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The Effect of Watching a Comedy Video Before Surgery on Anxiety Levels: A Randomized Controlled Study

Ameliyat Öncesinde Komedi Videosu İzletmenin Anksiyete Düzeyi Üzerine Etkisi: Randomize Kontrollü Bir Çalışma

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ABSTRACT

Objective: The research aimed to assess how viewing comedy videos impacts the anxiety levels of patients undergoing hospitalization in surgical clinics.

Methods: The research employed a randomized controlled pretest-posttest design, conducted in the surgical ward of a private hospital in İstanbul, Türkiye, spanning from October 2022 to February 2023. Ninety-two patients participated, with 46 allocated to the intervention group and 46 to the control group. Patients in the intervention group watched a comedy video, while those in the control group received no intervention. Data were gathered utilizing the "Descriptive Information Form" and the "State-trait Anxiety Inventory". Results were presented following the CONSORT statement guidelines.

Results: No notable distinction was detected in the trait anxiety level between the intervention and control groups. However, a significant decrease in the state anxiety levels among patients in the intervention group was observed post-video viewing ($p<0.05$). Furthermore, the state anxiety level of patients in the intervention group (41.50±2.62) was significantly lower compared to those in the control group (50.28±3.29) ($p<0.05$).

Conclusion: It was found that watching comedy videos during the preoperative period was an effective method of reducing the anxiety level. In line with this finding, it is recommended to identify the anxiety levels of patients undergoing surgery in the preoperative period and to reduce anxiety levels by watching a comedy video.

Keywords: Anxiety, nursing care, surgical nursing, video recording

ÖZ

Amaç: Araştırma, komedi videosu izletilmesinin cerrahi kliniklerinde yatan hastaların anksiyete düzeyine etkisini belirlemek amacıyla yapıldı.

Yöntem: Deneysel olarak gerçekleşen bu araştırmada randomize kontrollü ön test-son test tasarımı kullanıldı. Araştırma verileri Ekim 2022 ile Şubat 2023 tarihleri arasında Türkiye İstanbul'da özel bir hastanenin cerrahi servisinde toplandı. Örneklem, 46'sı müdahale grubunda ve 46'sı kontrol grubunda olmak üzere toplam 92 hasta dahil edildi. Müdahale grubundaki hastalara komedi videosu izletilirken, kontrol grubundaki hastalara herhangi bir müdahale yapılmadı. Veriler, "Tanımlayıcı Bilgi Formu" ve "Durumluk-sürekli Kaygı Envanteri" kullanılarak toplandı. Çalışma bulguları CONSORT Bildirgesi'ne uygun olarak rapor edildi.

Bulgular: Müdahale ve kontrol grupları arasında sürekli kaygı düzeyleri açısından anlamlı bir fark bulunamadı. Müdahale grubundaki hastaların video izledikten sonra durumluk kaygılarında istatistiksel olarak anlamlı bir fark belirlendi ($p<0,05$). Ayrıca müdahale grubundaki hastaların durumluk kaygı düzeylerinin (41,50±2,62) kontrol grubundaki hastalara (50,28±3,29) göre istatistiksel olarak anlamlı bir fark olduğu görüldü ($p<0,05$).

Sonuç: Ameliyat öncesi dönemde hastalara komedi videoları izletilmesinin anksiyete düzeyini düşürmede etkili yöntemlerden biri olduğu belirlendi. Bu bulgu doğrultusunda ameliyat olacak hastaların ameliyat öncesi dönemde anksiyete düzeylerinin belirlenmesi ve komedi videosu izletilerek anksiyete düzeylerinin düşürülmesi önerilmektedir.

Anahtar kelimeler: Anksiyete, hemşirelik bakımı, perioperatif hemşirelik, video kayıt

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INTRODUCTION

Surgery is a medical procedure that affects patients physiologically, behaviorally, and psychologically, creating anxiety regardless of its size and vital importance [1]. Patients are at risk for many complications during the surgical period [2]. Although they understand the necessity of the operation for them during this period, they are in an anxious, excited, and unpleasant emotional state [2]. In addition, patients experience anxiety due to pain, fear of death, uncertainty, loss of self-control, and potential lifestyle changes as soon as they enter the operating room [3]. Preoperative anxiety, which occurs in 60-80% of patients before surgery, is an important emotional state that causes an increase in blood pressure and pulse rate, excessive sympathetic activity during intubation, higher doses of anesthetic drugs during anesthetic induction, postoperative nausea, vomiting and pain, increased need for analgesics, delayed wound healing, and prolonged recovery and hospital stay [4-7]. It is possible to support the patient in coping with anxiety through effective nursing approaches. Professional nursing interventions, including informing the surgical patient, providing comfort, imparting coping skills for anxiety, and improving the quality of care, are part of preoperative psychological preparation for the surgical patient [8,9].

The most effective non-pharmacological nursing intervention to reduce preoperative anxiety is distraction [10]. There are two distraction methods as active and passive, depending on the method used in the research. Active distraction involves the active participation of the patient and uses methods such as virtual reality, breath control, imagination, and relaxation. Passive distraction, however, is the use of auditory methods like music and visual methods like television [11,12]. The comedy videos shown divert the patient's attention. Thus, it is believed that the patient's anxiety levels will decrease. The objective of this study was to assess how viewing comedic content influences the anxiety levels of patients admitted to surgical wards.

Research Hypotheses

H_1: There is a statistically significant difference in anxiety levels between surgical patients who watch comedy videos before surgery and those who do not.

MATERIAL AND METHOD

Aim of the Research

This randomized controlled experimental study was conducted to evaluate the effect of watching comedy videos on the anxiety levels of patients in surgical clinics.

Place and Time of the Research

The study was collected between October 2022 and February 2023 in the surgical ward of a private hospital in İstanbul.

Research Population and Sample

The study encompassed who were scheduled to undergo elective surgical procedures of a private hospital in İstanbul, Türkiye, from October 2022 to February 2023, who were undergoing surgical procedures. This investigation utilized a randomized controlled experimental methodology, and a power analysis was executed to ascertain the necessary sample size. With the aim of achieving 80% statistical power, the G*Power 3.0.10 program was employed, determining an effect size of 0.4 and a 5% type I error rate, resulting in a calculated sample size of 84 patients (with 42 individuals allocated to each group) [13]. The effect size (Cohen's d=0.4) was determined based on previous studies investigating the effect of non-pharmacological interventions, such as audiovisual distraction, on anxiety levels in surgical patients, where moderate effects were typically observed. An effect size of 0.4 was selected in line with Cohen's definition of a moderate effect and findings from related literature. However, the final sample consisted of 92 patients, evenly distributed between the intervention and control groups, with 46 participants in each.

Inclusion criteria

- Adults over 18 years,
- Patients who were going to have a surgical operation,
- Patients who were conscious,
- Patients oriented to person, place, and time.

Data Collection

The "Descriptive Information Form" and the "State-trait Anxiety Inventory (STAI-I)" were used to collect research data.

Descriptive Information Form: The form including the demographic characteristics of the patients was prepared by the researcher in line with the information obtained through a literature review. It consists of 8 questions regarding age, gender, marital status, etc [4,8,9].

The State-trait Anxiety Inventory (STAI-I): It was originally developed by Spielberger et al. [14] in 1970 and later adapted to Turkish culture by Öner and Le Compte [15] in 1976. It consists of a Likert-type scale comprising 20 questions designed to assess state and trait anxiety levels separately. Higher scores on the scale indicate higher levels of anxiety. The total score is calculated by subtracting the positive scores from the negative scores and adding 50 points to the remainder. In Öner and Le Compte's [15] study, the reliability of the scale ranged between 0.94-0.96. In this study, the scale exhibited a Cronbach's alpha coefficient of 0.88.

Randomization and Blinding

The randomization list was generated in advance using SPSS version 22's random number generation function. Patients who met the inclusion criteria and agreed to participate were assigned to either the intervention or control group based on this list, on the morning of their surgery. Specifically, odd-numbered patients were allocated to the intervention group and even-numbered patients to the control group. The study adhered to the CONSORT (2010) guidelines (Figure 1).

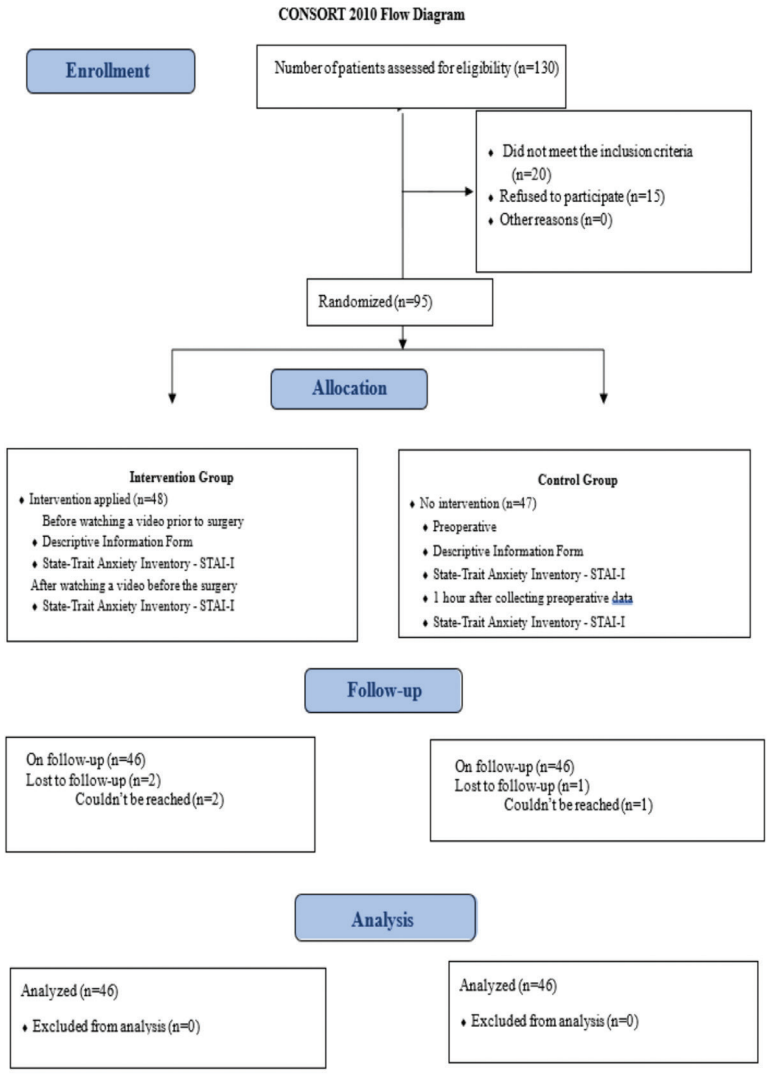


Figure 1. Consort 2020 Flow Diagram
STAI-I: State-trait Anxiety Inventory

Research Intervention

The study involved individuals who had undergone surgical procedures at a private hospital in İstanbul, met the inclusion criteria, and opted to participate voluntarily.

Intervention Group

Patients meeting the inclusion criteria in the intervention group were escorted to the clinic's patient room. Those agreeing to participate filled out the "Descriptive Information Form" and "STAI-I" through face-to-face interviews on the morning of the surgery. Subsequently, they were presented with a comedy video meticulously prepared by the researcher. One hour after viewing the video, participants were again asked to complete the "STAI-I". In the intervention group, patients watched the comedy video approximately two hours prior to surgery, after completing the pre-test forms. One hour following the video, the STAI-I was re-administered. This procedure and timing were applied uniformly to all patients in the intervention group to ensure standardization.

In the intervention group, patients watched the comedy video approximately two hours prior to surgery, after completing the pre-test forms. One hour following the video, the STAI-I was re-administered. This procedure and timing were applied uniformly to all patients in the intervention group to ensure standardization. The video was informally evaluated for appropriateness by psychiatric nursing and psychology professionals prior to implementation.

Comedy Video: Patients were exposed to a brief segment, lasting about ten minutes, extracted from a classic comedy film. Careful selection criteria were applied to ensure that the chosen videos were devoid of any elements such as violence, profanity, or aggressive scenes that could potentially have adverse effects on the patients. Specifically, scenes featuring renowned and esteemed actor Kemal Sunal were predominantly utilized. All video clips were sourced from YouTube, and a new composite video lasting ten minutes was meticulously crafted from these scenes. Subsequently, this newly edited compilation was presented to patients in the intervention group.

Control Group

Patients who were allocated to the control group were escorted to the patient room within the clinic. On the morning of their surgical procedure, individuals who agreed to take part were interviewed in person. During these interviews, patients were asked to complete the "Descriptive Information Form" and the "STAI-I" questionnaire. No specific intervention was administered by the researcher to the patients in the control group. They were simply instructed to complete the "STAI-I" questionnaire once more approximately one hour after they finished the initial set of questionnaires.

Ethical statement

Approval for this study was granted by the Maltepe University Ethics Committee (approval no.: 2022/23-04, date: 22.09.2022). Institutional clearance was also obtained from the hospital where data collection occurred. Patients who volunteered for the study provided both written and verbal consent after being briefed on the research's objectives, assured of the confidentiality of their personal information, informed of their right to withdraw at any point, and guaranteed that research data would remain confidential. The study adhered to the principles outlined in the Declaration of Helsinki.

Data Analysis

The data were subjected to analysis using the SPSS 22 software for Windows. he following analyses were conducted using SPSS version 22: Paired samples t-tests were used to evaluate the difference between pre-test and post-test scores within the intervention and control groups. Independent samples t-tests were used to compare the post-test scores between the intervention and control groups. Descriptive statistics (mean ± standard deviation) and p-values were reported for all comparisons. These revisions have been made in both the methods and results sections to enhance clarity and statistical transparency.

RESULTS

A paired samples t-test showed a significant decrease in State Anxiety Inventory (SAI) scores within the intervention group (pre-test: 50.22±5.84; post-test: 41.50±2.62; t=2.58; p=0.01). No significant change was found in the control group (p>0.05). Between-group comparison using an independent samples t-test also revealed a significant difference in post-test SAI scores (t=-4.79; p<0.01).

Similarly, in the control group, the mean age of patients was 63.57 years. Among them, 56.5% were female, 63% were married, and 41.3% were primary school graduates. Furthermore, 56.5% were employed, and 58.7% reported having income levels equal to their expenses. All patients in this group also had social security coverage, and 47.8% underwent general surgery.

After comparing the data, no statistically significant distinctions were noted between the intervention and control groups regarding age, gender, marital status, educational attainment, employment status, income level, social security coverage, and the type of surgical procedure. These findings indicate that both groups exhibited similar demographic and clinical characteristics (p>0.05) (Table 1).

The pre-test mean score for SAI was 50.22±5.84 in the intervention group and 49.01±2.72 in the control group, showing no statistically significant difference between the groups (p>0.05).

After the intervention, the average SAI score in the intervention group was 41.50±2.62, whereas it was 50.28±3.29 in the control group. Notably, participants in the intervention group displayed significantly lower post-test scores compared to those in the control group (p<0.05). Moreover, a significant discrepancy was observed between the pre-test and post-test mean scores of the intervention group (p<0.05). Examination of the mean values indicated that the post-test SAI scores (41.50±2.62) were lower than the pre-test scores (50.22±5.84). Conversely, there was no notable difference between the pre-test and post-test mean scores of the control group (p>0.05).

Concerning the Trait Anxiety Inventory (TAI), the initial mean score was 56.13±4.65 in the intervention group and 51.48±2.36 in the control group, with no significant variation between the groups (p>0.05). The subsequent mean score for TAI was 54.78±3.56 in the intervention group and 51.79±2.54 in the control group, with no noteworthy difference detected between the post-test mean scores of the groups (p>0.05). Furthermore, there was no statistically significant divergence between the pre-test and post-test mean scores for TAI in either the intervention or control groups (p>0.05) (Table 2).

Table 1. Descriptive Characteristics

		Intervention		Control		Statistical test
		n	%	n	%	
Gender	Female	29.0	63.04	26.0	56.52	X^2:0.41; p:0.52
	Male	17.0	36.96	20.0	43.48	
Marital status	Married	32.0	69.57	29.0	63.04	X^2:0.43; p:0.51
	Single	14.0	30.43	17.0	36.96	
Education	Literate	6.0	13.04	11.0	23.91	X^2:2.94; p:0.40
	Primary school	19.0	41.30	19.0	41.30	
	High school	16.0	34.78	10.0	21.74	
	Faculty/college	5.0	10.87	6.0	13.04	

Table 1. Continued						
		Intervention		Control		Statistical test
		n	%	n	%	
Income	My income is less than my expenses	6.0	13.04	5.0	10.87	X^2:0.26; p:0.88
	My income is equal to my expenses	28.0	60.87	27.0	58.70	
	My income is more than my expenses	12.0	26.09	14.0	30.43	
Social security	Yes	46.0	100.00	46.0	100.00	
Surgical intervention	Brain surgery	10.0	21.74	10.0	21.74	X^2:1,81; p:0,77
	Gastroenterology	4.0	8.70	6.0	13.04	
	General surgery	19.0	41.30	22.0	47.83	
	Cardiovascular	8.0	17.39	5.0	10.87	
	Orthopedics	5.0	10.87	3.0	6.52	
Age	$\bar{x}$ ± SD	59.43±17.59		63.57±13.39		t:1.26; p:0.21
SD: Standard devitation						

Table 2. Pre-test, Post-test, and Intergroup Comparison of SAI and TAI Scores				
		Pre-test $\bar{x}$ ± SD	Post-test $\bar{x}$ ± SD	Comparison of pre-test and post-test
SAI	**Intervention**	50.22±5.84	41.50±2.62	*t:2.58; p:0.01
	Control	49.01±2.72	50.28±3.29	*t:-7.98; p:3.54
	Comparison	**t:2.01; p:0.07	**t:-4.79; p:0.01	
TAI	**Intervention**	56.13±4.65	54.78±3.56	*t:1.99; p:0.07
	Control	51.48±2.36	51.79±2.54	*t:-8.02; p:0.12
	Comparison	**t:0.84; p:0.39	**t:5.29; p:0.27	
SD: Standard devitation, SAI: State Anxiety Inventory, TAI: Trait Anxiety Inventory				

DISCUSSION

Regardless of the diagnosis, individuals are negatively affected in physiological, emotional, and social aspects. Patients feel fear and angst due to the uncertainty about surgical interventions. Therefore, patients who will undergo surgery are at risk for anxiety. There are limited studies in Türkiye investigating the effect of watching comedy videos on patients' anxiety in surgical settings. According to the results of this study, the hypothesis "H_1: Showing comedy videos to patients in surgical clinics before the operation will reduce the level of anxiety". was confirmed.

As a result of our study, it was determined that the intervention and control groups were homogeneously allocated. In both the intervention and the control groups, the majority consisted of women, married individuals, primary school graduates, individuals whose income equaled their expenses, and individuals who underwent general surgical procedures. Additionally, it was noted that all participants had social security. The findings were in parallel with the literature [16-20]. When the descriptive characteristics were examined, it was important that there was no statistical difference between the intervention and control group patient and that both groups had similar characteristics, not affecting the result of the research.

The results of the study indicated a statistically significant reduction in anxiety levels among patients in the intervention group following video viewing ($p<0.05$). Furthermore, it was observed that the anxiety levels of patients in the intervention group were significantly lower compared to those in the control group ($p<0.05$). Humor has long been recognized as a coping mechanism that helps individuals manage stress and anxiety. It not only provides emotional relief but also offers physiological benefits by reducing stress hormones such as cortisol. Martin emphasized that laughter has positive effects on both psychological well-being and immune function [21]. Visual distraction techniques like comedy videos have been shown to effectively reduce preoperative anxiety. In a randomized controlled trial, Ko and Youn [22] found that a video-based intervention significantly decreased anxiety levels in patients awaiting surgery. Similarly, Mora-Ripoll [23] highlighted in his review that laughter triggers beneficial physiological responses, such as reduced heart rate, lower blood pressure, and muscle relaxation, which contribute to overall stress reduction. Furthermore, Rotton and Shats [24] reported that patients exposed

to humorous content prior to surgery experienced improved postoperative mood and required fewer analgesics compared to those who did not view such content. This suggests that humor may have a multidimensional therapeutic impact beyond anxiety relief. A study conducted in Türkiye by Genç and Sarıtaş [25] also supports the effectiveness of comedy videos in reducing anxiety and improving vital signs among surgical oncology patients. This finding reinforces the cultural applicability and accessibility of humor-based interventions in clinical settings. Humor helps individuals cope with stressful events and has a protective effect against stress-inducing situations. Humor in funny videos is a therapy method [26]. Genç and Sarıtaş [25] found that preoperative comedy videos shown to oncology patients undergoing surgery reduced blood pressure and preoperative anxiety levels. In the study conducted by Elmali and Balci Akpinar [13], it was established that watching comedy videos after orthopedic surgery reduced patients' pain and anxiety. Rotton and Shats [24] indicated that comedy videos shown to patients improved their well-being and reduced the need for analgesics). There are many studies in the literature on the use of humor in different ways, and in most of the studies, comedy videos are shown to patients before surgery to reduce anxiety. Study results showed that patients' well-being increased and anxiety decreased after the intervention. Vagnoli et al. [27] found that clown intervention applied to children before the surgery reduced the level of preoperative anxiety. In the literature, although the study group was children, results supporting our study were found [28-31]. An advantageous aspect of our study compared to these studies was that it was more cost-effective and feasible than clown intervention. Humor plays a direct and indirect role in the reduction of anxiety. It is believed that the comedy videos shown before surgery decrease stress hormones by reducing patients' anxiety and weaken the negative symptoms of stress by enhancing their ability to cope with anxiety-inducing situations.

Study Limitations

Our study had some limitations. Non-Turkish-speaking patients were excluded from the sample, findings based on the data obtained on the mentioned dates were limited to that time frame, the study was conducted at a single center, and the sample size was limited. Although the sample size was calculated based on power analysis, the inclusion of different surgical types may have introduced variability, which could affect the internal validity and generalizability of the results. Another limitation of this study is the inclusion of patients undergoing various types of surgical operations, which may have introduced variability. Future studies focusing on a single type of surgery are recommended to enhance the internal validity of the findings.

CONCLUSION

According to the results of the study, it was determined that the state anxiety level of the intervention group decreased after the intervention. In line with this finding, it is recommended to identify the anxiety levels of patients undergoing surgery in the preoperative period and to reduce anxiety levels by watching a comedy video. Conducting the research on larger and more diverse sample groups is also recommended.

Ethics

Ethics Committee Approval: Approval for this study was granted by the Maltepe University Ethics Committee (approval no.: 2022/23-04, date: 22.09.2022).

Informed Consent: Patients who volunteered for the study provided both written and verbal consent after being briefed on the research's objectives, assured of the confidentiality of their personal information, informed of their right to withdraw at any point, and guaranteed that research data would remain confidential.

Footnotes

Author Contributions

Concept: EA, AAY, GKB; Design: EA, AAY, GKB; Data Collection or Processing: EA, GKB; Analysis or Interpretation: EA, AAY, GKB; Literature Search: EA, AAY, GKB; Writing: EA, AAY, GKB.

Conflict of Interest: The authors declare no conflict of interest.

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