

# **THE EFFECT OF THERAPEUTIC TOUCH AND MUSIC REST ON SLEEPING APPLIED TO CHILDREN WITH LIVER TRANSPLANTATION**

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## **MATERIAL AND METHOD**

### **Desing of Research**

The research was planned as a quasi-experimental study.

### **Place and Time of Research**

The research will be carried out at İnönü University Turgut Özal Medical Center Liver Institute Pediatrics Clinic between February 2021 and October 2021. Pediatric transplant patients are followed in the 19-bed pediatric clinic of the institute.

### **Population and Sample of the Research**

The population of the research will be children between the ages of 0-18 who had liver transplantation at İnönü University Turgut Özal Medical Center Liver Institute between February 2021 and October 2021 and were hospitalized in the pediatric clinic of the institute. The number of patients to be included in the study was calculated as 50 when the calculation was made by taking the confidence interval of 95% in the sample whose population is known. Of the 50 patients sampled, 24 will be included in therapeutic touch groups and 24 in music concert groups.

### **Randomization:**

Assignment of the participants to the control and experimental groups will be done by stratification and block randomization method. Children will be stratified according to their age (0-1, 2-5, 6-12, 13-18 years) and randomization with blocks will be made. In order to prevent bias, children who were stratified were assigned to the control and experimental groups by drawing lots. The research groups will be written on separate papers and the group will be

determined by drawing lots during data collection. In this way, the number of children included in the groups and the probability of each child to be included in the study in the experimental or control group will be equalized.

**Inclusion criteria:**

\*Being within a period of at least one month and at most two years after the transplant

\* 0-18 years old

\* Conscious

\*spontaneous breathing

\*No hearing problems

\*Pain free

\*Children who do not use sleeping pills will be included in the study.

**Data Collection Tools**

The data will be collected by face-to-face interview technique with the "Introductory Information Form", "Actigraphy" created by the researcher between February 2021 and October 2021.

**Introductory Information Form**

The "Introductory Information Form", prepared by the researcher in line with the literature, consists of a total of 15 questions such as the age, gender, education status of the child and parent, and the time of transfer.

**Actigraphy**

Actigraphy measures the sleep and wake cycles of children and adolescents, detects motor activities with precision, is worn on wrists or ankles, and allows for recording and storing resting and activity patterns in a digital environment; small, lightweight, portable device in the form of a watch (Ertan & Alkan, 2012). The actigraphy device, which can be easily attached to the wrist of the patients, is used to evaluate and document the physical movements of the patients related to sleep. The device can keep a record of the patient's activity for 24 hours. The patient's information can be read and evaluated with the help of a special software of the device.

**Data Collection**

Data will be collected through face-to-face interviews with children aged 0-18 years, who had liver transplantation at İnönü University Turgut Özal Medical Center Liver Institute and were hospitalized in the pediatric clinic of the institute. The study will consist of therapeutic touch group and music groups. Which group the participants will be in will be determined by drawing lots. One of the experimental groups will be treated with therapeutic touch, and the other will be listened to a music preferred by the family/child. In both groups, children's sleep will be evaluated with pre-test, post-test and follow-up applications. In this study, applications to the "Therapeutic touch" and "music" groups will be done once a day (morning or afternoon) for three days, in the form of a 15-20 minute application period. Children's sleep will be evaluated with "Actigraphy" the day before the application, the day the application ends, and the fourth day after the application.

## **Intervention Materials**

### **Therapeutic Touch:**

Therapeutic touch; It is a low-cost, non-contraindications, easy-to-apply and non-invasive form of complementary therapy that can be applied anywhere and at any time (Vanaki et al., 2016). Therapeutic touch was developed by Krieger in 1975 as a nursing intervention to help and even heal the patient by balancing the patient's energy field (Marta et al., 2010). The basic assumption of therapeutic touch is that people have energy fields and these energy fields interact with the environment (Hanley, 2008). Therapeutic touch aims to harmonize, renew and heal the flow of the human energy field by removing the blockages of a person's biofield (Mueller et al., 2019). Unlike other touch-based methods such as massage therapy, therapeutic touch does not require the practitioner to physically touch the patient. Instead, the practitioner uses their hands to focus their energy and intent to help the recipient (Hanley, 2008).

In order to practice therapeutic touch, the researcher attended a certified course organized by the "Therapeutic Touch Association" and received a post-course certificate.

### **Music Rest:**

The use of music in the treatment of diseases has been seen in many civilizations since ancient times. In ancient Greek and Roman communities, individuals resorted to music to get rid of their humanitarian problems, while in Ancient Egypt, music was used to give strength to patients during birth (Kor & Adar, 2016). In today's studies, it has been determined that music positively affects the physiological parameters, nutrition, hospital stay and sleep of the patients (O'Toole et al., 2017; Van Der Heijden et al., 2016). It is important that the sound level is within

the appropriate limits while listening to music to the patients. The American Academy of Pediatrics recommends a sound level between 45dB- a maximum of 65dB (ACOG - AAP, 2012). The World Health Organization recommends a sound level of 35 dB during the day and 30 dB at night (Berglund et al., 2000). In this study, a music (such as lullaby, classical music) preferred by the patient or his family will be played to the children for 20 minutes once a day (morning or afternoon) for three days to help the child sleep. The sound level of the music played will be kept between 45-65 dB.

### **Nursing Initiative**

In this study, the effects of "Therapeutic Touch" and "Music Concert", which are nursing practices, on the sleep of children who have been transferred will be compared.

#### **Therapeutic Touch Group:**

\*Parents and children will be informed about “Therapeutic Touch”, which is an easy-to-apply and non-invasive application before the procedure.

\*One day before starting the "Therapeutic Touch" application, the child's sleep will be evaluated with "Actigraphy". Starting the day after the first measurement, “Therapeutic Touch” will be done in the form of a 20-minute daily application period for three days.

\* Before the “Therapeutic Touch” application, the patient's room will be ventilated and a spacious and quiet environment will be provided during the application.

TD process:

\*After the procedure was explained, the focus was on the child to be treated,

\*Intended to help the child's treatment and sleep,

\*The patient's energy field was scanned with the hands at a distance of 8-12 cm from the patient's skin (2 times)

\*To remove the blockages determined regarding the energy flow and to facilitate the energy flow, manual cleaning was performed (2 times),

\*Imbalances in the energy fields were tried to be treated by using mental visualization techniques such as dreaming, positive thinking and visualization, by directing the universal life energy to sick individuals with calm and rhythmic hand movements (2 times),

\*Reassessed to determine whether success has been achieved in treating imbalances in the energy field.

### **Music Rest Group:**

\*Parents and children will be informed about the “Music Rest” before the procedure.

\*One day before the “Music Rest” practice, the child's sleep will be evaluated with “Actigraphy”. Starting the day after the first measurement, the “Music Rest” will be held for three days as a 20-minute practice period per day. In order to help the child sleep, the child will be listened to music (such as lullaby, classical music) preferred by the patient or his family.

\*Before the “Music Rest” application, the patient's room will be ventilated and a spacious and quiet environment will be provided during the application.

\*The sound level of the music played will be kept between 45-65 dB.

\*Nursing interventions will be written in more detail after the data of the research is collected.

### **Variables of the Study**

Dependent variables: “Actigraphy”

Independent variables: Therapeutic touch, recital

Control variable: Age, gender, height, weight, place of residence, economic status, pain

### **Evaluation of Research Data**

IBM SPSS Statistics 25.0 package program will be used in the evaluation of the research data. Percentage, mean, standard deviation, normal distribution, t-test in independent groups, t-test and ANOVA tests in dependent groups, multiple linear regression and correlation analyzes will be used in the evaluation of the data. Statistical significance level will be accepted as  $p < 0.05$ .

### **Ethical Principles of Research**

Before the study, children and their parents will be included in the study after an explanation is given about the study and their written and verbal consents are obtained. Ethics committee approval was obtained from İnönü University Clinical Research Ethics Committee and institutional permission was obtained from İnönü University Turgut Özal Medical Center Liver Institute. It will be explained to the parents that not participating in the study will not have a negative effect on the treatment of their children.