Hospitalised Individuals Aged 65-85 Years Perceived Sleep Level and Anxiety of Therapeutic Touch the Effect on the Body Mas Index: A Randomised Controlled Trial

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Assoc. Prof. BB

MSc. Nurse BA

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ABSTRACT

This study was conducted to examine the effect of therapeutic touch on perceived sleep level and anxiety in individuals aged 65-85 years. The research design was a randomised experimental study with a pre-test post-test control group. The research was conducted in Ankara City Hospital Orthopaedics and Traumatology Service between October 2022 and December 2022. The population of the study consisted of 368 patients aged 65-85 years who applied to the clinic within one year. The sample size of the study was calculated by G-power analysis. The sample consisted of 68 patients, 34 in the experimental group and 34 in the control group. Patients in the experimental group received therapeutic touch for two sessions for one week, for an average of 20 minutes between 22:00-24:00 hours. No intervention was performed in the control group. Socio-demographic characteristics form, visual analogue scale and sleep pattern questionnaire were used for data collection. Chisquare test, dependent sample t test (t*), independent sample t test (t), Mann Whitney U test (z) and Wilcoxon test (z*) were used for statistical analysis of the data.

STUDY PROTOCOL AND STATİSTİCAL ANALYSİS

1. Study Design

The study found that therapeutic touch in hospitalised individuals aged 65-85 years In order to measure the effect on perceived sleep level and anxiety, pre-test and post-test was conducted as a randomised controlled trial.

2. Hypotheses

H1: Therapeutic touch applied to hospitalised individuals aged 65-85 increases the perceived sleep level.

H2: Therapeutic touch applied to hospitalised individuals aged 65-85 reduces the level of anxiety.

3. Population and sampling

The population of the study consisted of 368 patients with chronic diseases between the ages of 65-85 who were hospitalised in the Orthopedics and Traumatology Department of Ankara City Hospital between September 2022 and December 2022. The sample size of the study was calculated using the G-Power programme. A similar study that will be cited as a reference to this research since there was no effect size, Cohen's standardised values of 0.80 effect power

and 0.25 medium effect size were accepted (Tabachnick, G.B., Fidell, (2020). It was determined that the minimum required sample size was 56, 28 in the experimental group and 28 in the control group. A total of 68 elderly individuals, 34 in the experimental group and 34 in the control group, constituted the sample group of this study, taking into account the possibility of 20% loss from the groups in order to make analyses with parametric assumptions. The independent variable of this study was the therapeutic touch applied to the patient, and the dependent variables were anxiety and perceived sleep level. The control variables of this study were the socio-demographic characteristics of the patients.

3.1. Inclusion Criteria

- Between 65 and 85 years of age according to the WHO classification of 1998

- The patient was hospitalised in the orthopaedics and traumatology service for at least seven days

- The patient is able to communicate.

3.2. Exclusion Criteria

- The presence of a hearing impairment,

- Intubation.

- In the acute pain period

4. Randomisation and Blinding

In the determination of the experimental and control groups in the study, a random number sequence was generated by an independent statistical expert after written and verbal consent was obtained from the patients who met the inclusion criteria of the study. Patients were divided into two groups as (34) experimental group and (34) control group by block randomisation method and closed envelope method was used. The researcher made a selection from the sealed envelopes and saw the patient names just before the application. The first application to the patient was started after this selection was made. Since the research is an individual applied research type due to its characteristics, blinding could not be done in terms of participant and researcher. In this study, only statistical analysis blinding was performed. After the pre-test and post-test data forms were collected by the researcher, the group to which that form belonged was written on the questionnaire forms. All data forms were collected in this format and

delivered to the statistician who was not connected with the research. Data entry and analyses were performed by the statistician who was independent from the research.

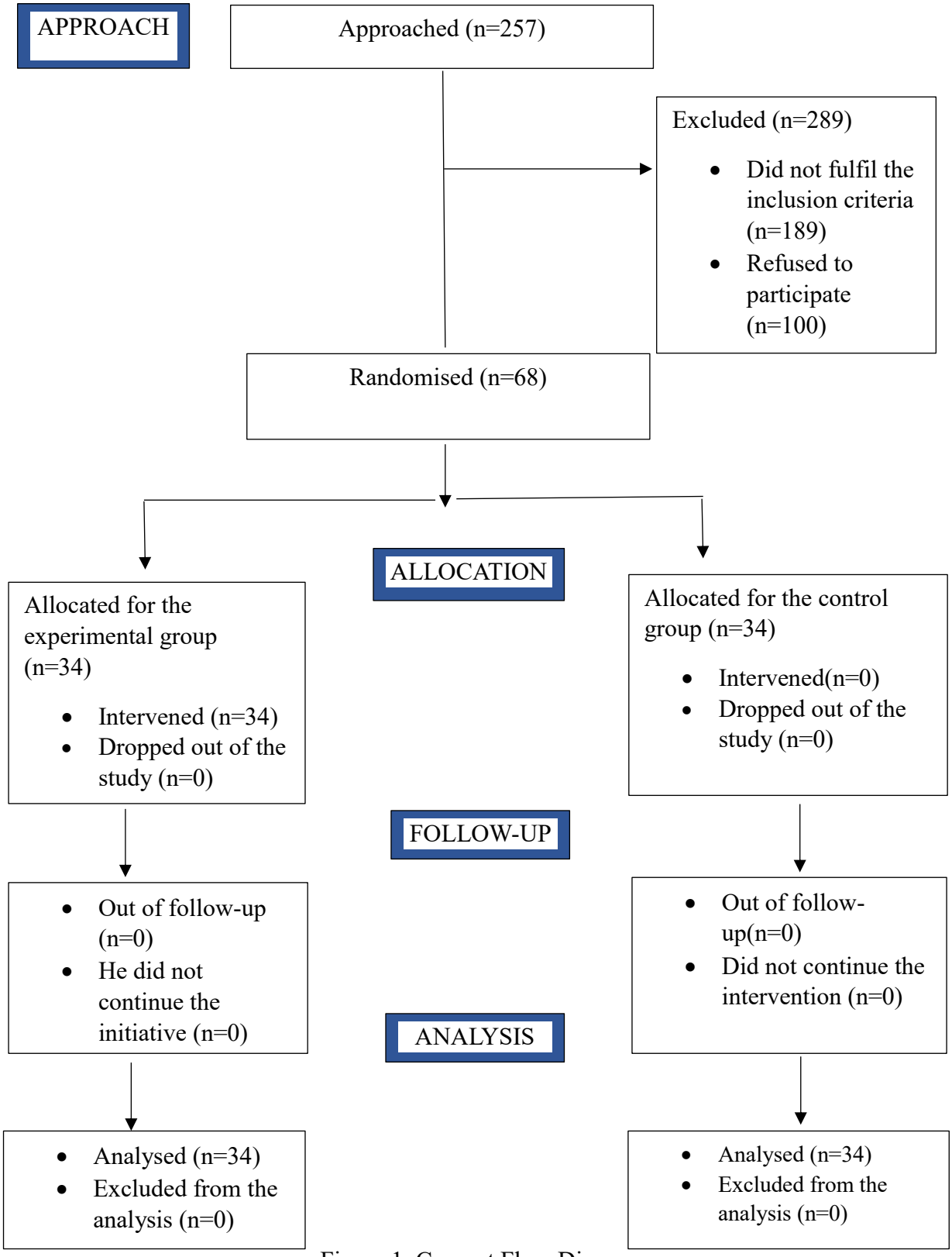

Figure 1. Consort Flow Diagram

5. Data Collection

Socio-demographic characteristics form developed by the researcher for data collection form, visual analogue scale and sleep pattern questionnaire were used. The data were collected twice with the 'Socio-Demographic Characteristics Form', 'Visual Analogue Scale' and 'Sleep Pattern Questionnaire': pre-test and post-test one week after the pre-test in the control group; pre-test before the intervention and post-test after two sessions of Therapeutic Touch application at three-day intervals (one week after the first measurement) in the experimental group.

5.1. Socio-Demographic Characteristics Form

This form, organised by the researchers (Kürtüncü et al., 2018; Tümkaya et al., 2008), consists of a total of nine questions including age, gender, marital status, presence of chronic disease, duration of chronic disease, educational and occupational status, stress statement, and self-report about the source of stress in order to obtain information about the characteristics of the patients included in the study.

5.2. Visual Analogue Scale (VAS)

The Visual Analogue scale consists of emotion adjectives in which each emotion experienced by the person at that moment is marked with a vertical line on a plane. Each emotion is evaluated between not experiencing that emotion at all (e.g., I am not anxious = 0) and experiencing it completely (e.g., I am extremely anxious = 100) (Aydın et al., 2011). The VAS assesses four categories of emotions (Dysphoria, Hostility, Anxiety and Positive Emotions) (Albersnagel, 1988). Aydın et al. (2011) stated that the visual analogue scale is valid and reliable (Aydın et al., 2011) (Appendix-2). In this study, the anxiety subtest of the scale was used. In this test, the patients were shown the rating score of the anxiety level between 0-10 and asked at which level they evaluated their anxiety. The level determined by the patient was marked and the data were determined.

5.3. Sleep Pattern Questionnaire

This form (Buysse et al., 1989), which was designed by the researchers, consists of questions about the factors affecting the individual's sleep patterns. It consisted of ten questions including the time at which the individual sleeps, factors affecting falling asleep, factors assisting sleep, sleep duration at night, stress level scoring, factors affecting the individual in the sleep process, evaluation of sleep, mood during the day, and the individual's own statements. After this form was created, expert opinion was obtained from five academicians. After the expert opinions, the Content Validity Index score of the questionnaire was determined as 1. Since the questions

were understandable and there were no additional suggestions, the data were collected with the first format.

5.4. Collection of Pretest Data of Experimental Group and Control Group

While collecting the pre-test data of the control group; firstly, after the researcher introduced himself to the patient, he gave information about the research, what therapeutic touch means, its benefits and studies on therapeutic touch. It was mentioned that the patients in the control group would not be applied in this study, only questions would be asked about their sleep patterns during the hospital process. After the written consent form was explained to the patients, a copy of the forms and the questions to be asked were left for them to read. In this process, the questions in their minds were answered and they were given time to think about participation. Consents were obtained from the consenting patients and the socio-demographic characteristics form, visual analogue scale and sleep pattern questionnaire were completed by the researcher.

While collecting the pre-test data of the experimental group; firstly, the researcher started communication by introducing himself to the patient. The research, what therapeutic touch means, its benefits and studies on therapeutic touch were mentioned. In this study, two sessions of therapeutic touch will be applied to the patients in the experimental group at three-day intervals in total; It was mentioned that this application was carried out to measure whether therapeutic touch has an effect on the sleep patterns of the patients. Patients were told about the stages of therapeutic touch. Since it is an alternative method, the concerns of the patients were eliminated, and the patients who wanted to see the therapeutic touch in this process were asked by their teammates to show the patient what kind of application was visually. Patients were given time to think about participation by leaving their written consent and a copy of the prepared questions. After obtaining consent from the patients who gave consent, the socio-demographic characteristics form, visual analogue scale and sleep pattern questionnaire were asked to the patients. The forms were filled in by the researcher according to the patients' statements.

PATIENTS FULFILLING THE INCLUSION CRITERIA

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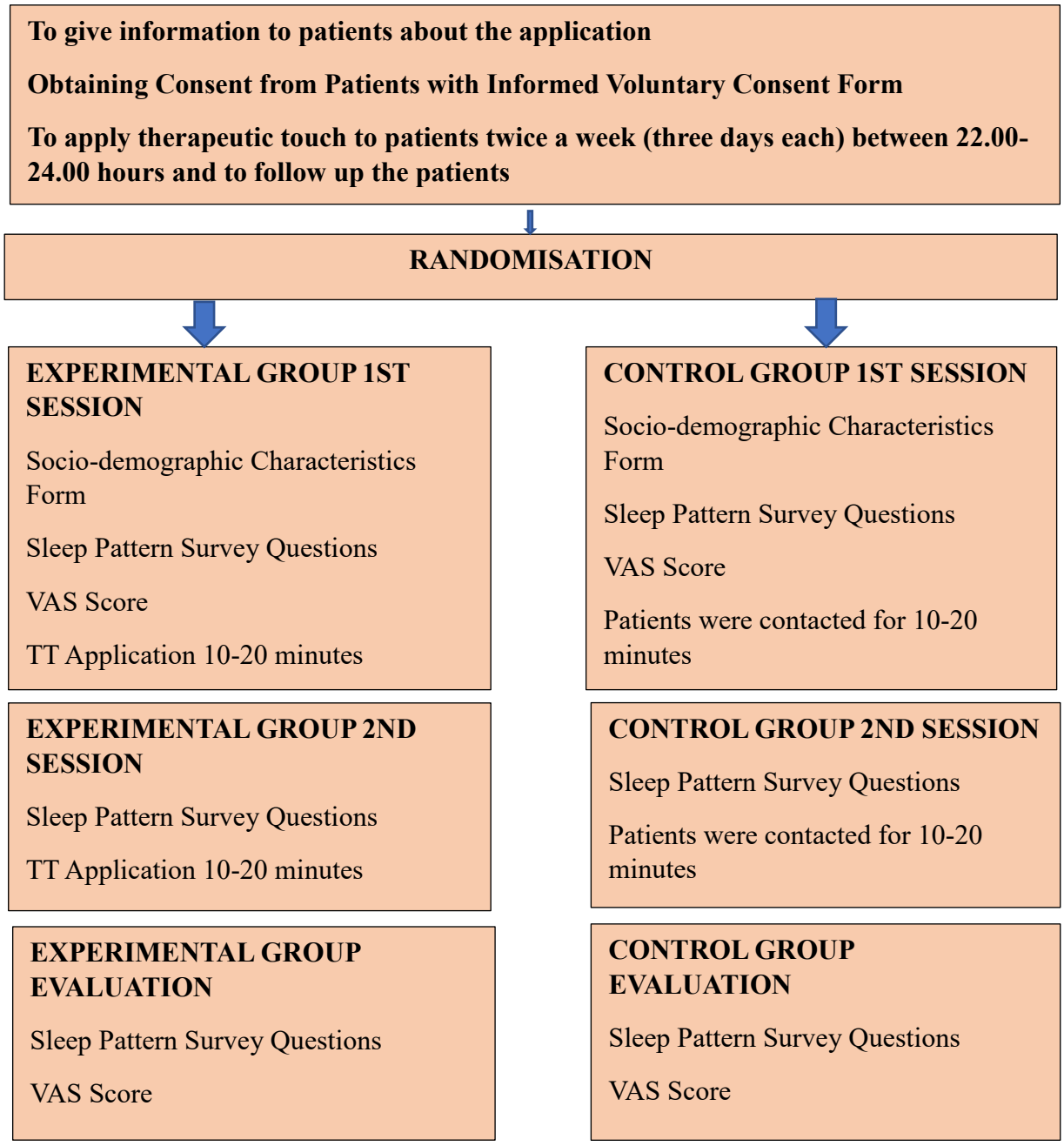

Figure 2. Research Flow Chart

5.5. Intervention Applied to the Experimental Group

After written and verbal consents were obtained from the experimental group, the application phase was started in the experimental group. Therapeutic Touch was applied to the patients in the experimental group for one week by the researcher who was trained in this subject. 3.11.1. Pre-Application Preparation The researcher received 12 hours of first stage therapeutic touch training from TT Turkey representative Serbülent Biçer for therapeutic touch method. In

November 2021 and December 2021, she received the 2nd level of therapeutic touch training from Sue Conlin and Serbülent Biçer and became a therapeutic touch practitioner (ANNEX-4). Permission was obtained from the author for the Visual Analogue Scale. 3.11.2. Therapeutic Touch Application Stages Therapeutic Touch application consists of five stages: "Centering", "Due Diligence", "Rebalancing and Re-Determining", "Finishing and Resting", "Remembering/Reflective Thinking" (Conlin, 2021).

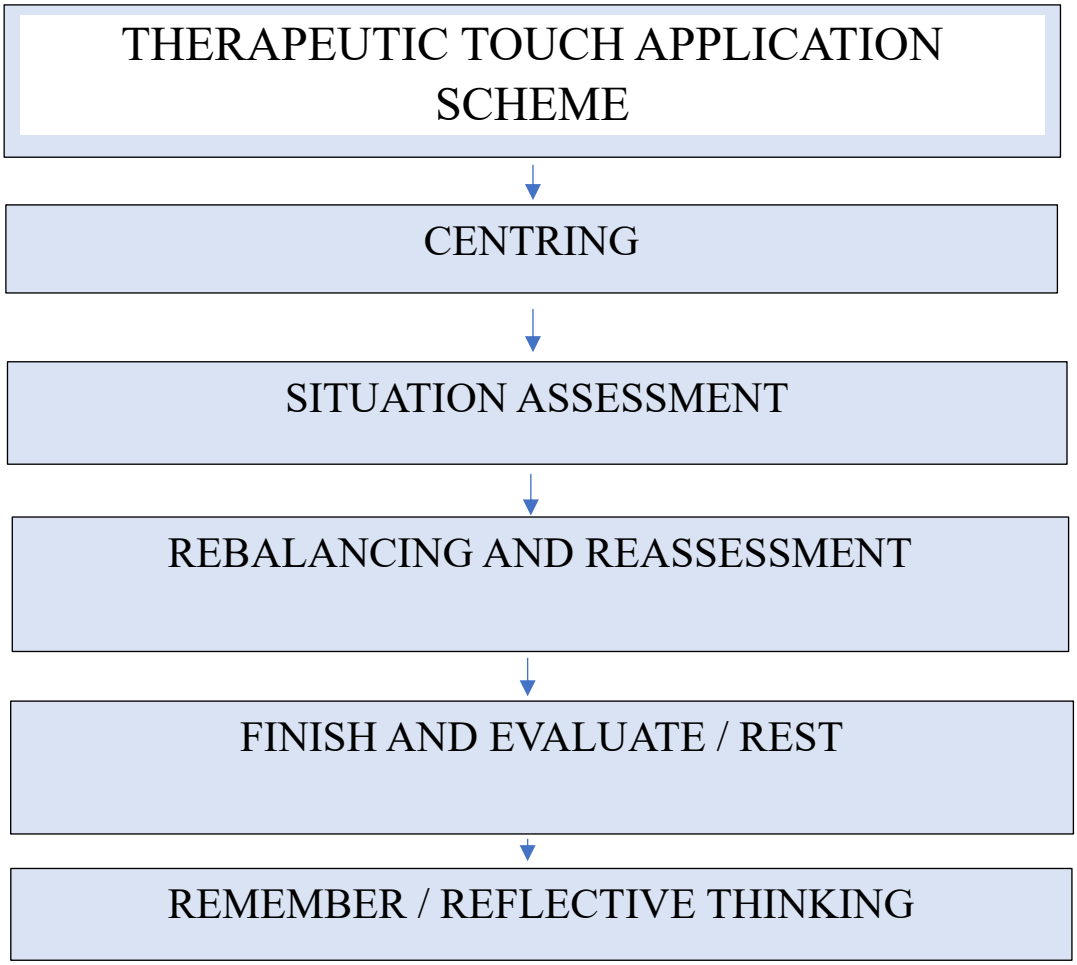

Figure 3. Therapeutic Touch Application Scheme

a. Centring

In the application phase, the patient is first told by the practitioner that the patient can touch his/her shoulders and ankles. The therapeutic touch practitioner first closes his/her eyes and starts the energy flow by rubbing his/her palms together. In this process, he/she grounds himself/herself in order to protect himself/herself from the stimuli in the external environment

and not to receive the negative energy of the patient to whom he/she will perform therapeutic touch. During the grounding phase, he/she describes himself/herself in the way and place he/she feels best. In general, the practitioner can think of himself/herself as a tree and feel rooted, or he/she can think of himself/herself as by the sea. This is completely up to the description of the practitioner. This is called grounding. He intends to heal. He focuses. If the practitioner thinks that he/she cannot do this stage and cannot focus, he/she should not start the therapeutic touch application. It takes between 2-5 minutes for the practitioner to centre.

b. Situation Assessment

After centring, the practitioner touches the patient's shoulders with permission. He starts to scan the energy field from inside to outside, from the centre to the outside with hand movements. While scanning the energy field, he actually gets information about the patient. He/she feels discomforts in some parts of the body, tingling sensation in his/her palms, pulling sensation, coldness, warmth, vibration etc. In the meantime, the practitioner can talk to the patient.

c. Rebalancing and Reassessment

After determining the points where the patient's energy flow is troubled, it is cleaned with hand movements from the inside to the outside, from the centre to the outside. This cleansing is done three times from the patient's back to the ankle, three times from the face to the ankles; arms and legs from top to bottom. After the cleansing phase is over, the patient's ankles are touched and grounding is done (this phase is up to the practitioner, he/she can do it whenever he/she feels the need for grounding for his/her patient). In order for the patient to be rebalanced, energy flow is sent to the patient by the practitioner according to the patient's needs. The patient is thus rebalanced. After the rebalancing is finished, the patient is scanned again. If there is a blockage in the energy flow, the same steps are repeated.

d. Finishing and Resting

After the re-assessment of the patient's condition, the therapeutic touch is finished. The practitioner does not leave the patient's energy field at once, he/she relaxes the field with slow and calm hand movements and then leaves. In total, the application takes 10-20 minutes. 20 minutes and more is not recommended as it will tire the patient and the practitioner. After the application, the soles of the hands and feet can be washed (for both the practitioner and the patient). Patient and practitioner rest.

e. Remembering/ Reflective Thinking

After the session is completed, the practitioner notes the answers to questions about the patient such as 'Which clues did we perceive?' 'How did we feel about these clues?' 'How did we respond?' 'How do we feel about our responses?' 'Was there a change in the field or in our consciousness during the practice? The practitioner spares time for himself/herself. The patient should wait 72 hours to get the answers to these questions.

6. Statistical Analysis

Data were analysed using the statistical package IBM SPSS Statistics Standard Concurrent User V 26 (IBM Corp., Armonk, New York, USA). Descriptive statistics were given as number of units (n), percentage (%), mean ± standard deviation (mean±SS), median (M), minimum (min), maximum (max) and interquartile range (IQR) values. The normal distribution of the numerical variables was evaluated by Shapiro Wilk normality test. Independent sample t test (t) was used for variables showing normal distribution in the study groups and Mann Whitney U test (z) was used for variables not showing normal distribution. The analysis of the data of the numerical variables at the measurement times was evaluated with the dependent sample t test (t*) for normally distributed variables and Wilcoxon test (z*) for non-normally distributed variables. Chi-square tests (Pearson chi-square/Fisher exact test) were used to compare categorical descriptive characteristics between groups. $p<0.05$ was considered statistically significant.

7. Ethical Statement of the Study

Ethical approval for the conduct of the study was obtained from the Ethics Committee of KTO Karatay University (Decision No: 2021/017; Date: 20.12.2021). Institutional permission was obtained from Ankara City Hospital, where the study was conducted. Verbal consent and written informed consent were obtained from all patients in both the experimental and control groups. The informed consent form included information about the purpose of the study, its duration, potential side effects, expected benefits of participation, and the contact details of the researchers for communication during the study period. The researcher received therapeutic touch training from Serbülent Biçer, the representative of Therapeutic Touch Turkey, in order to perform the therapeutic touch intervention. All stages of the study were conducted in accordance with the principles of the Declaration of Helsinki.