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# Energy drinks and obesity in special need children

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**Background:** A rapidly growing epidemic of obesity is associated with many health risks. Obesity is a complex condition, with serious social and psychological dimensions, affecting virtually all ages and socioeconomic groups. Sugar sweetened energy drinks are highly linked to obesity and other health problems such as type 2 diabetes and heart disease. Consequently, there are many campaigns being launched to reduce consumption of sweetened energy among children. To create better choices for people many associations and organizations have banned sugary drinks including fruit juices in addition to sugary soda drinks. One area that is not well known as a source of excess sugar and that can increase obesity risk are energy drinks. Since children who consume these energy drinks may derive as much as 12% of their sugary drink intake from these drinks , as their parents also are misguided because mostly the labels on energy drinks mentions low calories and low sugar contents and they happily buy for their children or allow them to consume. Energy drinks are very popular in special need children also as their parents or guardian thinks that it will give strength to their children specially those who have physical disabilities also.

**Material and Methods:** A pre-validated self-designed detailing information on energy drinks and obesity was administered the staff and care takers and parents and guardian of special need children enrolled with different rehabilitation centers and schools for special need children in India, Pakistan, Nepal, Russia and Malaysia to study their attitude, perception and practices regarding sports or energy drinks and associated sugar contents and the myths and facts related to the reasons as why they allow their children to have such drinks. The research on this topic is limited and diverse hence, the salient points in questionnaire were taken from the available literature and published articles. Staff and care takers and parents and guardian of special need children were also requested to give opinion about the calories and other details mentioned on the labels on energy drinks which their children are consuming. The special need children body mass index was also recorded to assess them whether they are overweight and in obese category and was corelated with the amount of energy drink consumed by them.

**Results and Discussion:** Our study showed that there is link between excess usage of energy drinks and obesity, which may not be acknowledged as sources of sugar in special need children. This may be because, energy and sports drinks though may have fewer calories and less sugar than regular sugary drinks, so staff and care takers and parents and guardian of special need children take it for guaranteed as they are not given awareness regarding associated health risks and as a myth they also enjoy health 'halos' due to an advertising focus on their cognitive benefits. It was found out that staff and care takers and parents and guardian of special need children are misled energy or sports drinks labels. 26% of staff and care takers and parents mentioned that some labels do not convey how much sugar is actually in the product, or what is the effect of 20 grams of carbohydrate in one energy drink might imply for the individual consumer. 65% of them stated that they were not aware that the glucose found in energy drink is a simple carbohydrate, which is dispersed into the bloodstream immediately. 69% were not aware that too much glucose, as found in energy

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drinks, can adversely affect memory, concentration and other forms of mental activity. It was found in our study that on the analysis of 14 different energy drinks, it showed all drinks were contained in non-reusable containers, thus providing excess sugar in a single serving. Our study showed that the added sugar intake from energy drinks had associated relationship to reduced sleep duration. 54% of parents and care takers of special need children stated that they were fascinated by information on energy drinks through media like facebook and were misguided as these drinks will help their disable children and will give them more physical and mental strength. Our study also showed that the sugar content across different brands of energy drink was inconsistent suggesting the amount is not guided by any legal limits.

**Conclusion:** This study conclude that energy drinks consumption is an increasingly dangerous, yet overlooked health issue for a variety of reasons, especially among special need children who are already physically and mentally challenged and where consumption is widespread. The added sugar content in the form of sucrose, glucose, or high fructose corn syrup ranges in quantity and is a potential contributor to the ongoing obesity problem in these children. Although many parents also today are often unaware of the sugar content of several popular brands, in the form of sucrose, glucose, or high fructose corn syrup and are unaware that 2-3 servings a day of these drinks are equal to 4-6 times the maximum recommended sugar intake. Yet, despite the magnitude of the obesity problem among special need children and the possibility that energy and sports drinks may be compounding this, there are very few active solutions discussed as what should be done to combat this threat.

#### Biography

Anshoo Agarwal is currently working as Professor & Chairperson at Department of Pathology, Northern Border University, Arar Kingdom of Saudi Arabia. She received her Bachelor of Medicine & Bachelor of Surgery from King George's Medical College Lucknow. She received her M.D in Pathology from LLRM Medical College / Ch. Charan Singh University. She is an Associate Professor and Discipline Coordinator in University Technology MARA, Malaysia. Dr. Anshoo Agarwal has served on many scientific memberships like life member of Indian Association of Pathology and Microbiology, Member of International Academy Pathology, Life Member of Indian Society of Hematology & Transfusion Medicine, Emirates Medical Association Pathology Society. She has more than 80 publications. She is an editorial member of 3 journals and has many reviewed publications. Her research interests include Advance Haematology & Immunohaematology, Breast cancer and Anticancer vaccines.