



Differences in Anxiety and Pain Levels in Endoscopic Patients Before and After the Provision of Information Control

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Abstract. Background: Endoscopic examination is essential, but it has a negative impact which causes problems such as anxiety and pain that can lead to failure of endoscopic procedures. This negative impact can be avoided by preparing the patient by providing control information.

Aim: This study aimed to analyze differences in anxiety and pain levels before and after giving control information to patients who underwent endoscopy.

Methods: This study used a pre-experimental. The population of this study was endoscopic patients in the endoscopy unit at 2 hospitals in East Java Province. The sample size was 69 endoscopic patients using purposive sampling according to the inclusion and exclusion criteria. The independent variable was control information, and the dependent variables were anxiety and pain. Instrument to measure anxiety using Endoscopy Confidence Questionnaire, and to measure pain using Visual Analog Scale. Data were analyzed using the Wilcoxon signed rank test, with a significance level of <0.05 .

Results: There was a difference in the level of anxiety of patients before and after $p = 0.000$ and pain $p = 0.014$. The results showed decreased anxiety and pain levels after being given control information.

Conclusion: Information control can provide differences in anxiety and pain between before and after endoscopy, because with the application of this intervention the patient feels assisted, directed his thoughts to positive things, and given ways to overcome the anxiety and pain felt before, during, and even after the procedure endoscopy. body weight depends on gender.

Keywords: anxiety · control information · endoscopy · health · pain

1 Introduction

Endoscopy is a medical procedure performed by inserting a long and thin tube with a small camera (endoscope) through the mouth to diagnose disease on the inside of the body [1, 2]. There are several different types of endoscopic systems to examine, such

as the oral cavity, joints, lungs, stomach, bladder, and colon. In addition to diagnostics, endoscopy is used to support therapeutic procedures such as surgery or reduce invasive interventions [3].

Patients attending endoscopy are often anxious and worried [4–6]. This anxiety is caused by many factors such as a lack of information about diagnostic procedures or concerns about pain during the endoscopy procedure [7–9]. A total of 49 (87.5%) patients experienced mild anxiety, and 7 patients (12.5%) experienced moderate anxiety during the endoscopic procedure [6].

In addition to anxiety, pain is the most common complaint felt by patients during invasive nursing procedures [2]. Uncontrolled pain causes physical and mental stress that leads to increased anxiety during the procedure [10]. High levels of anxiety lead to incomplete, painful, and difficult diagnostic procedures. It also increased the consumption of sedatives and their complications [11, 12].

Patients have the right to be fully informed about the reasons why the procedure is recommended, the expected benefits, potential risks, limitations, and alternatives. They also need to know exactly what is going to happen and have the opportunity to ask questions. Therefore, the provision of control information needs to be given to the patient before the endoscopy procedure. The purpose of this study was to analyze differences in anxiety and pain levels before and after giving control information to patients who underwent endoscopy.

2 Methods

Research design

This study used a pre-experimental design, research conducted on one group without a control or comparison group. The study was conducted in two hospitals in East Java Province for 5 months, namely on June 3–18 November 2021.

Population and Sample

The population in this study were all endoscopy patients in the endoscopy unit at 3 hospitals in East Java Province. The sample size was 69 endoscopic patients using a purposive sampling technique according to the inclusion and exclusion criteria. The inclusion criteria in this study included: 1) Patients aged more than 20 years, 2) Able to communicate well, 3) Good hearing and cognitive function, and 4) Did not receive general anesthesia. Exclusion criteria in this study included: 1) Patients who experienced decreased consciousness, 2) The patient's hemodynamic condition was unstable, 3) Patients who experienced severe psychological disorders 4) Patients who were on neurological treatment, and 5) Patients who underwent endoscopy under general anesthesia.

Data collection

Patients were instructed to complete the ECQ (Endoscopy Confidence Questionnaire) and VAS (Visual Analog Scale) questionnaires which were administered for the assessment of anxiety and pain. Patients received detailed explanations of each questionnaire and filled out the questionnaires in a quiet room.

Anxiety Assessment

The Endoscopy Confidence Questionnaire (ECQ) [13] is a questionnaire to assess anxiety in patients undergoing endoscopy. ECQ has been tested for reliability on 48 internal pre-preparation patients with an alpha value of 0.89, and 48 internal post-preparation patients with an alpha value of 0.92. These results indicate that ECQ was reliable. The parameters used consisted of 4 behaviors related to the success of the endoscopy (swallowing/insert ability, adapting, relaxing, and maintaining device patent during the procedure). Also consisted of 3 questions consisting of 1) prediction of comfort level, 2) estimated time of the procedure, and 3) confidence to act without difficulty. This parameter has been modified from previous studies by eliminating 2 questions related to sedation because they are not related to the study.

Pain Assessment

A Visual Analog Scale (VAS) is a tool for measuring pain intensity. VAS is generally presented in the form of a horizontal line and is numbered 0–10. The assessment of this questionnaire is as follows Score 0 = relaxed and comfortable, score 1–3 = mild pain, score 4–6 = moderate pain, and score 7–10 = severe pain.

Statistics analysis

The data were analyzed using statistical data processing software, SPSS (Statistical Package for the Social Sciences) version 23.0. The Wilcoxon signed rank test, with a significance level of 0.05, was used to assess the level of anxiety and pain in endoscopic patients before and after the information control intervention was administered.

Ethical considerations

The research ethics test was obtained from the Health Research Committee of the Faculty of Nursing, Universitas Airlangga with number 2270-KEPK. The purpose of the study was explained to all participants. Written informed consent was obtained from all participants and they were guaranteed anonymity and confidentiality.

3 Results

This study investigated a total of 69 patients with a mean age of 48 years (Table 1). Table 1 informs that the female gender (50.7), and primary school (37.7) dominate respondent characteristics. After giving the information control intervention, the patient's anxiety and pain were statistically reduced ($p = 0.000$) and pain ($p = 0.014$) (Table 2).

4 Discussion

The purpose of this study was to analyze differences in anxiety and pain levels before and after giving control information to patients who underwent endoscopy. The results of this study showed that there was a statistically significant difference in the level of anxiety ($p = 0.000$) and pain ($p = 0.014$) of patients before and after giving control information to patients who underwent endoscopy. Many patients undergoing GI endoscopic procedures experience anxiety. Improving the pre-procedure information is delivered can help in reducing anxiety, increase patient satisfaction and the patient is much more ready to

Table 1. Characteristics of Respondents

Characteristic	n (%)
Age (mean \pm SD)	48 (\pm 13)
Gender	
Female	35 (50.7)
Male	34 (49.3)
Education	
Primary	26 (37.7)
Junior high	16 (23.2)
Senior high	16 (23.2)
Higher education	11 (15.9)

Table 2. Statistics Analysis Result

Variables	Interventions		p-value
	Pre	Post	
Anxiety score (mean \pm SD)	36 (\pm 8)	40 (\pm 7)	0.000
Pain score (mean \pm SD)	4 (\pm 1)	3 (\pm 2)	0.014

undergo the procedure [14, 15]. It was suggested that information describing patients' experiences, for example, video procedures or testimonials and web-based education might be useful [16, 17].

Endoscopic procedures are a stressful experience and may also cause pain and anxiety [18]. Knowledge preparation (information control) before performing upper gastrointestinal endoscopy procedures is a very important action and has a beneficial effect on increasing knowledge and reducing patient anxiety levels [19, 20]. In a previous study, the persistent reliance on family members to interpret information sheets and preparation advice suggests that revision and/or development of culture and language-specific materials for patients in this Trust/unit is necessary [21]. Detailed preparatory information provided to children between the ages of 8–18 years helped reduce procedural stress significantly, as measured by cortisol levels and an anxiety questionnaire [12]. Patient preparation before endoscopy is an important thing that needs attention from health workers. The preparation that needs to be given is cognitive preparation and information needs including preparation for action [22]. Moreover, along with information preparation, the identification of patients at high risk for high pain scores before undergoing a procedure will enable care providers to reduce the risk of pain and anxiety [23]. Nursing comfort provides patients with a better mood, relieves pain, decreases physiological stress responses, and reduces the incidence of adverse reactions in endoscopy patients [24].

In general, it can be concluded that providing information before performing endoscopic procedures on patients can reduce the patient's anxiety level and the patient's pain levels. This is because the provision of health information is one of the effective factors in controlling anxiety so that it can reduce patient concerns when performing endoscopy [7, 25].

5 Conclusions

There was a significant difference in the aspects of anxiety and pain when the information control intervention was given before and after the endoscopy procedure was carried out.

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