



Negative emotions in consumers of empty calories in a higher institution in Sokoto, Nigeria

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Abstract

This study explores the link between consuming empty calories (energy drinks) and negative emotions among students at Sultan Abdurrahman College of Health Technology, Gwadabawa, Sokoto, Nigeria. A survey designed was applied among 62 participants that returned the questionnaire for further analysis. The research reveals that students experience sadness (37.1%), anxiety (33.9%), anger (22.6%), and fear (6.5%) due to energy drink consumption. Reasons for consumption include avoiding sleepiness (51.6%), feeling happy (22.6%), satisfying hunger (16.1%), and overworking (9.7%). The study suggests that health educators can leverage these negative emotions to promote awareness and encourage students to avoid empty calories.

Keywords: Students, empty calories, emotions, negative emotions, anxiety

Introduction

Typically, empty calories (ECs) include chips, soda, beverages, candy, cookies, lemonade, fearless, etc. Empty calories cause adverse health outcomes such as obesity, cancer, diabetes, mental disorders, and many other diseases (Bashar, 2025). Empty calories provide no fiber, minerals, and vitamins required by the human biological system to get satisfied. This is why the name "empty calories" is coined. The human body especially at younger age, needs vitamins, minerals, and fiber in order to prevent diseases, promote health, and growth (UNICEF, 2019; Mashin & Khalaf, 2022). People relying on empty calories frequently, will constantly face a lot of problems such as insatiation, and malnutrition. Instead of relying frequently on empty calories, the body need healthy foods such as legumes, fruits, vegetables, grains, cereals, fish, lean meat, etc. Failure to consume sufficient amount of healthy foods in right proportion is a risk factor of diseases and adverse health outcomes. Youngsters suffering from one form of malnutrition are liable to poor performance, mental problems, and poor emotional capacity or intelligence (Das, 2015).

Emotions are part and parcel of human life. "Emotions may be a strong feeling arising from circumstances, mood or relationships with others." Emotions may indicate passion, affection or feelings (Calin, 2023). Emotions are response to internal or external environment (Schaumberg, 2024). One of the external environmental components that affects or tilt emotions is the food humans eat (Das, 2015). It was confirmed that food components (natural or artificial) cause certain emotions or mental health patterns. Food can cause happiness due to activity of happy-hormones transduction pathways (Shankar et al., 2024; Sarkingobir, 2025). Likewise, the artificial foods materials in empty calories can cause negative outcomes or emotions as corroborated by numerous studies. Emotions are response to internal or external environment. One of the external environmental components that affects or tilt emotions is the food humans eat (Fuduye, 1998). It was confirmed that food components (natural or artificial) cause certain emotions or mental health patterns (Tatik & Ayyildiz, 2022; Zulfekar, 2024). Food can cause happiness due to activity of happy-hormones transduction pathways. Likewise, the artificial foods materials in empty calories can cause negative outcomes or emotions as corroborated by numerous studies (Sheena, 2020; Whiteland, 223).

The negative emotions in students or teachers can cause violence, aggression, poor performance, drop-out, and absenteeism, etc (Adesola, 2019; Xavier et al., 2023; Sharu & Bodinga, 2025). Nowadays, in a world of sedentary lifestyle, coupled with obesogenic societies, the prevalence of energy drinks empty calories is increasingly become high (UNICEF, 2021; Shamsol & Fisl, 2023; Sarkingobir & Miya, 2025). Students tend to be very busy, without enough time to cook healthy foods, required to prepare for examinations, required to have fun, and for other reasons (such as prevalence of food deserts at schools) tend to subscribe to empty calories more than ever (Vidya et al., 2015). Empty calories cause diabetes, hypertension, cancer, heart disease, mental problem, etc. Therefore, the objective of this study is to assess negative emotions in consumers of energy drinks (empty calories) in a higher institution in Sokoto, Nigeria.

METHODS

This study is a cross-sectional survey that was conducted among volunteers drawn from a higher institution in Gwadabawa. The volunteered student amount to 72, but only 62 returned their questionnaires. The criteria for selection was being a student at Sultan Abdurrahman College of Health Technology Gwadabawa, consumption of energy drinks empty the, and willing to participate in the survey. The filled questionnaires were descriptively analyzed at ($P < 0.05$).

RESULTS AND DISCUSSION

Table 1: Negative emotions due to empty calories (energy drinks) consumption among students in a higher institution in Sokoto, Nigeria

Negative emotions	Frequency	Percentage
Sadness	23	37.1
Anxiety	21	33.9
Fear	14	22.6
Total	62	100.0

Table 1 shows the negative emotions affecting higher institution students due to intake of empty calories (energy drinks). The submitted emotions are in the order as follows: Sadness (37.1%), anxiety (33.9%), anger (22.6%), and fear (6.5%). Indeed, the reported negative emotions are indicating a worrisome trend link to empty calories (energy drinks) consumption, because emotions are essential for health, and other schools or academic activities or interaction between students and other actors. Emotions could shape behavior of students or teachers or others. Poor emotional intelligence or negative emotions may breed poor environment (such as violence, discrimination, victimization, crime, etc) and poor performance (of students or teachers (Turcan & Boroza, 2025; Olariu, 2025).

Table 2: Methods of dealing with negative emotions among students in a higher institution in Sokoto, Nigeria

Methods of dealing with negative emotions	Frequency	Percentage
Avoiding the ECs for a while	23	37.1
Excessive isolation from peer or social exclusion	26	41.9
Meditation or fasting or prayer	13	20.9
Total	62	100.0

Table 2 shows the strategies utilized by students of a higher institution in Gwadabawa for managing negative emotions bred by consumption of empty calories (energy drinks). The respondents listed the following strategies they applied in order to manage negative emotions: Avoidance of drink for a while (37.1%), isolation from people or social interaction (41.9%), spiritual strategy (20.9%). The finding here is in tandem with that of Gharu (2016) that indicated mental or neurological effects of preservatives present in foods. Lane et al.(2024) reported mental disorders among the adverse effects of empty calories. Similarly, Kiran et al. (2023) narrated that food additives presence on ultra-processed foods encourage deteriorating state of mental health in consumers. According to the Calin (2023) the methods applied by the participants (students) to manage negative emotions are ineffective, because they are momentous. However, generally, negative emotions are signs of normal mental course, that shall be used to indicate danger due to the cause (empty calories intake). In turn, the negative emotions can be used to elicit perceived severity in consumers by health educators, and also built self-efficacy, that consequently induce complete avoidance of empty calories (energy

drinks) (Simpson, 2015). Complete avoidance is a typical effective management against negative emotions (Calin, 2023).

Table 3: Reasons for empty calories consumption among students in a higher institution in Sokoto, Nigeria

Reason	Frequency	Percentage
To avoid sleeping in order to read	32	51.6
To feel happy	14	22.6
To satisfy hunger	10	16.1
To do an overwork	6	9.7
Total	62	100.0

Table 3 shows the reasons for consumption of empty calories (energy drinks) among students in higher institution in Gwadabawa. The respondents submitted answers as follows: To avoid sleepy in order to read (51.6%), to feel happy (22.6%), for satisfaction against hunger (16.1%), for overworking (9.7%). In a similar work done by Rezaei (2017) it was reported that "taste" is among the reasons for taking fast foods in young students in Iran. Likewise, Turcan & Borozan (2025) reported that "happiness" is an emotion that drives people into committing a behavior. Because, some of the students feel some "momentous happiness" due to empty calories, they are drawn into further consumption or intake (Hill et al., 2011). Similarly, Calin (2023) listed "happiness" and other sorts of positive emotions that spur humans to demand for more of the source (empty calories in this regard).

CONCLUSION

The study concludes that consuming empty calories (energy drinks) is significantly linked to negative emotions such as sadness, anxiety, anger, and fear among students at Sultan Abdurrahman College of Health Technology, Gwadabawa, Sokoto, Nigeria. The findings highlight the need for health educators to address this issue and promote awareness about the risks associated with energy drink consumption. By leveraging the negative emotions experienced by students, health educators can encourage them to make informed choices and adopt healthier alternatives. Ultimately, the study emphasizes the importance of complete avoidance of empty calories as an effective management strategy against negative emotions and related health problems.

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