

## **Cover Page**

Manuscript Title: Does the preoperative anxiety decrease with BATHE method? A prospective randomized double blind study

We used Bathe method during preoperative evaluation to decrease anxiety.

We found out that in the group in which BATHE interview was applied, anxiety decrease was meaningful statistically.

We observed that patient satisfaction was high in the group that was approached by BATHE method, but this was not statistically significant.

These results encouraged us to use BATHE method as a part of our routine preoperative evaluation process at our institution.

Sincerely

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**Participants and Procedure**

Before the study, approval from the ethics committee of Katip Celebi University Faculty of Medicine was received. 463 patients were included in the prospective randomized double blind study. To accept to be involved in the study, being above 18 years old and being literate were the criteria necessary to be involved in the study. Exclusion criteria were listed as below: Not to accept to be involved in the study, being under 18 years old, being illiterate, having been diagnosed a psychiatric illness, having a physical/psychiatric trauma within the last one year, using sedative, antidepressant, antiepileptic substances or drugs, having cooperation, understanding or hearing problems, belonging to American Society of Anesthesiologists (ASA) physical situation (PS) III and above.

**STAI Analysis**

By randomization using the closed envelope technique, the envelopes have been prepared beforehand the patient examination. Sealed envelopes contained a specific number and a patient group defined for this number. Thus, patients were divided into two as 'bathe group' and 'control group' by simple randomization method and they were given one of these closed envelopes respectively.

The demographic data of the patients which included their names-surnames, gender, age, educational background, income level, their previous anesthesia experience (no experience, with general anesthesia experience, with regional anesthesia experience, with both general and regional anesthesia experience) have been questioned. Following this, STAI anxiety questionnaire that was validated to Turkish language by Oner et al. has been applied in order to learn the patients' anxiety levels before preoperative evaluation and the result has been recorded as entrance STAI(Appendix 1). Since we aimed to decrease operation anxiety of the patients, we only used state anxiety scale at that moment. After then, patients have been taken to anesthesia examination room.

**BATHE technique**

All the patients were evaluated before the anaesthesia. Later, by opening the envelope of the patient, his/her group has been learned. Feedback has been given with empathetic statements to those in

BATHE group after key questions and they have been informed about the possible outcomes (Appendix-2). Bathe questions have been modelled by Hepner et al. and have been modified in order to be used in perioperative period. It was validated to Turkish language by Akturan et al. For the patients in the control group, the interview ended by routine preoperative evaluation (without applying BATHE technique).

### **Satisfaction Questionnaire**

At the end of the examination, the STAI anxiety questionnaire (Exit STAI) was repeated for patients to measure their anxiety levels. In addition, satisfaction questionnaire, which was prepared by Leiblum et al., was also applied (Appendix-3). Patients have been asked to rate their satisfaction level by using five point Likert scale. At the end, the bathe method has also been applied to the patients in control group as well. The reason for this procedure was to prevent the discrimination of the control group. Obviously, this did not change the results of the study as the satisfaction questionnaire was applied before the BATHE technique procedure for the control group.

The flowchart of the study is shown in Figure 1.

### **Statistical Analysis**

Data has been evaluated by SPSS 22. STAI and satisfaction levels are expressed as mean values and standard deviations. They are compared by using the Student t test and ANOVA. On the other hand, the relationship among STAI, satisfaction level and age is expressed as correlation.

## APPENDIX

### Appendix 1. STAI questionnaire

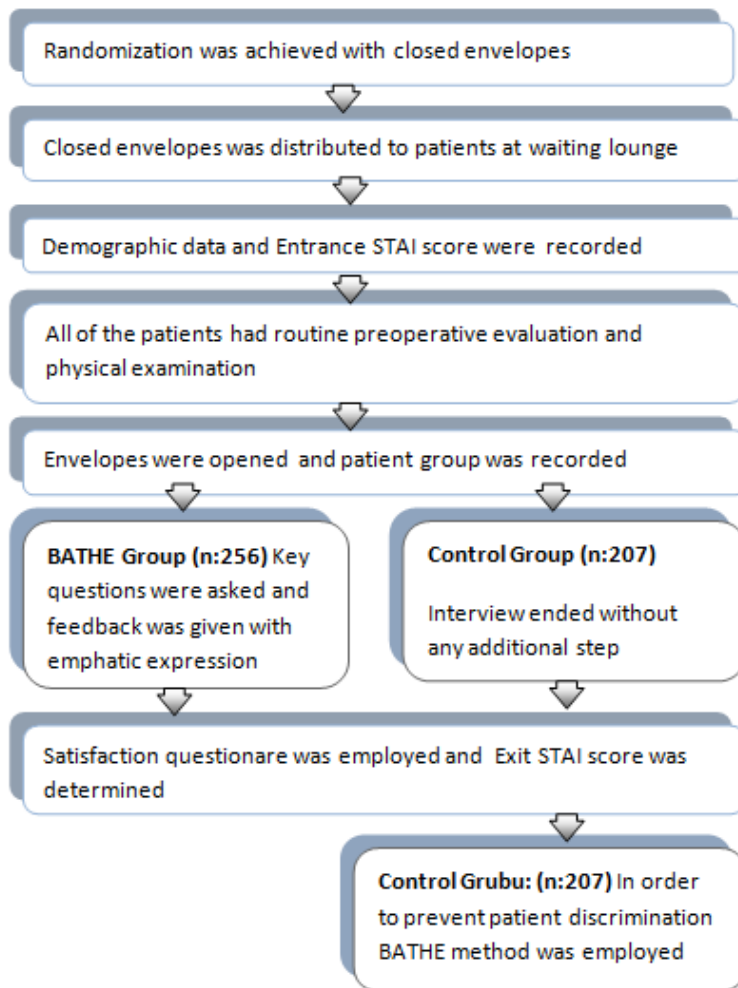
		Not at all	Somewhat	Moderately so	Very much so
1	I feel calm				
2	I feel secure				
3	I am tense				
4	I am regretful				
5	I feel at ease				
6	I feel upset				
7	I am presently worrying about possible misfortunes				
8	I feel rested				
9	I feel anxious				
10	I feel comfortable				
11	I feel self-confident				
12	I feel nervous				
13	I am jittery				
14	I feel "high strung"				
15	I am relaxed				
16	I feel content				
17	I am worried				
18	I feel over-excited and rattled				
19	I feel joyful				
20	I feel pleasant				

## Appendix 2. BATHE method questions

		Original questions	Modified questions
B	Background	What is going on in your life?	What brings you here?
A	Affect	“How do you feel about that?” or “What is your mood?”	How have you felt about the idea of having surgery?
T	Trouble	“What about the situation troubles you the most?” or “Is there anything about that that troubles you?”	What about the surgery worries you most?
H	Handling	“How are you handling that?” or “How could you handle that?”	How are you handling that?
E	Empathy	“That must be very difficult for you.”	It’s perfectly normal to be nervous about surgery. Let me explain what will happen on the day of your surgery

### Appendix 3. Satisfaction Questionnaire

		Very bad	Bad	Middle	Good	Very good
1	Friendliness/courtesy of your doctor					
2	Explanations your doctor provided about any problem/condition you may have					
3	Concern your doctor showed for your questions/worries					
4	Your doctor's efforts to include you in decisions about your treatment					
5	Information your doctor gave you about your medications					
6	Instructions your doctor gave you about follow-up care					
7	Degree to which your doctor talked with you using words you could understand					
8	Amount of time your doctor spent with you					
9	Your confidence in this doctor					
10	Likelihood of your recommending this doctor to others					
11	Please rate your overall satisfaction with today's visit to your doctor					



**Figure 1.** Study flow chart

## PATIENT DATA

Patient ID:

Name:

Surname:

Sex:

Age:

Education:

- ☐ 1. First Degree
- ☐ 2. High Shcool
- ☐ 3. University
- ☐ 4. Postgraduate

Operation Type:

- ☐ 1.General Surgery
- ☐ 2. Neurosurgery
- ☐ 3. Orthopedic Surgery
- ☐ 4. The others

Level of income:

- ☐ 1. Low
- ☐ 2. Moderate
- ☐ 3. High

Marital status :

- ☐ 1. Single:
- ☐ 2. Married:
- ☐ 3. Divorced

Anesthesia Experience:

- ☐ 1. None
- ☐ 2. General Anesthesia
- ☐ 3. Regional Anesthesia



Doctor experience in occupation:

- <15 year
- >15 year

State Trait Anxiety Inventory Score (30 minute before preoperatif evaluation)  
:.....Point

All patients were evaluated preoperatively

- Bathe group (Bathe method was applied to during evaluation in Bathe group)
- Non bathe group

State Trait Anxiety Inventory Score (30 minute after preoperatif evaluation)  
:.....Point

Satisfaction Questionnaire:

- 1. Very bad
- 2. Bad
- 3. Middle
- 4. Good
- 5. Very good