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RESEARCH ARTICLE

A STUDY TO ASSESS INSOMNIA, PSYCHOLOGICAL DISTRESS, AND COPING STRATEGIES AMONG POSTOPERATIVE GASTROINTESTINAL CANCER PATIENTS IN A SELECTED HOSPITAL, KOLKATA

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Key words:-

Postoperative Gastrointestinal cancer patient, Insomnia, Psychological distress, Coping strategies.

Abstract

Background: Gastrointestinal cancer refers to the malignant conditions of the gastrointestinal tract (GI tract), including the esophagus, stomach, biliary system, pancreas, small intestine, large intestine, rectum, and anus. When gastrointestinal cancer develops, function is crippled. S S T, Krishnan, S. K., et al; (2022), conducted a study on ‘Descriptive Epidemiology of Gastrointestinal Cancers: Results from National Cancer Registry Programme, India’. Gastrointestinal cancer occurrence was more common among men (60.5%) than in women (39.5%) in India. The incidence of Gastrointestinal cancer was highest in India’s northeast region, Aizawl district [AAR (age-adjusted incidence rates) 126.9] among males, and in Papumpare district (AAR 75.9) among females. The most common gastrointestinal cancer among men was esophagus cancer (28.2%), stomach cancer (21%), and rectal cancer (14.3%). Among women, esophagus cancer (25.7%), gallbladder cancer (23.8%), stomach cancer (14.8%), and rectum cancer (14.6%) were common. Adenocarcinoma (57.83%) was the most common type of Gastrointestinal tumor, then squamous cell neoplasms (25.99%). The majority of Gastrointestinal cancer were presented at the locoregional stage, where gall bladder cancer and pancreatic cancer presented at advanced stages. The colon, rectum, liver, gall bladder, and pancreas gradually increased, while a declining trend was observed for stomach and oesophageal cancer.

Methods: The study was done with postoperative gastrointestinal cancer patients. A descriptive cross-sectional research design was used in this study. A non-probability purposive sampling technique was used to select the sample.

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A standardized, structured tool, “Regensburg Insomnia Scale,” was used to assess insomnia. The standardized structured tool “The Kessler Psychological Distress Scale (K10)” was used to assess Psychological distress, and a Structured questionnaire on coping strategies was used to assess coping strategies. The association between

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insomnia, psychological distress, and coping strategies with selected demographic variables has been studied using by chi-square test.

Results:- The study result showed the presence of Conspicuous insomnia among 67(84%) of postoperative gastrointestinal cancer patients, inconspicuous insomnia 11(14%) and rest 2(2%) with marked insomnia. 45(56%) of postoperative gastrointestinal cancer patients had mild psychological distress, 19(24%) had severe psychological distress, 14(18%) had moderate psychological distress and 2(2%) had no psychological distress. 48(60%) of postoperative gastrointestinal cancer patients followed moderate coping and 32(40%) of postoperative gastrointestinal cancer patients followed good coping.

Conclusion:- The present study concludes that 84% of postoperative gastrointestinal cancer patients had conspicuous insomnia, 56% had mild psychological distress, and 60% patients followed good coping. There is no significant association between insomnia, psychological distress and coping strategies.

Introduction:-

Cancer refers to a large group of diseases that can start in any organ or tissue of the body when abnormal cells grow uncontrollably, go beyond their usual boundaries to invade adjoining parts of the body, and spread to other organs, called metastasis, which is a major cause of death. Gastrointestinal cancer refers to malignant tumors of the digestive system, including the esophagus, stomach, liver, pancreas, large intestine, small intestine, rectum and anus.

Materials and Methods:-

This was a descriptive cross-sectional study with a non-probability purposive sample. A total of 80 patients with postoperative gastrointestinal cancer were studied from the outpatient department of a selected hospital.

Criteria For Selecting Sample:-

Inclusion Criteria:-

-Patients who are attending the Outpatient Department for follow-up from the day of discharge to the 30th postoperative day. -Patients are able to understand Bengali or English or Hindi.

Exclusion Criteria:-

Patient with any postoperative complications.

Data Collection Tools And Techniques:-

The following tools were used to procure data- Semi-Structured Questionnaire on Socio-Demographic Characteristics of Postoperative Gastrointestinal Cancer Patients -It is developed to collect the background information of postoperative Gastrointestinal cancer patients based on some of the demographic characteristics of the patient. This semi-structured tool of 11 items as gender, age, education, marital status, monthly family income, no. of family members, occupation, family history of cancer, comorbidity, type of surgery, and postoperative days to collect demographic characteristics. The Regensburg Insomnia Rating Scale -The Regensburg Insomnia Rating Scale is a standardized tool, permission has been taken from the Author to use this tool in the present study. This tool was used to assess insomnia among postoperative gastrointestinal cancer patients. The tool consists of 10 structured questionnaires with a five-point Likert scale ranging from 0 to 4. Questions no. 1, 2, and 9 are negative statements and scored in order like 0, 1, 2, 3, 4, and questions no. 3, 4, 5, 6, 7, 8, and 10 are positive statements and scored in order like 4, 3, 2, 1, 0. Minimum score:-0 Maximum score:-40. Interpretation of Insomnia level scores is as follows: 0-12- Inconspicuous insomnia, 13-24- Conspicuous insomnia, 25-40- Marked insomnia 'The Kessler Psychological Distress Scale (K10)' (TOOL-III) The Kessler Psychological Distress Scale (K10) is a standardized tool. This tool was used to assess psychological distress among postoperative gastrointestinal cancer patients.

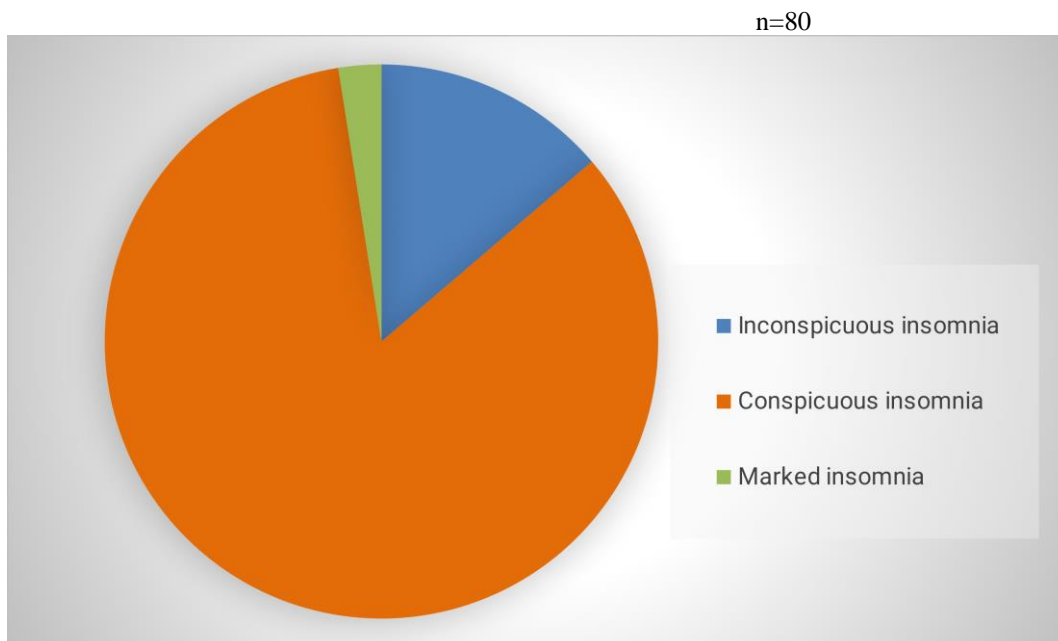
The tool consists of 10 structured questionnaires with a five-point Likert scale ranging from 5 to 1. All 10 questions are negative statements. Interpretation of Psychological distress level scores is as follows: Maximum score-50, Minimum score-10 K10 Score: May have a mental disorder (psychological distress)- 10 – 19:- well, 20 – 24:- mild disorder, 25 – 29:- moderate disorder, 30 – 50:- severe disorder. A structured questionnaire to assess the coping strategies of postoperative gastrointestinal cancer patients. This structured questionnaire was developed by the present study investigator. This tool was used to assess coping strategies among postoperative gastrointestinal cancer patients. The tool consists of 10 structured questionnaires with a four-point Likert scale ranging from 1 to 4. Questions no. 2 and 3 are positive statements and questions no. 1, 4, 5, 6, 7, 8, 9, 10 are negative statements. Score 1 - Never, Score 2- Sometimes, Score 3- Often, Score 4- Always. Minimum score:- 10 and maximum score:-

40. Interpretation of Coping strategies scores is as follows: 10-19:- Good coping, 20-29:-Moderate coping, 30-40:- Worst coping.

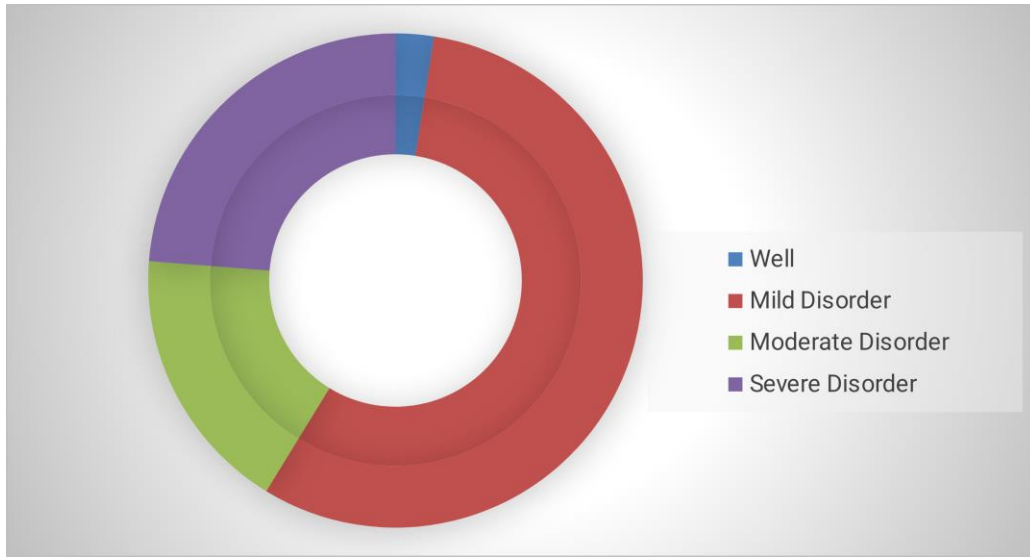
Results:-

Frequency and percentage distribution of postoperative gastrointestinal cancer patients according to demographic characteristics:-

The most 41 (51.25%) of postoperative gastrointestinal cancer patients were female and 39 (48.75%) were male. Most 39 (48.75%) of postoperative gastrointestinal cancer patients under study were within the age group of 41-60 years, 34(42.5%) of patients were within the age group of 61-80 years and 7(8.75%) of patients were within the age group of 25-40 years. The majority 78 (97.5%) of patients were married and only 2(2.5%) of patients were unmarried. Most 42(52.5%) of patients belonged to the upper lower class, 20 (25%) of patients belonged to the upper middle class, and 18 (22.5%) of patients belonged to the lower middle class. The majority of 56 (70%) of patients had no family history of cancer and 24(30%) of patients had a family history of cancer. The majority, 54 (67.5%) of the patients had different comorbidities (DM/ HTN and hypothyroidism), and 26(32.5%) of patients had no comorbidity. The majority, 59 (73.75%) of patients underwent lower gastrointestinal surgery, and 21 (26.25%) of patients underwent upper gastrointestinal surgery. The majority, 57 (71.25%) of the patients, were post-operative days 7-18, and 23 (28.75%) of the patients were post-operative days 19-30.

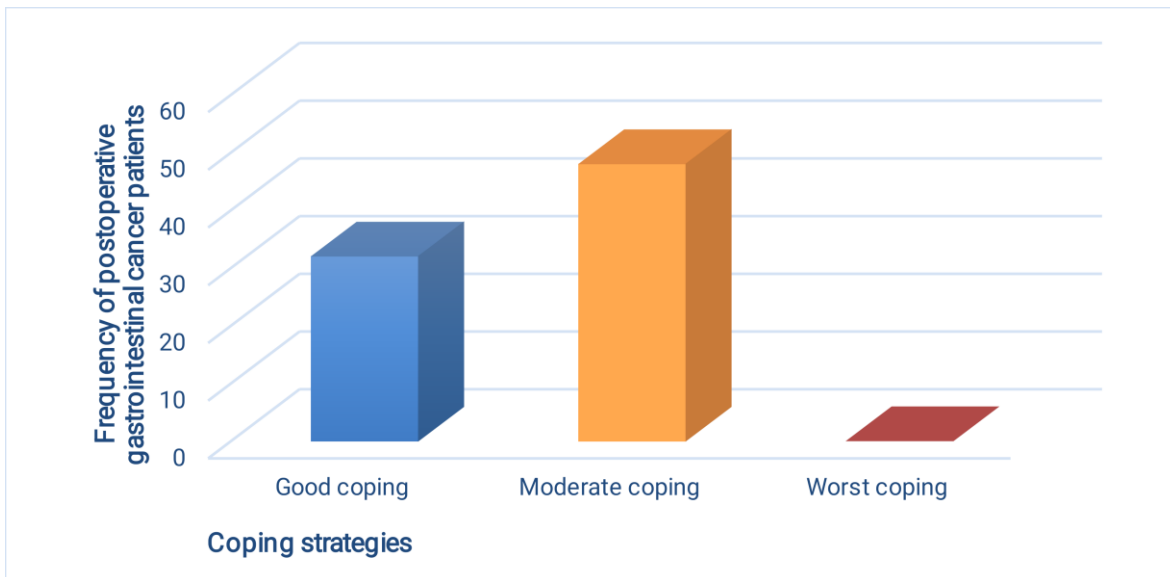


Pie diagram on the distribution of the level of Insomnia among postoperative gastrointestinal cancer patients. Data depicted in the pie graph showed that 67(84%) of postoperative gastrointestinal cancer patients had Conspicuous insomnia, 11(14%) had inconspicuous insomnia, and 2(2%) had marked insomnia. n=80



Doughnut chart on the distribution of psychological distress among post-operative gastrointestinal cancer patients.

Data depicted in the doughnut represented that the majority 45(56%) of postoperative gastrointestinal cancer patients had mild psychological distress, 19(24%) had severe psychological distress, 14(18%) had moderate psychological distress and 2(2%) had no psychological distress. n=80



Bar chart on coping strategies among post-operative gastrointestinal cancer patients:-

Data depicted in the Bar diagram represents the most 48(60%) of postoperative gastrointestinal cancer patients followed moderate coping and 32(40%) of postoperative gastrointestinal cancer patients followed good coping.

Association between Insomnia, Psychological distress and coping strategies with selected demographic characteristics among postoperative gastrointestinal cancer patients:-

There is no significant association between insomnia, psychological distress and coping strategies with selected demographic variables.

Discussion of The Findings Related To Other Studies:-

- The present study findings represented that the majority 67(83.75%) of postoperative gastrointestinal cancer patients had Conspicuous insomnia, 11(13.75%) had inconspicuous insomnia, and 2(2.5%) had marked insomnia.

The following study supported the findings of the present study:-

Zhu G H, Li J, Li J., et al (2021) conducted a cross-sectional study on 115 patients, intending to explore the characteristics and related factors of insomnia among postoperative gastrointestinal cancer patients. The study highlighted that 52.17% of postoperative gastric cancer patients with insomnia had poor sleep quality of postoperative gastric cancer patients as measured by the Pittsburgh Sleep Quality Index Score. The study concluded that the probability of reduced sleep quality is associated with the number of chemotherapy cycles and also with fatigue.

- The present study findings represented that 45(56.25%) of postoperative gastrointestinal cancer patients had mild psychological distress, 19(23.75%) had severe psychological distress, 14(17.5%) had moderate psychological distress, and 2(2.5%) had no psychological distress.

The following study supported the findings of the present study:-

L v G, Zhao D, Li G., et al (2022) conducted a descriptive cross-sectional study with 352 samples with gastrointestinal cancer, intending to find out how age and coping styles moderate the role of insomnia on psychological distress. The study findings highlighted that nearly half, 45% of the participants, reported psychological distress as measured by the Kessler Psychological Distress Scale.

- The present study findings represented that 48(60%) of postoperative gastrointestinal cancer patients followed moderate coping and 32(40%) of postoperative gastrointestinal cancer patients followed good coping.

The following study supported the findings of the present study:-

Wu, Xiaoting M M, RN., (2021), conducted a study with 253 Gastric cancer before on ‘Self-efficacy, Hope as Mediators between positive coping and resilience among gastric cancer Patients before the first chemotherapy. The study highlighted that self-efficacy and hope completely mediated the relationship between positive coping and resilience; the indirect effects were 0.242 ($P < .01$) and 0.258 ($P < .01$), respectively; indirect effects accounted for 81% of the total effect measured by the Simplified Coping Style Questionnaire, the General Self-efficacy scale.

Conclusion:-

The present study result shows that 67(84%) of postoperative gastrointestinal cancer patients had Conspicuous insomnia, 11(14%) had inconspicuous insomnia, and 2(2%) had marked insomnia. 45(56%) of postoperative gastrointestinal cancer patients had mild psychological distress, 19(24%) had severe psychological distress, 14(18%) had moderate psychological distress and 2(2%) had no psychological distress. 48(60%) of postoperative gastrointestinal cancer patients followed moderate coping and 32(40%) of postoperative gastrointestinal cancer patients followed good coping. There was no association between insomnia, psychological distress, and coping strategies with selected demographic variables.

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References Articles:-

1. World Health Organization: Available at: https://www.who.int/health-topics/cancer#tab=tab_1

Journals:-

1. S S T, Krishnan S K, Das P, Sudarshan K L, Kotian C M., Santhappan S, Vishwakarma, M B, N S, Mathur P. (2022). Descriptive Epidemiology of Gastrointestinal Cancers: Results from National Cancer Registry Programme, India. *Asian Pacific journal of cancer prevention*. (2022); 23(2): 409–418. doi.org/10.31557/APJCP.2022.23.2.409.
2. Zhu G H, Li J, Li J, Xu B W, Wang H P, Wang X M, Hu J Q, Dai M H. The characteristics and related factors of insomnia among postoperative patients with gastric cancer: a cross-sectional survey. *Supportive care in cancer: official journal of the Multinational Association of Supportive Care in Cancer*. 2021; 29(12): 7315–7322. doi.org/10.1007/s00520-021-06295-6.
3. L v G, Zhao D, Li G, Qi M, Dong, X, Li P. When experiencing a surgery: Gastrointestinal cancer patients' longitudinal trajectories in psychological stress and their association with quality of recovery. *Asia-Pacific journal of oncology nursing* (2022); 9(6): 100064. doi.org/10.1016/j.apjon.2022.04.003
4. Wu, Xiaoting MM, RN. Self-efficacy, Hope as Mediators Between Positive Coping and Resilience Among Patients With Gastric Cancer Before the First Chemotherapy. *Cancer Nursing*. 2021; 44(1):p 79-85.