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A Study to Assess the Effectiveness of Behavioural Intervention on Reducing Anxiety Level and Increasing Tolerance Level Among Patients Undergoing Gastroscopy in Endoscopy Room of Shri Mahant Indresh Hospital, Dehradun

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Abstract: ***Background: Anxiety and tolerance related to gastroscopy has been increasingly recognized as a global health burden. One of the most common interventions for patients undergoing gastroscopy is behavioural intervention that helps to reduce anxiety level and increase tolerance level. Methodology: A quantitative pre-experimental research design is used in this study. The data was collected using the anxiety level scale assessment and 4 point likert scale for tolerance level and analysed using descriptive and inferential statistics. Conclusion: Major findings of the study revealed that, Age in years depicts that the majority of the respondent 33.33% (10). Percentage distribution of the patients in relation to their Gender depicted that majority of the respondent 66.66% (20) were Female, 33. Percentage distribution of patient in relation to their Educational status depicted that majority of respondents 50%(15) has Intermediate Education. Percentage distribution of patients in relation to their Marital Status depicted that majority of the respondents 63.33% (19) are Married. Percentage distribution of patients in relation to their Occupational Status depicted that majority of respondents 40% (12) were Self Employed. Percentage distribution of patient in relation to their Type of family that majority of the respondents 56.66% (17) were Nuclear. Percentage distribution of patient in relation to their Monthly Income shows that majority of respondents 46.66% (14) have monthly income of Rs.5000-Rs.10000. monthly income Rs.15001-Rs.20000. The study shows that there was not significant association between demographic variables and pre test score in relation with anxiety level and tolerance level of the patient undergoing gastroscopy.***

Keywords: Behavioral Intervention, Anxiety level, Tolerance Level, Gastroscopy, Endoscopy, Effectiveness

1. Introduction

The human digestive system consists of the gastrointestinal tract plus the accessory organs of digestion. Digestion involves the breakdown of food into smaller and smaller components, until they can be absorbed and assimilated into the body. Gastroscopy is an examination of the oesophagus (food pipe) stomach and duodenum (upper part of the small bowel) using a flexible telescope called gastroscope.

Anxiety is a normal and often healthy emotion. However, when a person regularly feels disproportionate levels of anxiety, it might become a medical disorder. Anxiety disorders form a category of mental health diagnoses that lead to excessive nervousness, fear, apprehension, and worry.

Tolerance is the quality of allowing other people to say and do as they like, even if you do not agree or approve of it. It is the permitted variation in some measurement or other characteristic of an object or work piece.

Behavioural interventions are the mainstay of the biobehavioural arsenal used to prevent the development of disease, and to foster the adaptation to the stress of diagnosis and treatment for major conditions including cancers, cardiovascular disease, and immunologic disorders such as Acquired Immune Deficiency Syndrome (AIDS).

Objectives

- To assess the level of anxiety and tolerance among the patients undergoing Gastroscopy.
- To determine the effectiveness of behavioural interventions on anxiety and tolerance regarding gastroscopy among the patients.
- To associate the effect of behavioural intervention on anxiety and tolerance with the selected socio-demographic variables.

Hypotheses

H1: There is a significant difference between pretest score and post test score.
H2: The mean post test score of gastroscopy patient was significantly high than mean pre test assessment score at 0.05 level of significance.
H3: There is significant association between pre test and post test score of gastroscopy patient regarding behavioural intervention with their selected demographic variables.

2. Literature Survey

BENEDETTO MANGIAVILLANO 2018, The study to assess the effectiveness of behavioural intervention on anxiety and tolerance was conducted in the department of Gastroenterology and Gastrointestinal Endoscopy, San Paolo University Hospital, Italy. In this review we offer a descriptive analysis of the reported cases of the acute iatrogenic perforation, describing the closure of different

perforations occurring in the GI tract, treated with metallic clips and gastroscopy. In a large series of patients, demonstrated the important role of the endoclips in the closure of the acute iatrogenic perforations, showing a clinical success of 98.3% in 2460 patients who had undergone gastric endoscopy/gastroscopy, with an overall iatrogenic perforation rate of 4.9%.

Trevisani L 2015, This study was conducted to determine the patients with increased pre-endoscopic anxiety and of the use of conscious sedation at Lamont health Care Centre, Canada. 163 consecutive outpatients undergoing endoscopy (75 gastroscopy, 51 colonoscopy and 37 bronchoscopy) were interviewed to evaluate pre-endoscopy anxiety, by using the Spielberger State-Trait Anxiety Inventory. After endoscopy, endoscopists rated patient cooperation on a 10-cm visual analogue scale. Females had state and trait anxiety levels higher than males.[38]

E. Alexandridis, et al, 2017, A prospective study was conducted at Joan Hoffman, United States, to determine the effectiveness of structured teaching program on reducing the tolerating capacity of the patient having gastroscopy for diagnostic upper endoscopy to assess tolerability, acceptability and quality. We recruited 157 patients (83 females/74 males) mean age 57 years. The endoscopist and all patients completed detailed questionnaires regarding tolerability, acceptance and quality of endoscopy using standard visual analogue scales (VAS). Analysis included 161 procedures achieved in all patients. VAS scores for patient comfort were significantly better (7.3 vs. 5.3 respectively, $P < 0.001$).[40]

Richards KC 2012, A randomized clinical or controlled trials study was conducted to compare effects of tailored interventions to those of control conditions or other interventions. A research was conducted for "patient-centered interventions," "tailored interventions," and "individualized interventions,". The evidence strongly supports the efficacy of tailored behavioral interventions and provides beginning support for the efficacy of tailored psychosocial and biological interventions.

3. Methods/Approach

- **Research Approach:** A quantitative research approach was used for this study.
- **Research design:** Pre – experimental (one group pre-test post- test design) was used in this study.
- **Research setting:** The study was conducted in endoscopy room of Shri Mahant Indiresh Hospital, Dehradun.
- **Population:** In this study, the populations were patients undergoing gastroscopy in endoscopy room of Shri Mahant Indiresh Hospital, Dehradun.
- **Sample:** In this study, the samples were patients undergoing gastroscopy in endoscopy room of Shri Mahant Indiresh Hospital, Dehradun.
- **Sample size:** The total sample size of the study consists of 30 patients undergoing gastroscopy in endoscopy room of Shri Mahant Indiresh Hospital, Dehradun.
- **Sampling technique:** In this study Purposive Non-Probability sampling technique was used.
- **Description of the tool:** The tool used in the present study consists of following:

Section A: Percentage wise distribution of respondents according to demographic variables; Age, sex, education status, occupation, marital status, type of family, income.

Section B:

i. Distribution of samples with their level of anxiety.
ii. Effectiveness of behavioral intervention on reducing anxiety level among patients undergoing gastroscopy in endoscopy room of SMI hospital
iii. Association between pre-test and post-test score of anxiety among the patients undergoing endoscopy with their selected demographic variables.

Section C:

i. Distribution of samples with their level of tolerance.
ii. Effectiveness of behavioral intervention on increasing tolerance level among patients undergoing gastroscopy in endoscopy room of SMI hospital
iii. Association between pre-test and post-test score of tolerance among the patients undergoing endoscopy with their selected demographic variables.

Plan for Data Analysis: The collected data was analyzed by using both descriptive and inferential statistics on the basis of objectives and hypothesis of the study.

1) **Descriptive Statistics:** Frequency and percentage were used to analyze the demographic variable, such as Age, sex, education status, marital status, occupation, type of family, income. Mean, median and standard deviation were used to assess the effectiveness of behavioural intervention.
2) **Inferential Statistics:** Paired t-test was used for comparison of pre-test and post-test of anxiety and tolerance level and Chi-square was used to find association between the pre test and post test score of gastroscopy patient regarding behavioural intervention with their selected demographic variables to assess the effectiveness of behavioural intervention on anxiety level and tolerance level among gastroscopy patients in endoscopy room of Shri Mahant Indiresh Hospital, Dehradun.

4. Results/Discussion

The major findings of the study were as follows:

Section A: Percentage wise distribution of respondents according to demographic variables

Major findings of the study revealed that, majority of the respondent were age group 41-50 years 33.33% (10). Majority of the respondent 66.66% (20) were Female. Majority of respondents 50% (15) has Intermediate Education. Majority of the respondents 63.33% (19) are Married. Majority of respondents 40% (12) were Self Employed. Majority of the respondents 56.66% (17) were Nuclear family. Majority of respondents 46.66% (14) have monthly income of Rs.5000-Rs.10000.

Section B

1) Frequency and percentage distribution of patients Anxiety level on Gastroscopy:

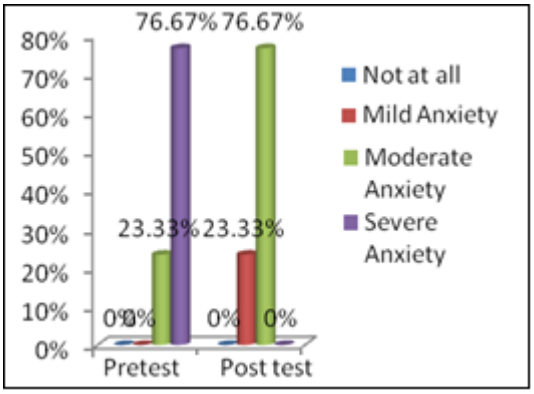

Figure 1: Distribution of samples with their anxiety scores in their pre test and post test

Figure 1 presents the anxiety level of patients undergoing gastroscopy. In the pretest (7) 23.33% of patients had Moderate Anxiety and (23) 76.67% of patients had severe anxiety. Among the patient undergoing gastroscopy no one had anxiety at all and mild anxiety. In post-test 07 (23.33%) of patients had mild anxiety, 23 (76.67) of patients had moderate anxiety.

ii. Effectiveness of behavioural intervention on reducing anxiety level among the patients undergoing gastroscopy:
The significant difference shows that the level of anxiety score in post – test after administering behavioural intervention is (Mean = 24.9, S.D= 7.01) in comparison with the pre – test level of anxiety score (Mean = 42.03 , S.D= 7.76). This change is statistically significant at **p**<0.05 level.

iii. Association between pre test and post test Anxiety scores among the patients undergoing gastroscopy with their selected demographic variables:
This shows that there was no association between the pre test and post test level of anxiety score with demographic variables that are age, gender, educational status, maritial status, occupational status, type of family and monthly income. The hypothesis (H3) is rejected because the calculated chi-square value is less than the tabulated value with the selected demographic variables; age, gender, educational status, maritial status, occupational status, type of family and monthly income.

Section C:

i) Comparison between pretest and posttest level of Tolerance:

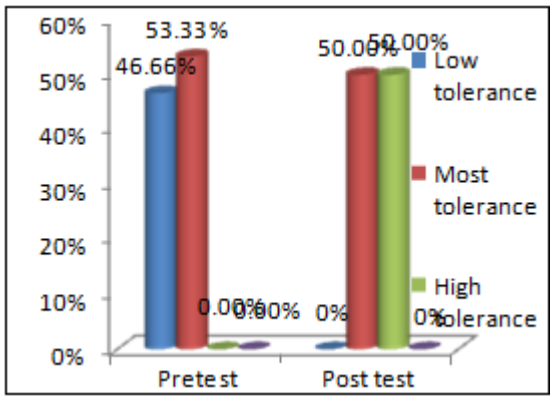

Figure 2: Distribution of samples with their tolerance scores in their pre test and post test

Figure 2 presents the tolerance level of patients undergoing gastroscopy. In the pretest (14) 46.66% of patients had least tolerance and (16) 53.33% of patients had most tolerance. Among the patient undergoing gastroscopy no one had high tolerance or extremely high tolerance.

ii. Effectiveness of behavioural intervention on reducing tolerance level among the patients undergoing gastroscopy:
The significant difference shows that the level of tolerance score in post – test after administering behavioural intervention is (Mean = 23.46, S.D = 4.44) in comparison with the pre – test level of tolerance score (Mean = 13.8 , S.D = 3.96). This change is statistically significant at **p**<0.05 level.

iii. Association between pre test and post test Tolerance scores among the patients undergoing gastroscopy with their selected demographic variables:
This shows that there was no association between the pre test level of tolerance score with demographic variables that are age, gender, educational status, marital status, occupational status, type of family and monthly income. The hypothesis (H3) is rejected because the calculated chi-square value is less than the tabulated value with the selected demographic variables; age, gender, educational status, marital status, occupational status, type of family and monthly income.

5. Conclusion

Based on the findings there is a need to provide behavioural intervention to the patients undergoing gastroscopy to reduce anxiety and increase tolerance level. The study revealed that there is no any significant association between pre-test and post-test level of anxiety and tolerance level with selected demographic variables. The study results show that the level of anxiety and tolerance of the patients undergoing gastroscopy, improved after behavioural intervention. The study indicates that the behavioural intervention is an effective method in improving moderate to severe level of anxiety as well as in improving tolerance level from least tolerance to most tolerance.

6. Implications

The finding of the study had varied implications in different areas of nursing practice, nursing administration, nursing education and nursing research.

- **Nursing Practice:** Behavioural interventions can be adapted as a process to the patients undergoing gastroscopy to reduce anxiety and increase tolerance level. Nurses can introduce the evidenced based practice of performing behavioural intervention before gastroscopy. Nurses must emphasize the patients comfort while providing behavioural intervention to reduce anxiety and increase tolerance during gastroscopy. Develop skills related to behavioural intervention in reducing anxiety and increase tolerance level. Providing health education about non pharmacological management.
- **Nursing Education:** Behavioural intervention can be included in the curriculum on reduction of level of anxiety and increase tolerance level during gastroscopy. The process of performing behavioural intervention for reducing the level of anxiety and reducing tolerance level during gastroscopy. Nursing students and staff nurses can be taught about the behavioural intervention for reducing the level of anxiety and reducing tolerance level during gastroscopy. Workshop and seminar can be conducted.
- **Nursing Administration:** Policies for the process of behavioural intervention for reducing the level of anxiety and reducing tolerance level during gastroscopy can be developed based on the study findings by incorporating the behavioural intervention in to the procedure. Nurse Managers can educate the medical surgical nurses regarding the behavioural intervention through in service education programs. Nursing administrators can take up initiatives in planning and implementation of non-pharmacological therapies along with the routine therapy for reducing anxiety and increasing tolerance level.
- **Nursing Research:** Nurse researchers can conduct studies to verify the scientific rationale and the physiology behind the effect of behavioural intervention for reducing the level of anxiety and reducing tolerance level during gastroscopy. Randomized clinical trials could be under taken so that the validity of the results can be increased and it can be incorporated into the evidence based nursing practice. Guidelines for the procedure of behavioural intervention can be prepared.

7. Recommendations

Training can be provided to the staff nurses regarding behavioural intervention for reducing the level of anxiety and reducing tolerance level during gastroscopy. Structured teaching programme on behavioural intervention for reducing the level of anxiety and increasing tolerance level among the patients undergoing gastroscopy. Encourage the patients to do self deep breathing and calming therapies to reduce anxiety and increase tolerance level.

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