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Binge Eating Pattern Among School Students

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Abstract: Binge eating disorder is when a person eats an excessive amount of food, losing control over what and how much is eaten, followed by feelings of guilt, shame or disgust. Factors like stress, food restriction, presence of palatable foods and environmental conditioning may also lead to binge in individuals. Early assessment and more extensive and suitable treatment may prevent more severe disorders. The main aim of this survey was to analyze binge-eating patterns among school students.Questionnaire was prepared and administered to 102 participants through a survey planet – an online survey. The study participants were people of age between 13-17. Data was collected from the link and was represented in the pie chart form. 31.2% binge eat more than 3 times a day, 32.3% binge eat more than 5 times a day, 19.4% binge eat more than 7 times a day. Stress, depression, negative feelings are some of the reasons, which influences binge eating, which is very common among school students. 48% consume more than normal level of calorie a day, 37.8% consume normal level of calorie, 13.3% consume less than normal level of calorie per day. Consumption of spicy food and junk food is also related to binge eating. Individuals with binge eating disorder experience impaired functioning in both social life and at home. From the survey, it was evident that binge eating is common among school students as the majority (32.3%) of them eat more than 5 times a day for which depression and hunger is the major cause.

Keywords: Binge eating, school children, obesity, awareness.

INTRODUCTION

Binge eating disorder is when a person eats an excessive amount of food, losing control over what and how much is eaten, followed by feelings of guilt, shame, or disgust (Granje, 2018). Symptoms of binge eating disorder can include eating more rapidly than normal, eating until completely full, eating large amounts when not hungry, eating alone because of embarrassment, etc (Peterson *et al.*, 2012). Individuals with BED experience impaired functioning in both their social life and at home. BED is also associated with higher levels of disability and health problems (Tanofsky-Kraff *et al.*, 2013). Factors like stress, food restriction, presence of palatable foods and environmental conditioning may also lead to binge in individuals (Mathes *et al.*, 2009).

The occurrence of binge eating episodes in obese patients was first observed and described by stunkard, in 1959 (Yager, 2007). These patterns can be improved by self-monitoring the type and amount of foods they ingest, the time and place where they started and finished eating, the nature of binge, etc (Neveu *et al.*, 2016). BED is also known as subclinical binge eating (Rosenbaum and White, 2015). The best treatment options for binge eating disorder are unclear but can try psychological and behavioral treatment, pharmacological treatment, etc (Abbott *et al.*, 2018). Also it is found that self-monitoring food intake may substantially help in reducing binge eating in previous research (Latner and Terence Wilson, 2002). Early assessment and more extensive and suitable treatment may prevent more severe disorder (Holford, 2010).

There is no exact solution to eradicate this problem completely and also the exact cause has not been found for this problem. Here the survey is done only among school students, which included both male and female students, but further surveys can be done among elderly population to analyze the problem. Our team has rich experience in research and we have collaborated with numerous authors over various topics in the past decade (Ezhilarasan, 2018; Ezhilarasan, Sokal and Najimi, 2018; Gupta, Ariga and Deogade, 2018; Jeevanandan and Govindaraju, 2018; J *et al.*, 2018; Menon *et al.*, 2018; Prabakar *et al.*, 2018; Rajeshkumar *et al.*, 2018, 2019; Vishnu Prasad *et al.*, 2018; Wahab *et al.*, 2018; Dua *et al.*, 2019; Duraisamy *et al.*, 2019; Ezhilarasan, Apoorva and Ashok Vardhan, 2019; Gheena and Ezhilarasan, 2019; Malli Sureshbabu *et al.*, 2019; Mehta *et al.*, 2019; Panchal, Jeevanandan and Subramanian, 2019; Rajendran *et al.*, 2019; Ramakrishnan, Dhanalakshmi and

Subramanian, 2019; Sharma *et al.*, 2019; Varghese, Ramesh and Veeraiyan, 2019; Gomathi *et al.*, 2020; Samuel, Acharya and Rao, 2020)

The main aim of this survey was to analyze binge-eating patterns among school students. Previously our department has published extensive research on various aspects of prosthetic dentistry ('Evaluation of Corrosive Behavior of Four Nickel–chromium Alloys in Artificial Saliva by Cyclic Polarization Test:An in vitro Study', 2017; Ganapathy, Kannan and Venugopalan, 2017; Jain, 2017a, 2017b; Ranganathan, Ganapathy and Jain, 2017; Ariga *et al.*, 2018; Gupta, Ariga and Deogade, 2018; Anbu *et al.*, 2019; Ashok and Ganapathy, 2019; Duraisamy *et al.*, 2019; Varghese, Ramesh and Veeraiyan, 2019), this vast research experience has inspired us to research about binge eating patterns.

MATERIALS AND METHODOLOGY

Self-administrated questionnaire was designed based on awareness. The questionnaire was distributed through an online survey monkey link. The study population included people belonging to the 13-17 age group. Data was collected from the link and was represented in the pie chart form. The participants were explained about the purpose of study in detail. The questions were carefully studied and the participants marked the corresponding answers. The data was collected and statistically analyzed

RESULTS AND DISCUSSION

This survey is done among school students in order to analyze binge eating patterns among them. This included 102 participants and then the result was statistically analyzed where it showed that binge eating is a common problem among both the genders. When asked whether they feel that they are obese, they result showed 35.1% do feel that they are obese [Figure 1]. 62.2% feel their eating behavior is out of control [Figure 2]. 57.9% continue eating even if they feel full or not hungry when it is their favorite food [Figure 3]. 31.2% binge eat more than 3 times a day, 32.3% binge eat more than 5 times a day, 19.4% binge eat more than 7 times a day [Figure 4]. 47.4 % eat faster than other people [Figure 5]. 52.7% eat until they are completely full [Figure 6]. 48.9% eat alone as they are embarrassed by what or how much is eaten [Figure 7]. 45.6% feel ashamed or guilty about binge eating [Figure 8]. 54.9% go for a walk after binge eating [Figure 9]. 48.4% have low self esteem or feel lonely [Figure 10]. 48% consume more than normal level of calorie a day, 37.8% consume normal level of calorie, 13.3% consume less than normal level of calorie per day [Figure 11]. 44.8% intake is healthy [Figure 12]. 44.3% Indulge in binge eating as they are hungry, 27.8% indulge due to depression, 17.8% indulge for timepass, 10.3% indulge as they are happy [Figure13].

Binge eating is found to be common among school students from the result as 44.3% indulge in it due to depression and hunger but other researches show that stress is the major factor for this habit (Tanofsky-Kraff *et al.*, 2012). 45.6% feel ashamed or guilty about binge eating. Teenagers are more conscious about their body image and are ready to skip food for any reason (Cheng *et al.*, 2019). 54.9% go for a walk after they binge eat whereas in other surveys only 37.2% do workout after they binge eat,which shows that enough awareness has to be created (Tworkowski *et al.*, 2018). 35.1% feel they are obese ,similarly in other research also there were 30-35 % were obese, which was due to overeating without loss of control ,eating in the absence of hunger,etc (Goldschmidt *et al.*, 2015). 48.4% have low self esteem or feel lonely. Binge eating has similar risk factors like depressive symptoms, body satisfaction, self esteem , etc. 44.8% intake is healthy which is less and this is due to the current food environment being replete with highly energy dense, ultra-processed food served in enormous portion sizes. 49% consume more than normal levels of calorie per day, which shows that symptoms of depression and anxiety influence calorie intake (Goldschmidt *et al.*, 2016).Our institution is passionate about high quality evidence based research and has excelled in various fields ((Pc, Marimuthu and Devadoss, 2018; Ramesh *et al.*, 2018; Vijayashree Priyadharsini, Smiline Girija and Paramasivam, 2018; Ezhilarasan, Apoorva and Ashok Vardhan, 2019; Ramadurai *et al.*, 2019; Sridharan *et al.*, 2019; Vijayashree Priyadharsini, 2019; Chandrasekar *et al.*, 2020; Mathew *et al.*, 2020; R *et al.*, 2020; Samuel, 2021)

There is no exact solution to eradicate this problem completely and also the exact cause has not been found for this problem. Here the survey is done only among school students, which included both male and female students, but further surveys can be done among elderly population to analyze the problem.

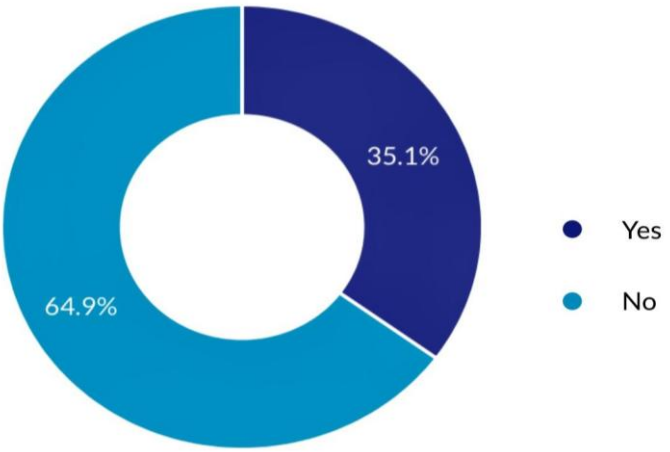

Fig.1: Pie chart represents the opinion on feeling obese which shows response for the question on whether they feel they are obese. 35.1% (Dark blue) responded 'yes' and 64.9% (Light blue) responded 'no'.

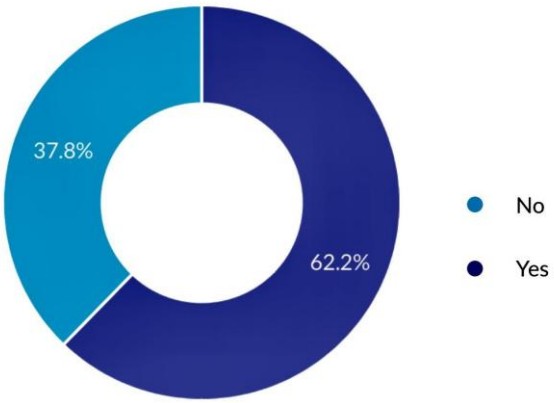

Fig.2: Pie chart represents the opinion on eating behaviour which shows response for the question on whether they feel their eating behaviour is out of control. 62.2% (Dark blue) responded 'yes' and 37.8% (Light blue) responded 'no'.

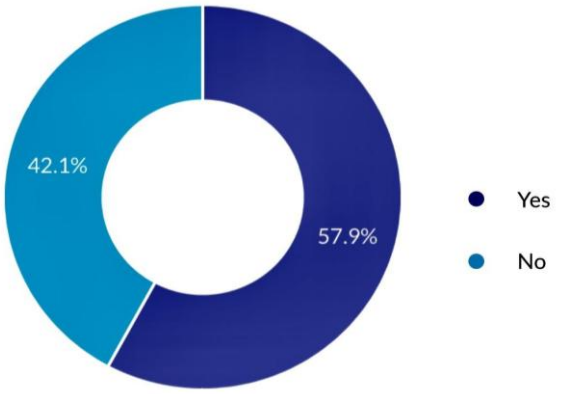

Fig.3: Pie chart represents the opinion on eating behaviour when it is their favorite food which shows response for the question on whether they continue to eat even if they are full or not hungry when it is their favorite food. 57.9% (Dark blue) responded 'yes' and 42.1% (Light blue) responded 'no'.

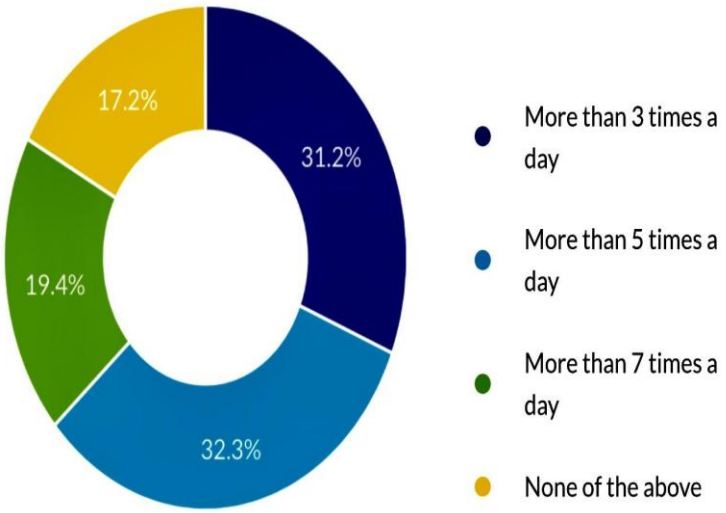

Fig.4: Pie chart represents the opinion on binge eating which shows response for the question on how often they binge eat. 31.2% (Dark blue) responded 'more than 3 times a day', 32.3% (Light blue) responded 'more than 5 times a day', 19.4% (green) responded 'more than 7 times a day' and 17.2% (yellow) responded 'none of the above'.

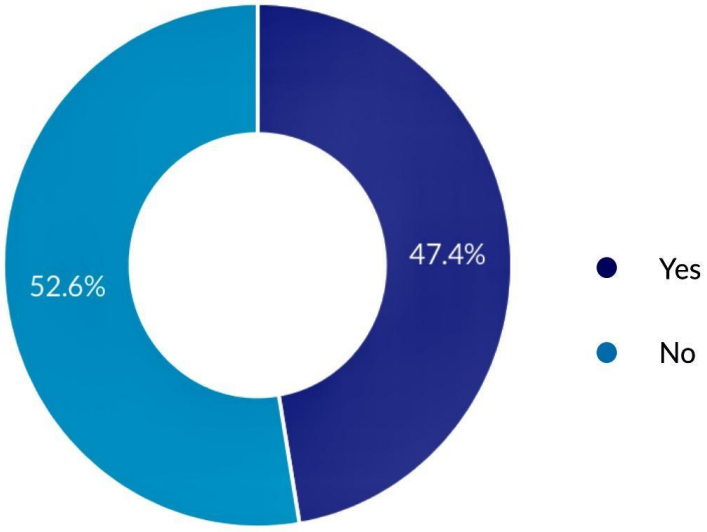

Fig.5: Pie chart represents the opinion on eating faster than other people which shows response for the question on whether they feel they eat faster than other people. 47.4% (Dark blue) responded 'yes' and 52.6% (Light blue) responded 'no'.

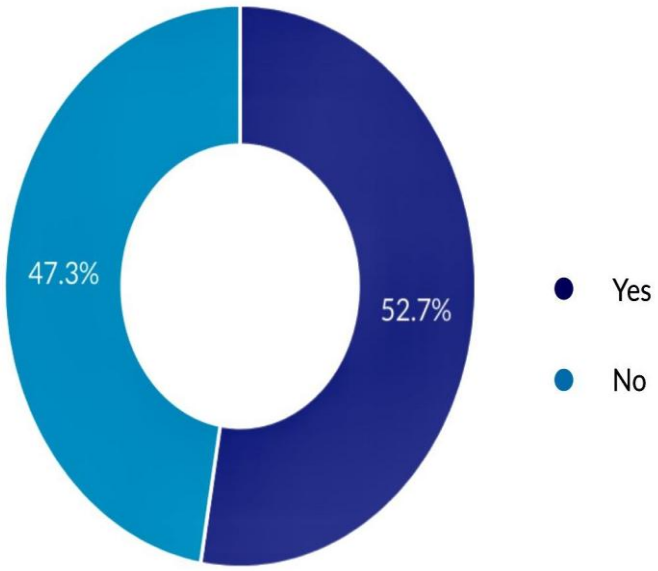

Fig.6: Pie chart represents the opinion on eating until completely full which shows response for the question on whether they eat until they are completely full. 52.7% (Dark blue) responded 'yes' and 47.3% (Light blue) responded 'no'.

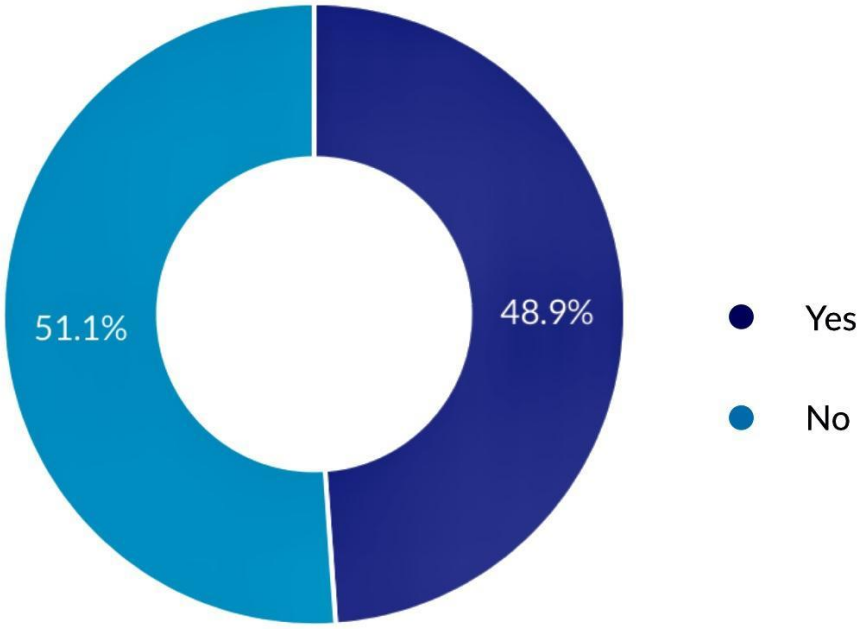

Fig.7: Pie chart represents the opinion on eating alone as they are embarrassed by what or how much is eaten which shows response for the question on whether they eat alone as they are embarrassed by what or how much is eaten. 48.9% (Dark blue) responded 'yes' and 51.1% (Light blue) responded 'no'.

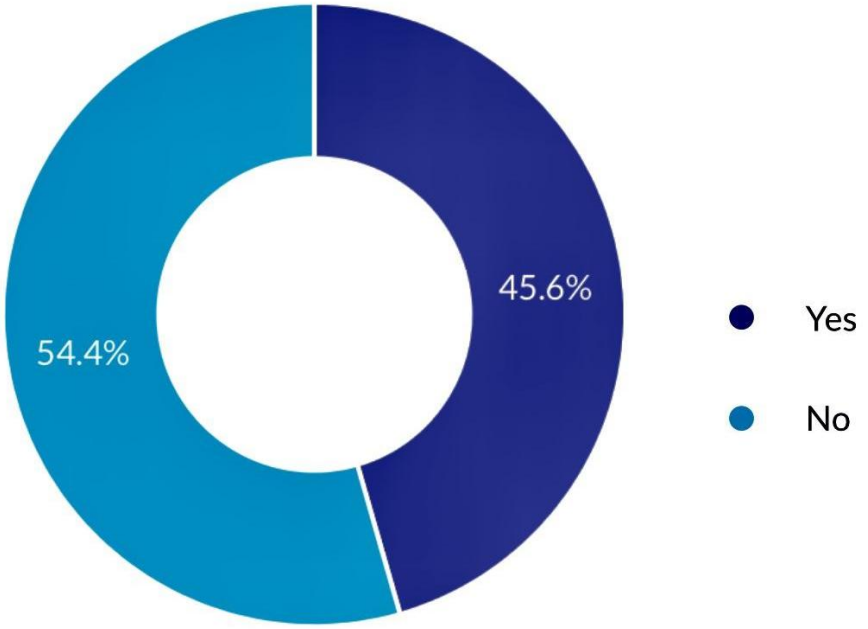

Fig.8: Pie chart represents the opinion on feeling ashamed or guilty about binge eating which shows response for the question on whether they feel ashamed or guilty about binge eating. 45.6% (Dark blue) responded 'yes' and 54.4% (Light blue) responded 'no'.

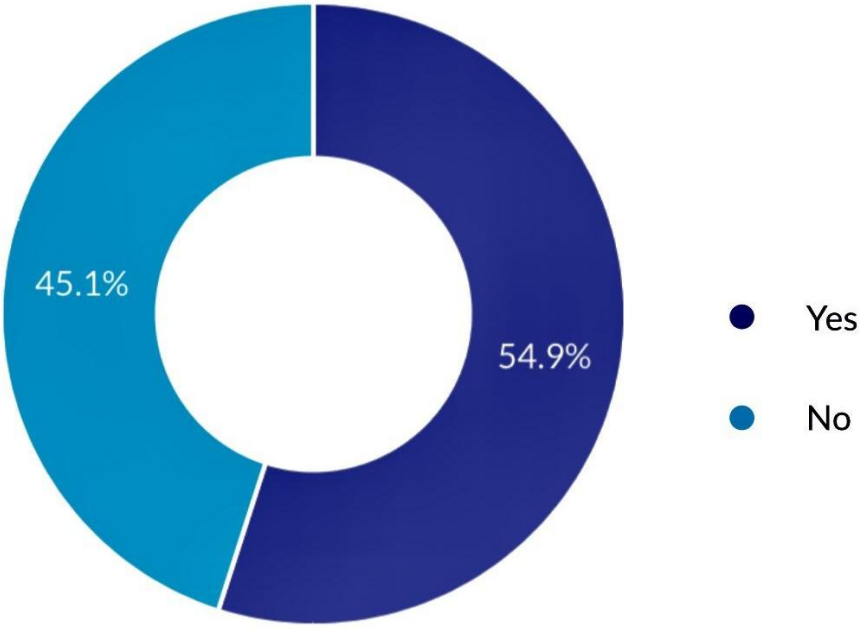

Fig.9: Pie chart represents the opinion on going for a walk after binge eating which shows response for the question on whether they go for a walk after binge eating. 54.9% (Dark blue) responded 'yes' and 45.1% (Light blue) responded 'no'.

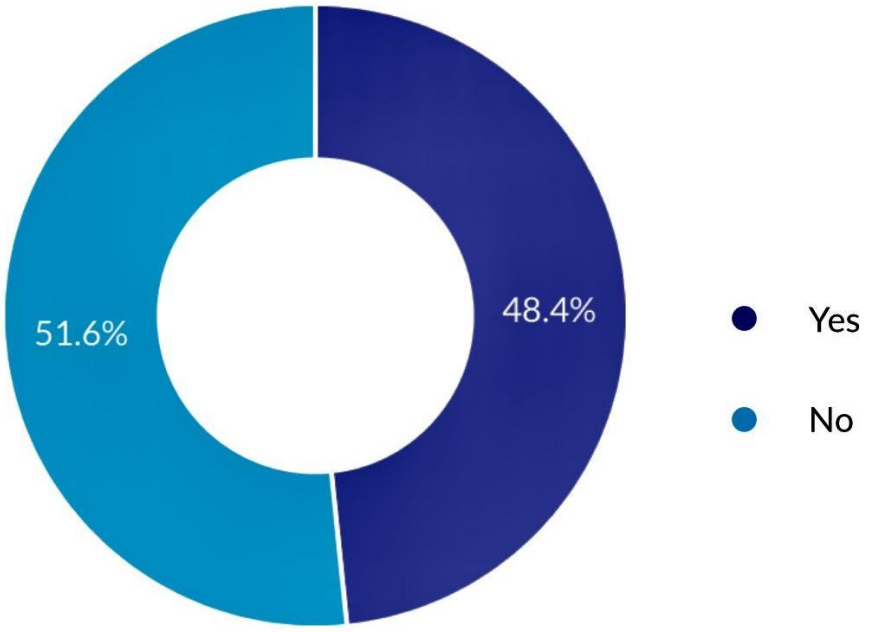

Fig.10: Pie chart represents the opinion on low self esteem or feeling lonely which shows response for the question on whether they have low self esteem or feel lonely. 48.4% (Dark blue) responded 'yes' and 51.6% (Light blue) responded 'no'.

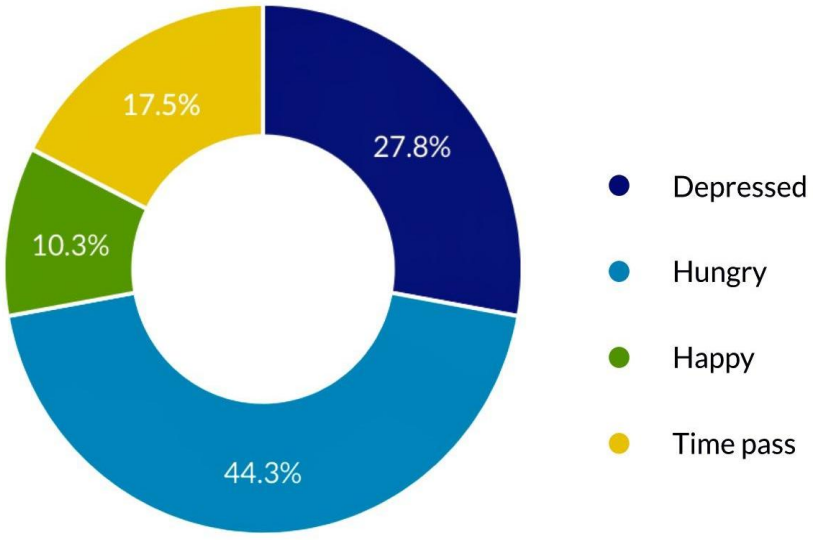

Fig.11: Pie chart represents the opinion on calorie consumption in a day which shows response for the question on how much calorie they consume in a day. 49% (Dark blue) responded 'more than normal level', 37.8% (Light blue) responded 'normal level' and 13.3% (green) responded ' less than normal level'.

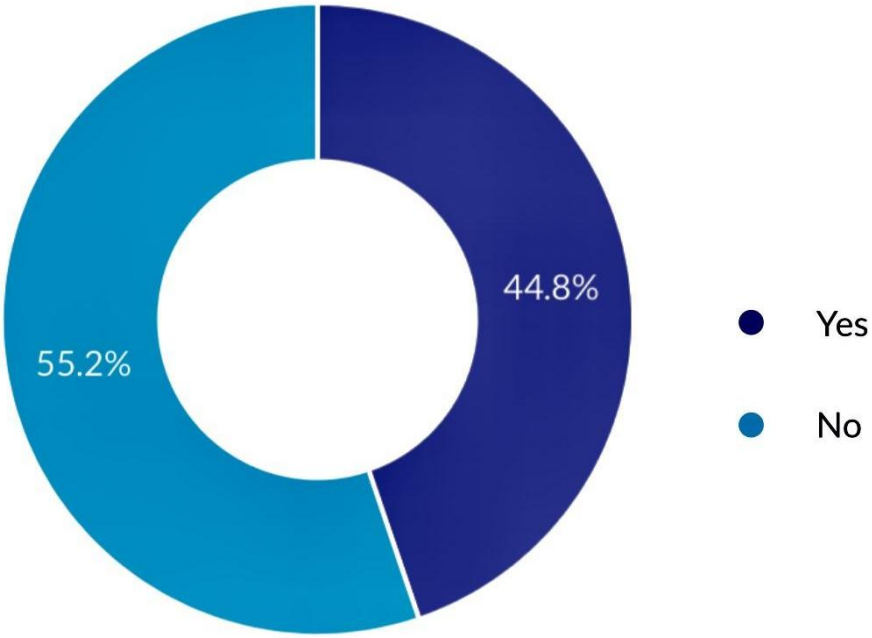

Fig.12: Pie chart represents the opinion on healthy intake which shows response for the question on whether their intake is healthy. 44.8% (Dark blue) responded 'yes' and 55.2% (Light blue) responded 'no'.

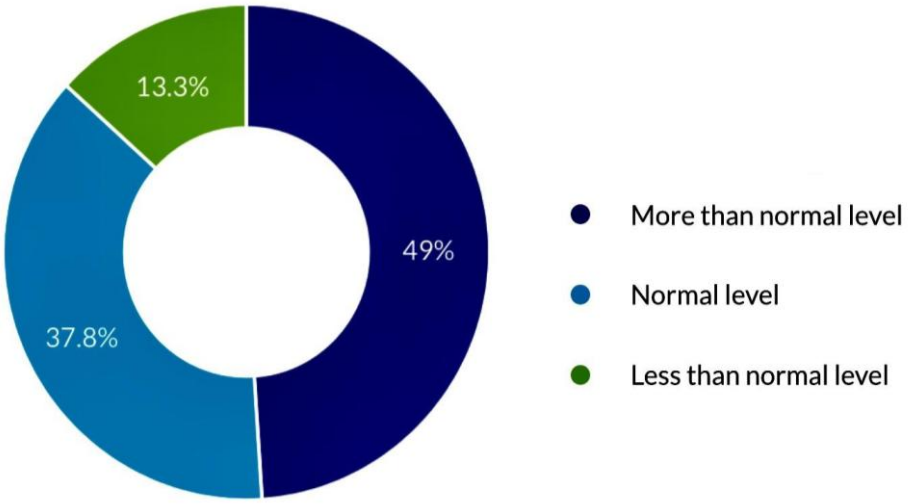

Fig.13: Pie chart represents the opinion on reason to indulge in binge eating which shows response for the question on the reason to indulge in binge eating. 27.8% (Dark blue) responded 'depression', 44.3% (Light blue) responded 'hungry', 10.3% (green) responded 'happy' and 17.5% (yellow) responded 'timepass'.

CONCLUSION

From the survey, it was evident that binge eating is common among school students as the majority (32.3%) of them eat more than 5 times a day for which depression and hunger is the major cause.

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CONFLICT OF INTEREST

The author declares that there was no conflict of interest in the present study.

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