

## Prevalence of Risky Behaviors among Secondary School Students in Selected Areas of Saudi Arabia

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### ABSTRACT

**Background:** Risky behaviors are those that potentially expose people to harm, or significant risk of harm, which will prevent them reaching their potential life and can cause a significant morbidity or even mortality.

**Objectives:** To determine the prevalence of risky behaviors among secondary school students in selected areas of Saudi Arabia.

**Methodology:** This study was descriptive conducted in Majmaah, Jazan, and Albaha cities, Saudi Arabia. The data was collected from 600 secondary school students of both genders. A Self-administered questionnaire was used to collect data after obtaining ethical approval. Data was analyzed using SPSS.

**Results:** 53.4% of the students have risky behaviors in one or more of the domains like smoking, fast driving, physical inactivity, sleep behavior, violence and obesity. One hundred and three students (16.7%) were smokers, 42.0% (n=252) were in a physical fight during the last 12 months, 47.6% (n=143) were over speeding, 30.3% (n=182) were physically inactive, 41.8% (n=251) sleep less than 6 hours before school

while 14.8% (n=120) and 7.7% (n= 62) were overweight and obese respectively.

**Conclusion:** The prevalence of risky behavior among secondary school students in Majmaah, Jazan and Al-Bahah is high. The most common risky behavior encountered by the students was driving fast followed by violence.

**Key words:** Prevalence, Risky Behaviors, Secondary School Students.

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### INTRODUCTION

Risky behaviors are those that potentially expose people to harm, or significant risk of harm, which will prevent them reaching their potential life and can cause a significant morbidity or even mortality. Some risky behavior is normal and part of growing up. However, there is a line which when crossed leads from normal, curious or experimental behavior to behaviors that put children and young people or others at risk and could escalate the behavior to a harmful stage.<sup>1</sup>

The prevalence of current smoking among school and university students was from 12.0 to 29.8% and 2.4 to 37 % respectively.<sup>2,3</sup> A study conducted in King Saud University School of Medicine in KSA found the prevalence of experimentation with cigarette smoking was 11.3% and the estimated prevalence of current smoking among the study participants was 4.7%.<sup>4</sup> Another study of the prevalence of tobacco smoking among intermediate

and secondary school students in Jazan Region of Saudi Arabia found that the ever-having smoked prevalence was 17.3% and the current smoking prevalence was 10.7%. This study found that the most important independent predictors of smoking was academic performance.<sup>5</sup> Another study was done among secondary school male students in Jeddah, Saudi Arabia found smoking prevalence of current smokers as 37%.<sup>6</sup> This high consumption of tobacco use has a heavy impact on the family and country economy.<sup>7</sup>

A study was done among adults in Alabama; United States about behaviors during driving in the last 30 days found that 41% reported texting and 11% reported driving after drinking. Overall 58% reported not wearing a seatbelt; 13% reported driving after using drugs; 60% reported routinely exceeding the speed limit.<sup>8</sup> In Saudi Arabia, a study was conducted in Jeddah reported that

the drivers, in general, prefer to drive at higher speeds and could be considered as more aggressive compared to the drivers in other countries. The most dangerous reported driving act was "drive thru red light", followed by "racing another driver". Only 23% of the drivers thought that it was dangerous to drive over 30 km of the legal speed limits. The most often seen unsafe driving action was "speeding (70%), followed by "driving too closely (57%), "failing to use turn signals (53%), "drive inattentively (50%)", and "running red lights (43%)".<sup>9</sup>

In one year there were 221405 tickets for over speed inside the city, and 678 tickets for drifting in Riyadh city only.<sup>10</sup> Drifters in Saudi Arabia are becoming such a menace on the roads that new laws have been put in place that upgrades the driving technique from a traffic violation to a criminal offence.<sup>11</sup>

During the past three decades, Saudi Arabia has undergone tremendous changes in lifestyle, including physical activity and eating habits. These dramatic lifestyle changes have had a considerable negative impact on the health of the society.<sup>12</sup> The prevalence of obesity among the age group of 13-18 years, female and males was 12.1% and 13.8% respectively.<sup>13,14</sup> In Majmaah, the prevalence of overweight and obesity among primary school students was reported as 29.0%.<sup>15</sup>

In Saudi Arabia sleep delay was reported in 11.8% of primary schools students.<sup>16</sup> It was observed a high prevalence of short sleep duration among Saudi adolescents 15- to 19-year olds which associated with obesity and overweight.<sup>17</sup> Students sleep an average of 7.0 hours on school nights, with an average delay of 2.8 and 6.0 hours in weekend sleep and rise times, respectively. Around 1 in 10 students stayed up all night and sleep after returning from school (exhibiting a reversed sleep cycle) on weeknights.<sup>18</sup>

The objectives of the current study were to determine the prevalence of risky behavior (smoking, fast driving, physical inactivity, sleep behavior, violence and obesity) secondary school students in Majmaah, Jazan and Albaha cities in Saudi Arabia and to verify the most common risky behaviors encountered by the students.

## METHODOLOGY

The design was cross-sectional to study the prevalence of risky behaviors among secondary school students in Majmaah city in Riyadh region, Jazan which is the capital of Jazan Region and Al-Bahah which is the capital of Al-Bahah Region. The study population was current secondary school students aged 15 to 18 years in the selected cities.

The sample size was determined by the following formula:

$$Z^2 * pq/d^2$$

$$Z = \text{Standard normal deviate} = 1.96$$

$$P = \text{prevalence}$$

$$q = 1 - p$$

$$d = \text{accepted error} = 0.04$$

$$\text{Sample size} = 2^2 * 0.6 * 0.4 / 0.04^2 = 600$$

Data was collected by a pre tested questionnaire modified from Youth Risk Behavior Surveillance System (YRBSS), United States survey.

Data were analyzed by the computer using SPSS Version 20. Informed consent was obtained from the participants and the ethical approval was obtained from Majmaah University Ethical Committee.

## RESULTS

### Sociodemographic Variables

The data was collected from 600 secondary school students in Majmaah, Jazan, and Albaha cities. Results showed that 7.3% (n=45), 21.3% (n=131), 31.2% (n=192) and 37.7% (n=232) of students were aged 15, 16, 17 and 18 years old respectively. Half of the students were males.

### Prevalence of Risky Behaviors

53.4% of the students have risky behavior in one or more of the domains: smoking, fast driving, physical inactivity, sleep behavior, violence and obesity. Forty two percent (n=252) of students were in a physical fight in the last 12 months, 16.7% (n=103) were smokers, 46.6% (n=143) of male students were driving faster than the speed limit, 29.6% (n=182) were physically inactive, 40.9% (n=251) were sleeping less than 6 hours before school, 44.4% (n=273) were sitting more than 3 hours every day in front of the TV or on the computer.

### Smoking

17.2% (n=103) of students were smokers (90% were males; 75.7% aged between 17-18 years and 24.3% aged between 15-16 years; 45.6%, 38.8% and 15.5% were from Al-Bahah, Majmaah and Jazan respectively).

### Violence

42.0% (n=252) of students were in a physical fight in the last 12 months (63.8% were males; 71.4% aged between 17-18 years and 28.6% aged between 15-16 years; 42.8%, 24.6% and 32.5% were from Majmaah, Jazan and Al-Bahah respectively).

### Driving Fast

47.6% (n=143) of the male student were over speeding (72% and 28% aged between 17-18 and 15-16 years respectively; 27.2%, 29.3% and 43.3% were from Majmaah, Jazan and Al-Bahah respectively).

### Physical Inactivity

30.3% (n=182) of students were physically inactive (34.6% were males; 69.2% and 30.8% aged between 17-18 and 15-16 years respectively; 45.6%, 27.5% and 27.5% were from Majmaah, Jazan and Al-Bahah respectively).

### Sleep Deprivation

41.8% (n=251) of students sleep less than 6 hours before school (47% of them were males; 27.9% and 70.1% were aged between 15-16 years and 17-18 years respectively; 29.5%, 34.7% and 35.9% were from Majmaah, Jazan and Al-Bahah respectively).

### Obesity

51.7% (n=418) of students were within normal body mass index, 14.8% (n=120) were overweight and 7.7% (n=62) of students were obese.

## DISCUSSION

Risky behaviors can significantly affect the lives of youth and those around them. As such, it is essential that parents, educators, and other concerned adults become aware of the prevalence of these behaviors, to plan programs that can reduce or prevent them. In our study the prevalence of overall risky behaviors among secondary school students was 53.4% (have risky behavior in one or more of the domains: smoking, fast driving, physical inactivity, sleep behavior, violence and obesity). This finding is less than 47.35% reported among university students in Majmaah University.<sup>18</sup> In our study 17.2% of students were smokers, this is consistent with the prevalence of smoking in

Saudi Arabia which ranges between 2.4% and 52.3%.<sup>3</sup> This finding is also in line with a study conducted in Jazan, Saudi Arabia which reported a smoking prevalence rate of 17.3%.<sup>5</sup> This result is higher than what was reported by Almutairi KM in Riyadh who reported smoking rate of 4.7% among medical students and lower than tobacco smoking prevalence reported by Abdelmoneim FH who reported a prevalence rate of 37% among secondary school students in Jeddah, Saudi Arabia.<sup>4,6</sup> A study conducted among Majmaah University students by AL- Ghaneem SA and Al-Nefisah OS revealed 30.4% rate of smoking.<sup>19</sup>

Our study revealed that 47.6 (n=143) of the male students were over speeding. This finding is lower than what was reported in Alabama of the United States in which 60% of the respondents reported routinely exceeding the speed limit.<sup>8</sup> This finding is also less than the rate reported by Ansari et al who reported a rate of 60.9% of fast driving among Majmaah University students.<sup>18</sup> This high prevalence represent a dangerous issue not only for the students, but also for the other drivers in the road.

Saudi Arabia is considered one of the top countries in high deaths as results of road traffic accidents. This behavior puts the students at higher level of risk of road traffic accidents and the potential morbidity and mortality resulting from it. The results showed 30.3% of the students considered physically inactive. A study conducted among Majmaah University students showed that 62.4% of students were physically inactive.<sup>20</sup> This represents a risk factor for many health-related problems such as diabetes mellitus and hypertension. High rate of students exhibiting sedentary lifestyle increases the obesity in them was demonstrated through the high prevalence of obesity according to this study (51.7%). This finding is higher than reports of 12.1% and 13.8% among males and females in Saudi Arabia.<sup>14,15</sup>

Our findings showed that 41.8% of students sleep less than 6 hours before school which considered less than the time needed for their age. This finding is higher than what was reported (27%) by Gaultney JF in southeastern United States.<sup>21</sup>

42.0% of students were in a physical fight during the last 12 months. This rate is higher than what was reported from Malatya, Turkey that (24.5%) of the students had been in a physical fight during the last year.<sup>22</sup> In a study conducted in Hefei in China the researchers reported 16.22% of the students reported having suffered from violence at least once every month.<sup>23</sup> In another study in Oman, Peyton RP et al reported that 47.6% of the students reported being in physical fights within the last year.<sup>24</sup>

## CONCLUSION

In conclusion, the prevalence of risky behavior among high school in Majmaah, Jazan and Al-Bahah is high. The most common risky behavior encountered by the students was driving fast followed by violence.

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