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Psychological and Moral Factors for Elderly in Their Adaptation to Surgical Procedures: A Quasi-Experimental Study

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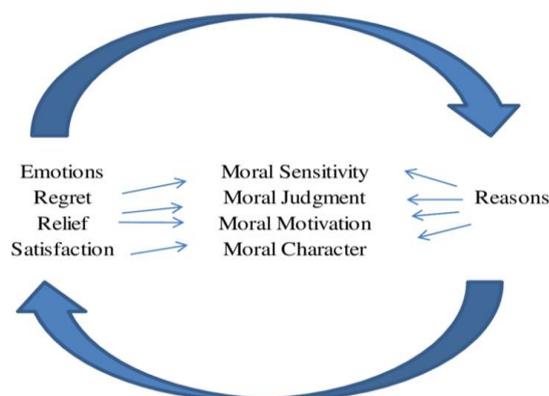
Adaptation mechanism grade (AMG)

Descriptive and inferential statistics

ABSTRACT

Most people fear surgery, even if it may save lives. Patients may fear hospitalization for surgery, causing anxiety. Preoperative nerves are prevalent. The main objective is to assess adaptation mechanisms grade (AMG) in preoperative surgery patients, to identify the relationship between AMG and selected variables such as age, gender, schooling level, employment, surgery procedure, and Mann-Whitney U test, to develop guidelines for preoperative patients for anxiety relief. The deliberate sampling strategy was used in this investigation. With 250 patients hospitalized at the KHCSB, a quasi-experimental research method, a single group pre-testing, and an apost-testing design was used for the present study. The data were analyzed using descriptive and inferential statistics. The terms used are mean, standard deviation, t-Test. According to the pre-testing percentage grade AMG, 84.38 percent of the patients had maladaptive coping, and 20.52 percent had adaptive coping before the structured training session. According to the post-testing AMG percentage grade, 81.62 %of patients had adaptive coping, and 19.997 %had maladaptive coping. AMG differentiates between pre-testing and post-testing. The mean post-testing AMG was 11.01, while the mean pre-testing AMG was 7.31. The experimental group exhibited minimal statistical significance regarding preoperative and postoperative anxiety. The experimental group exhibited minimal statistical significance regarding preoperative and postoperative anxiety. The experimental group had a lot less duration between becoming awake and removal of the endotracheal tube.

GRAPHICAL ABSTRACT



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Introduction

It is normal to feel nervous before surgery. Even though surgery may save or perhaps save lives, most people are afraid of "going under the knife." It is critical to avoid allowing anxieties and concerns to become too overpowering. Patients may see hospitalization for surgical treatment as a risk or a stressor, and nervousness is typical preoperative. There is no cure for concern. Therefore, it is vital to avoid excessive anxiety. However, a few things may help patients cope with their worries before surgery: Several hospitals provide specialized care, and family and friends may also be able to help. Preoperative education is essential before surgery. Preoperative education assists patients in dealing with anxiety by improving their self-esteem and mental health [1]. In 78 %of surgery patients, preoperative schooling helped lower stress [2]. According to the study, psychology-related preparation cannot provide all-encompassing covering [3]. However, soothing techniques such as distraction and visualization effectively reduce stress [4]. Fitzpatrick, E., and Hyde, A. (2006) describe preoperative patients to train for the rising physical and psychological claims pre-surgery and post-surgery, and several schooling activities occur before the operation. These operations include health data, patient pain pump skill training, and psychological support to address patients' concerns, needs, and challenges [5].

Problem Description

An experimental study at KHCSB in Iraq evaluated preoperative surgery patients' adaptation processes. This study aimed to evaluate the adaptation mechanisms grade (AMG) of preoperative KHCSB.

Study Objective

This research aimed to consider the impact of preoperative psychological variables on short-term patient satisfaction with surgery in older patients and the most effective coping mechanisms.

Study Delineation

The study is limited to Surgery in KHCSB in Iraq. Specific age group from 18 years and above. Patients who are admitted to the hospitals.

Al-KARAMAH Cardiac Surgery Specialized Center: An Overview

It is a facility that specializes in heart and artery disorders and surgery. It is made up of the departments listed below (consulting department, surgery department, pediatric cardiac surgery department, laboratories, radiology, catheterization rooms, operating rooms, and in addition to the presence of special halls for cardiac care). The hospital accepts all basic and complicated medical cases from Baghdad and the other Iraqi governorates, with over (500) referrals per day, around (886) catheter procedures, both curative and diagnostic, and (90) open-heart surgery conducted every month, making it one of the primary operations.

Review of Literature

A method to cope that includes an acognitive reevaluation of instances that may trigger anxiety, soothing monologue, and cognitive management via discriminatory attentiveness is contained in the first approach. The provision of data about the endangering incident as well as affirmations to produce emotional insertion are contained in the second approach. Patients preparing for serious surgery were given the coping device, preparation data, the two techniques, or none. The coping device's ability to successfully decrease anxiety before and after surgery is proven. A study that analyzed nurses' preoperative anxiety evaluations revealed that the coping device had a substantial significant influence [6]. The coping device also substantially influenced postoperative parameters (total pain relievers needed and percentage of patients who needed sedatives). The preliminary data, however, had no meaningful influence on such postoperative initiatives. At KHCSB in Iraq, a quasi-experimental study was conducted. This study aimed to see how preoperative patient Schooling affected anxiety and healing in patients who had open-heart surgery [7]. Patients who satisfied the eligibility

requirements and were admitted to the cardiac surgery unit were randomly allocated to one of two groups: experimental or control. Until the day of their admission, the experimental group (n=57) was given a specific schooling briefing and a visit to the heart surgery unit. The control group (n = 53) used standard hospital practices, including minimal prior instruction or inspection. The Beck Anxiety Inventory was used to measure anxiety, whereas physiological findings, hospitalization days, and the recurrence of problems were used to assess rehabilitation. Multivariate analysis of covariance was employed, with any confounding factors controlled [8]. The difference from the majority of prior research that indicated the advantages of preoperative patient Schooling, this study with the other clients failed to support earlier findings.

Methods

Utilizing an experimental research technique, the study's goals were met.

Research design

Group 1 o1xo2: The study was carried out using a single group before-test and after-test design. Independent variables (IV), include the following parameters, age, gender, schooling, employment, and kind of operation were the independent factors. Dependent variable (DV), where DV was AMG of the preoperative patients. Demographic variables (DemV), DemVs were age, gender, schooling, and surgical procedure. Selection and description of the field of the study: The research was carried out in KHCSB. Population (Pop): This study's target population comprised all preoperative patients admitted to KHCSB. Sample and sampling technique: The sample comprises Two hundred and fifty (250) patients hospitalized in various hospitals in Baghdad, Iraq. In this study, the approach of purposeful sampling was utilized.

Resource Enhancements

The resources consist of two sections, A and B.

Section A: Contains a *DemV*, i.e., gender, age, schooling, and Surgical Procedure.

Section B: Self-structured Adaptation checklist was used to assess the effectiveness of a structured teaching program for preoperative patients [9].

Content validity of the tool: The content validity of the instrument was validated by experts from many fields such as psychology, psychiatry, anesthesia, surgery, and nursing. Amendments were made per their recommendations [10].

Reliability of Tool: The Split-Half technique of dependability was used to calibrate the tool's reliability. The tool's reliability was computed using Karl Pearson's coefficient of correlation and Spearman's Brown Prophecy formula, which was determined to be 0.84, indicating that the instrument was reliable.

Ethical Consideration: The information's confidentiality was protected. They were guaranteed that their replies would be kept secret and that the material would only be used for research (Table 1) [11, 14].

Statistical Analysis

The T-test for parametric variables and the Mann-Whitney U test for nonparametric variables were used to compare parametric variables between preoperative and postoperative assessments [12]. According to the JOABPEQ's directions for usage, the data acquired from the JOABPEQ are given effective rates for each domain. Using Spearman's rank correlation coefficient and the stepwise approach of multiple regression analysis, preoperative variables impacting surgery satisfaction were investigated. The significance threshold for all statistical tests was set at 0.05, and all tests were two-tailed. SPSS Statistics was used to do all the calculations [13, 15].

Data Analysis Plan

The information will be examined using descriptive and inferential statistics, including mean, mean percentage, mean standard deviation, t-Test, p-Test, and Mann-Whitney U test (Figure 1) [14,17].

Table 1: Features of the Tasters when N=250

Parameters	Type of Gender: MALE	Type of Gender: FEMALE	Schooling	Surgical Procedure									
				Eye Surgery	Orthopedics	General Surgery	Plastic Surgery	Cesarean Section					
	14-25	25-35	35-45	45-60	Unlettered	Alumnus	Postgraduate Studies	98	88	0	114	76	31.52
	48	81	94	77	79	199	14	98	88	0	114	76	31.52
	15.66	25	29.87	21	26	59.8	7	29.81	28.88	0	73.01	31.52	31.52

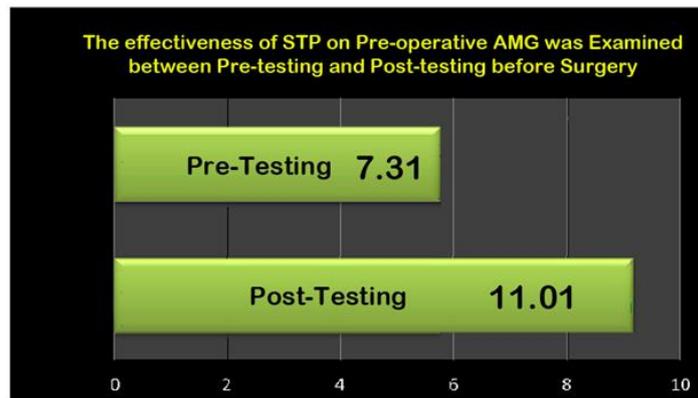


Figure 1: Comparing pre-testing and post-testing effectiveness on preoperative AMG before surgery

Table 2 demonstrates that before the structured training program, 84.38 % of the patients had maladaptive adaptation, and 20.52 % had adaptive coping. As a finding, it is determined that before the organized Schooling program, preoperative patients exhibited maladaptive AMG. Patients'

AMG differs before and after an organized Schooling program.

Table 3 depicts that 81.62% of the patients had adaptive coping, and 19.997 % had maladaptive coping.

Table 2: Percentage distribution of pre-testing AMG of the patients undergoing major surgery

AMG	N	Percentage
Unsuccessful AMG (1-9)	305	84.38
Flexible Adaptation Strategies (10 - 20)	40	20.52

Highest Points = 20; Smallest Points = 1

Table 3: Percentage distribution post-testing effectiveness of a structured teaching program on the level of AMG

AMG	post-testing grade (N=250)	
	N	Ration(%)
Unsuccessful AMG (1-9)	72	19.997
Flexible Adaptation strategies (10 - 20)	320	81.62

Highest Points = 20; Smallest Points = 1

Table 4. shows that there is a variation between the pre-testing and post-testing AMG. The mean post-testing highest AMG was 1.991, and the mean pre-testing AMG was 1.212.

Table 4: Comparison of pre-testing and post-testing effectiveness on preoperative AMG before surgery

N=250					
Parameters	N	AMG		t-Test	p-Test
		Mean	Standard Division		
pre-testing	250	7.31	1.212	30.0372*	p=0.000
post-testing	250	11.01	1.991		

Results and Discussion

Our study of many patients before surgery showed that they were unable to control their anxiety and fear of the surgery. While other studies conducted on patients who underwent surgery to remove breast cancer showed that they underwent Individual psychotherapy, as well as psychological preparation before surgery, as well as pharmacological management, which all had a significant and essential effect on relieving anxiety and fear among patients, and thus survival [18-20]. The current study reported that patients' fears of anesthesia mostly focus on postoperative wound pain, postoperative nausea and vomiting, not waking up after surgery and that they might stay conscious during surgery that they might not wake up again after the operation.

According to Nigussiet *al.* (2014) [21], the most prevalent preoperative worries were anxiety about over-dying, financial loss, surgery outcome, and operation awareness. This result was consistent with a 2013 study by Mavridou *et al.* that found (81%) of patients feel preoperative anxiety. In their research, Bakr *et al.* (2014) noted that although some individuals had low anxiety, most experienced moderate to severe anxiety.

According to Ramesh *et al.* (2017), most patients experienced higher preoperative anxiety.

According to Table 5, there is a statistically significant correlation between age and anxiety level. Bakr *et al.* (2014) [22] and Almalkiet *al.* (2017) [23] discovered in their studies a very significant relationship between the age of surgical patients and anxiety levels, which supported these results.

Table 5 depicts the range value of the Mean Independent Test from (45.242) for Male and (46.363) for females. The range value of Standard Deviation from (15.441) for Male and (15.354) for females. The results also showed that values of Mean of Independent t-test Pre-Surgery in case there are concerns from (43.992) and (47.591), and the values of Standard Deviation of Independent t-test Pre-Surgery in case there are concerns from (15.573) and (14.981).

Table 6 reveals that the primary source of patients' fears was; fear of death (51.2%), postoperative wound pain (48.8%), fear of postoperative nausea and vomiting (47.5%), fear of not waking up again next to the operation (46.2%) and (40%) of them were feared from staying conscious during surgery and (38.8%) of them were afraid of unconsciousness results from the effect of anesthesia.

Table 5: The variation in patients' anxiety levels depending on their gender and previous surgeries

Anxiety Variable		Independent t-test	
		Mean	Standard Deviation
Sex	Male	45.242	15.441
	Female	46.363	15.354
Pre-surgery	Yes	43.992	15.573
	No	47.591	14.981

Table 6: Refers to Patient distribution based on their apprehensions about operation and anesthesia

No	Items	Yes		No		Total	
		independence	%	independence	%	independence	%
1	Fear of becoming unconscious when under anesthesia	32.21	40.01	50.21	62.41	81.21	100
2	Fear of the pain from surgical wounds	40.21	50.01	42.21	52.41	81.21	100
3	Fear of not waking up after the procedure	38.21	47.41	44.21	55.01	81.21	100
4	Fear of undergoing surgery with inadequate anesthetic and being conscious	33.21	41.21	49.21	61.21	81.21	100
5	Fear of post-op nausea and vomiting	39.21	48.71	43.21	53.71	81.21	100
6	Fear of dying	42.21	52.41	40.21	50.01	81.21	100

Conclusions

Anxiety is the main characteristic experienced by patients before surgery. This is indicated by the results conducted on a large sample before their surgery. Patients with AMG are not able to cope with preoperative anxiety. Therefore, urgent steps are needed to improve patients' ability to cope with preoperative anxiety. There is also necessary to include anxiety counseling by appropriately trained counselors. Preoperative psychological preparation is essential to the management and preparation of the patient before the operation to promote postoperative recovery. In cancer patients, depression is common and may result from their diagnosis.

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Recommendations for future research

Based on the findings of this study, the study can be replicated on a large sample to validate and generalize its findings.

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Authors' contributions

All authors contributed to data analysis, drafting, and revising of the paper and agreed to be responsible for all the aspects of this work.

Conflict of Interest

There are no conflicts of interest in this study.

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