

Prevalence and Side Effects of Energy Drink Consumption among Medical College Students of Jouf University

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ABSTRACT

Introduction: Energy drinks is a drink that sugar and stimulating component, usually caffeine. These drinks are usually promoted and marketed as physical and mental stimulants that keep you alert for long time. Currently all over the world in KSA energy drinks have become famous adolescents and college students. Their intake of energy drink is more than general population. **Objectives:** To assess the prevalence and side effects of energy drink consumption among medical college students of Jouf university. **Materials and Methods:** All the medical students registered for 2016-17 academic year were included in this study. The present study is an analytical cross-sectional study design in the setting College of Medicine of Jouf University. The students registered of academic year 2016-17 were invited to take part in the study. A self-administered questionnaire was used for getting details about socio-demographic characteristics and second part was to assess the energy drink intake and its side effects. A pretested and structured questionnaire was administered. Data analysis were done by using SPSS Version 17. **Results:** Of the study participants, who consumed energy drinks was 32.9% (n=75). Regarding the gender of consumers, a significantly higher proportion of male students (39.9% of all male students, n=63) consumed energy drinks while 19.0% (12) female students consumed energy drink. Of the energy drink consumers, 58.7% do not remember about start of energy drink consumption. This study revealed 29 (38.7%) students drinks energy drink while they are studying. **Discussion:** This study findings are similar to several studies done in different part of the Kingdom. The promotion of awareness about the active ingredients of energy drinks and the potential side effects and adverse events from reaching intoxication levels.

Key word: Energy drink, Consumption, Side effects, Medical students

INTRODUCTION

Energy drinks is a drink that sugar and stimulating component, usually caffeine. These drinks are usually promoted and marketed as physical and mental stimulants that keep you alert for long time (1). Caffeine is the major ingredient on this kind of drink that expected to give burst of energy. caffeinated beverages designed to enhance alertness and provide a burst of energy. Energy drink may or

may not be a carbonated one. In addition to caffeine, some energy drinks are added with vitamin B, several amino acids and so forth (2).

Energy drink intakes have become one of the global trends and health problems (3) and in the Kingdom of Saudi Arabia (4-6). Currently all over the world in KSA energy drinks have become famous adolescents

and college students (7,8). Their intake of energy drink is more than general population.

Numerous reports all over the world described the health effects associated with regular intake of energy drinks (9-14). Some studies reported (9,10) that intake of minimal amount of energy drink may have some positive health aspects such as increase in alertness and so on. This is mostly due to effect of caffeine, which is the principal ingredient of energy drink. But several studies (11, 14) in the kingdom as well as other part of the world reported that energy drink causes numerous health hazards. This reported health hazards are: dizziness, difficulty in concentration, sleeplessness, stress and so on. Toxicity and hazards of this kind of drink is not only related to physiological problems but also behavioural problems like fighting, sexual risk taking, driving attitude and smoking. There are several reported cases of seizure, stroke or even deaths due to energy drink over intake. These hazards are highly common among adolescents, smokers and pre-existing diseased people like cardiac problems and hypertension.

According to the Global Energy Drink report, Saudi Arabia in among the top ten countries with high proportion people intake of energy drink. In 2014, the KSA has banned marketing and promotional activities of energy drink and it also added taxes for energy drink (15). Despite the facts the prevalence and intake of energy drinks are very high all over the world and KSA. Medical students are the future health care providers of the community. Hence, they should decrease intake of energy drink so that they can as an example for others in community. With this rationale, the present study was conducted with the objectives to assess the prevalence of energy drink consumption among medical students of Jouf university and to identify the prevalence of its side effect among energy drink users. Hence, our primary aim to decrease the consumption of energy drinks among the medical and dental college students of Jouf university can be achieved.

Material and methods

The present study is an analytical cross-sectional study design in the setting College of Medicine of Jouf University. The students registered of academic year 2016-17 were invited to take part in the study. A self-administered questionnaire was used for getting

details about socio-demographic characteristics of the study participants such as gender, age, consumption patterns, attitudes and knowledge about energy drinks. The second part of questionnaire was given to the participants who ever consumed energy drink. It collects details about usage pattern and side effects of energy drink intake like reasons for drinking, side effects such as nausea, sleep problems and so on. Participants were informed that their participation was voluntary and informed consent was obtained from participants.

Analysis of data

Statistical Package for Social Sciences version-17 was used for data entry and analysis. Categorical variables are presented as frequency and percentages.

Results:

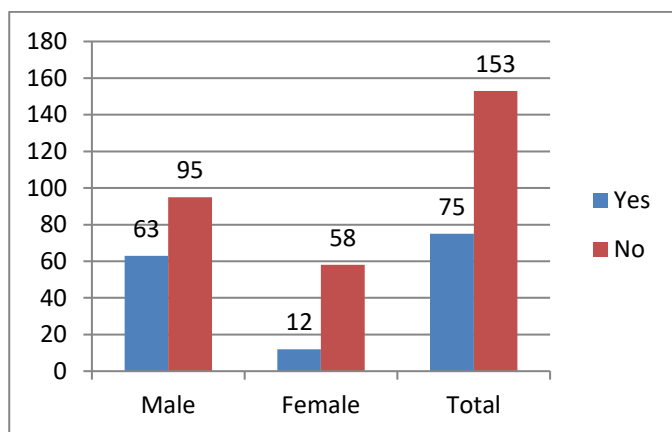
All the students of college of medicine registered for the academic year 2016-17 were invited to participate in the study. The total number of students participated in this study was 228. A total of 228 participants (158 males, 70 females), aged 21.63 ± 2.17 years

Table 1: Socio – Demographic Details of study population (n = 228)

Characteristics	No	%
Age group (in years)(21.63 ± 2.17)	83	36.4
<22 years	145	64.6
22 and above		
Gender		
Male	158	69.3
Female	70	30.7
Phase in college		
Basic science	178	78.1
Clinical science	50	21.9
Resident status		
Hostler	71	31.1
Staying with family	157	68.9
Smoking status		
No	191	83.8
Sometimes	21	9.2
Daily	16	7

Table 1 shows the socio-demographic profile of the participants. Of the sample studied majority (64.6%) students aged 22 and above group and belonged to basic sciences (78.1%). Most of the students (68.9%) are staying with family. Regarding smoking status, 83.8% students were non-smoker.

Fig 1: Prevalence of energy drink consumption



Of the study participants, who consumed energy drinks was 32.9% (n=75) of all students (Figure 1).

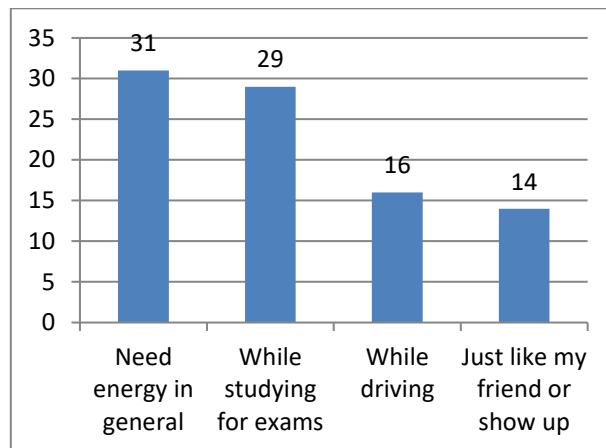
Regarding the gender of consumers, a significantly higher proportion of male students (39.9% of all male students, n=63) consumed energy drinks while 19.0% (12) female students consumed energy drink

Table 2: Pattern of energy drink consumption (n= 75)

Characteristics	No	%
Start of energy drinks consumption	15	20.0
Since joining med school	5	6.7
1 year ago	11	14.7
2 years ago	44	58.7
I don't remember		
Frequency of Consumption	10	13.3
Daily	14	18.7
Weekly	6	8.0
Monthly	45	60.0
Occasionally		
Type of Energy Drink		
Regular	37	74.0
Sugar free	7	9.3
Did not notice	31	41.3

Of the energy drink consumers, 58.7% do not remember about start of energy drink consumption and most (60.0%) of the people responded of drinking occasionally. Nearly three fourth (74%) of the energy drink consumers consume regular type of energy drink.

Fig 2: Reasons for energy drink consumption



This study revealed 29 (38.7%) students drinks energy drink while they are studying. Other purpose for drinking energy drinking are: Need energy in general, while driving and just like their friends or show up.

Table 3: Self-reported side effects due to energy drink intake (n=75)

Side effects	No	%
Palpitation	28	37.3
Headache	14	18.7
Insomnia	23	30.7
Tremor	13	17.3
Nausea and Vomiting	6	8.0
Nervousness	15	20.0

Most common reported side effects found in this study were: palpitation (37.3 %), insomnia (30.7%) and nervousness (20.0%).

Discussion:

Energy drink intake have become one of the important public health problems due to its health hazards combined with increase in intake of adolescents and college students [17]. The present study objective was to assess the prevalence of energy drinks consumption and its side effects among who consume energy drinks. This study was done among medical college students of Jouf University.

The present study found nearly one third (32.7%) of the study participants consumed energy drink in their

life. The study results of our findings are similar to several studies all over the world among medical students (18-20). In the KSA Naif et al found the intake of this kind of drinks are 22.7%. The similar finding also noted by some of the other authors (16).

Prevalence of energy drink usage is higher among non-medical students. The prevalence is ranges from 48 to 60%. This can be explained due to higher knowledge of medical students on ingredients and side effects of its ingredients.

Some of the studies correlated alcohol association with energy drink. But our study could not evaluate the alcohol association with energy drink intake. Because alcohol is banned in KSA and we may not get correct details about it (18,19).

Our present study, most common reported side effects found in this study were: palpitation (37.3 %) , insomnia (30.7%) and nervousness (20.0%). This finding are similar to study done Naif et al in 2017 (16).

Conclusion:

The present study found about one third of medical students of Jouf University consumes energy drink. Also, there are several side effects are reported among them. The health promotion program of awareness about ingredients of energy drinks and the potential side effects must be implemented in university.

Future studies are to be done to assess the predictors for regular energy drink intake among medical students. This will help us to plan for proper health promotion strategies.

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