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A Study To Asses The Level Of Anxiety Among Patients Undergoing Upper Gastrointestinal Endoscopy In JMMC & RI, Thrissur

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Abstract
Title: Level of anxiety among patients undergoing upper gastrointestinal endoscopy in JMMC & RI. Introduction: Upper Gastrointestinal Endoscopy is a diagnostic procedure performed in the clinical setting to visualize esophagus, stomach and duodenum with the help of flexible endoscope. Upper gastrointestinal (GI) symptoms are the common among the population. Even though these procedures are used widely, patients experience severe anxiety and psychological distress before the procedure. Objectives: To assess the baseline sociodemographic and clinical data variables among patients undergoing Upper Gastrointestinal Endoscopy. To assess the level of anxiety among patients undergoing Upper Gastrointestinal Endoscopy in JMMC &RI. To find association between anxiety level and sociodemographic & clinical data variable in patients undergoing Upper Gastrointestinal Endoscopy in JMMC& RI. Research Methodology: The study was conducted among 80 patients undergoing Upper Gastrointestinal Endoscopy at JMMC & RI. The research design was descriptive and sample was collected by convenient sampling method. The tool used for the study had two sections. Section A: Socio demographic variables of patients and clinical data variables. Section B: Spielberger State-Trait Anxiety Inventory to assess the level of anxiety among patients undergoing Upper Gastrointestinal Endoscopy above the age of 18 years in JMMC & RI. Data analysis was done using descriptive and inferential statistics. Results: On data analysis it reveals that among 80 patients,22(27.5 %) of them had Low State anxiety,18(22.5%) of them had Moderate state anxiety and 40(50%) of them had High state anxiety. On assessing trait anxiety 41(51.3%) patients had Low anxiety, 28(35%) had moderate anxiety and 11(13.8) had High anxiety. Majority of the samples in the study 72(90%) had no previous exposure to endoscopy. There is a significant association between presence of comorbidities and anxiety level of patients undergoing Upper Gastrointestinal Endoscopy($p<0.05$). Therefore the researcher hypothesis (There is a significant association between presence of comorbidities and level of anxiety among patients undergoing Upper Gastrointestinal Endoscopy) was accepted. Conclusion: This study to assess level of anxiety among patients undergoing Upper Gastrointestinal Endoscopy shows that majority of samples showed high state anxiety and there was an association between presence of comorbidities and level of anxiety among patients undergoing Upper Gastrointestinal Endoscopy.

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I. Introduction

Endoscopic procedures, especially Upper Gastrointestinal Endoscopy are diagnostic tools in gastroenterology, offering invaluable insights into gastrointestinal tract health. Gastroscopy allows doctors to visualize the oesophagus, stomach, and duodenum, aiding in the diagnosis of various conditions like ulcers, gastritis, esophagitis, and even early signs of cancer.[1]

While these procedures are widely considered safe and effective, the anticipation of undergoing endoscopy can provoke anxiety in patients. Studies have shown that anxiety is common among patients undergoing gastroscopy.[1]

Often, we have witnessed this many times in our clinical settings which motivated us to conduct a study to assess the anxiety level of patients undergoing Upper Gastrointestinal Endoscopy in JMMC&RI as it

would help us to assess the prevalence and severity of anxiety that can help healthcare providers to implement targeted interventions that would help to improve procedural outcomes, patient comfort and compliance.

Problem Statement

A study to assess the level of anxiety among patients undergoing Upper Gastrointestinal Endoscopy in JMMC &RI, Thrissur.

Objectives

To assess the baseline sociodemographic and clinical data variables among patients undergoing Upper Gastrointestinal Endoscopy.

To assess the level of anxiety among patients undergoing Upper Gastrointestinal Endoscopy in JMMC & RI.

To find association between anxiety level and sociodemographic & clinical data variable in patients undergoing Upper Gastrointestinal Endoscopy in JMMC & RI.

Hypothesis

There is a significant association between sociodemographic variables and level of anxiety among patients undergoing Upper Gastrointestinal Endoscopy.

II. Material And Methods

Quantitative approach was used.

Research Design

A descriptive research design was used to assess the level of anxiety among patients undergoing Upper Gastrointestinal Endoscopy in JMMC & RI.

Research Variables:

Level of anxiety among patients undergoing Upper Gastrointestinal Endoscopy.

Socio-demographic Variables:

Patient's age, gender, religion, educational status, occupation, income, marital status, previous experience of any endoscopic procedures, presence of any comorbidities, use of anxiolytics.

Clinical data Variables:

Patient's Pulse (bradycardia, tachycardia, normal), Blood Pressure (Pre hypertension, Hypertension, Normal), Respiration (Bradypnea, Tachypnea , Normal)

Setting of the Study

The study was conducted at Gastroenterology OPD of JMMC &RI.

Population

Total no of patients undergoing Upper Gastrointestinal Endoscopy from Gastroenterology OPD of JMMC &RI.

Sample

The patients who are in the age above 18 years who have met the inclusion criteria.

Sample size

Sample size consists of 80 patients of age above 18 years in the gastroenterology OPD of JMMC & RI.

Sampling technique

Non probability (convenient sampling technique).

Criteria for sample collection

Inclusion criteria

Any of the patient from gastroenterology OPD of JMMC&RI;

1. Above 18 years of age
2. Willing to participate in the study
3. Able to read and write in English and Malayalam language

Exclusion criteria

1. Patients with any sensory impairment and other neurological deficits
2. Patients who are unable to verbalize the information during data collection
3. Patients who are recently using anxiolytic drugs

Description Of Tool

Tool consist of section A and B

Section A: Socio demographic variables of patients (age, gender, religion, education, occupation, income, marital status, previous experience of any endoscopic procedures, presence of any comorbidities) and clinical variables (blood pressure, pulse, respiration)

Section B: Spielberger State-Trait Anxiety Inventory is to assess the level of anxiety among patients undergoing Upper Gastrointestinal Endoscopy above 18 years of age in JMMC &RI. The Spielberger State-Trait Anxiety Inventory (STAI) is a widely used psychological questionnaire designed to measure two distinct aspects of anxiety: state anxiety and trait anxiety. The STAI is a 40-item self-report measure, with 20 items assessing state anxiety and 20 assessing trait anxiety. For each response the score ranges from a minimum of 1 to maximum of 4. Reverse scores for items marked (R). Example: If a respondent selects 1 (Not at all) on a reverse-scored item, it should be converted to 4 (Very much so).

State Anxiety: This refers to a person's current, temporary emotional state of anxiety, nervousness, or apprehension. The STAI measures this by asking individuals to rate how they feel "right now" in response to specific statements.

Trait Anxiety: This refers to a more stable, long-term personality characteristic indicating a tendency to experience anxiety in various situations. A score of 20-37 indicates low anxiety ,38-44 indicate moderate anxiety and 45-80 high anxiety.

Plan For Data Collection

Permission was obtained from principal and higher authorities of Jubilee Mission Medical College and Research Institute. Samples were selected using convenient sampling technique and those who met inclusion criteria. The data was collected from 80 patients undergoing Upper Gastrointestinal Endoscopy in JMMC & RI by using Spielberger State -Trait Anxiety Inventory. Confidentiality of the respondents were assured and informed consent obtained. The purpose of each statement is explained and proper rapport maintained.

III. Result

Table 1.1: Distribution of sociodemographic data

Socio Demographic Variables	Characteristics	Frequency	Percentage (%)
Age in years	18-30 years	9	11.3
	31-50 years	13	16.3
	51-60 years	22	27.5
	61-80 years	33	41.3
	Above 80 years	3	3.8
Sex	Male	43	53.8
	Female	37	46.3
	Others	0	0
Religion	Hindu	36	45.0
	Christian	26	32.5
	Muslim	18	22.5
	Others	0	0
Education Status	No formal Education	4	5.0
	Primary Education	35	43.8
	Secondary Education	28	35.0
	post graduate	13	16.3
Occupation	Government employee	3	3.8
	Private Employee	20	25.0
	Self-Employee	14	17.5
	Daily Wager	8	10.0
	Unemployed	35	43.8
Income	Less than 5000	36	45
	5001-10001	20	25.0
	10001-35000	17	21.3
	More than 35001	7	8.8
Marital status	Unmarried	9	11.3
	Married	63	78.8
	Widowed/separated	8	10.0
Use of Anxiolytics	No	80	100.0
	Yes	0	0.0

Previous exposure to Endoscopy	No	72	90
	Yes	8	10.0
Presence of comorbidities	No	42	52.5
	Yes	38	47.5
Hypertension	No	56	70
	Yes	24	30.0
Diabetes Mellitus	No	59	73.8
	Yes	21	26.3
Coronary artery diseases	No	77	96.3
	Yes	3	3.8
Hyperlipidemia	No	17	87.5
	Yes	10	12.5
Others	No	70	87.5
	Yes	10	12.5

Table 1.1 shows that Frequency and percentage distribution of age makes it evident that most of the patients 33(41.3%), belongs to age group of 61-80 years whereas the least 9(11.3%) belongs to 18-30 years of age.Genderwise distribution shows that 43(53.8%) are males whereas37(46.3%)are females.Majority of the family members are having primary education 35(43.8%) and most of them are unemployed 35(43.8%). 36(45%) have an income of less than 5000/-.Most of the patients 63(78.8%) are married .Only 8(10%)of patients had previous exposure to Endoscopic procedures .38(47.5%) has presence of comorbidities.

Table 1.2: Distribution of clinical data variables

Range of score	Category	Frequency	Percentage
Blood Pressure			
130-139/85-89 mmHg	Pre hypertension	35	43.8
120-129/80-84 mmHg	Normal	31	38.8
>=140/90 mmHg	Hypertension	14	17.5

Respiration			
<12 breaths/min	Bradypnea	2	2.5
12-20 breaths/min	Normal	31	38.8
>20 breaths /min	Tachypnea	47	58.8

Pulse Rate			
<60	Bradycardia	5	6.3
60-100	Normal	70	87.5
>100	Tachycardia	5	6.3

Table 1.2: shows that majority 35(43.8%) samples were prehypertensive and 14(17.5%) were hypertensive before the procedure. Majority 70(87.5%) of the samples had normal pulse rate and 5(6.3%) had bradycardia and tachycardia. Majority 47(58.8%) of the sample had tachypnea and 2(2.5%) had bradypnea prior to Upper Gastrointestinal procedure.

FIGURE 1: State Anxiety Level of patients undergoing Upper Gastrointestinal Endoscopy

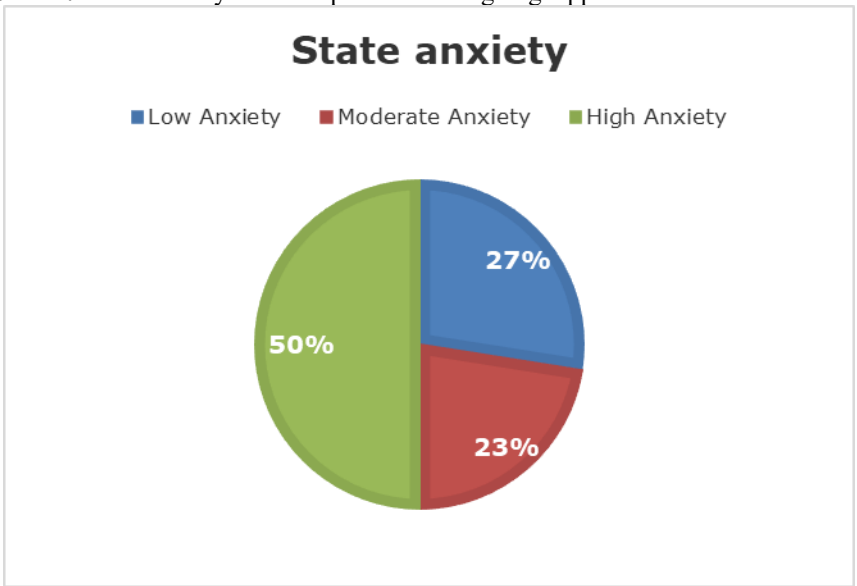
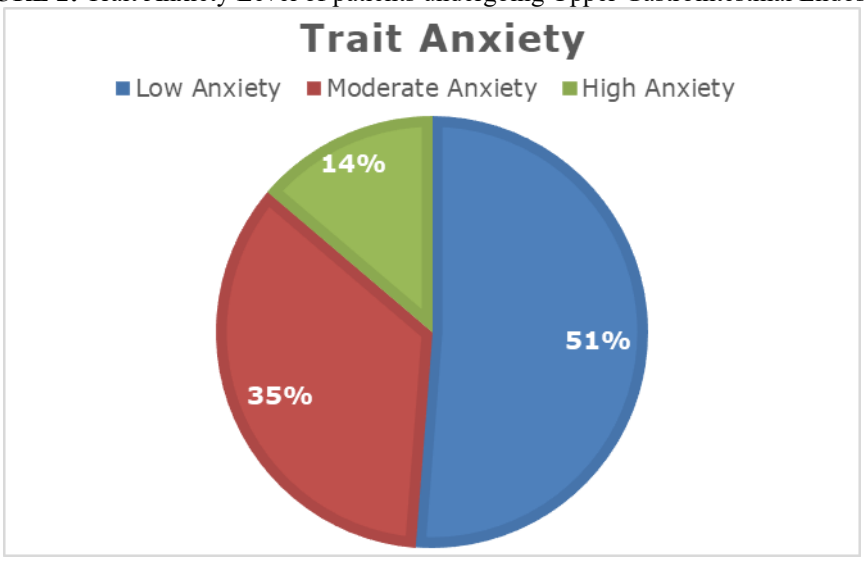


Figure 1 shows that 40(50%) of patients undergoing Upper Gastrointestinal Endoscopy had severe state anxiety, 22(27.5%) had moderate state anxiety and 18(22.5%) patients had low state anxiety.

FIGURE 2: Trait Anxiety Level of patients undergoing Upper Gastrointestinal Endoscopy



IV. Discussion

1) To assess the baseline sociodemographic and clinical data variables among patients undergoing Upper Gastrointestinal Endoscopy

Among 80 patients, the majority (41.3%) were aged 61–80 years, with males (53.8%) and Hindus (45%) forming the larger groups. Nearly half had only primary education (43.8%), were unemployed (43.8%), earned less than 5000 per month (45%), and most (78.8%) were married. Most patients (90%) had no prior exposure to endoscopic procedures, none were on anxiolytics, and 47.5% had comorbidities such as hypertension (30%), diabetes (26.3%), and hyperlipidemia (12.5%). Clinically, 43.8% had prehypertension, 17.5% hypertension, 58.8% tachypnoea, and the study confirmed a significant association between comorbidities and anxiety levels during upper gastrointestinal endoscopy.

2) To assess the level of anxiety among patients undergoing Upper Gastrointestinal Endoscopy

Among 80 patients, 27.5% had low, 22.5% moderate, and 50% high state anxiety, while 51.3% had low, 35% moderate, and 13.8% high trait anxiety as per the Spielberger State-Trait Anxiety Inventory. A similar study at AIIMS Bhubaneswar with 56 endoscopy patients using Beck's Anxiety Inventory found 87.5% had mild anxiety and 12.5% had moderate anxiety. Both studies highlight that anxiety is common among patients undergoing upper gastrointestinal endoscopy. Overall, most patients experienced mild to moderate levels of anxiety, emphasizing the need for supportive interventions.

3) To find association between anxiety level and sociodemographic & clinical data variable in patients undergoing Upper Gastrointestinal Endoscopy

There was a significant association ($p=0.028$) between comorbidities and state anxiety among patients undergoing upper gastrointestinal endoscopy, supporting the researcher's hypothesis. A comparative study in India among 500 patients undergoing elective endoscopy and colonoscopy using the Beck Anxiety Inventory also showed similar results. It found that patients with comorbidities had significantly higher anxiety than those without ($p<0.001$).

In the present study hypothesis (H) is accepted. There is association between comorbidities and state anxiety of patients undergoing upper gastrointestinal endoscopy.

V. Conclusion

A descriptive study was conducted among 80 patients aged 18–80 years undergoing upper gastrointestinal endoscopy at JMMC & RI using socio-demographic/clinical data and the Spielberger State-Trait Anxiety Inventory. Results showed that 50% had high, 22.5% moderate, and 27.5% low state anxiety, while 51.3% had low, 35% moderate, and 13.8% high trait anxiety. There was a significant association ($p=0.028$) between comorbidities and state anxiety, with patients having comorbidities experiencing higher anxiety levels.

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