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# STUDY ON THE IMPACT OF ENERGY DRINK CONSUMPTION AMONG FOOTBALL PLAYERS

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## ABSTRACT

Sports supplements are widely sold on a global scale. Regarding the numerous energy drinks and items used in the world of sports, the research is not conclusive. The goal of the current study was to determine how frequently football players from the Aurangabad area of Maharashtra, India, used energy drinks. The study examined energy drink use trends, common energy drink varieties, frequency of consumption, and the reasons athletes drank energy drinks. 150 football players in total took part in the study. They responded to a questionnaire that was given to them during a football competition between several Aurangabad football clubs. Statistics on the consumption of energy drinks were compiled and examined. A serving of energy drink was consumed at least once each week by about 30% of football players. About 37.77% of respondents who drank energy drinks said that doing so had made them feel more energised after working out or competing. Other justifications for consuming energy drinks were replacing lost bodily water (33.33%), boosting performance (22.22%), and avoiding weariness (6.66 percent ). The evaluated football players had very little knowledge of the components, advantages, and appropriate procedures of using energy drinks. Campaigns and educational initiatives are required to inform football players about the benefits of taking energy drinks.

***Keywords:*** *Energy drinks, Energy drink usage statistics, Football players*

## 1. INTRODUCTION

A sort of beverage known as an energy drink is one that contains stimulant components, the most common of which being caffeine, and is marketed as being capable of giving both mental and physical stimulation (marketed as "energy", but distinct from food energy). They may or may not have carbonation, and they may or may not contain sugar, other sweeteners, herbal extracts, taurine, or amino acids. They may or may not be

carbonated. These are a subset of the larger category of energy goods, which also includes bars and gels. They should not be confused with sports beverages, which are marketed as being able to improve athletic performance. There are a wide variety of brands and flavours available in this type of drink.

Coffee, tea, and other beverages with caffeine that occurs naturally are not typically considered to be energy drinks. Even though certain other soft drinks, including cola, may contain caffeine, these beverages are not regarded to be energy drinks. Caffeine and other stimulants can be found in a few types of alcoholic beverages, such as the Buckfast Tonic Wine. According to the findings of the Mayo Clinic, an average healthy adult can eat up to 400 milligrammes (mg) of caffeine on a daily basis without any adverse effects. This has been verified by a committee from the European Food Safety Authority (EFSA), which likewise came to the conclusion that an intake of caffeine of up to 400 milligrammes per day does not put individuals at risk for any adverse effects. According to the ESFA, this is the same as drinking four standard cups of coffee (each containing 90 mg) or two and a half standard cans (each containing 160 mg and 80 mg per serving) of energy drink.

Caffeine and sugar are responsible for the effects of energy drinks, but there is scant or no evidence to suggest that the vast majority of the other ingredients have any kind of impact. The inclusion of caffeine is primarily responsible for the majority of the effects that energy drinks have on cognitive performance. These effects include improved attention and reaction speed. According to the findings of other studies, the gains in performance are due to the effects of the combined substances. There is no scientific consensus to back the claims that energy drink advertising typically makes about increased muscle strength and endurance; yet, these claims are commonly made. Energy drinks have been linked to a variety of adverse health effects, including an increased risk of injury when used alongside alcohol and the potential for problems related to the heart and the mind to develop if they are consumed in excess or on a regular basis. Consumption of energy drinks puts some groups of people at increased risk for difficulties. These groups include young people, those who are caffeine-naive or caffeine-sensitive, pregnant women, competitive athletes, and persons who already have an underlying cardiovascular condition.

Athletes frequently drink energy drinks with the goal of improving their performance, which is why these beverages are so popular. The majority of athletes depend on energy drinks, particularly due to the fact that the title "energy drink" suggests that the product has some sort of relationship with exercise. Therefore, a naive consumer may wrongly believe that ingesting these beverages will result in the acquisition of certain advantages. Large quantities of sugar are typically found in energy drinks, and caffeine is the primary active ingredient in most of them. However, some energy drinks also contain other substances, such as taurine,

riboflavin, pyridoxine, vitamin B complex, nicotinamide, and various herbal derivatives (such as ginseng, guarana, and ginkgo biloba). However, a study indicated that ingesting energy drinks, in comparison to taking a placebo, led to energising effects that peaked thirty to sixty minutes after intake and lasted for at least ninety minutes afterwards. These benefits were maintained throughout the duration of the trial. The fact that the information on the adverse effects of excessive use on one's health is not displayed over the labels of energy drinks is a matter that gives rise to significant cause for concern. Some energy drinks have components that may interact with one another, such as taurine and amino acids, or caffeine and some herbal extracts. Other energy drinks contain components that may also interact with one another. The "synergistic effect" that is produced when some herbs are combined with caffeine can differ depending on the type of energy drink consumed. Manufacturers of energy drinks target young adults because they are the most susceptible to being persuaded to consume energy drinks after being exposed to marketing commercials about these products in the media. There is, however, a rising amount of scepticism over the actual ergogenic advantage of energy drinks and the potential harmful health effects that may be brought on by the consumption of these beverages by individuals.

There has been essentially no research conducted on the consumption patterns of energy drinks among the young population in developing countries. In addition, there is a dearth of published research on the subject of the consumption of energy drinks by football players in India, despite the fact that an increasing number of different types of energy drinks are being advertised and sold in the country.

(1) The consumption patterns of energy drinks among football players in the city of Aurangabad, which is located in the state of Maharashtra in India was the primary purpose of this research. (2) the prevalence and frequency of the consumption of energy drinks, (3) the motives behind football players consuming energy drinks, and (4) the knowledge among football players regarding the contents and side effects of energy drink consumption (2) the prevalence and frequency of the consumption of energy drinks

According to the findings of the current research, an energy drink is defined as a sort of soft drink that is carbonated and contains caffeine, sugar, or other stimulants. These ingredients are thought to reduce or prevent weariness, raise alertness and physical performance, and supply energy.

## 2. OBJECTIVE

To ascertain about the impact of energy drink on the football players

## 3. METHODS

**Study Design**: Cross-sectional study

Subjects: Through the use of a straightforward random sample method, a total of one hundred and fifty football players who took part in the interclub football competition in Aurangabad were considered for inclusion. During the course of the event, each player was given the opportunity to respond to a questionnaire. There were a total of 150 surveys handed out, and every single participant who received one of them provided their approval and responded by filling out the questionnaire, amounting to an overall response rate of one hundred and fifty percent.

**Study instrument and data collection:**

The questionnaire was divided into two parts: the first part asked questions about socio-demographic information, and the second part asked questions on usage patterns of energy drink by football players as well as the motivations behind using energy drinks. The following information was collected through the use of a questionnaire: basic information (such as age and the number of hours per day spent training), energy drink usage patterns, the names of the energy drink brands that were consumed, the reasons for consuming energy drinks, and information regarding the contents of energy drinks and their effects.

Following the gathering of the participants' informed consent, the participants were given comprehensive study information. It was mentioned to them that this study would be helpful in evaluating the usage patterns of energy drinks in football players from the district, and that it would also be helpful in devising educational interventions for the football players. They have been given the assurance that the confidentiality of individual responses will be preserved. This was done to guarantee that all requirements were met.

**Statistical analysis:**

Microsoft Excel 2007 was utilized for the purpose of conducting the analysis on the data. The data that were obtained were summed up using descriptive statistics, and the results were presented using frequency counts and percentages.

## 4. RESULTS

**Basic information regarding participant football players:** The basic information of the participant football players is presented in Table 1. All the players were males. A majority (66.33%) of the study participants were within the age category of 21 to 25 years. A majority (48%) trained for a period of between 2 and 3 hours per day.

**Table 1**

**Basic Information of Study Participants**

| Variable | Groups | Percentage of individuals (%) |
|---|---|---|
| Sex | Male | 100 |
| Age (years) | 15-20 | 10 |
| | 21-25 | 66.33 |
| | 26-30 | 12 |
| | Above 30 | 11.66 |
| Training Hours per Day | 1-2 hours/day | 32 |
| | 2-3 hours/day | 48 |
| | 3-4 hours/day | 20 |

**Data regarding energy drink usage patterns**

The frequency of energy drinks use among the surveyed football players was 30%. This is the number of football players who answered in the affirmative regarding consuming an energy drink in the week before the study and those who consumed a minimum of one serving of energy drink in a week. Among those consuming energy drinks, 60% used Red Bull, 20% used Tzinga and 20% used other energy drinks. The majority (80%) of the energy drink users reported that they consumed 1 to 2 servings of energy drink in a week, whereas 20% answered that they consumed 3 to 4 servings of energy drinks during a week.

**Table 2**

**Energy Drinks Usage Practices of football players**

| Variable | Percentage of players |
|---|---|

| | | |
|---|---|---|
| Consumption of energy drinks | Yes | 30 |
| | No | 70 |
| Brand commonly used | Red Bull | 60 |
| | Tzinga | 20 |
| | Others | 20 |
| Number of cans per week | 1 to 2 | 80 |
| | 3 to 4 | 20 |

Table 3 shows the motives of consuming energy drinks as indicated by the players. Most of the players (37.77%) mentioned that they consumed energy drinks to regain the energy lost during the exercise. Performance enhancement (22.22%) & replacement of body water (33.33%) were the other reasons behind consuming energy drinks. Some of the players (6.66%) mentioned that it reduced fatigue.

**Table 3**

**Energy Drinks Usage Practices of football players**

| **Motive of Drinking** | **Percentage of players** |
|---|---|
| Regain the energy lost during the exercise | 37.77 |
| Performance enhancement | 22.22 |
| Replacement of body water | 33.33 |
| Reduce fatigue | 6.66 |

Table 4 shows the data regarding information of contents of energy drinks and its side effects on human body asresponded by football players.

**Table 4**

**Information of contents of energy drinks and its side effects on human body as responded by footballplayers**

| Variable | | Percentage of players |
|---|---|---|
| Information regarding contentsof energy drinks | Yes | 11.11 |
| | No | 88.88 |
| Information regarding methodsof using energy drinks | Yes | 6.66 |
| | No | 93.33 |
| Information regarding sideeffects of energy drinks | Yes | 8.88 |
| | No | 91.11 |

## 5. Discussion:

According to the results of this study, the intake of energy drinks is extremely uncommon among football players. According to the findings of a study, the overall prevalence of the problem was found to be 51% among the college students who were polled. When asked about their motivation for drinking energy drinks, the majority of respondents in the previous study (64.1% of them) cited the need to replenish lost energy after intense workouts and contests as their primary reason for doing so. The present study found a similar pattern of responses. In a similar vein, Bonci (2002) discovered that the majority of individuals drink energy drinks as a speedy technique of acquiring "additional energy" in order to carry out the activities of the day and speed up the recovery from strenuous activity. Because of the ergogenic effects of caffeine and the numerous other ingredients in energy drinks that are claimed to be "energy boosters" by the manufacturers, Duchan et al. also stated that younger athletes are increasingly using energy drinks. This is due to the fact that these drinks contain a variety of ingredients.

Approximately 33.33 percent of the athletes admitted that they used energy drinks because they could replace their bodies' natural water supply. However, it has been said that there are major repercussions that come about as a result of substituting water for energy drinks, particularly when engaging in strenuous physical activity. The reason for this is because caffeine, which is found in the majority of energy drinks, can lead to dehydration since it has a diuretic effect and leads the kidneys to excrete additional quantities of water. Therefore, an individual can suffer from acute dehydration if they consume energy drinks while also producing large amounts of sweat. Players who consume large quantities are at an even greater danger of sweating more than usual and also burning away all of the additional energy that is speculated to have been gained through the effect of the energy drinks. It is clear from the players' comments that they are unsure of the difference between the functions performed by sports drinks and those performed by energy drinks. The objective of sports beverages is to particularly replenish the lost body fluids, along with the important minerals and nutrients that are lost during activity and after exercise during recovery. This can be done both during exercise and after exercise.

The results of the survey showed that 22.22 percent of the athletes admitted to drinking energy drinks because they helped them perform better. According to Desbrow and Leveritt's research, the majority of the world's best athletes consume energy drinks in order to boost both their physical performance and their ability to concentrate when they are competing. When compared to a placebo drink that was given to the participants, other experimental research found that drinking energy drinks led to an increase in both speed and work production, as well as an increase in endurance. When the effect of energy drink consumption on endurance performance was compared with that of carbonated water, Alford et al. came to the conclusion that use of energy drinks slowed down the rate at which the body reached exhaustion. In a study that reached a similar conclusion, Mucignat-Carette [15] found that participants who drank energy drinks had a faster reaction time when compared to participants who drank a placebo drink under the same and controlled experimental conditions of the study. This was the case even though the experimental conditions were the same.

In the research that we conducted, we found that only 6.66 percent of players admitted to using energy drinks as a means to stave off exhaustion. The alleviation of fatigue was cited by a comparable percentage (5.4) of the student athletes who participated in the study conducted by Buxton et al. as the motivation for drinking energy drinks.

Extremely few players (11.11 percent) were aware of the components that make up energy drinks, and an even smaller amount (6.66 and 8.88 percent) were aware of the ways in which energy drinks can be used

and the potential adverse effects of doing so.

The present study has the limitation that it only assessed males, and it only surveyed one set of participants, namely football players. These are both significant limitations. The fact that there was a response rate of one hundred percent from the participants is a significant strength of the study.

## 6. CONCLUSION

According to the research that has been done, the number of football players from this region who take energy drinks is significantly lower than the average. The players who were polled have a shockingly little amount of knowledge about the ingredients in energy drinks, as well as the appropriate ways to use them and the potential negative repercussions of doing so. Therefore, educational programmes should be carried out to develop an orientation regarding energy drinks, make people aware of the benefits of sports drinks in comparison to energy drinks, inform people about the recommended quantities of energy drinks to be consumed, and also inform people about the potential harmful effects that can be associated with misusing energy drinks.

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