

A descriptive study to assess the relationship between perceived stress and gastrointestinal symptoms among final year nursing students at selected nursing colleges, Bangalore.

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Abstract

Background: Stress and Anxiety are common entities in college students. Time at the college is enjoyable for most of the students. Only handful of students can handle the stressors appropriately, while others it could be accompanied by emotional challenges, mood disorders and relationship issues in pursuing personal and professional goals.

The study aims to evaluate the relationship between perceived stress and Gastrointestinal symptoms among final year nursing students studying at selected nursing colleges in Bangalore, Karnataka.

Purpose: The study aims to assess the perceived stress and gastrointestinal symptoms among final year nursing students.

Materials and Techniques: A Co-relational research design was adopted to assess perceived stress and gastrointestinal symptoms among final year nursing students at selected college, Bangalore.

A non-probability convenient sampling technique was used to select 94 students. Data were collected by using perceived stress scale (PSS) and Gastrointestinal symptoms scale among the nursing students. The data obtained was analyzed by using descriptive and inferential statistics.

Results: Majority of the subjects 78. 72% were experiencing moderate stress and majority of the subjects were experiencing mild gastrointestinal symptoms. The mean and standard deviation of perceived stress scale was 21.16 and ± 5.135 . and the mean and standard deviation of gastrointestinal scale was 5.86 ± 4.534 . A weak correlation was found between perceived stress and gastrointestinal symptoms which was statistically not significant ($p > 0.05$). The results revealed that there is no significant association between perceived stress and selected socio demographic variables except for gender, family income and Health status. There is no significant association between gastrointestinal symptoms and selected socio demographic variables.

Conclusion: The study findings highlight that perceived stress and gastrointestinal symptoms are common among college students who participated in the study. The academic challenges contributes to the perception of stress based on the stressors.

Keywords: Perceived stress, Gastrointestinal symptoms, Nursing students.

Introduction

Stress is a state of physical and psychological strain which imposes demands for adjustments upon the individual ⁽¹⁾. Stress is a state of physical strain which impose demands for adjustments upon the individuals. Stress is a common feature in all our lives. It is often seen as negative emotion but stress plays an important role in survival. It helps to face threats and dangerous situations and makes individual to get motivated and can even makes the performance better.

Stressful life events can affect the human body response through activating the sympathetic nervous system and the hypo thalamic-pituitary-adrenal axis, which may in turn affect the cardiovascular, metabolic, immune system ⁽⁹⁾.

According to American Psychological Association (APA), people aged 18-25 years suffer the highest levels of stress. The World Health Organization (WHO) estimated that stress related disorder will be one of the leading cause of disability⁽⁶⁾.

Nursing curriculum involves demanding clinical training which requires ability to withstand stressful situations and emergencies.

It also requires the ability to be on the feet to clinical postings, withstand sleepless nights, cope with emergencies and handle difficult situation by staying calm and providing patient care. Along with clinical it also challenges academic requirements and internal tests to be fulfill by the students.

Materials and methods

• Study Design: A co-relational research design was used in the study.

Research variables

- Study variable: Perceived stress, Gastrointestinal symptoms
- Attribute variables: Age, gender, BMI, Family income, residence, exercise, diet, sleep pattern, health status.

Setting and sample size

The study was carried out at M S Ramaiah Nursing College, Bangalore. 94 students of final year B. Sc Nursing were selected as sample for the study.

Sampling technique

A nonprobability convenient sampling technique was used to select the samples.

Inclusion and exclusion criteria:

Inclusion criteria: Final year students who were

- Willing for the study.
- Who were available at the time of the study

Exclusion criteria

- Final year students who were absent or sick at the time of the study.

Ethical consideration

The study was approved by the Institution review board of the Ramaiah Nursing college (approval no 0467/ RIN ER/ IRC/2021)

Measurement/ Instrument

After an extensive review of literature, discussion with the experts and with the researchers personal and professional experience.

A structured Perceived stress scale (PSS) and self-structured Gastrointestinal symptoms scale. In addition information regarding socio-demographic variables of subjects were collected.

The researcher's tool includes three parts

Section A: Socio-demographic profile.

Section B: Perceived stress scale (PSS)

Perceived stress scale (PSS) is a classic stress assessment tool, developed by Dr. Cohen et al, 1983 in the USA. The original instrument was a 14 . tool developed in English then it was redeveloped to 10 scale tool. The PSS is well reliable and validated.(Cronbach alpha is 0.78).

Scoring: 0-13 denotes low stress, 14-26 denotes moderate stress, 27-40 denotes high stress.

(Note: reverse scores for questions 4,5,7 and 8)

Section C: Gastrointestinal symptoms scale.(GSS)

The Gastrointestinal symptoms scale is developed to assess the gastro intestinal symptoms. The items identification, selection and development are done through literature review and search for articles related to gastro intestinal symptoms and also guidelines provided by the American college of Gastroenterology. Validity and reliability will be established after tool validation by the experts Doctors in general surgery, faculty in Medical surgical nursing.

Scoring: Score ranges from 0-30

0-10 denotes mild gastro intestinal symptoms, 11-20 denotes moderate gastro intestinal symptoms, 21-30 denotes severe gastrointestinal symptoms.

Data collection procedure

Written formal permission was obtained from the higher authority , Principal, Ramaiah Nursing College . A total of 94 subjects who met the inclusion criteria were selected using a non-probability convenient sampling technique.

Subjects were given detailed information about the study and informed consent was obtained from all the participants. The tool was distributed to each subject and informed to read the instructions carefully. The data was collected using Perceived stress scale and gastrointestinal scale. The confidentiality of the subjects was maintained.

The average time taken to complete the tool was about 25-30 minutes. The data collected were coded and entered in the master sheet.

Statistical method

The data analysis was done by using descriptive and inferential statistics SPSS (version 20) was used to analyze the data.

1. Frequency and percentage distribution were computed for socio-demographic variables.
2. Mean and Standard deviation of Perceived Stress and Gastro intestinal Symptoms.
3. Co-relation between perceived stress and gastro intestinal symptoms.
4. Association between Perceived stress and socio demographic variables.
5. Association between gastrointestinal symptoms and socio demographic variables.

Results

The collected data were analyzed by the objectives of the study

1. Frequency and percentage distribution of perceived stress

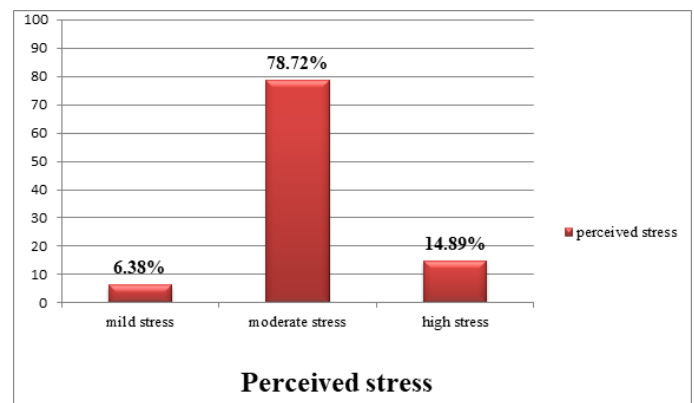


Figure 1: frequency and percentage distribution of perceived stress.

Frequency and percentage distribution of Gastrointestinal symptoms.

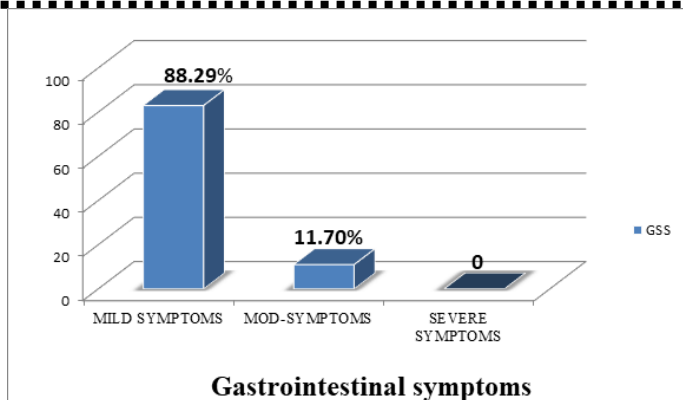


Figure 2: frequency and percentage of Gastrointestinal symptoms.

Mean and standard deviation of perceived stress and gastrointestinal symptoms.

Table 1: Mean and standard Deviation of perceived stress and gastrointestinal symptoms. n=94

Sn.	Tool	Minimum	Maximum	Mean	Standard deviation
1	PSS	1	32	21.16	±5.135
2	GSS	0	20	5.86	±4.524

The above table depicts that the Mean , Standard deviation of PSS is 21.16 and ±5.135. and GSS is 5.86 ± 4. 524.

Relationship between Perceived stress and Gastro intestinal symptoms.

Table 2: Relationship between Perceived stress and Gastro intestinal symptoms. n=94

Variable	Correlation	P value
Perceived stress Gastrointestinal symptoms	0.159	0.125

Table 2 depicts that there is weak positive relationship exists between Perceived stress and gastrointestinal symptoms and it is not statistically significant.

2. Association between Perceived stress and socio-demographic variables.

There is no significant association between perceived stress and socio-demographic variables except for family income, duration of sleep.

3. Association between Gastrointestinal symptoms and socio-demographic variables.

There is no significant association between gastro intestinal symptoms and socio-demo graphic variables.

Discussion

➤ The present study results are consistent with Malaysian university students which states that 88% of students experience moderate Perceived stress.⁽²³⁾

➤ In this study it was observed that there is weak relationship (r=0.159, p=0.125) between perceived stress and GI symptoms which was statistically not significant (p>0.05).

➤ The present study was contradicted with the previous results on Nurses at Malatya hospital, Turkey. It states that there was statistically significant relationship between Perceived stress and Gastrointestinal symptoms (r=0.780, p=0.021).

The present study results are found to be contradicted with the previous study conducted by Ansari, et. al (2014) that there was directionality in the relationship between perceived stress and gastro intestinal symptoms.⁽¹⁹⁾

➤ The study findings showed that there was a significant association between Gender, Monthly family income of the family and Health status. (calculate Chi-square value for gender was 8.503 with p value 0.003 and for family income was 16.96 with p value 0.00 and Health status it was 10.335 with p value 0.005) where as for other variables such as Age, Body mass index, Residence, type of Diet, duration of Sleep, Exercise were found to have no association with perceived stress.

The present study results are consistent with the previous study conducted on Korean Nursing students which states

that there is no significant association between Perceived stress and Socio – demo graphic variables ($p > 0.05$).⁽¹⁾

➤ The study findings showed that there was a significant association between gastrointestinal symptom and Health status (Chi-square 9.408 and p value 0.009) whereas for other variables like Age, Gender, Body Mass Index, Family income, Residence and duration of sleep it was not significant.

The present study results are consistent with the previous results on Korean nursing students which supports the results of the study with no significant association between Gastro intestinal symptoms and socio-demo graphic variables. ($p > 0.05$).⁽¹⁾

Limitations

- ✓ The Authenticity of the information regarding socio-demo graphic variables is based on the response of the subjects.
- ✓ Limited small sample size has restricted the generalization of the findings.

Conclusion

The following conclusions were drawn on the basis of the findings of the study.

The study findings highlights that students will experience one or the other perceived stress during their student life . The academic challenges contributes to the stress based on the individual perception to the stressors. Gastro intestinal symptoms are common symptoms experienced by the students .

Recommendations

On the basis of the findings of the study, the following recommendations have been made

The study can be replicated in a different college students with large diverse student population.

A study can be conducted on the first year B.sc nursing students with more sample size and various colleges.

A study can be conducted by clubbing all the GNM, B.sc and M.sc nursing students to generalize and compare the different levels of the perceived stress and gastro intestinal symptoms.

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