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Video Assisted Teaching: A Better way to Prepare Patients for Upper Gastro Intestinal Endoscopy

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ABSTRACT

Introduction: Upper gastrointestinal (UGI) endoscopy is a commonly performed diagnostic procedure that often causes anxiety because of its invasive nature and inadequate patient awareness. Increased pre-procedural anxiety may affect patient cooperation and the overall procedural experience. This study evaluated the effectiveness of video-assisted teaching in improving awareness and reducing anxiety among patients undergoing UGI endoscopy.

Materials and Methods: A quasi-experimental, non-randomized controlled trial was conducted among 70 patients undergoing UGI endoscopy at Apollo Speciality Hospital, Vanagaram, Chennai. Participants were selected through consecutive sampling and assigned to a control group (n = 35) and an intervention group (n = 35). The intervention group received a 30–40-minute video-assisted teaching session before the procedure. Data were collected using demographic and clinical proformas, a structured awareness questionnaire, the Beck Anxiety Inventory, and an acceptability rating scale. Descriptive and inferential statistics were used for data analysis.

Results: The intervention group demonstrated significantly higher awareness scores than the control group (8.17 ± 0.95 vs. 5.42 ± 1.17; $p < 0.05$). Anxiety scores were significantly lower in the intervention group (14.77 ± 4.31) than in the control group (20.60 ± 3.35; $p < 0.05$). A significant correlation between awareness and anxiety was observed only in the intervention group ($p < 0.05$). Among demographic and clinical variables, only age showed a significant association with anxiety.

Conclusion: Video-assisted teaching effectively improved patient awareness and reduced anxiety before UGI endoscopy. Incorporating this educational intervention into routine pre-procedural care may enhance patient understanding, promote cooperation, and improve overall procedural outcomes.

Keywords: Upper gastrointestinal endoscopy, video-assisted teaching, awareness, anxiety, patient education.

INTRODUCTION:

A prevalent issue among people having invasive medical treatments is anxiety. Endoscopy is a difficult

treatment that needs the patients full cooperation to be successful. Anxiety prior to an upper gastrointestinal endoscopy might have negative effects and occasionally prevent the surgery from being completed successfully (Mary et al,2019).

Cognitive process has the power to change how a dangerous signal is understood and lessen the body's reaction. In cognitive theory of emotion, educating the patients about the process and offering psychological support during it are the greatest ways to lessen their anxiety (John et al ,2024).

The educational intervention's key elements are skill development, psychological support, and pertinent information. The type of endoscopic operation and the patients' need to modify their lifestyles during the perioperative phases must be covered in the pre-operative education. Pre-operative education is a crucial and standard component of patients preparation for any surgical treatment; it consistently results in positive outcomes for the patients. Thus, video-assisted instruction, guided visualization, music, relaxation, etc. can all be used as interventions. The majority of patients experience anxiety prior to having an upper gastrointestinal endoscopy.

Pre-operative education is a crucial and standard component of patients preparation for any surgical treatment; it consistently results in positive outcomes for the patients. Thus, video-assisted instruction, guided visualization, music, relaxation, etc. can all be used as intervention participants must get sufficient information in order to feel less anxious (Li et al, 2025).

STATEMENT OF THE PROBLEM

An Evaluative Study to Determine the Effectiveness of Video Assisted Teaching on Awareness and Anxiety of Patients undergoing Upper Gastro Intestinal Endoscopy at Selected Hospital, Chennai.

MATERIALS AND METHODS

A Quasi Experimental study Design was used to Determine the Effectiveness of Video Assisted Teaching on Awareness and Anxiety of Patients undergoing Upper Gastro Intestinal Endoscopy conducted at Apollo Specialty Hospital, Vanagaram Chennai. The study Population comprised those who met the inclusion criteria, including Willing to participate in the study ,Undergoing Upper GI endoscopy, Aged 21 to 59 years. Patients Underwent recent esophageal or gastric surgery, have acute mental illness or cognitive impairment and unable to comprehend Hemodynamically unstable patients, who are sick during the study period were excluded. A Total of 70 Patients were included in the study. Participant were selected using a Consecutive Sampling Technique to ensure feasibility and timely Data Collection. Tools used were structured questionnaire on awareness on upper gastro intestinal endoscopy, Beck Anxiety Inventory scale and the ethical principles were followed accordingly. The data was tabulated and analyzed using both descriptive and inferential statistics.

RESULT

Table 1 Frequency and Percentage Distribution of Level of Awareness on Upper Gastro Intestinal Endoscopy before Intervention and after Intervention in Control and Intervention group. (n=35)

Assessment	Before intervention						After intervention					
	Adequate		Moderately adequate		Needs improvement		Adequate		Moderately adequate awareness		Needs improvement	
	f	%	f	%	f	%	f	%	f	%	f	%
Control Group	1	2.86	24	68.57	10	28.57	2	5.71	24	68.57	9	25.71
Interventional Group	1	2.86	21	60	13	37.14	27	77.14	8	22.86	0	0

The data in table denotes that in the control group, majority of the patients had moderately adequate awareness in both pre-test (68.57%) and post-test (68.57%). In the intervention group, during the pre-test, most of the patients had moderately adequate awareness (60%). In the post-test, 77.14% of the patients had adequate awareness, showing improvement when compared to the control group**.**

Table 2 Frequency and Percentage Distribution of Level of Anxiety on Upper Gastro Intestinal Endoscopy before Intervention and after Intervention in Control group and Intervention group (n=35)

Assessment	Before intervention								After intervention							
	Minimal anxiety		Mild Anxiety		Moderate anxiety		Severe anxiety		Minimal anxiety		Mild Anxiety		Moderate anxiety		Severe anxiety	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Control group	0	0	3	8.57	29	82.86	3	8.57	0	0	2	5.71	31	88.57	2	5.71
Intervention group	0	0	1	2.86	31	88.57	3	8.57	0	0	27	77.14	6	17.14	2	5.71

The data in table denotes that in the control group, majority of the patients had moderate anxiety in both the pre-test (82.86%) and post-test (88.57%). In the intervention group, during the pre-test, most of the patients had moderate anxiety (88.57%), whereas in the post-test, the majority of the patients had mild anxiety (77.14%).

Table 3 Comparison of Mean and Standard Deviation of Awareness on Upper GI Endoscopy between Control and Interventional Group. N=70

Group	Max score	Pre test		Post test		M.D	Paired t value	"p" value
		Mean	S. D	Mean	S. D			
Control Group	10	5.25	1.12	5.42	1.17	0.17	2.23	0.03
Intervention Group	10	4.97	1.31	8.17	0.95	3.2	13.62	0 .00001

Hence the hypothesis H1 there will be a significant difference between awareness scores on upper gastro endoscopy before and after intervention. In both control and intervention group was accepted.

Table 4 Comparison of Mean and Standard Deviation of Anxiety scores on Upper Gastro Intestinal Endoscopy before and After Intervention in Control and Interventional Group N=70

Group	Max score	Pre test		Post test		M.D	Paired 't, value	"p" value
		Mean	S. D	Mean	S. D			
Control Group	63	20.34	3.90	20.6	3.35	0.26	1.55	0.13
Intervention Group	63	20.71	3.06	14.77	4.31	5.94	9.18	0.00001

Hence the hypothesis H1 there will be a significant difference between level of anxiety on upper gastro endoscopy before and after intervention. In both control and intervention group was accepted.

DISCUSSION:

The first objective was to assess the level of Awareness and Anxiety of Patients Undergoing Upper Gastro Intestinal Endoscopy

The study findings on proportion of awareness reveals that most of the patients (68.57%,60%) had moderately awareness on upper gastro intestinal endoscopy in both the groups in anxiety reveals that most of the patients (82.86%, 88.57%) had moderately anxiety on upper gastro intestinal endoscopy in both the groups.

The present findings are supported with Quasi-Experimental Research Design (Pre-test and Post-test with Control Group Design) conducted by **Helba et al, (2024)** post-intervention, 76.7% of the study group had high knowledge compared to 16.7% in the control group. Severe anxiety was observed in 63.3% of the control group versus only 10% of the study group. The findings confirmed that nursing instructions significantly improved knowledge and reduced anxiety, enhancing overall clinical outcomes.

The second objective was to determine the effectiveness of Video Assisted Teaching on awareness and anxiety of control and intervention group

The present study depicts that in control group the level of awareness scores on upper gastro endoscopy before intervention (5.25±1.12) was similar to the awareness scores on upper gastro intestinal endoscopy after intervention (5.42±1.17).

Whereas in intervention group, awareness scores on upper gastro intestinal endoscopy after intervention was higher (8.17±0.95) than the before intervention (4.97±1.31), reflecting the significant improvement of awareness after the intervention in intervention group ($p<0.05$), which can be attributed to the Effectiveness of Video Assisted Teaching.

The present study depicts that in control group the level of anxiety on upper gastro intestinal endoscopy before intervention (20.34±3.90) was similar to the level of anxiety on upper gastro intestinal endoscopy after intervention (20.6±3.35) which is non-significant at $p>0.05$ level. In intervention group there was significant reduction in the level of anxiety on upper gastro intestinal endoscopy (20.71±3.06) after the intervention compared to the level of anxiety before intervention at (14.77±4.31) which is significant at $p<0.05$ level.

Hence the hypothesis H1 there will be a significant difference between level of Awareness and anxiety on upper gastro endoscopy before and after intervention. In both control and intervention group was accepted.

The present study depicts that awareness scores on upper gastro endoscopy before intervention in control group (5.25±1.12) was similar to the intervention group (4.97±1.31) which is non-significant at $p>0.05$ level. The level of awareness on upper gastro endoscopy was higher in the intervention group (8.17±0.95) after the intervention, compared to the control group (5.42±1.17) which is significant at $p<0.05$ level.

The present study depicts that in the control group the pre assessment level of anxiety on upper gastro endoscopy (20.34±3.90) was similar to the post assessment level of anxiety on upper gastro endoscopy (20.71±3.35) which is nonsignificant at $p>0.05$ level. In the post assessment, the level of anxiety was lesser in the intervention group (8.17±0.95) compared to the control group (32.69 ± 3.06) which is significant at $p<0.05$ level.

Hence the hypothesis H2 there will be a significant difference in level of Awareness and anxiety on upper gastro endoscopy between the control and intervention group was accepted.

The present findings are supported by Knowles et al, (2020) conducted a Quantitative research approach with a cross-sectional study the Individuals with an anxiety disorder and those with a depressive disorder displayed significantly elevated scores on the STAI-T compared to nonclinical comparison groups.

The third objective were to determine the level of Acceptability of Video assisted teaching in selected Intervention group

The present findings depicts that video assisted teaching was highly acceptable to most of the(62.86%). And acceptable to 37.14 in the intervention group of patients undergoing upper gastro intestinal endoscopy.

The findings align with a recent study by **Osman et al, (2023)** evaluated the acceptability of video-assisted teaching among patients undergoingupper gastrointestinal endoscopy and colonoscopy using Mixed-methods approach. The video group reported significantly higher satisfaction scores (mean 13.8 vs. 12.3; $p = 0.038$).

The fourth objective were to find out the association of Awareness and Anxiety among Patients Undergoing Upper Gastro Intestinal Endoscopy with selected Demographic variables.

These results are in line with the findings of Das et al, (2023) Descriptive cross-sectional design statistically significant association between awareness of patients with their age and socioeconomic status as the Chi-square value is (3.79) and (6.157) which is less than the tabulated value whereas there is statistically significant association the awareness with sex as the Chi-square value is (7.44) which is more than the tabulated value at 0.05 significant level.

This finding was in agreement with Anwar et al, (2018) conducted a Descriptive cross-sectional design Less than two thirds of studied patients who undergoing upper GI endoscopy.

Hence the hypothesis H4 there will be a significant association between selected demographic variables and upper gastro intestinal endoscopy anxiety and awareness in control group and intervention group was rejected.

The fifth objective were to find out the Association of Anxiety among Patients Undergoing Upper Gastro Intestinal Endoscopy with selected Clinical Variables.

There was no significant association between level of awareness and anxiety score with clinical variables Hence the hypothesis H5 there will be a significant association between selected clinical variables and upper gastro intestinal endoscopy level of awareness and anxiety in control and intervention group was rejected

The present findings are supported by the study conducted a Quasi- experimental by Aghazadeh et al, (2017) at Ahvaz Golestan Hospital (Iran) evaluated the effect of psychological preparation (including information and behavioral intervention) versus control on STAI-based anxiety reduction.

The sixth objectives were to find out correlation between Awareness and Anxiety score on Video assisted teaching Control and Intervention group

The Data reveals that there is no correlation between Awareness and Anxiety in control group ($p > 0.05$), in Intervention group there is significant correlation between Awareness and Anxiety ($p < 0.05$).

Hence the Hypothesis H3 “there will be a significant Correlation between the awareness and anxiety in upper gastro intestinal endoscopy in the control and intervention group” was rejected. The current findings are consistent with those reported a Descriptive cross- sectional correlational design by Felemban et al, (2024) that showed that 44% had poor knowledge, and more than 45% experienced severe anxiety

CONCLUSION

This study concludes that video-assisted teaching effectively improves patients awareness and reduces anxiety before upper gastrointestinal endoscopy. The structured, visual approach enhanced understanding, supported informed consent, and promoted patients cooperation. It also contributed to a calmer, more positive procedural experience. Integrating this method into routine nursing care supports patients-centered and evidence-based practice.

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