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Prevalence of stress and severity symptoms among clients with constipation

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Abstract

Digestion is a complicated process that requires particular anatomical and physiological adaptations to allow nutrients to be absorbed. Food is broken down into smaller molecules for Absorption and the waste products are removed. Constipation indicate that not passing stools on a regular basis or that unable to completely empty bowel caused by a poor diet, a fear of using the bathroom, or issues with toilet training. Although the term constipation can imply different things to different people, the symptoms range from a headache and exhaustion to bloating, loss of appetite, nausea, and vomiting, and exacerbate other symptoms like limb stiffness or bladder dysfunction.

Objectives: To assess the level of stress and severity symptoms and to determine the association between level of stress and severity symptoms with their selected demographic variables among clients with constipation.

Research Methodology: A cross-sectional descriptive study was conducted. 100 samples were selected by convenient sampling technique. Perceived Stress Scale, Constipation Assessment Scale were used to collect data from the participants.

Results: The present study suggested that the, 37 (37%) had mild, 43 (43%) had moderate and 20 (20%) had severe level of severity symptoms and 41 (41%) had mild, 49 (49%) had moderate and 10 (10%) had severe level of stress. The dietary pattern, BMI, and symptoms of constipation had shown statistically significant association with level of stress among clients with constipation at $p < 0.01$. It had a negative impact on physical and mental well-being as well as the social life of people.

Keywords: constipation, prevalence, severity symptoms, stress

Introduction

"Life is a tragedy of nutrition"

Healthy living entails accepting responsibility for one's own health and making wise health decisions for the now and future. A healthy lifestyle includes eating healthily, getting physically fit, mental wellness, spiritual wellness, and prevention ^[1]. Health is defined by the World Health Organization (WHO) as a degree of complete bodily, mental, and social well-being. It's worth noting that health isn't exclusively defined by the absence of disease. Healthy Living refers to the methods, practises, and techniques used to achieve optimum health ^[2].

Appropriate diet is necessary for good health throughout one's life. Obesity, coronary heart disease, stroke, certain cancer, type 2 diabetes, high blood pressure, osteoporosis, and dental decay can all be reduced by eating a nutritious diet ^[3]. Poor nutrition and food are a primary 'downstream' cause of ill health, chronic disease, and early death. Many chronic diseases can be significantly reduced by eating a healthier diet with a larger proportion of fruits and vegetables ^[4].

According to Rome II and III criteria constipation is the combination of at least two symptoms, such as infrequent bowel movements (typically 3 per week over the previous six months), difficulty defecating, straining during >25% of bowel movements, a subjective feeling of hard stools, or incomplete bowel emptying ^[5]. Constipation is defined differently in different studies, with the majority of studies relying on a questionnaire and implying that it is caused by an underlying problem. Constipation affects 16 percent of individuals globally (ranging from 0.7 percent to 79 percent); however, adults aged 60 to 110 years have a prevalence of 33.5 percent ^[6].

The reasons for in complete bowel evacuation among bedridden patients are multi-factorial and include poor diet, reduced fluid intake, lack of exercise and the effects of medication. It is believed that the disease process itself may lead to a reduction in the time it takes food to move along the bowel (slow transit bowel), or a tightening instead of a relaxation of the muscles which let them go to the toilet (pelvic floor dyssynergia) ^[7].

In these dynamic circumstances, the patient's the standard of living including the use of healthcare resources are connected. Constipation affects 1.4 percent to 37 percent of the total population, with functional constipation influencing 24.2 percent of the total population. As far as we know, a high incidence of bowel problems is related to the progression of age in epidemiological data [8]. The 2002 National Health Interview Survey discovered that those with back or neck pain had a higher rate of gastrointestinal issues (inflammatory bowel disease, irritable bowel syndrome, or severe constipation) than those who did not. Children (0.7 percent–29.6%), pregnant women (11 percent–38 percent), and young female athletes are all affected by constipation (29 percent non-intensive sport category and 36 percent intense sport category) [9].

Although all physical therapists' purpose and responsibility is to improve their patients' overall health and function, we acknowledge that we can't effectively treat both adult and child-hood constipation, as well as all varieties of constipation, in a single perspective paper [10]. As a result, the focus of this perspective paper is only on adult functional constipation condition. This perspective article aims to improve physical therapists' knowledge and ability to recognise, diagnose, and treat people with functional constipation (using the most appropriate evidence-based physical therapy interventions or referring them to a specialist physician or physical therapist, or both) [11].

The objectives of the present study were

- To assess the level of stress among clients with constipation
- To assess the prevalence of severity symptoms among clients with constipation.
- To determine the association between level of stress and severity symptoms among clients with constipation with their selected demographic variables.

Methodology

Study Design

A cross-sectional descriptive study was conducted among clients with constipation. 100 clients were selected by Convenience sampling technique in selected urban area, Chennai. The eligibility criteria were a) Clients with the age group of >18 years. b) Clients of both the sex. c) Clients who are conscious with constipation for more than three days. d) Clients who are willing to participate. e) Clients who can able to speak Tamil or English. f) Clients who are all available at the time of data collection. During the initial interview, the purpose of the study was explained to the participants. The written informed consent obtained, informed that participation is voluntary and they can withdraw from the study at any time. Confidentiality of information was achieved by maintaining anonymity of the

participants.

Data Collection

Formal permission was obtained from the concerned authorities to conduct the study. Written informed consent was obtained from the participants in their preferred language. Perceived Stress Scale and Constipation Assessment Scale was used in the study. Perceived Stress Scale consists of 10 standardized questionnaires each question consists of 5 options (0=Never, 1 = Almost Never, 2 = Sometimes, 3 =Fairly Often, 4 = Very Often). PSS scores were obtained by reversing responses (e.g., 0=4, 1=3, 2=2, 3=1& 4=0) to the four positively stated items (4, 5, 7 and 8). Stress score is interpreted as <50% - Mild Stress, 51-75%- Moderate Stress and >76% - Severe Stress. Constipation Assessment Scale consists of 10 standardized questionnaires, ranging from 0-20 to assess the severity symptom of constipation. It is Likert scale with options as no symptoms – 0, for somewhat— 1, for severe – 2. Constipation Score Interpretation, No Symptoms — 0. Scores were interpreted as Mild Symptoms — 1-6, Moderate Symptoms —7-12 and Severe Symptoms ---- 13 - 20. About 20-30 minutes were spent on each participant to elicit data using the selected tool.

Statistical Analysis

Descriptive statistics were used to describe the Socio-demographic variables and the level of stress, and severity symptoms. Socio- demographic variables and level of stress, severity symptoms of constipation were given in frequencies with percentage. Association between level of stress with their selected demographic variables. The findings suggested that the demographic variables dietary pattern, BMI, symptoms of constipation had shown statistically significant association with level of stress among clients with constipation at $p<0.05$ level and the other demographic variables had not shown statistically significant association with level of stress among clients with constipation.

Results

About 100 clients participated in the study. Based on severity of symptoms among clients with constipation, 37 (37%) had mild, 43 (43%) had moderate and 20 (20%) had severe, based on level of stress among clients with constipation, 41 (41%) had mild stress, 49 (49%) had moderate stress and 10 (10%) had severe stress. Based on the demographic variables dietary pattern, BMI, symptoms of constipation had shown statistically significant association with level of stress among clients with constipation at $p<0.01$ level and the other demographic variables had not shown statistically significant association with level of stress among clients with constipation.

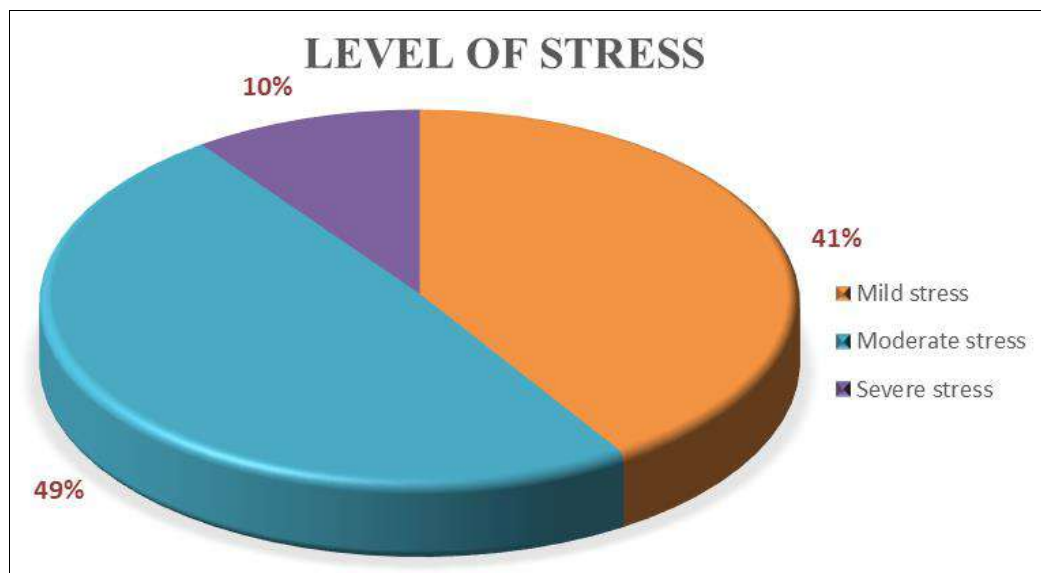
Table 1: Frequency and percentage of Socio-demographic variables of clients with constipation who participated in the study N = 100

S.no	Demographic variable		Frequency	Percentage
1	Age (in years)	18-29 years	35	35%
		30-47 years	45	45%
		>50 years	20	20%
2	Gender	Male	60	60%
		Female	40	40%
		Transgender	0	0%
3	Religion	Hindu	47	47%
		Christian	29	29%
		Muslim	24	24%
4	Education	No formal education	41	41%
		Primary education	26	26%
		High school	20	20%
		Graduate	13	13%
5	Occupation	Unemployed	24	24%
		Government employee	13	13%
		Private employee	63	63%
6	Dietary pattern	Vegetarian	11	11%
		Non vegetarian	89	89%
7	Weight	<40 kg	31	31%
		40-70 kg	57	57%
		>70 kg	12	12%
8	BMI	Lean	17	17%
		Moderate	54	54%
		Obese	29	29%
9	Symptoms of constipation	Hard stool	27	27%
		Bleeding while passing stools	19	19%
		Can't able to pass stool for more than 3 days	54	54%

Level of stress

The level of stress among clients was assessed using Perceived Stress Scale. The results showed that 41 (41%)

had mild stress, 49 (49%) had moderate stress and 10 (10%) had severe stress among clients with constipation.

**Fig 1:** Level of stress among clients with constipation**Level of severity symptoms**

The level of severity symptoms of constipation among clients was assessed using Constipation Assessment Scale.

The results showed that 37 (37%) had mild symptoms, 41 (41%) had moderate symptoms, and 20 (20%) had severe symptoms among clients with constipation.

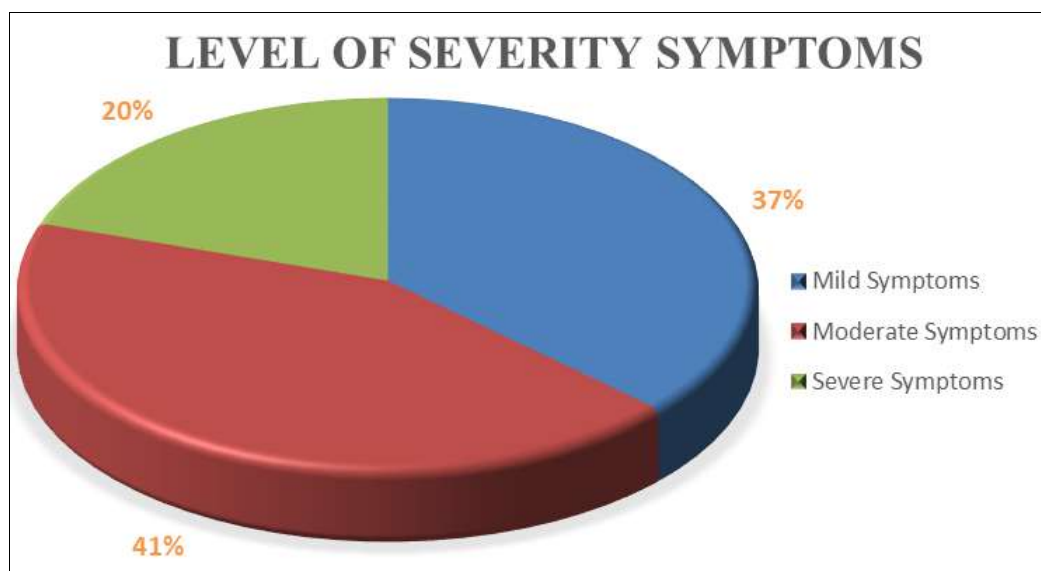


Fig 2: Level of severity symptoms among clients with constipation

Association between levels of stress about constipation with demographic variable of clients with constipation.

The chi-square analysis was done to find out the association between the level of stress about constipation with their selected demographic variables. The findings suggested that the demographic variables dietary pattern, BMI, symptoms of constipation had shown statistically significant association with level of stress about constipation among clients with constipation at $p < 0.01$ level and the other demographic variables had not shown statistically significant association with level of stress among clients with constipation.

Discussion

Objective 1: The study shows that level of stress among clients with constipation, 41 (41%) had mild stress, 49 (49%) had moderate stress and 10 (10%) had severe stress.

The present study results were supported by the following studies Yusop & Nor Qubbul *et al.* (2021) conducted a cross – sectional study on association between dietary intake, physical activity and stress level with constipation among undergraduate students. The study results highlighted that 77.1% had a high or a very high stress level and 64.3% had slight constipation. Age, dietary fibre, fluid, energy, and perceived stress scale explained a significant amount of the variance in the occurrence of constipation^[3]. Mehmet Aykut Yildirim, Murat Cakir *et al.* (2020) conducted survey study among 425 medical students, including 140 first, 186 third, and 99 sixth-year respectively, more than 50% of the students reported irregular sleeping patterns and stress. 69.3% of the first-year students reported that they had stress and 4.1% of these students were constipated. 86.9% of the third-year students reported that they had stress, and 11% of them were constipated. 84.6% of the sixth-year students reported that they had stress, and 9.3% of them were constipated. The constipation rate of those experiencing stress was higher in all years^[12].

Objective 2: The present study results revealed that the severity of symptoms among clients, 37 (37%) had mild symptoms, 43 (43%) had moderate symptoms and 20 (20%)

had severe symptoms.

The present study results were supported by the following studies Mohammed Alhassan, Abdulaziz Alhassan *et al.* (2019) conducted cross -sectional study among 543 central region population residing in Saudi Arabia Riyadh and Qassim provinces. The results showed that the prevalence of constipation among the sampled individuals is only 4.4%, whereas those whose result indicates no suffering from constipation represented 95.6%. Constipation is more prevalent among females (79.2%) rather than males (20.8%). Moreover, constipation is more severe among those who are between 20- and 35-year-old, while it reaches 0% among old people (over 51 years). Riyadh residents are more likely to suffer from constipation rather than Qassim residents. In Riyadh, 83.3% suffered from constipation, whereas the percentage in Qassim was 16.7%^[13]. Ferhat Arik, Ugur Kalan *et al.* (2020) conducted descriptive study on prevalence of constipation increases dramatically with age; while it is 12%–19% in adults, goes over 30% in geriatric population. The study results showed patients not receiving laxatives, straining during more than one-fourth (25%) of defecations, hard stool in more than 25% of bowel movements, a sense of incomplete evacuation more than one-fourth (25%) of defecations, sensation of anorectal obstruction/blockage more than one-fourth (25%) of defecations, a need for digital manipulation more than one-fourth (25%) of defecations, fewer than three spontaneous bowel movements per week^[14].

Objective 3: The study findings suggested that the demographic variables dietary pattern, BMI, symptoms of constipation had shown statistically significant association with level of stress about constipation among clients with constipation at $p < 0.01$ level and the other demographic variables had not shown statistically significant association with level of stress about constipation among clients with constipation

The present study results were supported by the following studies Nor Baizura Md. Yusop *et al.* (2021) conducted a cross – sectional study on association between dietary intake, physical activity and stress level with constipation

among undergraduate students. The study results highlighted that age, dietary fibre, fluid, energy, and perceived stress explained a significant amount of the variance in the occurrence of constipation at $p < 0.01$ level [3]. Firdous Jahan *et al.* (2020) conducted a cross-sectional descriptive study design to identify the correlation between perceived stress and GI symptoms among clients with constipation. The study results reported that post-meal fullness (34.6%), bloating (37%), abdominal pain (28.4%), diarrhoea (7.4%), constipation (28.4%) and 62% had perceived stress in last month. The study concluded a significant association between perceived emotional stress and two upper dysmotility symptoms (post meal fullness in abdomen and bloating) at $p < 0.001$.

Limitations

The study has some limitations. The researcher could not generalize the study findings as the sample size is relatively small and limited to 100 clients. Only clients having symptoms of constipation were included into the study. Another limitation is selected urban area used for data collection. Psychological well-being among clients can differ based on their cultural differences and background. The current study has only few supportive studies in Indian Population due to paucity of literature.

Conclusion

The present study suggests that the, 37 (37%) had mild, 43 (43%) had moderate and 20 (20%) had severe level of severity symptoms and 41 (41%) had mild, 49 (49%) had moderate and 10 (10%) had severe level of stress. The dietary pattern, BMI, and symptoms of constipation had shown statistically significant association with level of stress among clients with constipation at $p < 0.01$. It had a negative impact on physical and mental well-being as well as the social life of older people. The review also showed that clients with Constipation had individual and personal strategies, based on their own beliefs.

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