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SEPARATE AND COMBINED CHRONIC INGESTION OF PROMETHAZINE AND HALOPERIDOL ON FEEDING BEHAVIOUR OF FEMALE ALBINO RATS

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ABSTRACT

Substance abuse is on the increase world wide and its affecting the overall being of youths especially. Because substance abuse has evolved to a combination of drugs being ingested by the youths, the concern for monitoring and managing the behaviour is growing. One concern of this behaviour is the effects it has on feeding behavior of individuals concerned. Using albino rats, in an experimental study the present study investigated the effects of separate and combined ingestion of Haloperidol and Promethazine oo feeding behaviour of the rats. It was observed that in combined form, there was weight gain among the rats even though they did not eat very much. However, when taken separately, it was observed that there was no significant difference in weight gain but significant difference in food intake. The implication of these findings fpr healthy living and weight loss conscious individuals were discussed

Keywords: *Feeding behaviour, Haloperidol, Promethazine, Chronic ingestion, substance abuse*

INTRODUCTION

Substance use, misuse/abuse has been on the rise globally. The consequences of this behavior can be disastrous to the individuals, the society and the nation in general. According to UNODC (2024) there has been an increase of about 20% over the past decade and developing nations are more involved in this. This could be attributable to the socio-economic situation prevalent in these societies. The prevalence of this maladjusted behavior in Nigeria is between 26% to 40% among youths and university students aged between 25 and 39 (Jatau AI, Sha'aban A, Gulma KA, Shitu Z, Khalid GM, Isa A, Wada AS, Mustapha M. 2021; Usman, 2024; UNODC, 2024)

Social acceptance of some drugs/substance may be the reasons why some adolescents/youth engage ion the use of these drugs. However, because of the global village phenomenon in the world, supported by ICT, especially social media, internet accessibility, many cross-learning, cross-cultural adaptation and the like, we have see drug misuse/abuse go on the rise.

Many of these drugs are psychoactive (Altering cognitions and behaviours), a behavior that is being encouraged by many social factors such as age group peer pressure, economic situations, family disruption and poor adjustments, especially by youths/adolescents. There is a malaise in Nigeria at present labeled "Chemistry" where youth practice the mixture of drugs to be injected/ingested into their bodies, in order "to obliterate the "pressure" or to "perform" whatever, better. "Chemistry is where two or more drugs are combined together because of the perception that the dosage of one could/or is not effective enough, to get the desired result(s), hence the use of multiple combinations in practice.

A consequence or fall out of substance abuse/use is the influence of such on our eating behaviour. We may experience eating disorders such as over-eating or under-eating, we may end up being obese or malnourished and so on. All of these have consequence(s) for our mental well-being or overall psychological health. According o Bahji et al (2019), People who have eating disorders may begin using substances before, at the same time or after eating disorder symptoms appear.

As has been highlighted during the drug overdose epidemic in the U.S., substance use disorders (SUD) are well known to increase the risk of premature death, with a large body of research documenting mortality related to tobacco, alcohol, and other drugs. Eating disorders (ED) are also associated with high premature mortality rates and are among the most lethal of all the psychiatric disorders. Death rates for those with both ED and SUD are addictive, leaving those with co-occurring illness at a substantially elevated risk of premature death. Despite the increase in morbidity and mortality of comorbid ED and addiction, patients with this unique co-occurrence have been infrequently studied, leaving them often undiagnosed, untreated and underserved. According to a 2021 study published in the American Journal of Psychiatry, "A major driver of mortality in patients with eating disorders is substance use disorders…eating disorders and substance use disorders are each shown to be associated with high rates of mortality, but the combination of anorexia nervosa, bulimia nervosa, or unspecified eating disorders with a substance use disorder is particularly lethal because the risks of death from one are added to the other.(Dennis, 2025")

Some individuals may develop an eating disorder due to long-term appetite suppression caused by continued drug use. Eating disorders and substance abuse are both linked to compulsive or ritualistic behaviours, high rates of self medication, and a high relapse rate (Walker Centre, 2023). Guisado, Vaz-leL, Peral and Fernandez-Gil (2000) also argued that It is thought that food-deprivation increases the susceptibility for consuming drugs, rising the probability to reinforce the use of substances such as cocaine, heroine and alcohol.

Up to 50% of individuals with eating disorders use alcohol or illicit drugs, a rate five times higher than the general population. Up to 35% of individuals who were dependent on alcohol or other drugs also have eating disorders, Despite the substantial overlap between these two illnesses, there remains a gap between eating

disorders and addiction professionals, which impacts training, research and clinical care for those with co-occurring disorders. The Walk Centre (2025)

Promethazine (Phenergan) is a kind of drug used in treating allergies, nausea, vomiting, or to sedate patients undergoing surgery. This is a kind of depressant, and in Nigeria, it is easily available and accessible, over the counter. Another drug that is easily accessible is Haloperidol. Haloperidol is a kind of psychoactive drug used to restore the balance of certain natural substances in the brain (neurotransmitters). Side effects of this drug include dizziness, lightheadedness, drowsiness and so on.

If the above named drugs are combined together, only God knows what effect it may have on the individuals and subsequent behavioural dispositions, especially among "Chemistry" practitioners among our youths

WHY DO WE EAT

We eat food in order to provide our bodies with the nutrients for growth, to stay alive and be healthy. While we do this we may encounter some abnormalities such as over-eating, excessive eating or under-eating, all of which has consequences for our overall health. This is compounded, when we eat with substance abuse. Some individuals may develop an eating disorder due to long-term appetite suppression caused by continued drug use. Eating disorders and substance abuse are both linked to compulsive or ritualistic behaviors, high rates of self-medication, and a high relapse rate (The Walker Centre (2025) People who have eating disorders may begin using substances before, at the same time or after eating disorder symptoms appear(Bahji, et al. 2019, Balogun, et al, 2020)

People abuse substance by consuming a particular drug or a combinations of drugs and the combination of drugs use/abuse is a common phenomenon in the contemporary world of youths/adolescents these days. One common drug, even if it is medically accepted but abused is Haloperidol, while another is Promethazine**.**

Haloperidol is a well-known antipsychotic medication that is commonly used to treat schizophrenic symptoms, manage agitation in patients with acute illness and delirium, and control delusions, hallucinations, agitation, and other disruptive behavioral symptoms associated with Alzheimer's disease. The medicine works by inhibiting dopamine D2 receptors in the prefrontal brain, which causes extrapyramidal side effects. Haloperidol is still a widely used antipsychotic medication. It is on the World Health Organization's (WHO) list of essential medications (Boslaugh, 2016).

Haloperidol decreases learning and memory function in both humans and animals. Chronic use of haloperidol, a high-affinity D2 postsynaptic receptor blocker, has been linked to behavioral changes. Despite improving positive symptoms in schizophrenia, haloperidol concurrently decreases dopaminergic function in the already hypodopaminergic frontal cortex and decreases the expression of D1 receptors in the prefrontal cortex (Babin et al., 2011), both of which are essential for executive functions such as attention and working memory (Chudasama & Robbins, 2006). Thus, studies have shown that haloperidol impairs spatial working memory performance and planning ability in healthy volunteers (Rosengarten & Quartermain, 2002; Lustig et al., 2005) and worsens recent autobiographical memory scores in Alzheimer's disease patients (Lustig et al., 2005). Haloperidol reduced memory recall in experimental rats both in water-maze challenge and a step-through test (Terry et al., 2002; Hou et al., 2006; Abdel-Salam & Nada, 2011)

Pouzet, Mow, Kreilgård, and Velschow (2003) observed that drugs like Haloperidol induce weight gain in schizophrenic patients. Uguru-Okorie (1981) also observed that haloperidol depressed food intake among albino rats in his study, and the rats were depressed for a while.

Promethazine is a histamine (H1) receptor antagonist and phenothiazine derivative. It is also a direct antagonist at the muscarinic (M1) and dopamine (D2) receptors (Sharma & Hamelin, 2005; Cookson, 2008). Promethazine is a medication that can be taken alone or in combination with additional components such as dextromethorphan, paracetamol, and/or expectorants. It is a widely available medicine with considerable variations among nations, primarily in Europe and beyond, where some promethazine-containing pharmaceutical treatments can be acquired over-the-counter (OTC).

Promethazine is often used to treat the symptoms of nausea and vomiting, allergic diseases, motion sickness, and the common cold, as well as for the short-term treatment of sleeplessness in adults or as a paediatric sedative ((EMC), 2019). It is classed as a first-generation antihistamine molecule, which penetrates the blood-brain barrier more easily than second-generation antihistamines and is associated with side effects such as moderate/intense drowsiness (Jensen et al., 2017). As a result of its inhibiting action at H1 and M receptors, promethazine could be employed in acute tranquilization (Cookson, 2008). Toxicity may induce severe impairment of cognitive and psychomotor functioning as a result of central nervous system (CNS) depression/reduced levels of consciousness, and may result in fatalities (Jensen et al., 2017). Promethazine has been linked to a variety of CNS adverse effects, including confusion, disorientation, drowsiness, cardiovascular symptoms, and respiratory depression (Burns & Boyer, 2013; Ellen Tsay et al., 2015).

Promethazine is a drug that is commonly abused and misused, particularly among young adults. Promethazine abuse in co-formulation with various components of OTC cough treatments has been reported to be on the rise among young adult populations (Carney et al., 2018; Carr, 2006). Because of its soothing and sedative properties, first-generation antihistamines such as promethazine and cyclizine have a significant misuse potential (Cookson, 2008; Jensen et al., 2017), and augmentation of other co-ingested compounds, particularly those engaging with gamma-aminobutyric acid (GABA), opiate, and muscarinic acetylcholine receptors, resulting to psychedelic experiences (Clatts et al., 2010 ;Lynch et al., 2015). Orthen-Gambill (1988) reported that ingestion of promethazine produced significant and long lasting increase in food intake, concluding that it's the drug that stimulates appetite

Because of the high prescription rate, haloperidol and promethazine research is still important. Only a few rodent studies have looked at the long-term effects of antipsychotic medication feeding behaviour. This study therefore was designed to experimentally investigate the effect of separate and combined chronic ingestion of promethazine and haloperidol on feeding behaviour among female Wister albino rats Using food intake and weight gain/loss as parameters

(i) Will chronic administration of Promethazine have an effect on learning behavior especially in female albino rats?

(ii) Will chronic administration of Haloperidol have an effect on learning especially in female albino rats?

(iii) Will chronic administration of a combination of both drugs (promethazine and haloperidol) have an effect on learning behavior especially in female albino rats?

The following hypotheses were tested to answer the research questions;

1. There will be a significant effect of Promethazine on feeding behaviour among female albino rats.
2. There will be a significant effect of Haloperidol on feeding behaviour among female albino rats.
3. There will be a significant combined effect of Promethazine and Haloperidol on feeding behaviour among female albino rats.

MATERIALS AND METHOD

Research design

The design employed for this research is the independent group randomized design. The independent variables are promethazine and haloperidol, administered at a dose of 1.1mg/kg for promethazine and 1mg/kg for haloperidol. The dependent variable is learning behavior. Promethazine and the combination of both to the female albino rats, while the dependent variable is consumption pattern or behavior displayed or exhibited by the female albino rats.

Setting

The experimental animal laboratory of the Department of Psychology, University of Ibadan was used for this study.

Particpants

A total of 24 female Albino rats weighing between 180 to 200g were used for this study. The rats were randomly assigned into 4 groups with 6 rats in each group of control, Promethazine, haloperidol and promethazine combined with haloperidol. The rats were brought into the laboratory three weeks before the commencement of the study for the purpose of acclimatization. They were housed in North Kent plastic cages and properly fed with adequate food and water. For easy identification, the rats were numbered with markers according to the groupings.

Instruments

The following materials were used in conducting the experiment:

1. Recording sheets
2. Laboratory hand Gloves
3. Nose masks
4. Oral cannula
5. Distilled water
6. Weighing balance
7. North Kent plastic cages
8. Mouse cubes
9. Promethazine
12. Haloperidol
13. Disinfectants (Dettol)

PROCEDURE

The rats were housed in cages at the laboratory and acclimatized for 21days before starting the experiment. During this period, food and water was given freely and given without any form of deprivation. After the orientation period, there was an eight (8) day baseline period before treatment will start, this was undertaken so as to erase any plausible explanation for the outcome of the experiment i.e extraneous variables. They were divided into four (4) groups; the control group, the Promethazine group, the Haloperidol group and the Promethazine and Haloperidol group, each group consisted of 6 rats each. The study took 28 days in which the rats in the experimental groups was exposed to treatment and was fed with the use of oral cannula, a solution containing Promethazine, Haloperidol and a combination of both drugs throughout the period of the experiment, the control group was not exposed to Promethazine or Haloperidol but was treated with distilled water solution (placebo).

The volume of the Promethazine, Haloperidol and a combination of both drugs that was administered to the rats was dependent on the body weight. However, after treating the rats according to their groups each day, 30 minutes was allowed for the drug to be properly and effectively ingested or assimilated into their system before introducing them to food and water. This condition was applied throughout the experimental period.

Data was recorded after 24 hours from the previous administration. Quantity of food intake was determined by subtracting the weight of the food remaining and spillage from the food given from the previous day. On the other hand, weight gained was gotten by subtracting the weight of the rat the previous day before administration from the weight of the rat in new day after administration.

Each day at the expiration of the 24 hours period, the following operations were carried out

- Weighing of each rat
- Removal of water containers from cages
- Removal of feed containers which contains remaining feeds from cages
- Removal and keeping of food spilled by each rat
- Injection of saline, separate and combined Promethazine and Haloperidol into the control and experimental groups respectively

RESULTS

The effects of separate and combined acute administration of promethazine and haloperidol on memory and learning behaviour among female Wister Albino rats were investigated by this study. The results are presented according to the hypotheses proposed for the study.

The first hypothesis which stated that promethazine ingestion will significantly affect learning behaviour of female Albino Wister rats exposed to the drugs was tested using the Randomized Block ANOVA and the result presented in Table 1.

Table 1a: Summary Randomized Block ANOVA table showing the influence of exposure to chronic intake of Promethazine and Haloperidol on Weight gain of female Albino rats.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial η^2
Block	13248.670	1	13248.670	46.529	.000	.123
Treatment	3963.440	1	3963.440	.13.919	.000	.040
Error	94819.211	333	284.742			
Corrected Total	112931.121	335				

The result from Table 4.1 reveals that exposure to acute intake of anti-psychotic (Haloperidol & Promethazine) significantly impacted on the weight gain among Albino Rats $F(1, 333) = 13.92$, $p < 0.01$, $\eta 2 = .04$. The result demonstrated that weight gain increased by 4% with exposure to acute intake of anti-psychotic (Haloperidol & Promethazine) compared to the control group. Further analysis on the mean differences was carried out with descriptive statistics and LSD post hoc multiple comparison Test and the result presented in Table 1b.

Table 1b: Summary of LSD post hoc comparison analysis showing the mean difference in weight gain between rats exposed to acute intake of the combined drugs and those exposed to Normal saline.

	Mean	S.E.M	LSD POST HOC	Sig.
Combined Drugs	119.905[a]	1.302	6.87*	000
Control	126.774[a]	1.302		
*. The mean difference is significant at the .05 level.				
a. Covariates appearing in the model are evaluated at the following values:.			Days = 14.500	

From the analysis, mean differences showed that rats in the control (x = 126.77) significantly gained more weight compared to rats ingested with Haloperidol + Promethazine (x = 119.91). The mean differences were

significant. Based on this, hypothesis which states that there will be a significant difference in weight gain among female Albino rats ingested with different drugs is thus accepted.

Table 2a: Summary Randomized Block ANOVA table showing the influence of exposure to chronic intake of Haloperidol on Weight gain of female Albino rats.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial η^2
Block	9740.000	1	9740.000	37.464	.000	.101
Treatment	3369.333	1	3369.333	12.960	.000	.037
Error	86574.952	333	259.985			
Corrected Total	99684.286	335				

The result from Table 2a shows that exposure to acute intake of anti-psychotic (Haloperidol) did not significantly influenced the weight gain among Albino Rats F (1, 333) = 12.96, $p < 0.01$, $\eta 2 = .04$. The result demonstrated that weight gain increased by 0% with exposure to chronic intake of anti-psychotic (Haloperidol) compared to the control group. Further analysis on the mean differences was carried out with descriptive statistics and LSD post hoc multiple comparison Test and the result presented in Table 2b.

Table 2b: Summary of LSD post hoc comparison analysis showing the mean difference in weight gain between rats exposed to chronic intake of Haloperidol and those exposed to Normal saline.

	Mean	S.E.M	LSD POST HOC	Sig.
Haloperidol	126.238[a]	1.244	6.33*	000
Control	119.905[a]	1.244		
*. The mean difference is significant at the .05 level.				
a. Covariates appearing in the model are evaluated at the following values:.			Days = 14.500	

From the analysis, mean differences showed that rats in the control (x = 119.91) significantly displayed lesser weight gain compared to rats ingested with Haloperidol (x = 100.69). The mean differences were not significant. Based on this, hypothesis states that there will be a significant difference in weight gain among females' rats ingested with different drugs is thus rejected.

Table 3a: Summary Randomized Block ANOVA table showing the influence of exposure to chronic intake of Promethazine on Weight gain of female Albino rats.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial η^2
Block	8127.278	1	8127.278	36.172	.000	.098
Treatment	418.527	1	418.527	1.863	.173	.006
Error	74820.192	333	224.6855			
Corrected Total	83365.997	335				

The result from Table 5 shows that exposure to chronic intake of anti-psychotic (Promethazine) did not have significant effect on weight gain among female Albino Rats F (1, 333) = 1.86 $p > 0.05$, $\eta 2 = .01$. Further analysis on the mean differences was carried out with descriptive statistics and LSD post hoc multiple comparison Test and the result presented in Table 3b.

Table 3b: Summary of LSD post hoc comparison analysis showing the mean difference in weight gain between rats exposed to chronic intake of Promethazine and those exposed to Normal saline.

	Mean	S.E.M	LSD POST HOC	Sig.
Promethazine	124.006[a]	1.156	2.23*	.173
Control	126.238[a]	1.156		

*. The mean difference is significant at the .05 level.

a. Covariates appearing in the model are evaluated at the following values:. Days = 14.500

From the analysis, mean differences showed that rats in the control (x = 124.01) significantly gained more weight compared to rats ingested with Promethazine (x = 126.24). The mean difference was not significant. Based on this, hypothesis stated that there will be a significant difference in weight gain among females' rats ingested compare to thus rejected.

Table 4a: Summary Randomized Block ANOVA table showing the influence of exposure to chronic intake of Promethazine and Haloperidol on food consumption of female Albino rats.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial η^2
Block	333.782	1	333.782	.552	.458	.002
Treatment	19.000	1	19.000	.031	.859	.000
Error	94819.211	333	284.742			
Corrected Total	112931.121	335				

The result from Table 4a reveals that exposure to acute intake of anti-psychotic (Haloperidol & Promethazine) did not significantly influenced food consumption among Albino Rats F (1, 333) = .03, p > 0.05, η2= .00. Further analysis on the mean differences was carried out with descriptive statistics and LSD post hoc multiple comparison Test and the result presented in Table 4b.

Table 4b: Summary of LSD post hoc comparison analysis showing the mean difference in weight gain between rats exposed to acute intake of the combined drugs and those exposed to Normal saline.

	Mean	S.E.M	LSD POST HOC	Sig.
Combined Drugs	27.288[a]	1.3898	.48*	.86
Control	26.813[a]	1.898		

*. The mean difference is significant at the .05 level.

a. Covariates appearing in the model are evaluated at the following values:. Days = 14.500

From the analysis, mean differences showed that rats in the control (x = 26.81) significantly lesser food consumption compared to rats ingested with Haloperidol + Promethazine (x = 27.29). The mean differences was not significant. Based on this, hypothesis which states that there will be a significant difference in food consumption among female Albino rats ingested with different drugs is thus rejected.

Table 5a: Summary Randomized Block ANOVA table showing the influence of exposure to chronic intake of Haloperidol on food consumption of female Albino rats.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial η^2
Block	1339.079	1	1339.079	2.869	.091	.009
Treatment	49.834	1	49.834	.107960	.744000	.000
Error	155412.166	333	466.703			
Corrected Total	156801.080	335				

The result from Table 5a shows that exposure to acute intake of anti-psychotic (Haloperidol) significantly influenced food consumption among Albino Rats F (1, 333) = .11, p > 0.0, η2= .00. The result demonstrated that food consumption decreased by 4% among rats exposed to chronic intake of anti-psychotic (Haloperidol) compared to the control group. Further analysis on the mean differences was carried out with descriptive statistics and LSD post hoc multiple comparison Test and the result presented in Table 5b.

Table 5b: Summary of LSD post hoc comparison analysis showing the mean difference in food consumption between rats exposed to chronic intake of Haloperidol and those exposed to Normal saline.

	Mean	S.E.M	LSD POST HOC	Sig.
Haloperidol	26.935[a]	1.667	2.36*	.74
Control	26.165[a]	1.667		
*. The mean difference is significant at the .05 level.				
a. Covariates appearing in the model are evaluated at the following values:.			Days = 14.500	

From the analysis, mean differences showed that rats in the control (x = 26.17) significantly displayed more food consumption compared to rats ingested with Haloperidol (x = 26.94). The mean differences was not significant. Based on this, hypothesis states that there will be a significant difference in food consumption among females' rats ingested with different drugs is thus rejected.

Promethazine ingestion will significantly affect the food consumption of female albino rats exposed to the drugs. This hypothesis was tested using the Randomized Block ANOVA and the result presented in Table 6a.

Table 6a: Summary Randomized Block ANOVA table showing the influence of exposure to chronic intake of Promethazine on food consumption of female Albino rats.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial η^2
Block	1062642.865	1	1062642.865	1209.195	.000	.784
Treatment	3228.960	1	3228.960	3.674	.05	.04
Error	292640.972	333	878.802			
Corrected Total	1358512.797	335				

The result from Table 6a shows that exposure to chronic intake of anti-psychotic (Promethazine) significantly affect the food consumption among female Albino Rats F (1, 333) = 3.67, p < 0.05, η2= .04. The result demonstrated that food consumption increased by 4% with exposure to acute intake of anti-psychotic (Promethazine) compared to the control group. Further analysis on the mean differences was carried out with descriptive statistics and LSD post hoc multiple comparison Test and the result presented in Table 6b.

Table 6b: Summary of LSD post hoc comparison analysis showing the mean difference in food consumption between rats exposed to chronic intake of Promethazine and those exposed to Normal saline.

	Mean	S.E.M	LSD POST HOC	Sig.
Haloperidol	113.464[a]	2.203	6.20*	.05
Control	119.664[a]	2.203		

*. The mean difference is significant at the .05 level.

a. Covariates appearing in the model are evaluated at the following values:. Days = 14.500

From the analysis, mean differences showed that rats in the control (x = 119.66) significantly consumed more food compared to rats ingested with Promethazine (x = 113.02). The mean differences were significant. Based on this, hypothesis stated that there will be a significant difference in food consumption among females' rats ingested compare to thus, accepted.

DISCUSSION

Since the concern of this paper was on the trendy phenomenon of substance abuse/misuse, especially when it is done through cocktails of drugs, the major focus of this study/paper was to test if combination of two drugs, haloperidol and promethazine, would have on feeding behaviour, using albino rats because of ethical reasons, and then work back to see their individual effects on feeding behaviour.

On drug combination, it was discovered that rats ingested with the combination of the drugs did not show a significant difference in their eating behaviour, when compared with those that were not given any drug at all. This observation was contrary to the expectation of the researchers, who believed, from the literature reviewed that, combination of drugs would negatively affect intake of food intake and or weight gain among individuals. Schankweiler , Raddatz , Ellrott and Cirkel (2023) reasoned that this kind of outcome could be related to the type of food ingested, especially, among those who are attempting to control obesity, regardless of the drugs combination being taken.

A cursory look at the two measures of feeding behaviour threw up a critical issue, because there was a slight gain in weights (4%) of the rats ingested with combined drugs, yet there was no significant difference in food consumption of the rats. This goes to suggest that the drugs could actually contribute to weight gain even in the absence of food intake. This has significant implication for obese people who are trying to reduce weight. This observation was equally supported by Schankweiler, et al (2023) and Bonder and Davis, C (2022) when they talked about binge eating behaviour and more so for University students as observed by Gan, Mohd Nasir, Zalilah, & Hazizi (2011). The drugs could be responsible for suppression of appetite and or food intake.

The above observation then led to see the effect of this drugs (separately) because post hoc analysis shows a significant difference among the four experimental groups on feeding behaviour of the rats.

It was observed that Haloperidol alone, did not significantly influence weight gain among the rats compared to the control group. This is in line with the findings of von Wilmsdorff, Bouvier, Henning, Schmitt, and Gaebel (2010). However, haloperidol significantly influenced food consumption. In other words, though haloperidol influenced (increased) food consumption, also confirming von Wilmsdorff et al (2010) observation it did not translate to weight gain. The import of this observation could be that if someone is looking forward to losing weight, without letting go food intake, he/she should do so with ingestion of haloperidol, an abusive use of it is what is not encouraged in this paper.

When Promethazine was considered, it was observed that the drug alone also did not increase nor influence weight gain as then control group gained more weight than those in promethazine group. However, like in haloperidol situation, food consumption was influenced (increased food intake). This implies that promethazine is equally good for losing weight in the presence of increased food intake. However, combining the two drugs, slightly increased weight gain, implying that drugs combination should not be encouraged for those who are looking forward to weight loss. In simple language, cocktails of drugs could pose danger to those using them.

Chemical compositions of drugs matter because of their inhibiting tendencies, when combined, in their individual effectiveness accuracy. An inverse relationship between histamine (promethazine) and food intake, especially when taken along with other drugs that inhibits food intake as reported by Orthen-Gambill (1988)

CONCLUSION

Conclusion arising from this study is that combining drugs intake should be discouraged as full benefits of each drug on its own would not be met but rather may work inversely against the purpose(s) for which they were manufactured for. This is even more important for those who are embarking on weight loss. When combined together, there would be weight gained but less food intake, whereas when taken individually, there may be increased food intake but less or no weight gain for an individual that is weight conscious.

LIMITATIONS

Conclusion arising from this paper should be taken cautiously because human beings were not directly used in the study (ethical considerations). Different results may be obtained when human beings are direct participants in the study. Second, The chemical, physiological and anatomical compositions of the drugs were not determined and this may make it difficult to conclude on the definite effects of the drugs either individually or in combined form

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