



## Prevalence of Constipation and its Relationship with Dietary Habits Among College Going Girls in the Age Group of 18-25 Years of Kolkata, West Bengal, India

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### Abstract

Constipation is one of the most prevalent digestive system problems and is characterised by an increase in bowel frequency, too few and infrequent movements, difficulty passing waste, and hard, strained faeces. Constipation can result from a variety of causes, including environmental, psychological, hereditary, and others. Approximately 40% of individuals globally experience digestive problems like diarrhoea, constipation, or irritable bowel syndrome (IBS), with prevalence rates of 4.7%, 11.7%, and 4.1%, respectively, according to a large-scale multinational study based on online surveys. Additionally, gastrointestinal conditions like IBD, Crohn's disease, and ulcerative colitis have been associated with bowel motion. Extreme bowel motions (constipation or frequency) could therefore be a sign of various diseases or gastrointestinal issues.

The present study aimed to ascertain the prevalence of constipation among college-going girls (18-25 years old) and the relationship between constipation and dietary practices. It is one observational and descriptive in nature, and was limited to college-going female students between the ages of 18 and 25 years who live at Kolkata, West Bengal. The data was collected through an online survey using a pre-tested standardized questionnaire using a random sampling technique and the sample size of 300 was achieved.

Among the respondents 19% were found to be suffering from constipation. There is a strong statistical correlation between constipation frequency, daily dietary pattern, and food habits. According to the study's findings, constipation is frequently caused by stress and an unhealthy lifestyle. Thus, in conclusion the college girls are experiencing constipation and the regular healthy eating habits, including foods high in fibre in the diet, and drinking adequate water can be effective treatments for the same.

**Keywords:** Constipation; Bowel Movements; Lifestyle; Defecation Difficulty; Eating Habits; Dietary Fibres

### Introduction

Bowel movements describe the frequency and comfort of faecal discharge, or stool production. Faecal discharge is an essential process of eliminating the body's undigested and unabsorbed food particles along with cells and microflora [1]. The frequency,

type, and contents are the main characterization of faeces [2]. A "normal" defecation is to have bowel movements between three per week and three per day [3].

According to a large-scale multinational study based on internet surveys, >40% of people worldwide suffer from gastrointestinal

complications such as diarrhoea, constipation, or irritable bowel syndrome (IBS), with prevalence rates of 4.7%, 11.7%, and 4.1%, respectively [4]. Bowel movements have also been linked to gastrointestinal diseases such as IBD, Crohn's disease, and ulcerative colitis [5]. As a result, extreme bowel movements (constipation or frequency) may be early indicators of gastrointestinal disorders or other diseases [6]. Bowel movement can be affected by various factors like age, gender and body mass index (BMI) [7]. In case of chronic constipation which is a bowel movement-related disorder, it has been found that women have been more frequently affected by this [8]. However, growing age is related to rising gastrointestinal motility disorders for both genders, i.e., constipation, incontinence or diarrhoea [9]. Disorders like anorexia or morbid obesity which are affected by body weight [10,11] are also related to bowel movement complaints. Anxiety, perceived stress and depression [12], infections [14], changes in the gut microbiota [13], physical inactivity [15], and altered sleeping patterns [16] are some more factors that cause irregular bowel movements.

Dietary factors such as dietary patterns/habits, food group consumption preferences, and macro- and micronutrient intake, among others, have been shown to modulate gastrointestinal tract activity [17]. For example, the number of calories in a meal has been linked to the digestive tract colonic motor response [18], which also affects the stomach [19] and the small intestine [20]. Low energy intake may be linked to constipation by slowing colonic transit time [21]. Excess calorie intake may also disrupt the proper functioning of the gastrointestinal tract [22]. Along with that low liquid intake, i.e., water intake from food and beverages, has also been linked to constipation, possibly due to the osmotic action of fluids [23]. Given the ability of nutrients to influence gastrointestinal food passage, it is not surprising that dietary patterns have been linked to bowel movements [24]. The Westernized diet is distinguished by a high intake of fat, primarily saturated and trans fats, as well as a high intake of refined sugar, excessive salt consumption, and a low intake of fruits, vegetables, and dietary fibre [25]. The Mediterranean diet, on the other hand, has been shown to significantly improve bowel movements due to its plant-rich profile [26]. According to this study, vegetarian and/or vegan diets have higher bowel movement frequency than meat and/or fish eaters [7]. In general, eating a lot of whole grains, fruits, vegetables, nuts, and seeds helps with bowel movements [27]. Fast

food, junk food, and/or processed food consumption, on the other hand, has been linked to functional gastrointestinal disorders [28]. Lactose-free, gluten-free, low-carb, or low-FODMAP (fermentable oligosaccharides, disaccharides, monosaccharides, and polyols) diets are also used as dietary therapies to treat functional bowel disorders [29]. In people who have functional constipation, the exact cause of the condition is unknown, although psychological problems are thought to be contributing causes. Children with constipation have previously been found to have significant physical or psychological trauma as well as a history of personal health issues [30], while other studies have found that one-third of children with functional constipation have clinical ranges of scores on the Child Behaviour Checklist [31]. Other research, however, fell short of proving this link [32].

The precise link between emotional stress and childhood functional constipation has not been thoroughly studied, although earlier research has shown a high association between functional constipation and psychological symptoms including anxiety and depression in adults [35,36]. The few researches that have been done on this topic have evaluated this effect in an indirect manner. Inan, *et al.* research on children aged 7 to 12 in Turkey showed a correlation between serious physical or psychological trauma, a history of personal health issues, and aberrant oral habits and constipation [30]. The influence of typical stressful family and school-related situations was not examined in this study. They proposed using aberrant oral habits as an indiscriminate indicator of stress and stress as a contributing factor to constipation. Since only extremely intense emotional stress would result in such atypical oral habits, this likely underestimates the actual connection between constipation and stress [30]. Psychological stress has an impact on digestive health via the brain-gut axis. In both infants and adults, it has been linked to various functional gastrointestinal illnesses such as functional abdominal pain and irritable bowel syndrome [33,34]. Constipation can be controlled by altering one's lifestyle, consuming more dietary fibre and water, and engaging in more physical exercise. Constipation can also be treated pharmacologically using stool softeners, bulk-forming substances, osmotic agents, and chloride channel activators. Probiotics and surgery can both be used to treat some chronic conditions [37]. Additionally, a number of studies have demonstrated the beneficial effects of moderate exercise on the regularity and consistency of stools [38-40].

The exercise dose effect is a crucial factor to take into account, as mild to moderate physical activity has been shown to improve the health of the gastrointestinal tract (GIT), as shown by the reduction of inflammatory markers like C-reactive protein (CRP) in obese women and the reduction of liver enzymes in obese patients with hepatitis C infection [41]. Acute strenuous activity, on the other hand, may result in gastrointestinal (GI) bleeding, heartburn, nausea, vomiting, and diarrhoea [42]. Additionally, persons who are physically active have shown a lower prevalence of constipation compared to those who are not [43]. It is yet unknown exactly how exercise aids in controlling and preventing constipation [44]. It has been proposed by some of the underlying processes that exercise alters colonic motility and quickens gastrointestinal transit. Exercise has been shown to boost the release of key GI hormones by stimulating the vagus nerve and/or decreasing blood flow to the GI tract. Another explanation is that physical activity, such as bouncing, standing up straight, gravity, and abdominal muscular contraction, mechanically stimulates the gut. The increase in energy expenditure during physical activity was observed to influence energy intake and, thus, the requirement for increasing dietary fibre intake. This mechanical stimulation aids stools in moving into the rectum, contributing to the stimulation [45,46]. There have been few studies on the effects of macronutrients other than carbohydrates on bowel movements, and even fewer on included micronutrients. The purpose of this study was to observe the prevalence of constipation and its relationship with dietary habits and stress among college-going girls (18-25 years) in Kolkata, West Bengal, India.

### Methodology

This observational descriptive study was conducted among 300 college going girls selected randomly through social media, age group of 18-25 years, residing at Kolkata, West Bengal, India. The inclusion criteria was only female college going students who were in the age group of 18-25 years, residing at Kolkata, West Bengal, India. The study duration was February 2022- May 2022. Online pre-tested standardized questionnaire was used to conduct the survey. Data collected were put in Microsoft Excel Worksheet (Microsoft, Redwoods, W. A., USA.) and they were checked for elimination errors. The association between two qualitative data was calculated by Pearson’s Chi-square test and ‘P’ value was determined. All the statistical analysis was performed by SPSS software (Statistical Package for Social Sciences version 20.0). ‘P’ value is equal to or less than 0.05 was considered as statistically significant.

### Results and Discussion

Mean age of the targeted adult population was 21.65 ±1.53. The mean height of the targeted respondents was 160.49 ± 5.89 and the mean weight was 64.72 kg, again the mean BMI of the targeted respondents was 25.22 kg/m<sup>2</sup> Out of 300 respondents present, 19% of the population are suffering from constipation. As per the anthropometric assessment among all the respondents 0.33% were suffering from underweight, 21.67% were overweight and 46.33% were suffering from obesity grade I whereas 10.67% were suffering from obesity grade II (Table 1). Again, in accordance with Table No 2 only 19.29% respondents belonged to the normal category and 80.70% belonged to the malnourished category.

Nutritional Status	BMI (kg/m <sup>2</sup> )	Female (%)	Constipation sufferers (%)		Chi-square test (p value)
		N = 300	Yes	No	
Underweight	<18	1(.33%)	-	1(.41%)	0.369(p-0.83)
Normal	18 - 22.9	63(21%)	11(19.29%)	52(21.39%)	
Overweight	23 - 24.9	65(21.67%)	46(80.70%)	190(78.18%)	
Obesity grade I	25 - 29.9	139(46.33%)			
Obesity grade II	30 - 34.9	32(10.67%)			
Obesity grade III	> 35	-			

**Table 1:** Summary of the nutritional status of the respondents based on Body Mass Index (BMI) in tabular representation and its association with constipation.

Nutritional Status	BMI (kg/m <sup>2</sup> )	Female (%)	Constipation Sufferers%		Chi-square test (p value)
		N = 300	Yes	No	
Normal	18 - 22.9	63(21%)	11(19.29%)	52(21.39%)	0.123(p-0.72)
Malnourished	<18 &/or >23	237(79%)	46(80.70%)	191(78.60%)	

**Table 2:** Association between Body Mass Index (BMI) and constipation.

Among the respondents 1.67% were vegetarian and 98.33% were non-vegetarian. Out of them 1.75% of the vegetarians and 1.64% of the non-vegetarians suffered from constipation. Insignificant statistical association was found between the food habit and presence of constipation using chi-square test (Chi-square-0.003, p-0.65). Chronic constipation is regarded as the most common gastroenterological problems which can be treated using certain lifestyle modifications such as inclusion of fibre and sufficient water in daily diet. This fibre helps to bind water and act as a bulking agent, helping in better bowel movement [47]. There can be several risk factors that could lead to causation of constipation. They include demographic factors (female gender), lifestyle factors (physical activity) and health-related factors (surgery, certain medications) [48]. The Rome IV criteria categorizes disorders of chronic constipation into four subtypes: (a) functional constipation, (b) irritable bowel syndrome with constipation, (c) opioid-induced constipation, and (d) functional defecation disorders, including inadequate defecatory propulsion and dyssynergia defecation [49]. As per daily dietary pattern, among the respondents in the present study 79.67% followed diet pattern (a), 20.33% followed diet pattern (b) and none followed diet pattern (c) and (d). Out of these, the constipation sufferers about 75.43% belonged to category (a) and 24.56% belonged to category (b). Insignificant statistical association was found between the daily dietary pattern and presence of constipation using chi-square test (Chi-square-0.777, p-0.23). Chronic constipation is highly prevalent, affecting between 10% to 15% of the population. Chronic constipation is either a primary disorder (such as normal transit, slow transit, or defecatory disorders) or a secondary one (due to medications or, in rare cases, anatomic alterations) [50].

While considering the frequency of skipping breakfast among the respondents 79% did not skip their breakfast at all, 21% skipped their breakfast for 1-3 days. Out of them, 73.68% of the

constipation sufferers did not skip breakfast and 26.31% skipped breakfast for 1-3 days. Insignificant statistical association was found between skipping breakfast and onset of constipation using chi-square test (Chi-square-1.119, p-0.17). According to, daily water intake among the respondents, 12% were found to drink <1.5L of water daily and 88% were found to drink >1.5L of water daily. Out of these, 87.71% of the constipation sufferers drank <1.5L of water/day and the rest 12.28% drank >1.5L water/day. Significant statistical association was found between daily water intake and presence of constipation using chi-square test (Chi-square-0.005, p-0.05). Again, considering frequency of green leafy vegetable consumption among the respondents, 5% ate green leafy vegetables daily, 61% ate once per week, 15.67% ate <3 times per week and 18.33% ate very rarely. Out of them, 64.91% of the constipation sufferers ate green leafy vegetables very rarely, 5.26% ate <3 times/week and 29.82% ate once/week. Significant statistical association was found between frequency of green leafy vegetables consumption and presence of constipation using chi-square test (Chi-square-102.870, p-0.00). Green leafy vegetables other than playing a role in constipation different traditional Indian food made up of these constituents also help in proper brain functioning which is also a required component for the targeted group [51]. Similarly, when Frequency of fruit consumption was considered among the respondents, 10% ate fruits daily, 58.33% ate once per week, 23.67% ate <3 times per week and 8% ate very rarely. Out of them, 10.52% of the constipation sufferers ate fruits very rarely, 22.80% ate <3 times/week, 63.15% ate once/week and 3.50% ate fruits daily. Significant statistical association was found between frequency of fruits consumption and presence of constipation using chi-square test (Chi-square-3.829, p-0.02). Overall, an adequate diet not only helps in recovering constipation but also will impact significantly on having a better immune health [52].

Sl. No.	Particulars	Female (%)	Constipation Sufferers (%)		Chi-square test (p value)
		N = 300	Yes	No	
1.	Food habit: Vegetarian Non-vegetarian	5(1.67%) 295(98.33%)	1(1.75%) 4(1.64%)	56(98.24%) 239(98.35%)	0.003 (p-0.65)
2.	Daily dietary pattern: Breakfast + Lunch + Evening + Dinner Breakfast + Lunch + Dinner Lunch + Dinner Other	239(79.67%) 61(20.33%) - -	43(75.43%) 14(24.56%) - -	196(80.65%) 47(19.34%) - -	0.777 (p-0.23)
3.	Skipping breakfast: None 1-3 days 3-6 days Everyday	237(79%) 63(21%) - -	42(73.68%) 15(26.31%) - -	195(80.24%) 48(19.75%) - -	1.119 (p-0.17)
4.	Daily water intake: < 1.5L > 1.5L	36(12%) 264(88%)	50(87.71%) 7(12.28%)	29(11.93%) 214(88.06%)	0.005 (p-0.05)
5.	Frequency of green leafy vegetable consumption: Daily Once per week <3 times per week Very rarely	15(5%) 183(61%) 47(15.67%) 55(18.33%)	- 17(29.82%) 3(5.26%) 37(64.91%)	15(6.17%) 166(68.31%) 44(18.10%) 18(7.40%)	102.870 (p-0.00)
6.	Frequency of fruit consumption: Daily Once per week <3 times per week Very rarely	30(10%) 175(58.33%) 71(23.67%) 24(8%)	2(3.50%) 36(63.15%) 13(22.80%) 6(10.52%)	28(11.52%) 139(57.20%) 58(23.86%) 18(7.40%)	3.829 (p-0.02)

**Table 3:** Nutritional assessment of the respondents and its association with constipation.

Behavioural modifications should be considered in primary care, together with pharmacotherapy such as laxatives [53]. Primarily, it was found that certain symptoms of constipation are age-dependent and that symptoms of constipation are not included in the Rome IV criteria, such as daily failure to defecate and an average duration of straining of more than five minutes, are also reliable indicators of constipation [54]. It was found that most constipation is self-managed by patients, 22% seek health care, mostly to primary care physicians (>50%) and gastroenterologists (14%), resulting in large expenditures for diagnostic testing and treatments [50]. Besides, these mindful eating habits also play an

important role in having a healthy eating behaviour [55]. Among all the respondents, 53.67% were found to sleep for 5-6 hours daily and 46.33% were found to sleep for 7-8 hours daily. Out of that, 54.32% of the constipation sufferers slept for 5-6 hours daily and the rest 49.12% slept for 7-8 hours daily. Insignificant statistical association was found between daily sleeping pattern and the presence of constipation (Chi-square-0.220, p-0.37). Another researcher mentioned that the symptoms of constipation might differ from one patient to another and also its impact on different age groups might be different [56]. Another group of researchers stated that the occurrence of constipation could be secondarily

due to diet, drugs, endocrine diseases, metabolic diseases, neurological diseases, psychiatric disorders, or gastrointestinal obstruction. They also mentioned that if there is no presence of any kind of secondary cause, then this type of constipation should be diagnosed as functional constipation. According to them, in order to relieve the patient of the symptoms, modification of diet and lifestyle should be implemented and if unsuccessful after using this method, only then laxative therapy should be started [57].

As per daily exercise 17% respondents were found to exercise and 83% were found who do not exercise. Out of that, 84.28% of the constipation sufferers did not exercise at all and 15.78% did exercise. Insignificant statistical association was found between exercise and presence of constipation (Chi-square-0.073, p-0.48).

Now if we consider, frequency of exercise per week about 13.33% of the respondents were found to exercise 3-4 days/week, 3.67% were found to exercise for 1-2 days/week and 83% were found to not exercise at all per week. Out of that, 84.21% of the constipation sufferers exercised rarely, 5.26% exercised for 1-2 days/week and 10.52% exercised for 3-4 days/week. Insignificant statistical association was found between frequency of exercise per week and presence of constipation (Chi-square-0.917, p-0.63). Considering, stress of the respondents, 26% were found to suffer from stress and 74% were found to not suffer from stress. Out of that, 75.43% of the constipation sufferers were found to undergo stress and the rest 24.56% did not undergo any stress. Significant statistical association was found between stress and presence of constipation (Chi-square-89.396, p-0.00).

Sl. No.	Particulars	Female (%)	Constipation Sufferers (%)		Chi-square test (p value)
		N = 300	Yes	No	
1.	Daily sleeping pattern: 5-6 hours 7-8 hours	161(53.67%) 139(46.33%)	29(50.87%) 28(49.12%)	132(54.32%) 111(45.67%)	0.220 (p-0.37)
2.	Exercise: Yes No	51(17%) 249(83%)	9(15.78%) 48(84.21%)	42(17.28%) 201(82.71%)	0.073 (p-0.48)
3.	Frequency of exercise per week: Daily 5-6 days/week 3-4 days/week 1-2 days/week Rarely	- - 40(13.33%) 11(3.67%) 249(83%)	- - 6(10.52%) 3(5.26%) 48(84.21%)	- - 34(13.99%) 8(3.29%) 201(82.71%)	0.917 (p-0.63)
4.	Stress: Yes No	78(26%) 222(74%)	43(75.43%) 14(24.56%)	35(14.40%) 208(85.59%)	89.396 (p-0.00)

**Table 4:** Summary of the lifestyle of the respondents and its association with constipation.

As per Stool consistency among the respondents, 81% stated that their stool consistency was soft lumpy and 19% stated their stool consistency was hard pellet like. Out of that, 100% of the constipation sufferers had hard pellet like stool consistency. Significant statistical association was found using chi-square test (Chi-square-300.00, p-0.00). Similarly, considering abdominal pain and discomfort 82% of the respondents did not have any abdominal pain and discomfort, 15% had mild and 3% had moderate abdominal pain and discomfort. Out of that, 5.26% of the constipation sufferers did not have any abdominal pain and

discomfort, 78.94% had mild and 15.78% had moderate pain in discomfort in the abdomen. Significant statistical association was found using chi-square test (Chi-square-280.745, p-0.00). Now when we consider rectal burning 89.67% of the respondents were found not to suffer from rectal burning, 10.33% had mild rectal burning. Out of that, 45.61% of the constipation sufferers did not have any rectal burning and the rest 54.38% had mild rectal burning. Significant statistical association was found using chi-square test (Chi-square-147.388, p-0.00). While considering Rectal bleeding or tearing 96.33% of the respondents did not

have any rectal bleeding or tearing, 3.67% suffered from mild rectal bleeding or tearing. Out of that, 80.70% of the constipation sufferers did not have any rectal bleeding or tearing and the rest 19.29% had mild rectal bleeding or tearing. Significant statistical association was found using chi-square test (Chi-square-48.680, p-0.00). When incomplete evacuation was considered 82.67% of the respondents did not have incomplete evacuation, 13.67% suffered from mild, 3.67% suffered from moderate incomplete evacuation. Out of that, 56.14% of the constipation sufferers had mild, 19.29% had moderate and the rest 24.56% did not suffer from incomplete evacuation of stool. Significant statistical association was found using chi-square test (Chi-square-168.525, p-0.00). As per Hardening of stool 82.67% of the respondents did not suffer from hardening of stool, 14% suffered from mild, 3.33% suffered from moderate hardening of stool. Out of that, 57.89% of the constipation sufferers had mild, 17.54% had moderate and the rest 24.56% did not have hardening of stool. Significant statistical association was found using chi-square test (Chi-square-168.219, p-0.00). Now if we consider frequency of too small bowel movement 82.67% of the respondents did not suffer from too small bowel movement, 15.67% suffered from mild and 1.67% suffered from moderate frequency of too small bowel movement. Out of that, 66.67% of the constipation sufferers suffered from mild, 8.77% suffered from moderate and the rest 24.56% did not suffer from "too small bowel movement". Significant statistical association was found using chi-square test (Chi-square-166.886, p-0.00). Now considering, Straining or squeezing during defecation:82.67% of the respondents did not experience straining, 14% experienced mild, 3.33% experienced moderate straining or squeezing during defecation. Out of that, 57.89% of the constipation sufferers had mild, 17.54% had moderate and the rest 24.56% did not have any straining during defecation. Significant statistical association

was found using chi-square test (Chi-square-168.219, p-0.00). Finally, considering frequency of defecation per day 82.67% of the respondents defecated once/day, 14% defecated twice/day and 3.33% defecated thrice/day. Out of that, 24.56% of the constipation sufferers went once, 59.64% went twice and the rest 15.78% went thrice for defecation/day. Significant statistical association was found using chi-square test (Chi-square-166.239, p-0.00).

It was found that chronic idiopathic constipation (CIC) is more common among the women and its prevalence is found to increase with age [58]. Lifestyle modifications, such as increasing the amount of dietary fibre, is the first step in managing CIC [58] and medications, physical therapy, and possibly surgery in refractory cases could be beneficial [59]. Constipation can even be termed as a condition that exhibits heterogenous symptoms associated with reduced physical health, mental health and social functioning [60]. There are few epidemiological evidences that indicates the presence of association between lower fluid intake and intestinal constipation [61]. Research has shown that several factors are vital to normal gut motility, including immune and nervous system function, bile acid metabolism and mucus secretion, and the gastrointestinal microbiota and fermentation; an imbalance or dysfunction in any of these components may contribute to aberrant gut motility and, consequently, symptoms of constipation. Modifying the gut luminal environment with certain probiotic strains may affect motility and secretion in the gut and, hence, provide a benefit for patients with constipation. In order to manage chronic constipation, it is very important to identify and treat the secondary causes like instituting lifestyle changes, prescribing pharmacologic and non-pharmacologic therapies, and occasionally, referring for surgery.

SL. No.	Particulars	Female (%)	Constipation Sufferers (%)		Chi-square test (p value)
			Yes	No	
	Presence of constipation: Yes No	55(18.33%) 245(81.67%)	-	-	-
	Stool consistency: Soft lumpy Hard Pellet	243(81%) 57(19%)	- 57(100%)	243(100%) -	300.00 (p-0.00)
	Abdominal pain and discomfort: Absent Mild Moderate Severe	246(82%) 45(15%) 9(3%) -	3(5.26%) 45(78.94%) 9(15.78%) -	243(100%) - - -	280.745 (p-0.00)

Rectal burning:					
Absent	269(89.67%)	26(45.61%)	243(100%)	147.388	
Mild	31(10.33%)	31(54.38%)	-	(p-0.00)	
Moderate	-	-	-		
Severe	-	-	-		
Rectal bleeding or tearing:					
Absent	289(96.33%)	46(80.70%)	243(100%)	48.680	
Mild	11(3.67%)	11(19.29%)	-	(p-0.00)	
Moderate	-	-	-		
Severe	-	-	-		
Incomplete evacuation:					
Absent	248(82.67%)	14(24.56%)	234(96.29%)	168.525	
Mild	41(13.67%)	32(56.14%)	9(3.70%)	(p-0.00)	
Moderate	11(3.67%)	11(19.29%)	-		
Severe	-	-	-		
Hardening of stool:					
Absent	248(82.67%)	14(24.56%)	234(96.29%)	168.219	
Mild	42(14%)	33(57.89%)	9(3.70%)	(p-0.00)	
Moderate	10(3.33%)	10(17.54%)	-		
Severe	-	-	-		
Frequency of too small bowel movement:					
Absent	248(82.67%)	14(24.56%)	234(96.29%)	166.886	
Mild	47(15.67%)	38(66.67%)	9(3.70%)	(p-0.00)	
Moderate	5(1.67%)	5(8.77%)	-		
Severe	-	-	-		
Straining or squeezing during defecation:					
Absent	248(82.67%)	14(24.56%)	234(96.29%)	168.219	
Mild	42(14%)	33(57.89%)	9(3.70%)	(p-0.00)	
Moderate	10(3.33%)	10(17.54%)	-		
Severe	-	-	-		
Frequency of defecation per day:					
Absent					
Mild	248(82.67%)	14(24.56%)	234(96.29%)	166.239	
Moderate	42(14%)	34(59.64%)	8(14.03%)	(p-0.00)	
Severe	10(3.33%)	9(15.78%)	1(.41%)		
	-	-	-		

**Table 5:** Summary of the signs and symptoms among the respondents and its association with constipation.

## Conclusion

Constipation is one very frequently encountered disorder faced by the young generation of India. It is caused due to physical, Psychological morbidity and poor quality of life. Hence, early diagnosis and management is of utmost importance. In developing

countries like India constipation is becoming one major public health issue. Due to rapid industrialisation there is a major shift observed in the eating patterns where the Green leafy vegetables and other healthier foods are being replaced by the unhealthy, easily available and highly marketed Junk food. As well as in response to



excessive stress and distorted sleep cycle the circadian rhythm gets disbalanced impacting the vital systems of the body. Therefore, a good lifestyle including a healthy balanced diet, regular exercise and proper stress management is crucial to fight the current increase in the trends of constipation. Further, the government in collaboration with the education institutions should educate the students about the importance of having healthy dietary practices, which can lead to several health consequences. Present study is a small approach in finding the current status of constipation among youth which can be conducted more frequently for regular monitoring and correction to achieve healthier individuals in future.

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### Conflict of Interest

The authors declare no conflicts of interest.

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