"Assess the Risk Factors of Gerd among the Students at Selected Institute."

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Abstract

Background of the study: Gastroesophageal Reflux Disease (GERD) is a chronic condition in which the backflow of stomach acid into the esophagus causes symptoms like heartburn, chest pain, and difficulty swallowing. GERD occurs when the ring of muscle that separates the esophagus and stomach, called the lower esophageal sphincter (LES), becomes weak or relaxes abnormally, allowing stomach acid to flow back up into the esophagus, leading to inflammation and damage. GERD affects millions of people worldwide and can have a significant impact on quality of life if left untreated.

Objectives of the study were to assess the risk factors of GERD and to find out the association between risk factors of GERD with selected demographic variables.

METHOD: Non experimental descriptive study was conducted among 291 students of selected Institutes. They were selected by random sampling technique. The structured risk factors questionnaire was used for the assessing the level of risk for GERD. The collected data was analyzed and interpreted based on descriptive statistics and inferential statistics.

RESULTS: This research study reveals that the frequency and percentage distribution of various demographic variables among a sample population for the age category of 18-20 years , the frequency is 157 and percentage is 54%, for category of more than 20 years of age, the frequency is 134 and percentage is 46%.In the criteria of gender, the categories are Male, Female and Transgender the following frequency are 97 for male, 194 for female and no any transgender and the following percentage are 33.3% for male, 66.7% for female .The following frequency for criteria of living are 104 for hosteller and the percentage is 35.7%, Day scholar the frequency is 187 and percentage is 64.1%.The area of living categories are Rural and Urban, following frequency for rural is 116 and the percentage is 39.9%

and for urban frequency is 175 and the percentage is 60.1%.For the religion categories are the following frequency is 208 for Hindu, 54 for Muslims, 15 for Christian, 14 for other. And the percentage are 71.5% for Hindu, 18.6% for Muslims, 5.2% for Christian, 4.8%for other. In the educational criteria categories are Science ,Commerce ,Arts and the following frequency is 214,39,38 and the percentage are 73.5%,13.4%,13.1%In education criteria categories Under graduate, post graduate .The following frequency are 112,179 and the percentage are 38.5%,61.5%.In Weight categories are 30-50kg,51-70kg,71-90kg.for above 90kg.The following frequency are 128,146,16,1 and the percentage are 44%,50.2%,5.5%,0.3%.For height the criteria are 120-140cm,141-160cm,161- 180cm,above 180cm the following frequency are 10,165,100,16 and the percentage are 3.4%,56.7%,34.4%,5.5%.The study level regarding risk of GERD among the selected Institute provide a detailed breakdown of the frequency and percentage distribution of the risk associated with Gastro Esophageal Reflux Disease(GERD) among the student population surveyed having the low level of risk for GERD (0-7) in the frequency is 213 and the percentage is 73.2%. For moderate risk for GERD (8-14) the frequency is 74 and the percentage is 25.4%. For severe risk for GERD (15-21) the frequency is 4 and the percentage is 1.4%.Similarly, this result presents the association between risk factors of Gastro esophageal Reflux Disease (GERD) and selected demographic variables. It displays the relationship between the level of risk for GERD (categorized as low, moderate and severe) and various demographic factors such as age, gender ,hostel/day scholar status ,area of living(rural/urban) , religion, education level ,weight ,height.

Keywords: Assess; Risk factors; GERD; Students; Institutes.

INTRODUCTION Gastro esophageal reflux disease (GERD) occurs when stomach acid repeatedly flows back into the tube connecting your mouth and stomach (esophagus). This backwash (acid reflux) can irritate the lining of your esophagus.Many people experience acid reflux from time to time. However, when acid reflux happens repeatedly over time, it can cause GERD. A chronic gastrointestinal disorder characterized by the regurgitation of gastric contents into the esophagus. It is one of the most commonly diagnosed digestive

disorders in the US with a prevalence of 20%, resulting in a significant economic burden in direct and indirect costs and adversely affects the quality of life [1][2]. GERD is caused by multiple different mechanisms that can be intrinsic, structural, or both, leading to the disruption of the esophago gastric junction barrier resulting in exposure of the esophagus to acidic gastric contents. Clinically, GERD typically manifests with symptoms of heartburn and regurgitation. It can also present in an atypical fashion with extra-esophageal symptoms such as chest pain, dental erosions, chronic cough, laryngitis, or asthma [3][4]. Based on endoscopic and histopathologic appearance, GERD is classified into three different phenotypes: non-erosive reflux disease (NERD), erosive esophagitis (EE), and Barrett esophagus (BE) [5]. NERD is the most prevalent phenotype seen in 60-70% of patients followed by erosive esophagitis and BE seen in 30% and 6-12% of patients with GERD, respectively [1][5][6] .Over the years, the mainstay in the management of GERD has been lifestyle modifications, and proton pump inhibitors (PPIs). However, medically refractory GERD is becoming increasingly common, requiring a tailored approach in the management of GERD.It is caused by frequent acid reflux or reflux of non acidic content from the stomach. When you swallow, a circular band of muscle around the bottom of your esophagus(lower esophageal sphincter) relaxes to allow food and liquid to flow into your stomach. Then the sphincter closes again. If the sphincter does not relax as it should or it weakens, stomach acid can flow back into your esophagus. This constant backwash of acid irritates the lining of your esophagus, often causing it to become inflamed.Currently, there is no known cause to explain the development of GERD. Over the years, several risk factors have been identified and implicated in the pathogenesis of GERD.Motor abnormalities such as esophageal dysmotility causing impaired esophageal acid clearance, impairment in the tone of the lower esophageal sphincter (LES), transient LES relaxation, and delayed gastric emptying are included in the causation of GERD [7]Anatomical factors like the presence of hiatus hernia or an increase in intra-abdominal pressure, as seen in obesity are associated with an increased risk of developing GERD [7]

METHODOLOGY: In order to achieve the objective of assessing the risk factors of GERD and to find out the association between risk factors of GERD with selected demographic variable the quantitative research approach a descriptive non experimental study design was used. The study was conducted among the students of selected Institute with the sample size of 290. A random sampling technique was used in the study. Only those Students who are not willing to give consent during the data collection, who were enrolled in a Ph.d courses, and who are not having any electronic devices at the time of data collection were excluded. Tools for data collection consisted of two tools to collect relevant data as they were socio-demographic (section-A) data and self-structured checklist (section-B). Section-A:Socio-demographic questionnaire. Section-B:Self-structured checklist.

Section A consists of 15 multiple choice questions, such as Name, Age, Gender, Area of living, Education background, graduated or undergraduate, height and weight to identify the baseline characteristic of study participants. Section B consists of 21 multiple choice questions , if the participants has marked "YES" then they will marked as 1 and likewise for "NO" it is marked as After obtaining formal administrative approval from the concerned authorities and informed consent from the sample the investigators collected the data from the students using the checklist for risk of GERD.

RESULT:

SECTION-1

Table 2 : Frequency and percentage distribution of demographic variable.

(n=291)

Sr. No	Demographic variable	Category	Frequency f	Percentage %
1	**Age**	18-20years	157	54
		>20years	134	46
2	**Gender**	Male	97	33.3
		Female	194	66.7
		Transgender	0	0
3	**Areyoua…**	Hosteller	104	35.7
		Dayscholar	187	64.3
4	**Areaof living**	Rural	116	39.9
		Urban	175	60.1
5	**Religion**	Hindu	208	71.5
		Muslim	54	18.6
		Christian	15	5.2
		Other	14	4.8
6	**Education Stream**	Science	214	73.5
		Commerce	39	13.4
		Arts	38	13.1
7	**Education**	Undergraduate	112	38.5
		Postgraduate	179	61.5
8	**Weight**	30-50Kg	128	44
		51-70Kg	146	50.2
		71-90 Kg	16	5.5
		Above90 Kg	1	0.3
9	**Height**	120-140 cm	10	3.4
		141-160cm	165	56.7
		161-180cm	100	34.4
		Above180 cm	16	5.5

The provided data table : 2 presents frequency and percentage distributions of various demographic variables among a sample population.

SECTION-2

Table 3: Frequency and percentage distribution of the risk factors of GERDamong the student. (N=291)

Level of Risk	Frequency	Percentage
Low riskforGERD(0-7)	**213**	**73.2**
Moderate risk for GERD(8-14)	**74**	**25.4**
Severe risk for GERD(15-21)	**4**	**1.4**

Table 3: Provides a detailed breakdown of the frequency and percentage distribution of the riskfactors associated with Gastro esophageal Reflux Disease (GERD) among the student population surveyed.

SECTION-3

Table 4: findout Association between risk factors of GERD with selected demographicvariable. (n=291)

Demographic variable	Category	Level of Risk			Chi- Value	Df	p- Value
		Low	Modera te	Seve re			
Age	18-20years	112	43	2	0.701	2	0.705
	>20years	101	31	2			
Gender	Male	65	32	0	6.031	2	0.049*
	Female	148	42	4			
	Transgender	0	0	0			
Areyoua…	Hosteller	73	30	1	1.143	2	0.565
	Dayscholar	140	44	1			
Area ofliving	Rural	84	30	2	0202	2	0.904
	Urban	129	44	2			
Religion	Hindu	152	52	4	3.175	6	0.787
	Muslim	39	15	0			
	Christian	10	5	0			
	Other	12	2	0			
EducationStream	Science	157	55	2	5.441	4	0.245
	Commerce	28	11	0			

	Arts	28	8	2			
Education	Under Graduate	76	33	2	4.127	2	0.127
	PostGraduate	137	41	1			
Weight	30-50Kg	99	28	1	6.293	6	0.391
	51-70Kg	101	4	3			
	71-90 Kg	13	3	0			
	Above90 Kg	0	1	0			
Height	120-140 cm	7	1	2	29.374	5	0.00*
	141-160cm	123	42	2			
	161-180cm	72	26	2			
	Above180 cm	10	5	0			

Table-4: presents the association between risk factors of Gastro esophageal Reflux Disease (GERD) and selected demographic variables. It displays the relationship between the level of risk for GERD (categorized as low, moderate, and severe) and various demographic factors such as age, gender, hostel / day scholar status, area of living (rural/urban), religion, education stream, education level, weight, and height.

DISCUSSION: The finding of the study was discussed in term of objectives. We used demographic variables and questionnaire for our study to assess the risk factors of GERD among the institute .The frequency and percentage distribution of various demographic variables among a sample population. For the age category of 18-20 years , the frequency is 157 and percentage is 54%, for category of more than 20 years of age, the frequency is 134 and percentage is 46%. In the criteria of gender, the categories are Male, Female and Trans gender the following frequency are 97 for male, 194 for female and no any trans gender and the following percentage are 33.3% formale, 66.7% for female and 0% for Transgender. The following frequency for criteria of living are 104 for hosteller and the percentage is35.7%, Day scholar the frequency is187and percentage is 64.1%.The area of living categories are Rural and Urban, following frequency for rural is 116 and the percentage is 39.9% and for urban frequency is 175 and the percentage is 60.1%.For the religion categories are the following frequency is 208 for Hindu, 54 for Muslims,15 for Christian, 14 for other. And the percentage are 71.5% for Hindu, 18.6% for Muslims, 5.2% for Christian, 4.8% for other. In the educational criteria categories are Science, Commerce, Arts and the following frequency is 214,39,38 and the percentage are 73.5%,13.4%,13.1% In education criteria categories Undergraduate ,postgraduate. The following frequency are 112,179 and the percentage are 38.5%, 61.5%. In Weight categories are 30-50kg ,51- 70kg,71- 90kg, for above 90kg. The following frequency are 128,146,16,1 and the percentage are 44%, 50.2%, 5.5%, 0.3%. For height the criteria are 120-140 cm,141-160 cm,161-180cm , above 180cm the following frequency are 10, 165, 100, 16 and the percentage are 3.4%, 56.7%, 34.4%, 5.5%.

CONCLUSION: This chapter deals with the conclusion drawn based on the findings of the

present study: GERD is one of the leading disease in students.

The conclusions drawn based on the finding of study were :

The study findings revealed that valuable insights into the distribution of GERD risk levels among the student population, highlighting the prevalence of different risk categories and the proportion of students at varying levels of risk for developing the condition. There is the association between risk factors of Gastro esophageal Reflux Disease (GERD) and selected demographic variables. Itdisplays the relationship between the level of risk for GERD (categorized a slow, moderate, and severe) and various demographic factors such as age, gender, hostel/day scholar status, area of living (rural/urban), religion, education stream, education level, weight, and height.

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No author has conflict of interest.

AUTHOR'S CONTRIBUTION:
Author 1- Approval and finalization of the study's conception and design, as well a manuscript
drafting.
Author 2- Collection and analysis of data, as well as interpretation of results

ETHICS APPROVAL: Permission taken from Parul University Institutional Ethics Committee for Human Research PU-IECHR Approval Number: PUIECHR/PIMSR/00/081734/5909

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