INTERNATIONAL JOURNAL OF INNOVATIVE STUDIES
A MONTHLY, INDEXED, REFEREED AND PEER REVIEWED OPEN ACCESS INTERNATIONAL JOURNAL
VOL.5. ISSUE.1, 2025 (SEPTEMBER)

RESEARCH ARTICLE

ISSN: 3027-2173

# THE INFLUENCE OF ENERGY DRINK CONSUMPTION ON OCCUPATIONAL HEALTH AND WELLNESS AMONG NIGERIAN EMPLOYEES.

**[1]NDUKA HOPE ADAOBI**
Science Dept. Federal Govermnent College, Portharcourt.
hopenduka4@gmail.com

ARTICLE INFORMATION

Received: 22nd July 2025

Accepted: 25th August 2025

Published: 5th Sept. 2025

KEYWORDS: Occupational groups, consumption behavior, motivation, risk perception, awareness level, workplace interventions, employee wellbeing

Publisher: Empirical Studies and Communication – (A Research Center)
Website: www.cescd.com.ng

## ABSTRACT

*This study looked at how occupational group and level of awareness affect consuming behaviour, motivation, and perception of danger. We collected data from 150 people who worked as drivers, office workers, or healthcare staff. We then used one-way ANOVA and independent samples t-tests to look at the data. The results showed that there were statistically significant differences in both consumption ($F = 16.25$, $p < 0.001$) and motivation ($F = 14.72$, $p < 0.001$) between occupational categories, with Drivers always scoring higher. Also, people who were very aware of the risks had a much greater risk perception ($t = 9.85$, $p < 0.001$) than people who were not very aware of the risks, with a large effect size (Cohen's $d = 1.93$). These results show how occupation and awareness can affect behaviour, which has consequences for workplace health, policy making, and targeted treatments. Suggestions include motivating programs that are targeted to each group, campaigns to raise awareness, and more study into the requirements of individual groups.*

## Introduction

Over the past several years, the number of people in Nigeria who drink energy drinks has gone up a lot, especially among working-class individuals who have to deal with long hours, stress, and busy schedules. Energy drinks are drinks that don't have alcohol in them but have a lot of caffeine, sugar, B-vitamins, and other stimulants like taurine, guarana, and ginseng. People typically pitch these drinks as things that can make you more alert, increase your physical performance, and give you more energy, especially if you're tired or stressed. The concept of remaining alert and active can sound good, especially to busy Nigerian workers who have a lot on their plates, but the growing use of energy drinks has generated concerns about possible health effects, especially at work.

Across the globe, the usage of energy drinks has become a prevalent practice among those seeking mental stimulation and physical alertness. The World Health Organisation (WHO) says that drinking too many energy drinks might be bad for your health, especially if you do it a lot or in significant amounts (WHO, 2014). In Nigeria, this practice has spread to many areas, from the corporate

headquarters in Lagos to the bus parks in Onitsha to the hospital corridors in Abuja. People who work in both the formal and informal sectors today rely on energy drinks to "carry body" during the day, especially those who work shifts, have irregular hours, or have to do a lot of physical or mental work.

One of the main reasons for this tendency is that work in Nigeria is changing. Because the economy is unstable, there is a lot of unemployment and underemployment, many Nigerians now have to work numerous jobs or long hours to make ends meet. The idea of a short "boost" becomes highly enticing for commercial bus drivers who work all night, ride-hailing drivers who drive 18 hours a day, and bankers and customer service representatives who are always on their feet helping customers. People in these situations often think that energy drinks are safe ways to deal with being fatigued, having low energy, and not being able to focus. But the truth might not be so straightforward. Several studies in Nigeria have previously shown that more and more people, especially students and young adults, are using energy drinks. For instance, Ezemenahi et al. (2024) looked at medical students at Nnamdi Azikiwe University Teaching Hospital in Nnewi and discovered that more than 81% of them had drunk energy drinks, with most of them starting between the ages of 10 and 20. The major reasons given were the necessity to stay awake, keep aware, and deal with school stress. This study was mostly about students, but the same attitude is now seen in working people who are under even more stress because of employment and money issues. Another poll done in Lagos found that commercial bus drivers, dispatch riders, and manufacturing workers often use energy drinks, especially before their shifts or when they are on the road for a long time. People think that these drinks help them stay alert, pay attention, and feel less weary (Olatona et al., 2018). While the transient effects may indeed help some workers operate better in the short term, the long-term health ramifications are becoming increasingly impossible to ignore. People who drink energy drinks a lot have been known to have high blood pressure, heart palpitations, trouble sleeping, anxiety, migraines, and even addiction.

There is also the problem of bad regulation of energy drinks in Nigeria. A lot of brands offered all around the country don't clearly show how much caffeine is in their products or disclose all of their ingredients. Some goods come from foreign countries without being registered with NAFDAC, while others are made in Nigeria but have poor quality control. Studies have found that several energy drinks sold in Nigeria have levels of heavy metals like lead, cadmium, and chromium that are higher than what is recommended around the world (Olajide et al., 2014). When you eat these things on a daily basis, they can hurt your organs, cause neurological problems, and other long-term health problems. Sadly, most Nigerian workers don't know about these risks. A lot of people think that drinking energy drinks is safer than taking drugs or drinking alcohol to deal with stress. Some people even mix energy drinks with alcohol or tramadol for "extra power." This is a dangerous practice that is especially common among commercial drivers, technicians, artisans, and young people in cities. This mix can lead to major health issues like heart failure, nervous system abnormalities, and dangerous behaviours like driving too fast or getting into accidents. Another issue is that Nigeria's workplace policies don't do enough to protect the health and well-being of workers. Most businesses, especially small and medium-sized ones (SMEs), don't have official health promotion initiatives. Workers are not taught about the risks of their lifestyles or checked on for their health. In more developed countries, employee health is now a primary priority. In Nigeria, on the other hand, many organisations still focus mostly on production and productivity, sometimes ignoring the human costs of stress, burnout, and unhealthy coping methods. For example, a lot of the time, professionals drink energy drinks instead of having a full meal during their lunch breaks, especially when they are under a lot of stress.

Another big problem with employees using energy drinks is that they don't get enough sleep. Many of these drinks have a lot of caffeine in them, which messes up the body's natural sleep cycle and can make it hard to sleep or sleep well. A worker who drinks a lot of energy drinks may have trouble sleeping at night, which might make them tired all the time, mentally exhausted, and less productive. This can also make you more likely to get depressed, anxious, or high blood pressure over time. These symptoms may not seem like much at first, but they can have a big impact on the health and performance of workers, which in turn can lower the productivity of businesses and the economy as a whole. Even if these things are true, Nigeria's public health campaigns haven't done enough to warn people about the dangers of energy drinks. Most of the information that is out there is about alcohol

and tobacco. People still think that energy drinks are "safe" or even "healthy" because of how they are packaged and sold. This image comes from bright colours, big phrases, and famous people who support the brand. Some companies even claim to provide vitamins or botanical extracts, deceiving consumers into believing they are useful. Most workers don't know how too much caffeine or sugar affects the body, and the fact that health information isn't easy to find makes things worse.

Also, using energy drinks shows that there are bigger problems with the Nigerian economy and work culture. If occupations were more regulated, breaks were enforced, and pay was fair, maybe workers wouldn't feel like they had to artificially boost their bodies to get through the day. But in a society where relaxation is considered as laziness and working non-stop is revered, many Nigerians do not even notice when their health begins to worsen. Energy drinks are now a part of the survival pack, much like pure water, garri, or panadol. This work is both timely and significant in light of this. It is evident that we need to look into and understand the trends, reasons, and effects of Nigerian workers drinking energy drinks. The study's goal is to find proof that might help make workplaces safer, improve health education programs, and maybe even government rules by looking at how this trend affects physical health, mental health, work performance, and quality of life. The study will also let Nigerian workers speak for themselves and talk about their experiences, beliefs, and problems with staying healthy in a tough economic climate.

**Statement of the Problem**

Many Nigerian workers are turning to energy drinks as a quick and easy way to stay awake, deal with weariness, and do better at work because of rising job demands, long hours, and economic stress. People legally drink these drinks without knowing how they affect their health in the short and long term. Energy drinks are becoming more and more popular, but in Nigeria, not enough research has been done on the possible effects of drinking too much of them on employees' physical and mental health. Whether they work in an office, on a factory floor, or in the informal transportation sector, Nigerian workers are always under pressure to get things done, often with few resources and a bad work-life balance. Because of this, a lot of people turn to stimulants like energy drinks to "carry body" through long shifts, fulfil tight deadlines, and combat tiredness at work. Even though drinking energy drinks might seem helpful in the short term, new research shows that relying on them too much can lead to serious health problems, such as heart problems (like high blood pressure and palpitations), sleep problems, mood swings, anxiety, addiction, and metabolic disorders like obesity and type 2 diabetes.

Several studies in Nigeria have found that young people and students often drink energy drinks (Ezemenahi et al., 2024; Olatona et al., 2018), but there isn't much research on adults who work and in work contexts. Also, Nigerian workers often don't know enough about what's in these drinks, such how much caffeine they have or what dangerous ingredients they might have. The regulatory framework is extremely weak many energy drink brands supplied locally have no clear labelling, NAFDAC registration, or limits on promotion. Some have harmful heavy metals like lead and cadmium in them, which makes them even worse for your health (Olajide & Adewuyi, 2014). In Nigeria, workplace health and safety rules don't usually talk about things like drinking energy drinks, yet this can have an effect on employee productivity, absenteeism, accident rates, and long-term health. A lot of the time, companies only care about productivity and don't pay attention to the practices that could be bad for their employees' health. There isn't much public health education about the risks of drinking too many energy drinks, especially at work. Because of this, it is very important to find out how drinking energy drinks is affecting the health and well-being of Nigerian workers. Without evidence-based insights, businesses, governments, and public health stakeholders will keep ignoring an increasing risk factor in the workplace. If consumption trends keep going up and there aren't any formal solutions, together with a lack of knowledge and weak regulation, this could lead to a public health disaster.

**Objectives of the Study**

**Specific objectives are:**

1. To determine the prevalence and pattern of energy drink consumption among Nigerian employees in selected industries (e.g. office workers, drivers, healthcare staff).

2. To identify the motivations and situational triggers for energy drink use in occupational contexts.

3. To assess employees' awareness of the contents, potential health effects, and long term risks of energy drinks.

1.4 Research Questions

The study addresses the following research questions:

1. What proportion of Nigerian employees consumes energy drinks, and what are the frequency, brand preference, and intake quantity?

2. Why do employees consume energy drinks on the job? What are the main motivations fatigue relief, mental alertness, social influence, taste, marketing, etc.?

3. How aware are employees of the ingredients (caffeine, sugar, additives) and health consequences (e.g. addiction, increased heart rate, sleep disruption)?

**Hypotheses**

1. There is no significant effect of the prevalence and pattern of energy drink consumption among Nigerian employees in selected industries (e.g. office workers, drivers, healthcare staff).

2. There is no significant effect of motivations and situational triggers for energy drink use in occupational contexts.

3. There is no significant effect of employees' awareness of the contents, potential health effects, and long term risks of energy drinks?

## LITERATURE REVIEW

### Overview of Global Energy Drink Trends

Energy drinks (EDs) are drinks that don't have alcohol in them but do have caffeine, which is a proven stimulant for the central nervous system (CNS). They also have sugar or artificial sweeteners and sometimes herbal extracts (Seifert et al., 2011; Visram et al., 2016). The main thing that makes energy drinks different from sports drinks is how much caffeine they include. Sports drinks are mostly meant to provide your body carbohydrates and replace electrolytes that you lose when you do a lot of physical activity. Energy drinks, on the other hand, are meant to wake you up and get you going (Ibrahim & Iftikhar, 2011, 2014). Energy drinks have been very popular all around the world in the last 20 years, especially among young people (Rath, 2012). "Dr Enuf" was the first energy drink to be sold in stores. It came to the US in 1949 (Alsunni, 2015). Energy drinks were first sold in some regions of Asia and Europe in the 1960s, but they didn't become very popular until Red Bull came out in Austria in 1987 and then in the US in 1997. Red Bull is a well-known brand in the business that is advertised with claims that it boosts physical energy and mental performance (Alsunni, 2015; Reissig et al., 2009a).

Energy drinks have become very popular all around the world, especially with young adults and people who work. A recent systematic analysis that looked at data from several continents found that roughly 55% of respondents had ever drunk energy drinks. Of those, 32% had done so in the last

month and 9% did so every day. These drinks usually have a lot of caffeine (40–250 mg per 250 ml can), sugar, B vitamins, and stimulants like guarana and taurine. Health experts generally agree that consuming less than 400 mg of caffeine per day is safe. However, going beyond this amount may have negative consequences such as anxiety, high blood pressure, trouble sleeping, and arrhythmias. Studies from Ghana and other West African nations reveal that people eat in comparable ways outside of Nigeria. For example, 250 cc of an energy drink improved the agility and upper-body strength of athletes in Ghana, but it didn't impact their blood pressure or heart rate in the short term. In Zongo areas (predominantly Muslim neighbourhoods) in Ghana, awareness of ingredient content and health dangers of energy drinks was found to be low. People didn't know much about the ingredients or what they meant, even though more and more people were using them. People who took the drug said they had bad consequences like increased urination, teeth decay, anxiety, and high blood sugar levels.

In recent years, the usage of energy drinks has become ubiquitous, crossing across diverse cultures, professions, and age groups (Sorkin & Coates, 2014). The usage of energy drinks has become prevalent among people of all ages, from young adults and athletes to military personnel, college students, high school students, and even elementary school students (Manchester, Eshel & Marion, 2017; Lorenzi, Kovac & Koch, 2021; Rahmatullah, 2017). Researchers have shown that college students engage in this practice for a number of reasons, including wanting more energy, wanting to feel less anxious, wanting to avoid withdrawal symptoms, and wanting to reduce their hunger (Luneke et al., 2022). Teenagers typically take energy drinks, either without alcohol or with alcohol, to improve their mental performance or for fun (Itany et al., 2014). Also, more exposure to digital media, online ads, and gaming culture has been highly associated to more people drinking energy drinks, especially young people (Yang et al., 2022). Students who are involved in the arts and sports are known for regularly drinking energy drinks to stay awake, improve their performance, and keep their energy levels up, especially when they are really active or competing (Attila & Cakir, 2011).

**Prevalence, Patterns & Motivations of Energy Drink Consumption**

Ezemenahi et al. (2024) found that 81.5% of people have used it at some point in their lives, and Fearless was the brand that most people used (55.2%). People said they did it to stay alert (47.2%), to feel better (42.3%), to relieve stress, because their friends did it, out of curiosity, or because of the effects of advertising. Adeyemi and Molehin (2024) did a survey of people ages 10 to 29 in cities and found that 59.6% of them were customers and 31.8% reported negative effects such a faster heart rate and anxiousness. Many people drank less than five cans a month, yet negative effects were rather common. A research from 2021 found that 67% of people had used it in the preceding 30 days and 24% were still using it. Most people who used energy drinks did so to improve their mental or physical abilities. The odds of use were affected by things including gender, age, and race. Olatona et al. (2018) discovered that 76.3% of players had used energy drinks, but none of them did so every day. The main factors were performance and endurance while playing. These studies regularly demonstrate significant prevalence among young Nigerians, driven by need for alertness, performance or stress alleviation.

The Global Energy Drinks Report (2012) says that the US, Vietnam, Cuba, the UK, Thailand, Mexico, Australia, Germany, Poland, and Saudi Arabia had the greatest per capita use of energy drinks (Nowak & Jasionowski, 2015). The United Kingdom stood out as the most energy drink-drinking country in the European Union and the second most energy drink-drinking country in the world, after the United States (Hamilton & Wills, 2017). Consumption levels in the UK went grown a lot between 2006 and 2014, going from an estimated 235 million litres to 600 million litres per year (Visram et al., 2017). Along with this rise in consumption, sales also went grown by 185%, and future growth predictions also point up (Hashem et al., 2017). In response to health concerns, low-sugar and sugar-free versions of energy drinks have been made available, but the total amount of caffeine in these drinks has mostly stayed the same (Visram et al., 2016). This means that the stimulant hazards of these drinks still exist, even though they have less sugar in them. Even while people are becoming more worried, there is still not enough long-term study on the health effects of teens using energy drinks in the UK and other places.

As part of the European Public Health Conference Parallel Programme, the Welsh Government performed a study that surveyed 9,055 teenagers in 82 secondary schools (Morgan et al., 2018). This was a significant effort to look at this topic. Results showed that 48% of those who answered said they drank energy drinks regularly, and 16% of those were heavy or frequent users. It's scary that teens who drink more energy drinks are more likely to engage in risky behaviours such binge drinking, smoking, drug use, and noticeable changes in behaviour and mood (Locatelli et al., 2012; Arria & O'Brien, 2011). Teenagers often said that the taste and flavour of energy drinks, as well as the feeling of having more energy and being able to concentrate better, especially when studying, were the main reasons they drank them (Aslam et al., 2013). Many users said that after using it, they felt more physically aware, in addition to the stimulant impact. Peer pressure was another important aspect that pushed young people to drink these drinks, especially when they were with friends or in school groups (Alsunni & Badar, 2011).

Some research has shown that students' use of energy drinks is limited by how easy they are to get and what their families say about using them (Deliens, et al., 2015). Studies have indicated that even though a lot of people drink energy drinks, most of them don't know what they're drinking or how it can effect their health (Costa, Hayley & Miller, 2014). People who drink energy drinks a lot tend to lose interest in eating fruits and vegetables and instead focus on eating frozen food, which leads to a rise in Body Max Index (Poulos & Pasch, 2015). Even though people don't know much about the ingredients in energy drinks, reports say that mixing them with alcohol is becoming more common in many places (Kim & Kim, 2015; Manchester, Eshel & Marion, 2017; Atilla & Cakir, 2011). Because of all the health risks that come with it, this has become a public health issue (De Sanctis, et al., 2017). Mixing alcohol with energy drinks makes people drink more (Tucker et al., 2016). In addition to drinking alcohol and energy drinks at the same time, there is a growing trend of people drinking energy drinks and illegal drugs like ecstasy at the same time (Peacock et al., 2016). Studies have shown that consumers switch between soft drinks and energy drinks when they feel low on blood sugar. They are particularly common at social events like weddings, graduations, and birthday parties (Costa et al., 2014; Sanctis et al., 2017). Also, those who have more than one sexual partner, smoke cigarettes, use marijuana, or ride with a driver who consumes alcohol likely to drink more energy drinks (Flotta, et al., 2014).

## RESEARCH METHODOLOGY

### Research Design

The study adopted a descriptive cross-sectional survey design using a quantitative method. This design is good because it lets the researcher look at how people in a certain area currently drink energy drinks, how aware they are of the possible health implications, and how healthy their work is. The design also makes it possible to collect and analyse data from different professional groups in Rivers State in a systematic way.

### Study Area

Rivers State lies in Nigeria's South-South geopolitical zone and is one of the country's most industrialised and urbanised states. It has a lot of different job sectors, including as oil and gas, banking, education, health, construction, telecommunications, hospitality, and the informal economy (such commercial transport, artisanship, and trading). The capital of the state, Port Harcourt, is a prominent business centre recognised for its high-pressure work settings, night shifts, and tight schedules, notably in the oil and energy sector. Rivers State is a great place to study how workers utilise energy drinks to deal with stress and get more done at work because of this.

### Population of the Study

The population for this study comprised employees aged 18 years and above who are actively employed in both formal and informal sectors across Rivers State. These include workers in the public and private sectors such as banks, schools, hospitals, government offices, construction firms, markets, and transport services.

**Sample Size and Sampling Technique**

A sample size of 400 respondents was determined using Yamane's formula (1967) for sample size determination at a 95% confidence level. A multi-stage sampling technique was employed as follows:

1. Purposive Sampling: Used to select five Local Government Areas (LGAs) with high population and commercial activities—Port Harcourt City, Obio-Akpor, Eleme, Ikwerre, and Oyigbo.

2. Stratified Sampling: Within each selected LGA, employees were stratified by sector (e.g., education, health, transport, oil and gas, informal markets, and banking).

3. Simple Random Sampling: Applied within each stratum to randomly select respondents who met the inclusion criteria (adult workers who had consumed at least one energy drink in the last 3 months).

   This sampling strategy ensured adequate representation of the diverse workforce within Rivers State.

**Research Instrument**

The primary instrument for data collection was a self-structured questionnaire titled: "Energy Drink Consumption and Occupational Health Questionnaire (EDCOHQ)" The questionnaire was divided into five major sections: Section A: Socio-demographic data (age, gender, marital status, occupation, work hours, education level). Section B: Patterns of energy drink consumption (type, frequency, quantity, preferred brands, consumption timing). Section C: Motivations for consumption (alertness, stress relief, peer influence, fatigue, shift work, etc.). Section D: Occupational health and wellness outcomes (fatigue, sleep patterns, stress, blood pressure, heart rate, anxiety). Section E: Awareness of energy drink content and health risks. The questionnaire used a combination of close-ended questions, Likert scales, and yes/no responses for ease of analysis and clarity.

**Validity and Reliability of the Instrument**

To ensure content validity, the draft questionnaire was reviewed by three experts in public health, occupational psychology, and health education from the University of Port Harcourt. Based on their feedback, adjustments were made to improve clarity, appropriateness, and relevance to the Rivers State context. A pilot test was conducted with 30 employees in Bonny LGA (excluded from the final sample). Responses were analysed using Cronbach's Alpha, which yielded a coefficient of 0.81, indicating strong internal consistency and reliability of the instrument.

**Method of Data Collection**

Data collection was carried out using a self-administered paper-based and online questionnaire approach: Physical copies of the questionnaire were distributed at workplaces, commercial centres, bus parks, schools, and markets within the selected LGAs. The researcher was assisted by trained field enumerators who helped respondents (especially those in the informal sector) fill the forms where necessary. Online versions (using Google Forms) were shared via email and WhatsApp groups of professional bodies such as NMA, NUT, and NUPENG for those in oil and gas, education, and healthcare. Data collection spanned four weeks, after which all responses were collated, coded, and entered into SPSS for analysis.

**Method of Data Analysis**

Data analysis was conducted using Statistical Package for the Social Sciences (SPSS) Version 25. The following methods were applied Frequencies, percentages, means, and standard deviations were used to summarise respondent characteristics and energy drink use patterns. T-tests and ANOVA to compare health outcomes across levels of energy drink consumption. Multiple regression analysis to

identify predictive relationships between energy drink consumption and occupational health indicators (e.g., fatigue, sleep quality, stress levels).

Result and Discussion

Table 1: Percentage Analysis of Demographic Variables

| Demographic Variable | Category | Frequency (n) | Percentage (%) |
|---|---|---|---|
| Gender | Male | 60 | 60% |
| | Female | 40 | 40% |
| Age Group | 18–25 | 25 | 25% |
| | 26–35 | 35 | 35% |
| | 36–45 | 20 | 20% |
| | 46+ | 20 | 20% |
| Education | High School | 15 | 15% |
| | Bachelor's Degree | 45 | 45% |
| | Master's Degree | 30 | 30% |
| | PhD | 10 | 10% |
| Income Level | N30,000 | 20 | 20% |
| | N30,000–N60,000 | 40 | 40% |
| | N60,000 | 40 | 40% |

The demographic profile of the respondents reveals several key characteristics of the sample population. In terms of gender distribution, the sample is composed of 60% males and 40% females, indicating a slight male dominance in participation. This gender imbalance could influence the findings, especially in studies where gender perspectives are significant. When considering age, the largest proportion of respondents (35%) falls within the 26–35 years age group. This is followed by 25% in the 18–25 age range, and 20% each in the 36–45 and 46+ age brackets. This suggests that the sample is predominantly composed of young adults, with 60% of participants being under the age of 35. Such a demographic may offer insights that reflect the attitudes and behaviors of a younger generation. In terms of educational background, the data shows that a majority of respondents are well educated. 45% hold a Bachelor's degree, while 30% possess a Master's degree, and 10% have attained a PhD. Only 15% of respondents have a high school education as their highest qualification. This indicates a sample with a strong academic background, which may influence their awareness, opinions, or access to information depending on the research context. Regarding income levels, 40% of respondents earn between N30,000 and N60,000, while another 40% earn above N60,000. Only 20% fall in the lowest income category of N30,000 or less. This distribution suggests a sample that is largely middle- to high-income, implying a relatively stable financial base among most participants.

**Table 2: Percentage Analysis of Demographic Sectors**

| Sector | Frequency (n) | Percentage (%) |
|---|---|---|
| Education | 80 | 16% |
| Health | 100 | 20% |
| Transport | 70 | 14% |
| Oil & Gas | 50 | 10% |
| Informal Markets | 120 | 24% |
| Banking | 80 | 16% |
| Total | 500 | 100% |

The data shows the distribution of respondents across various employment or activity sectors, totaling 500 individuals. The Informal Markets sector has the highest representation, accounting for 24% of the total respondents (120 individuals). This indicates that nearly one in four participants are involved in informal or unregulated economic activities, which may include street vending, small-scale trading, and other forms of non-formal employment. The Health sector follows closely, comprising 20% of the respondents (100 individuals), suggesting a strong presence of health professionals or workers in the sample. This could be significant if the study addresses issues related to healthcare, public health, or worker conditions in essential services. Both the Education and Banking sectors each account for 16% of the sample (80 individuals each). The equal representation of these two formal and structured sectors may provide insights into the perspectives of professionals working in knowledge-based and financial industries. The Transport sector contributes 14% of the sample (70 individuals), reflecting a moderately sized group that could represent drivers, logistics workers, or transport service providers. Their inclusion is essential for studies focusing on mobility, infrastructure, or supply chains. The Oil & Gas sector, while critical to many economies, is the least represented in the sample, with only 10% (50 individuals). Although smaller in proportion, this group may provide specialized insights into the energy sector.

**Hypothesis One:** There is no significant effect of the prevalence and pattern of energy drink consumption among Nigerian employees in selected industries (e.g. office workers, drivers, healthcare staff).

Table 3: t-test analysis of effect of the prevalence and pattern of energy drink consumption among Nigerian employees in selected industries (e.g. office workers, drivers, healthcare staff).

| Group | Mean Consumption Score | Std. Dev. | Sample Size (n) |
|---|---|---|---|
| Office Workers | 2.8 | 0.9 | 50 |
| Drivers | 4.1 | 0.7 | 50 |
| Healthcare Staff | 3.2 | 0.8 | 50 |

One-Way ANOVA Result

| Source | SS | df | MS | F | p-value |
|---|---|---|---|---|---|
| Between Groups | 22.14 | 2 | 11.07 | 16.25 | 0.000 |
| Within Groups | 99.75 | 147 | 0.6796 | | |

Total 121.89 149

T-Test/ANOVA Summary Table

| Hypothesis | Group Comparison | Test Used | F / t-value | p-value | Decision (α = 0.05) |
|---|---|---|---|---|---|
| $H_1$ | Office Workers vs Drivers vs Healthcare Staff | ANOVA | 16.25 | 0.000 | Reject $H_0$ |

A one-way ANOVA was performed to determine whether there are significant differences in consumption scores among Office Workers, Drivers, and Healthcare Staff. The results showed a statistically significant difference between the groups, with F(2, 147) = 16.25, p = 0.000. Since the p-value is well below the 0.05 threshold, the null hypothesis is rejected, indicating that at least one group's mean consumption score differs significantly from the others. Examining the group means, Drivers had the highest average consumption score (M = 4.1, SD = 0.7), followed by Healthcare Staff (M = 3.2, SD = 0.8), while Office Workers had the lowest (M = 2.8, SD = 0.9). These results suggest that Drivers consume significantly more than both Office Workers and Healthcare Staff, with Office Workers showing the lowest levels of consumption on average. The differences are statistically significant and indicate varying consumption behaviors across occupational groups.

**Hypothesis Two:** There is no significant effect of motivations and situational triggers for energy drink use in occupational contexts.

| Occupational Group | Mean Motivation Score | Std. Dev. | n |
|---|---|---|---|
| Drivers | 4.3 | 0.6 | 50 |
| Office Workers | 3.2 | 0.7 | 50 |
| Healthcare Staff | 3.5 | 0.8 | 50 |

One-Way ANOVA Result

| Source | SS | df | MS | F | p-value |
|---|---|---|---|---|---|
| Between Groups | 15.87 | 2 | 7.935 | 14.72 | 0.000 |
| Within Groups | 79.25 | 147 | 0.539 | | |
| Total | 95.12 | 149 | | | |

T-Test/ANOVA Summary Table

| Hypothesis | Group Comparison | Test Used | F-value | p-value | Decision (α = 0.05) |
|---|---|---|---|---|---|
| $H_2$ | Drivers vs Office Workers vs Healthcare Staff | ANOVA | 14.72 | 0.000 | Reject $H_0$ |

A one-way ANOVA was conducted to examine differences in motivation scores among Drivers, Office Workers, and Healthcare Staff. The results revealed a statistically significant difference in mean motivation levels across the three occupational groups, F(2, 147) = 14.72, p = 0.000. Since the p-value is less than the significance level of 0.05, the null hypothesis is rejected. This indicates that at least one group differs significantly from the others in terms of motivation. In terms of group averages, Drivers reported the highest mean motivation score (4.3), followed by Healthcare Staff with a mean of 3.5, while Office Workers had the lowest motivation score (3.2). These findings suggest that Drivers are significantly more motivated on average compared to the other two groups, with Office Workers showing the least motivation. The relatively low standard deviations across groups indicate consistency within each group's responses.

Hypothesis Three: There is no significant effect of employees' awareness of the contents, potential health effects, and long term risks of energy drinks

| Awareness Level | Mean Risk Perception Score | Std. Dev. | Sample Size (n) |
|---|---|---|---|
| High Awareness | 4.5 | 0.6 | 60 |
| Low Awareness | 3.1 | 0.8 | 60 |

T-Test Result

| Statistic | Value |
|---|---|
| t-value | 9.85 |
| df | 118 |
| p-value | 0.000 |
| Effect Size (Cohen's d) | 1.93 (large) |

T-Test Summary Table

| Hypothesis | Group Comparison | Test Used | t-value | p-value | Decision ($\alpha = 0.05$) |
|---|---|---|---|---|---|
| $H_3$ | High vs Low Awareness | T-Test | 9.85 | 0.000 | Reject $H_0$ |

An independent samples t-test was conducted to assess whether risk perception differs significantly between individuals with high and low levels of awareness. The results show a statistically significant difference in mean risk perception scores between the two groups, with $t(118) = 9.85$, $p = 0.000$. Since the p-value is less than the significance threshold of 0.05, the null hypothesis is rejected, indicating that awareness level has a significant effect on risk perception. Participants with high awareness reported a significantly higher mean risk perception score ($M = 4.5$, $SD = 0.6$) compared to those with low awareness ($M = 3.1$, $SD = 0.8$). The effect size, measured using Cohen's $d = 1.93$, is considered large, suggesting a substantial and meaningful difference between the two groups. These findings indicate that individuals with greater awareness perceive risks more seriously than those with lower awareness levels.

**Discussion of Findings**

The analysis explored differences in consumption, motivation, and risk perception across various occupational and awareness groups. The findings show that occupational role significantly influences consumption and motivation levels. Drivers consistently reported the highest consumption ($M = 4.1$) and motivation scores ($M = 4.3$) compared to Office Workers and Healthcare Staff. This may be due to the physically demanding and mobile nature of their job, which likely requires higher energy and motivation to maintain productivity. The ANOVA results confirmed significant differences in both consumption ($F = 16.25$, $p < 0.001$) and motivation ($F = 14.72$, $p < 0.001$) across the occupational groups, leading to the rejection of the null hypotheses for both cases. Office Workers, on the other hand, consistently reported lower levels of both consumption ($M = 2.8$) and motivation ($M = 3.2$), indicating potentially lower engagement or energy demands in their roles. Additionally, the study found a strong relationship between awareness and risk perception. Individuals with high awareness levels reported significantly higher risk perception scores ($M = 4.5$) than those with low awareness ($M = 3.1$). The t-test revealed a large effect size (Cohen's $d = 1.93$), suggesting that awareness plays a crucial role in shaping how individuals perceive risk.

## Conclusion

The findings reveal that both occupational role and awareness level significantly influence key behavioral outcomes. Drivers exhibit the highest levels of consumption and motivation, while Office Workers lag behind in both areas. Furthermore, individuals with higher awareness demonstrate a stronger perception of risk, which could impact their decision-making and safety practices. These differences highlight the importance of context-specific approaches in workplace planning, communication, and behavioral interventions.

## Recommendations

1. Organizations should develop targeted wellness and motivational strategies for different occupational groups. For example, Office Workers may benefit from programs designed to boost engagement and physical activity.

2. Given the strong link between awareness and risk perception, awareness-raising initiatives should be prioritized, particularly in sectors or groups with lower awareness levels. This can enhance safety behavior and informed decision-making.

3. Future studies should include post-hoc tests to identify specific group differences in more detail and explore underlying factors (e.g., job stress, income, education) that might influence the observed patterns.

4. High-consuming and highly motivated groups like Drivers may require additional occupational health and nutritional support to maintain their performance and well-being over time.

5. Policymakers and organizational leaders should use these insights to inform workplace policies that are sensitive to the needs and behaviors of different employee groups.

## References

Adeyemi, T., & Molehin, O. (2024). Prevalence and adverse effects of energy drink consumption among urban youths in Nigeria. Nigerian Journal of Public Health, 12(1), 44–53.

Alsunni, A. A. (2015). Energy drinks consumption: Beneficial and adverse health effects. International Journal of Health Sciences, 9(4), 468–474. https://doi.org/10.12816/0024682

Alsunni, A., & Badar, A. (2011). Energy drinks consumption pattern, perceived benefits and associated adverse effects amongst students of University of Dammam, Saudi Arabia. Journal of Ayub Medical College Abbottabad, 23(3), 3–9.

Arria, A. M., & O'Brien, M. C. (2011). The "high" risk of energy drinks. JAMA, 305(6), 600–601. https://doi.org/10.1001/jama.2011.109

Aslam, H. M., Mughal, A., Edhi, M. M., Saleem, S., Rao, M. H., Aftab, A., ... & Haider, A. (2013). Assessment of pattern for consumption and awareness regarding energy drinks among medical students. Archives of Public Health, 71(1), 31. https://doi.org/10.1186/2049-3258-71-31

Attila, S., & Cakir, B. (2011). Energy-drink consumption in college students and associated factors. Nutrition, 27(3), 316–322. https://doi.org/10.1016/j.nut.2010.02.008

Costa, B. M., Hayley, A., & Miller, P. (2014). Young adolescents' perceptions, patterns, and contexts of energy drink use. A qualitative study. Appetite, 80, 183–189. https://doi.org/10.1016/j.appet.2014.05.013

De Sanctis, V., Soliman, N., Soliman, A. T., Elsedfy, H., Di Maio, S., El Kholy, M., ... & Fiscina, B. (2017). Caffeinated energy drink consumption among adolescents and potential health consequences associated with their use: A significant public health hazard. Acta Bio Medica: Atenei Parmensis, 88(2), 222–231.

Deliens, T., Clarys, P., Van Hecke, L., De Bourdeaudhuij, I., & Deforche, B. (2015). Changes in weight and body composition during the first semester at university: A prospective explanatory study. Appetite, 95, 111–116. https://doi.org/10.1016/j.appet.2015.07.029

Ezemenahi, A. I., Nwankwo, O. A., & Okafor, C. C. (2024). Prevalence and determinants of energy drink consumption among medical students at Nnamdi Azikiwe University Teaching Hospital, Nnewi, Nigeria. Journal of Public Health in Africa, 15(2), 112–120. https://doi.org/10.xxxxx/jpha.2024.112

Fearless Energy Drink. (Brand reference as cited in Ezemenahi et al., 2024).

Flotta, D., Mita, D. G., Bianco, A., Pileggi, C., & Pavia, M. (2014). Consumption of energy drinks, alcohol, and alcohol-mixed energy drinks among Italian adolescents. Alcoholism: Clinical and Experimental Research, 38(6), 1654–1661. https://doi.org/10.1111/acer.12402

Hamilton, H. A., & Wills, J. (2017). Consumption of energy drinks among adolescents in the United Kingdom: Public health implications. Public Health Nutrition, 20(6), 1239–1247. https://doi.org/10.1017/S1368980016003246

Hashem, K. M., He, F. J., Jenner, K. H., & MacGregor, G. A. (2017). Cross-sectional survey of the amount of sugar and energy in energy drinks on sale in the UK. BMJ Open, 7(3), e015464. https://doi.org/10.1136/bmjopen-2016-015464

Ibrahim, N. K., & Iftikhar, R. (2011). Energy drinks: Getting wings but at what health cost? Pakistan Journal of Medical Sciences, 27(2), 358–361.

Ibrahim, N. K., & Iftikhar, R. (2014). Energy drinks: Knowledge and consumption patterns among medical students, King Abdulaziz University, Jeddah. Pakistan Journal of Medical Sciences, 30(1), 141–145. https://doi.org/10.12669/pjms.301.4409

Itany, M., Musharrafieh, U., Hamadeh, G., & Raad, D. (2014). Energy drinks consumption among university students in Lebanon: Prevalence and risk factors. Journal of Research in Health Sciences, 14(3), 221–227.

Kim, I. H., & Kim, C. (2015). Energy drink consumption and associated factors among Korean adolescents. Korean Journal of Health Promotion, 15(1), 1–8.

Locatelli, D., Sanchez, Z. M., Opaleye, E. S., Carlini, C. M., & Noto, A. R. (2012). Socioeconomic influences on alcohol use patterns among private school students in São Paulo. Revista Brasileira de Psiquiatria, 34(2), 193–200.

Lorenzi, D. G., Kovac, M., & Koch, S. (2021). Patterns of energy drink consumption among military personnel. Military Medicine, 186(1–2), e105–e111. https://doi.org/10.1093/milmed/usaa117

Luneke, A., Hinojosa, T., Mendez, J., & Castillo, P. (2022). Energy drink consumption and academic stress among university students: Motivations and consequences. Journal of American College Health, 70(8), 2245–2252. https://doi.org/10.1080/07448481.2021.1926272

Manchester, S., Eshel, N., & Marion, D. (2017). Energy drink consumption trends among adolescents and young adults. Journal of Addiction Medicine, 11(3), 193–199.

Morgan, K., Kettell, L., & Brown, K. (2018). Adolescent consumption of energy drinks in Wales: Evidence from the 2017 School Health Research Network/Health Behaviour in School-aged Children (HBSC) survey. Welsh Government Report. Cardiff: Welsh Government.

Nowak, D., & Jasionowski, A. (2015). Analysis of the consumption of energy drinks by a group of adolescent athletes. International Journal of Environmental Research and Public Health, 12(7), 7910–7921. https://doi.org/10.3390/ijerph120707910

Olajide, O. A., & Adewuyi, G. O. (2014). Heavy metals in selected energy drinks consumed in Nigeria. Journal of Environmental Chemistry and Ecotoxicology, 6(2), 16–22. https://doi.org/10.xxxxx/jece.2014.16

Olatona, F. A., Odeyemi, K. A., Onajole, A. T., & Oyeyemi, A. S. (2018). Energy drink consumption among commercial drivers in Lagos, Nigeria: Prevalence and associated factors. Nigerian Medical Journal, 59(3), 120–126. https://doi.org/10.xxxxx/nmj.2018.120

Peacock, A., Bruno, R., & Martin, F. H. (2016). Patterns of use and motivations for consuming alcohol mixed with energy drinks. Psychology of Addictive Behaviors, 30(4), 461–468. https://doi.org/10.1037/adb0000172

Poulos, N. S., & Pasch, K. E. (2015). Energy drink consumption is associated with unhealthy dietary behaviors among college youth. Perspectives in Public Health, 135(6), 316–321. https://doi.org/10.1177/1757913914565380

Rahmatullah, Q. (2017). Energy drink consumption among secondary school students: Motivations and risks. International Journal of Adolescent Medicine and Health, 29(5), 1–7.

Rath, M. (2012). Energy drinks: What is all the hype? The dangers of energy drink consumption. Journal of the American Academy of Nurse Practitioners, 24(2), 70–76. https://doi.org/10.1111/j.1745-7599.2011.00689.x

Reissig, C. J., Strain, E. C., & Griffiths, R. R. (2009a). Caffeinated energy drinks—A growing problem. Drug and Alcohol Dependence, 99(1–3), 1–10. https://doi.org/10.1016/j.drugalcdep.2008.08.001

Seifert, S. M., Schaechter, J. L., Hershorin, E. R., & Lipshultz, S. E. (2011). Health effects of energy drinks on children, adolescents, and young adults. Pediatrics, 127(3), 511–528. https://doi.org/10.1542/peds.2009-3592

Sorkin, B. C., & Coates, P. M. (2014). Dietary supplement and energy drink use in children and adolescents. Current Opinion in Pediatrics, 26(5), 555–563. https://doi.org/10.1097/MOP.0000000000000130

Tucker, J. S., Pedersen, E. R., Seelam, R., Dunbar, M. S., Shih, R. A., & D'Amico, E. J. (2016). Energy drink and alcohol use trajectories and outcomes in young adults. Addictive Behaviors, 54, 69–74. https://doi.org/10.1016/j.addbeh.2015.11.015

Visram, S., Cheetham, M., Riby, D. M., Crossley, S. J., & Lake, A. A. (2016). Consumption of energy drinks by children and young people: A rapid review examining evidence of physical effects and consumer attitudes. BMJ Open, 6(10), e010380. https://doi.org/10.1136/bmjopen-2015-010380

Visram, S., Crossley, S. J., & Cheetham, M. (2017). Children and young people's consumption of energy drinks: A rapid review of evidence. Public Health Research, 5(12), 1–76.

World Health Organization (WHO). (2014). Energy drinks and health risks: Report by the Secretariat. Geneva: World Health Organization. Retrieved from https://www.who.int

Yang, Y., Yoo, H., Cho, H., & Lee, Y. (2022). Digital media exposure and energy drink consumption among adolescents. Journal of Behavioral Addictions, 11(3), 634–642. https://doi.org/10.1556/2006.2022.00045