] So, determining the risky behaviors of medical students and taking appropriate measures is important to reduce the impact on them. The study was done with the objectives to assess risky behaviors like unsafe driving, violence related, sad feelings, smoking, alcohol, dietary, physical activity among medical students.

MATERIALS AND METHODS

It was an institutional based cross-sectional study in a rural medical college, Sangareddy district, Telangana done over a period of 2 months (December 2024 & January 2025). Considering p (Ever use of tobacco, alcohol, and other substances) as 34.2 %, (based on the study conducted by Sumit Malhotra et al at Delhi¹⁰), 95% Confidence Interval & absolute precision 5, the sample size of the study works out to be 345. (Using the formula $n=Z^2PQ/d^2$). After taking the approval of institutional ethics committee, all the medical students who signed informed consent were included in the study. Students who did not give consent were excluded from the study.

Students were explained about the questionnaire and following which they completed the questionnaire during a scheduled session. The questions were adopted from Youth Risk Behaviour Surveillance System (YRBSS) questionnaire 2023,^[11] modified and done as pilot study among 30 students. It was tested for validation and reliability. The Cronbach alpha was 0.72. The questionnaire included questions regarding safety behaviour, violence related behaviour, sad feelings, attempting suicide, smoking and drinking alcohol, substance abuse, food habits and physical activity.

Those who drove a car/2 wheeler while they have consumed alcohol, texting/mobile usage in the last 30 days were considered to have risky behaviour. Those who felt unsafe going to college/had physical fight/were treated badly in institution were considered experiencing risky violence related behaviour. Those who had smoked or chewed tobacco or consumed alcohol in the last 30 days preceding the survey either occasionally or daily,^[12,13] was considered to have risky behaviour. Those who felt sad or hopeless feelings/seriously considered attempting suicide were considered to have risky behaviour. Those who consumed <5portions/day of fruits/vegetables were considered to have risky behaviour⁹. Those who perceived to have poor mental health (stress, anxiety and depression) in the past 30 days were considered to have risky behaviour. Those having <4 hrs sleep/day, mobile usage >5hrs/day,^[11] who did not have at least 60 minutes of physical activity/day in the previous 7 days were considered to have risky behaviour. The responses collected were entered in Microsoft excel and analyzed using SPSS 18 software. Results were analyzed by percentage, mean and Chi-square test was used to test statistical significance. P value <0.05 was considered statistically significant.

RESULTS

Of the total 345 medical students, 128(37.1%) were males and 217 (62.89%) were females. The mean age of males was 21.87 years (Standard deviation: 1.627) and that of females was 21.29years

(SD:1.689). Mean age of total participants was found to be 21.5 years (SD: 1.688).

Majority 196 (56.9%) of the students had safety related risky behaviours. 82(64.1%) of males had significantly higher safety related risky behaviours than 114(52.5%) of females (p<0.05). 166(48.1%) of the students had violence related risky behaviours.69(53.9%) of males had higher violence related risky behaviours than 97(44.7%) of females.

33(9.6%) of the students had smoking related risky behaviours. 23(18%) of males had highly significant higher smoking related behaviours than 10(4.6%) of females (p<0.001). 53(15.4%) of the students had alcohol related risky behaviours. 27(21.1%) of males had significantly higher alcohol related risky behaviour than 26(11.9%) of females (p<0.05).

70(20.3%) of the students had experienced bullying. 28(21.9%) of males and 42(19.4%) of females have experienced bullying. 127(36.8%) of students had hopeless feelings. 90(41.5%) of females had significantly higher hopeless feelings than 37(28.9%) of males (p<0.05). 182(52.7%) of students perceived to have poor mental health. Alarmingly 127(58.9%) of females had significantly poorer mental health than 55(42.9%) of males (p<0.005). Distressingly 28(8.1%) of the students have considered to attempt suicide. 20(9.2%) of females have considered to attempt suicide than 8(6.3%) of females (p value was not significant). 57(16.5%) of the students were using mobile >5hours/day.

Risky behaviour of usage of mobile >5 hours/day was found more among females 40(18.4%) than 17(13.3%) males (p value was not significant). 53(15.4%) of the students had sleep for <4hours/day. 23(18%) of males had higher disturbed sleep of <4hours/day than 30(13.8%) of females. Astonishingly 193 (55.9%) of the students had inadequate consumption of fruits and vegetables. 88(68.8%) of males and 105(48.4%) of females had consumed less fruits and vegetables. This was statistically significant (p<0.005). 89 (25.8%) of the students had inadequate physical activity. 61(28.1%) of females had significantly inadequate physical activity than 28(21.9%) of males (p<0.05). (Table.1).

Significantly lower number of students with BMI >25 [91(51.7%)] were taking actions to lose weight compared to those with BMI<25 [68(71.5%)] (p<0.001). Students with higher BMI were not attempting/taking actions to lose weight. (Table.2). Significantly higher number of students with BMI <18.5 [29(74.3%)] were trying to gain weight compared to those with BMI >18.5 [45(30.6%)] (p<0.001). (Table 2)

Table 1: Gender wise distribution of medical students based on risky behaviours						
Sl No/ Factor Risk	Male (%)	Female (%)	Total (%)	P value		
1. Safety Non -Risky	46(35.9)	103(47.5)	149 (43.1)	<0.05*		
Risky	82(64.1)	114(52.5)	196 (56.9)			
2.Violence Non-Risky	59(46.1)	120(55.3)	179(51.9)	0.008		
Risky	69(53.9)	97(44.7)	166(48.1)	0.098		
3.Smoking Non-risky	105(95.4)	207(82)	312 (90.4)	<0.001*		
Risky	23(18)	10(4.6)	33 (9.6)	<0.001		
4. Alcohol Non-Risky	101(78.9)	191(88.1)	292 (84.6)	<0.05		
Risky	27(21.1)	26(11.9)	53 (15.4)	<0.03		
5. Bullying Non Risky	100(78.1)	175(80.6)	275(79.7)	0.574		
Risky	28(21.9)	42(19.4)	70(20.3)	0.374		
6. Hopeless/sad feelings						
Non Risky	91(71.1) 37(29.0)	12/(36.5)	210(03.2) 127(36.9)	<0.05*		
Risky	57(28.9)	90(41.5)	127(30.8)			
7. Poor mental health	ntal health 00(11.4)					
Non Risky	73(57)	90(41.4) 127(58 0)	163(47.2)	<0.005*		
Risky	55(42.9)	127(56.9)	182(52.7)			
8. Considering to attempt suicide	120(02.8)	107(00.8)	217(01.0)	0.22		
Non Risky	8 (6 3)	20(0 2)	39(81)	0.33		
Risky	8(0.3)	20(9.2)	20(0.1)			
9. Mobile usage						
<1hr	32(25)	53(24.4)	85(24.6)			
1-5hrs	79(61.7)	124(57.1)	203(58.8)	0.451		
>5hrs (Risky)	17(13.3)	40(18.4)	57(16.5)			
10. Sleep disturbance						
> 8 hrs	42(32.8)	58(26.7)	100(29)			
4-8hrs	63(49.2)	129(59.4)	192(55.7)	0.179		
<4hrs (Risky)	23(18)	30(13.8)	53(15.4)			
11. Fruits/Vegetables						
Low	40(31.3)	112(51.6)	152(44.1)	<0.001		
High (Risky)	88(68.8)	105(48.4)	193(55.9)			
12.Physical activity						
Low	36(28.1)	37(17.1)	73(21.2)			
Moderate	64(50)	119(54.8)	183(53)	<0.05		
High (Risky)	28(21.9)	61(28.1)	89(25.8)			

Table 2: BMI and relation with action taken to alter weight							
Sl No/ Factor	Yes (%)	No (%)	Total (%)	P value			
1. Those trying to lose weight BMI <25 BMI >25	68(71.5) 91(51.7)	27(28.4) 85(48.2)	95(27.5) 176(51)	<0.0001			
2. Those trying to gain weight BMI>18.5 BMI <18.5	45(30.6) 29(74.3)	102(69.3) 10(25.6)	147(42.6) 39(11)	<0.0001			

DISCUSSION

Majority of the medical students were females in this study which follows the current trend of more female medical admissions. This study found astonishingly 56.8% of the students had safety related risky behaviour, which was higher when compared to studies done by Ricardo Abrantes Aarel et al,^[14] youth risk behaviour study conducted in Vermont,^[15] in 2013 where 33% and 34.5%. of students had safety related risky behaviour respectively. Study done by Fenny Leferty Kharpuri et al,^[1] at Coimbatore showed 10.5% students having moderate violence risk behaviour, while in this study disturbingly 48.1% of the students were exposed to violence related risky behaviours.

Another study done to assess prevalence and practices of tobacco and alcohol done by Neha Taneja et al,^[16] showed 40.2% of students smoking while this study shows 9.6% of students showed smoking related risky behaviours. This study showed 15.4% of medical students were consuming alcohol while studies done by Neha Taneja et al and Fenny Leferty Kharpuri et al,^[1] showed the percentage of students consuming alcohol was 47.5% and 64.1% students respectively.

Study done by Fenny Leferty Kharpuri et al,^[1] had 73.4% students experiencing moderate bullying which was much higher when compared to this study where 20.3% of students experienced bullying. Distressingly 36.8% of the students had hopeless or sad feelings in this study while in another study conducted by Cathrine Keiner et al,^[17] on loneliness among medical students, physician trainees and faculty physicians, 20.9% of medical students had hopeless or sad feelings. A study conducted by Gidey Rtbey et al,^[18] on prevalence of mental distress and associated factors among medical students in Northwest Ethiopia showed 45.95% of medical students having poor mental health, while this study showed alarmingly 52.7% of students having poor mental health. The percentage of students who considered to attempt suicide according to a study done by Fenny Leferty Kharpuri et al,^[1] was 47.4% while in this study 8.1% of the students considered to attempt suicide.

In the current study, 16.5% of medical students were using mobile phones for >5hours/day while a study conducted by Santosh Kumar Verma et al,^[19] showed that mobile phone usage was very high among the medical students which was 54.1%. A study conducted by Abdulrahman Almalki et al,^[20] on sleep quality among a sample of medical students showed 78.5% students had poor sleep quality or disturbed sleep while the current study showed 15.4% of students having sleep disturbances.

Astonishingly 55.9% of the students from this study consumed <5 portions/day of fruits and vegetables while a similar study conducted by Manish Jain et al9, on Assessment of Lifestyle and Risk Behaviour Practices among Undergraduate Medical Students showed 63.1% of students consuming <5 portion/day of fruits and vegetables. Study by Manish Jain et al,^[9] showed 15.6% of students had no physical activity at all while this study showed 25.8% of students with no physical activity.

51.7% of the students with BMI >25 were taking actions to lose weight similar to the study done by Aishwarya S et al,^[4] where 56.8% of the students had taken action to lose weight. Being in medical profession it is surprising that the students are not having healthy behaviours related to diet, physical activity and are not also keen on taking measures/actions towards adopting healthy lifestyles.

Limitations

Further assessment of risky behaviours is needed as it was one-time self-administered questionnaire only among medical students.

Recommendations

Multi-component health intervention along with coordinated, comprehensive, curriculum-based lifestyle education, life skills training and dietary approach is needed. Interventions for mental wellbeing of students needs to be taken on war footing as higher number of students had perceived poor mental health and suicidal tendencies. Education/counselling of students related to risky behaviours are needed.

CONCLUSION

High prevalence of risky behaviours including unsafe driving, dietary, physical inactivity, poor mental health was found among both male and female medical students, the next generation doctors.

Risky behaviours related to safety, violence related, smoking, alcohol consumption, bullying and dietary habits etc was higher among male medical students. Mobile usage, considering to attempt suicide, sad feelings/hopelessness and poor mental health was significantly higher among female medical students.

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Conflict of Interest

The authors declare that there is no conflict of interest.

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