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INCIDENCE OF ANXIETY AND DEPRESSION IN PRE-OPERATIVE PATIENTS

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ABSTRACT

Background: Anxiety and depression are prevalent psychiatric comorbidities that are known to have a negative impact on a patient's general prognosis. The hospital Anxiety and Depression scale has been extensively used to evaluate these comorbidities in various clinical settings. This study aims to assess the incidence of Anxiety and Depression in pre-operative surgical patients in four groups: (Orthopaedic, Abdominal, Gynaec and Opthal). **Objective:** To find out the incidence of anxiety and depression level in patients undergoing surgery for the first time. To find out the incidence of anxiety and depression level in patients undergoing four different surgeries pre operatively. Comparison in anxiety and depression levels between males and females. **Materials and Methods:** A descriptive study comprising of a sample size of 80 patients was collected. Patients undergoing abdominal, orthopaedic, gyneac, and opthal surgeries for the first time, were included. The data collected was analysed using graphs and tables and presented in a tabular format. **Results and Conclusion:** Results showed that percent mean difference of pre-operative Depression among Males and Females in four different surgeries. (Males – 6.67%; Females – 26%). Females are more prone to Depression. Percent mean difference of pre-operative Anxiety among Males and Females in four different surgeries. (Males – 40%; Females – 46%). Females are more prone to Anxiety. Maximum Anxiety and Depression is seen in Orthopedic pre-operative surgical patients. Maximum Anxiety is seen in Females than Males. HAD provided relevant information on presence of pre-operative anxiety and depression and need to treat the anxious and depressed patients.

KEYWORDS: Anxiety, Depression, Hospital Anxiety and Depression scale.

INTRODUCTION

Anxiety is a general term for several conditions that causes nervousness, fear, apprehension and worrying. It affects how we feel and behave, and can manifest real physical symptoms. Mild anxiety is vague and unsettling, while severe anxiety can be extremely debilitating, having a serious impact on daily life. It is an emotion characterized by feelings of tension, worried thoughts and physical changes like increased blood pressure.

People often experience a state of worry or fear before confronting something challenging such as, interview, examination or surgery. These feelings become a problem when symptoms interfere with the person's sleep or function. The common symptoms of anxiety are: Trembling, Churning Stomach, Nausea, Diarrhea, Headache, Heart Palpitations, Numbness in arms, hands or legs, Sweating, Irritability, Muscle Tension, Frequent Urination, Easily tired.

Anxiety is described as a vague, uneasy feeling, the source of which is often nonspecific and unknown to the individual but known to cause abnormal hemodynamics as a consequence of sympathetic, parasympathetic and endocrine stimulation. The preoperative period is well known to be anxiety–provoking for most patients scheduled for surgery and is still a major problem. The incidence of pre-operative anxiety varies according to the setting of surgery. It is around 60%–80% in the western population. People who undergo surgery first time experience anxiety and depression. Anxiety and Depression can be measured in many ways. It can be measured directly by measuring plasma cortisol and urinary catecholamine's, or indirectly by measuring BP and pulse. It can also be measured by using hospital anxiety and depression scale (HAD).

Surgery is a critical event, often an abruptly imposed reality, which causes profound changes in people's lives, well-being and health, as well as in fundamental life patterns at individual and family levels, thus changing roles, relationships, identities, skills and behavioral standards. It is perceived as a stressful event associated with a negative and frightening meaning and a threat to physical and mental integrity.

Many patients that undergo surgery quite naturally experience anxiety. Anxious patients respond differently than non-anxious patients. The insertion of intravenous cathetearter in

pre-operative phase can be a difficult task as result of anxiety related vasoconstriction. In anxious patients, larger doses of anesthetics are required to induce anesthesia. Causes of pre-operative anxiety are:

Anesthesia, Fear of –not waking up, failed surgery, Association with any uneventful experience, lack of faith, trust in the institution, previously failed surgery. There are several references that are recommended to cope with anxiety- J.M. Leigh, J. Walker, P.Janagnathan. The assessment of anxiety is important because the response to anesthesia and analgesia in anxious patients is different when compared with non-anxious patients. Patient with extreme pre-operative anxiety tend to have longer hospital stays.

There are several exercises that are recommended to cope with anxiety: Learn to manage stress in your life, learn a variety of relaxation techniques and practice deep abdominal breathing. This consists of breathing in deeply and slowly through your nose, taking the air right down to your abdomen, and then breathing out slowly and gently through your mouth, Picture yourself successfully facing and conquering a specific fear, Talk with the person who is supportive, Meditate and Exercise. There is a correlation of anxiety and depression with pre-operative state of patients. Therefore, using tool to assess anxiety and depression by hospital anxiety and depression scale.

MATERIALS AND METHODOLOGY

Study commenced after necessary approvals from the college authorities. Four different surgeries were included (Orthopedic, Abdominal, Gynaec and Opthal) from Dr. D.Y. Patil Medical College and Hospital. In this study, equal number of males and females were divided into two groups. Inclusion criteria was:

a) Patients undergoing abdominal, orthopedic, gyneac, and opthal surgeries.
b) Patients between ages of 20-70 years
c) Patients undergoing surgery for the first time.

Exclusion criteria was:

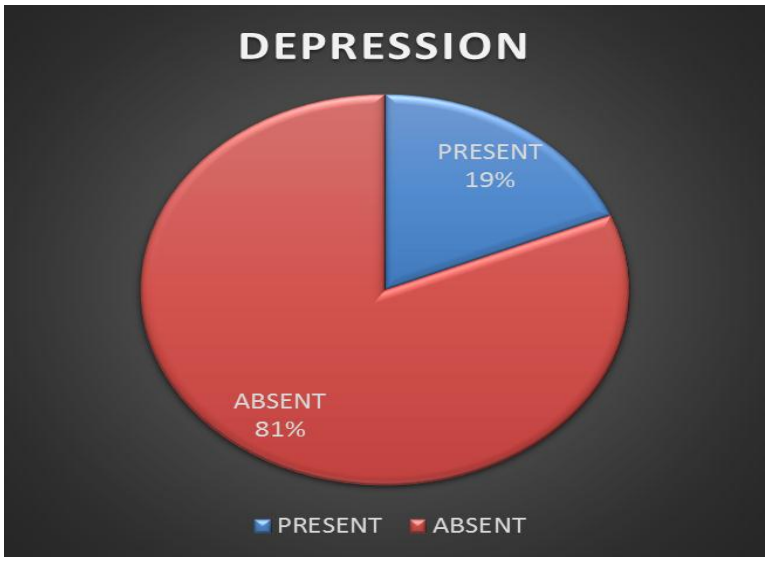
a) Patients having underlying psychiatric conditions
b) Patients having undergone any previous surgery
c) Unable to answer questionnaire who did not give consent.

The data collected was analysed using graphs and tables and presented in a tabular format.

RESULTS

Table I: Presence and Absence of Depression in Pre-operative Surgery Patients.

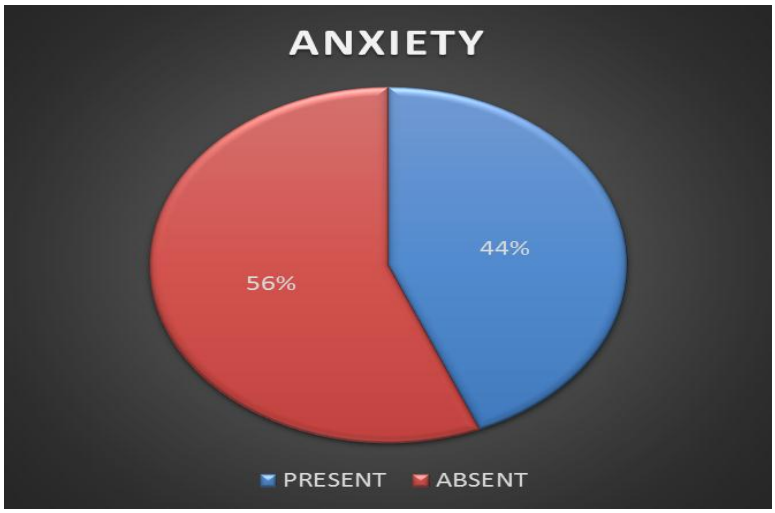
DEPRESSION	NO. OF PATIENTS
Present	15
Absent	65
Total no. Of patients	80



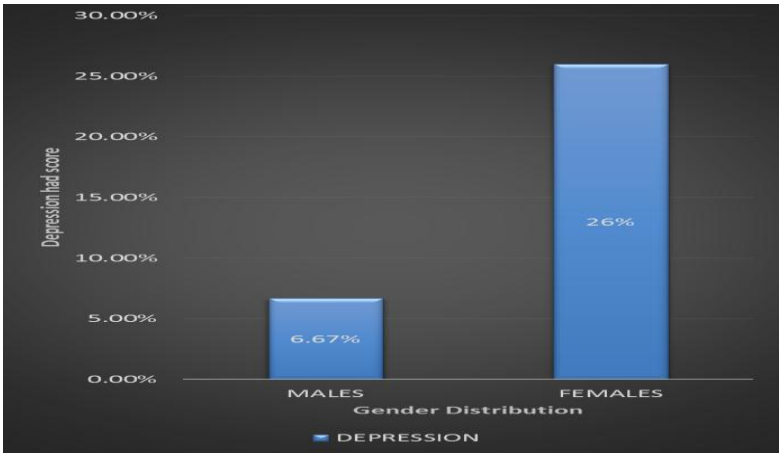
Graph I: Presence and Absence of Depression in Pre-operative Surgery Patients.

Table II: Presence and Absence of Anxiety in Pre-operative Surgery Patients.

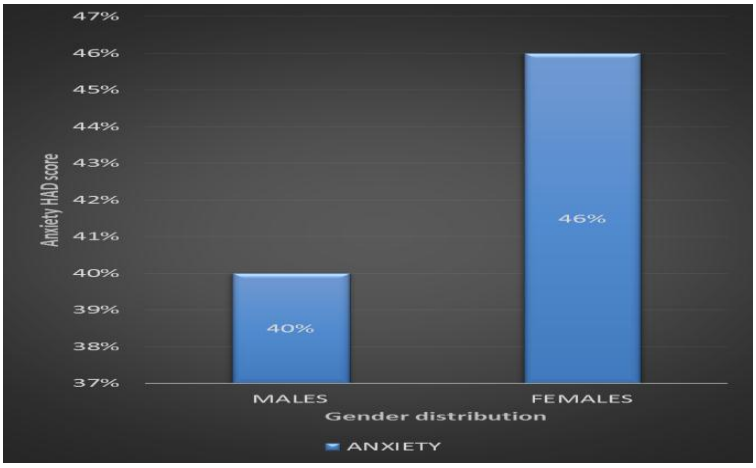
ANXIETY	NO. OF PATIENTS
Present	35
Absent	45
Total no. Of patients	80



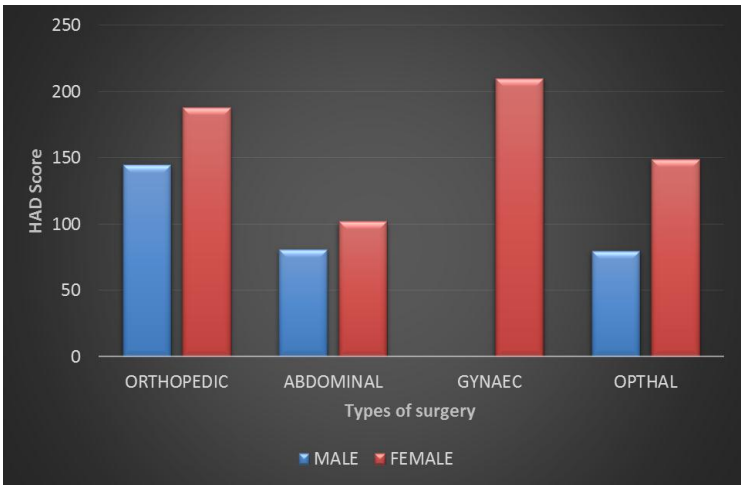
Graph II: Presence and Absence of Anxiety in Pre-operative Surgery Patients.



Graph III: Percentage mean difference of pre-operative Depression among Males and Females in Othopedic, Abdominal, Gynaec and Opthal.



Graph IV: Percentage mean difference of pre-operative Anxiety among males and females in Orthopedic, Abdominal, Gynaec and Opthal.



Graph V: Gender distribution of HAD score among Orthopedic, Abdominal, Gynaec and Opthal.

Table III: Mean and Standard Deviation of Anxiety in Males and Females.

SURGERY	ANXIETY IN MALES (M ± SD)	ANXIETY IN FEMALES (M ± SD)
Orthopedic	9.0 ± 1.6	10.9 ± 2.3
Abdominal	4.9 ± 2.2	6.1 ± 2.4
Gynaec	N/A	5.6 ± 2.3
Opthal	4.9 ± 1.9	8.8 ± 3.2

Table IV: Mean and Standard Deviation of Depression in Males and Females.

SURGERY	DEPRESSION IN MALES (M ± SD)	DEPRESSION IN FEMALES (M ± SD)
Orthopedic	5.5 ± 2.1	7.9 ± 2.1
Abdominal	3.2 ± 1.6	4.1 ± 2.1
Gynaec	N/A	4.9 ± 2.0
Opthal	3.1 ± 2.4	6.1 ± 2.3

RESULT

- Graph-I showed percentage number of presence and absence of Depression in pre-operative surgery patients. (Present – 19%; Absent – 81%).
- Graph-II showed percentage number of presence and absence of Anxiety in pre-operative surgery patients. (Present – 56%; Absent – 44%).
- Graph-III showed percent mean difference of pre-operative Depression among Males and Females in four different surgeries. (Males – 6.67%; Females – 26%).
  Here, Females are more prone to Depression.
- Graph-IV showed percent mean difference of pre-operative Anxiety among Males and Females in four different surgeries. (Males – 40%; Females – 46%).
  Here, Females are more prone to Anxiety.
- Graph-V showed Gender distribution of HAD score among four different surgeries. Maximum Anxiety and Depression is seen in Orthopedic pre-operative surgical patients.
- Table-III showed mean and standard deviation of anxiety in Males and Females among four different surgeries.

(Anxiety in Males: Orthopedic – 9.0 ± 1.6; Abdominal – 4.9 ± 2; Gynaec – N/A; Opthal – 4.9 ± 1.9).

(Anxiety in Females: Orthopedic – 10.9 ± 2.3; Abdominal – 6.1 ± 2.4; Gynaec – 5.6 ± 2.3; Opthal – 8.8 ± 3.2).

- Table-IV showed mean and standard deviation of depression in Males and Females among four different surgeries.

(Depression in Males: Orthopedic – 5.5 ± 2.1; Abdominal – 3.2 ± 1.6; Gynaec – N/A; Opthal – 3.1 ± 2.4).
(Depression in Females: Orthopedic – 7.9 ± 2.1; Abdominal – 4.1 ± 2.1; Gynaec – 4.9 ± 2.0; Opthal – 6.1 ± 2.3).

DISCUSSION

Anxiety is a common response to stress and is present in patients scheduled for surgery. Many patients that undergo surgery quite naturally experience anxiety. Anxious patients respond differently than non-anxious patients. This study demonstrates the pre-operative Anxiety and Depression is common in patients undergoing surgery. This suggests that pre-operative Anxiety should be addressed as a part of pre-operative management in order to improve outcome. Using HAD (Hospital Anxiety and Depression Scale), a short, reliable and valid tool can assess patient's Anxiety and Depression.

There was a study conducted in Germany by Bernd Kappis. The study comprises a sample of patients undergoing different types of surgery. The scale used was APAIS. Distribution of sex and age in that trial was similar to our study. Sex related differences were similar and can be explained by psycho-social factors such as – sex specific perception and behavior patterns.

Different factors such as – violation of physical integrity, fear of extension of the planned procedure, outcome of surgery (functional disability), better imagination of surgical strategies in comparison with anesthesia techniques and others may lead to this perception. This result reflects that apart from anesthesia specific questions, patient's concerns related to surgery should also be addressed and evaluated.

A positive co-relation between extent of surgery and patient's anxiety was identified. Surgeons focus their attention more on patient's physical condition and tend to overlook the importance of psychological factors. Detection of patient's emotional state is difficult and may be even more so when the surgeon has not met the patient before, such as in a pre-operative visit. At a pre-operative visit, contact with the patient is usually time limited, and because of the individual workload of anesthesiologist questions about emotions such as anxiety may be avoided.

In this study patients undergoing surgery for the first time were included. The study done by Anne Thushara Matthias, revealed that Females were more prone to anxiety and depression which is similar to this study. In this study, four types of surgeries were included: Abdominal, Orthopedic, Opthal, and Gyneac. In each surgery, Abdominal, Orthopedic, Opthal, and Gyneac, equal number of males and females were divided into 2 groups, except Gynaec.

Maximum anxiety and depression was seen in Orthopedic surgery patients may be due to fear from inability to walk, socialize or earn living if in case of failed surgery, activities of daily living hamper, extent of work hamper is more.

The percent mean difference of pre-operative Depression among Males and Females in four different surgeries was 6.67%, 26% respectively. Females were more prone to Depression.

The percent mean difference of pre-operative Anxiety among Males and Females in four different surgeries was 40%, 46% respectively. Females were more prone to Anxiety.

19% had Depression and 81% among total number of patients had not.
56% had Anxiety and 44% among total number of patients had not.

The mean and standard deviation of anxiety in Males and Females among four different surgeries. (Anxiety in Males in Orthopedic surgery was – 9.0 ± 1.6; Abdominal surgery was – 4.9 ± 2.2; Gynaec surgery was – N/A; Opthal surgery was – 4.9 ± 1.9); (Anxiety in Females in Orthopedic surgery was – 10.9 ± 2.3 which was highest among all; Abdominal surgery was – 6.1 ± 2.4; Gynaec surgery was – 5.6 ± 2.3; Opthal surgery was – 8.8 ± 3.2).

The mean and standard deviation of depression in Males and Females among four different surgeries. (Depression in Males in Orthopedic surgery was – 5.5 ± 2.1; Abdominal surgery was – 3.2 ± 1.6; Gynaec surgery was – N/A; Opthal surgery was – 3.1 ± 2.4); (Depression in Females in Orthopedic surgery was – 7.9 ± 2.1 which was highest among all; Abdominal surgery was – 4.1 ± 2.1; Gynaec surgery was – 4.9 ± 2.0; Opthal surgery was– 6.1 ± 2.3).

Studying Anxiety and Depression levels in Pre-operative Patients is necessary as higher Anxiety and Depression levels affects Post-operative condition of the patients. It increases post-operative pain which increases the requirement of Analgesics, Prolongs the stay in hospital, has mental effect on patient, etc.

By studying Anxiety and Depression levels Pre-operatively, Doctors, Nursing Staff and other Medical professionals can have a proper communication with patient before surgery so that patient is relaxed and Anxiety and Depression level is reduced.

At Physiotherapist's part, Relaxation techniques and Breathing exercises can be taught to the patient to relax the patient.

Post-operative Protocol can be also explained to patient so that fear about post-operative recovery lessons. Dealing with anxiety Pre-operatively will result in Good Post-operative results.

CONCLUSION

Maximum Anxiety and Depression seen in Orthopedic Surgery and Maximum Anxiety is seen in Females than Males.

HAD provided relevant information on presence of pre-operative anxiety and depression and need to treat the anxious and depressed patients.

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