

*Original Article***Effect of therapeutic touch on patients' anxiety
before coronary artery bypass graft surgery***Mahin Moeini*, Zahra Zare**, Maryam Hazrati***, Mahmood Saghaei*******Abstract**

Background: Coronary artery bypass graft (CABG) surgery is very traumatic and makes patients very nervous. Since it is a main task of nurses to improve patients' comfort and safety, this study investigated the effect of therapeutic touch in cardiovascular patients' anxiety before CABG surgery.

Methods: In a controlled clinical trial study the simple random sampling was used to select 44 patients from two separated lists of random numbers of women and men among the patients waiting to undergo CABG surgery at Shiraz Namazi Hospital in 2006. Data was collected using the Spielberger's Anxiety Inventory. In the case group, therapeutic touch was performed by the researcher for 20 minutes and the state anxiety test was taken before and after the therapeutic touch session by the research assistant. In the control group the anxiety was measured twice with 20 minutes gap in between, without any intervention. Data were analyzed using student t-test, paired t-test, and descriptive tests via SPSS software.

Results: Results showed a significant difference between the mean of anxiety before and after therapeutic touch in the case group ($p < 0.001$); but there was no significant difference in anxiety mean in the control group. It was a significant difference between the mean of anxiety of the two groups of case and control ($p < 0.001$).

Conclusion: Therapeutic touch is a safe and effective intervention to reduce the anxiety of patients. This technique is very simple, inexpensive, feasible, and applicable in all health centers and hospitals and even in patients' residences.

Key words: Therapeutic touch, anxiety, Coronary Artery Bypass Graft (CABG) Surgery

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Ever since the cardiovascular diseases have become the main cause of death in the world, the term "healthy heart" is a known goal for the health societies.¹

Cardiovascular diseases are very dangerous and It has been the main cause of death in United States since 1900.² More than 70 million Americans suffer from one or more cardiovascular disease and it is reported that from every 4 men and women in the US, one has a form of cardiovascular disease and it is the cause of death in nearly 60 percent of cases.³ In Iran, the prevalence of cardiovascular diseases is increasing and the average age of patients is decreasing

so that currently the health centers are receiving lots of cardiovascular patients.³

The existence of developed technologies and medical treatments in the modern health care systems in one side and nurses' work overload which does not leave sufficient time to make a nurse-patient relationship in the other side cause a gap between health care personnel and patients, which in turn put lots of stress on patients in health care environments.⁴ It is while nurses play a significant role in emotional and psychological support of patients before the surgery⁵ and there are several methods including therapeutic touch -which is a method of

* MSc, Department of Medical Surgical Nursing, School of Nursing and Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran.

** MSc, Department of Operating Room Nursing, School of Nursing and Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran.

***MSc, Department of Medical Surgical Nursing, School of Nursing and Midwifery, Shiraz University of Medical Sciences, Shiraz, Iran.

**** Professor, Department of Anesthesiology and critical care medicine, Isfahan University of Medical Sciences, Isfahan, Iran.

Correspondence to: Mahin Moeini MSc.

E-mail: moeini@nm.mui.ac.ir

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complementary therapy- to be used by nurses to reduce patients' anxiety.⁶

Therapeutic touch was developed by Dolores Krieger, a faculty member of New York University's Division of Nursing, in the early 1970s.⁷ Therapeutic touch is actually a nursing intervention based on scientific findings⁶ and has been used by professional nurses to support and comfort their patients for more than 25 years.⁸ This technique increases the quality of nursing care. In Iran, the effect of therapeutic touch on children's anxiety before injection,⁹ infants' colic pain,¹⁰ women's waist pain,¹¹ the anxiety and manifestation of disrhythmic heart activity in patients undergoing heart catheterism¹² and toddlers' tenseness¹³ have been studied.

North American Nursing Diagnosis Association (NANDA) recorded "energy field disturbance" as a standard nursing diagnosis and other professional organizations such as American Nurses Association, the National League for Nurses and American Holistic Nurses Association support therapeutic touch as a "nursing intervention".¹⁴ It is also important that therapeutic touch is inexpensive and need no special facilities except the nurses' hands.¹⁵

This study can help nurses to have a deeper and more scientific attitude towards the patients' anxiety especially those with heart diseases. It is nurses' responsibility to provide more effective care for patients by using non-pharmacologic interventions which demonstrate their skills alongside their knowledge. These interventions develop a deeper relationship between nurses and patients. While the number of patients in the waiting list for CABG surgery is increasing daily and these patients often experience a high level of anxiety during the time waiting for surgery, this study aimed to find the effect of therapeutic touch on reducing patients' anxiety before the CABG surgery.

Methods

This study was a controlled randomized clinical trial to investigate the effect of therapeutic touch as an independent variable on anxiety as a dependent variable. The studied sample was

selected by simple random sampling among the patients waiting to undergo CABG surgery at Shiraz Namazi Hospital in 2006. The inclusion criteria were self-awareness of the disease, willing to participate in the study, having no mental disabilities, blindness or deafness, being alert and having no psycho-active disease based on the diagnosis reported by professional doctors in patients past medical history file. The selected patients were randomly divided into two groups of case and control using two separated lists for men and women. The number of patients in each group was 22 and it was approved by the statistical advising professor as well as other similar studies.

The patients' anxiety was measured using a questionnaire with two sections; the first included demographic information such as sex, age, educational level, marital status and medical history of neuroanxiety diseases and the second section included the Spielberger's State Anxiety Inventory. The questionnaire is standard and widely used both inside and outside Iran. The reliability of questionnaire was proved by high Cronbach's alpha coefficient (91 percent).¹⁶ The Spielberger's State Anxiety Inventory includes 40 questions; 20 of them measure the state anxiety and the other 20 measure the trait anxiety. The questionnaire was filled by a research assistant. Once the questionnaire was filled, the patients in case group received therapeutic touch for 20 minutes and in four steps including concentration, finding patient's energy fields, balancing energy fields and re-evaluating the energy fields. The researcher who performed the therapeutic touch had already passed a special course to learn the technique including educational sessions by one of the advising professor who had sufficient skills and several research and thesis on the subject. She also had passed the physical and psychological preparation course including special concentration exercises for one and half a year under the supervision of the professor as well as practicing on healthy people and then on different patients in various hospital wards. The study was approved by the Isfahan University of Medical Sciences ethics committee. The

first step of the therapeutic touch was concentration that is the most important part of the procedure. In the second step of therapeutic touch, the researcher moved his hands over the patient's body, head to toe, with 2-6 inches distance to find the energy fields. Following the procedure, in the intervention step, the researcher moved his hands slowly and symmetrically on the energy fields to clean up the body from unfavorable energies and to center energy softly all on the body. In the final step, the researcher re-evaluated the energy fields on the patient's body and compared it with the first evaluation and continued the work until no more imbalances was felt in the patient's energy fields. Then the research assistant measured the state anxiety again.

In the control group, the state anxiety was measured twice with 20 minutes interval in between. The trait anxiety was measured only before intervention in order to match two groups, and since the trait anxiety does not change by one time intervention, it was not measured again in the second time. In case group, when a patient did not will to continue or there was any other obstacle, the subject was excluded from the study. The collected data were analyzed using SPSS software. Student t-test was employed to compare the score of patients' anxiety after therapeutic touch in experiment and control groups. For control group paired t-test was employed two times with a 20 minutes interval and $p < 0.05$ considered as meaningful.

Results

Student t-test showed no significant differences between two groups comparing age, state and trait anxiety (before intervention). It means the two groups were similar in this regard. Also, chi square test showed no significant differences between educational level and marital status of two groups. Therefore, the two groups were similar in this regard as well.

Paired t-test showed a significant difference between the mean of state anxiety before and after the intervention in the case group ($p < 0.05$; $M = 60.91$, $SD = 8.53$ before the inter-

vention, and $M = 28.32$ and $SD = 4.18$ after the intervention).

Paired t-test also showed no significant difference between the mean of state anxiety in the control group before and after intervention ($p = 0.272$; $M = 58.181$, $SD = 11.27$ before and $M = 57.86$, $SD = 11.23$ after).

Student t-test showed a significant difference between the state anxiety of two groups of control and case after intervention ($p = 0.000$; $M = 32.590$, $SD = 7.956$ for the case and $M = 0.318$, $SD = 1.323$ for the control group)

Discussion

The results of this clinical trial showed that therapeutic touch can reduce the state anxiety in patients waiting for CABG surgery. The results are similar to the findings of following studies. In a study by Larden et al, the effect of therapeutic touch on the anxiety of drug-abuse pregnant women was studied and results showed that the anxiety in therapeutic touch group reduced significantly compared to the group used mutual amusing games (card, puzzle ...) and the placebo group.¹⁷ Post-white et al also reported that therapeutic massage and healing touch were more effective than presence alone or standard care in reducing pain, mood disturbance, and fatigue in patients with cancer receiving chemotherapy.¹⁸

Kelly et al studied the perceptions of women with breast cancer to therapeutic touch, quiet time, and dialog in three groups. The patients in each group expressed feelings of calmness, relaxation, security, comfort and a sense of awareness. They resulted that nursing intervention including therapeutic touch may use to enhance feelings of calmness and relaxation in patients with breast cancer and reduce their anxiety.¹⁹ In addition, a study by McEillgott et al showed a significant difference between the nurses' anxiety before and after intervention.²⁰ Ireland et al in 1998 studied the anxiety of HIV-Infected children before and right after the intervention witch the results showed that the mean of anxiety in therapeutic touch group reduced while it did not change in the placebo group.²¹

Lin et al studied self-reported pain and anxiety in an elderly population using Spielberger's State Anxiety Inventory to measure anxiety. In this study salivary cortisol was analyzed after 20 minutes therapeutic touch with single blind method. The results showed that pain reduction in therapeutic touch group was significant, effect size of anxiety also reduced significantly and salivary cortisol levels showed little change.²²

Ravanipour studied the effect of therapeutic touch to reduce the anxiety of children before receiving an injection and reported a significant difference in their anxiety before and after the intervention.⁹

According to these findings, a study by Smith in 2001 on a female patient after a Whipple procedure showed that the pain and anxiety reduced after therapeutic touch.²³ We could not find any theoretical study reporting that therapeutic touch is not effective on patients' anxiety, but Lin (1999) mentioned that Parker and Randolph could not show the effectiveness of therapeutic touch in reducing anxiety.²²

Several factors of modern medical procedures in addition to the disease itself make patients very anxious. These factors include hospitalization especially for a surgical proce-

dures, the complicated therapies of modern medicine and the intensive care units. The patients' anxiety can cause lots of problems and the purpose of professional nursing is to improve the patient's condition, comfort them and reduce their anxiety.

Therapeutic touch is not well known for the Iranian nurses while it is a simple, inexpensive and feasible in all health centers and even in patients' residences to comfort them. The results of this study revealed the effectiveness of therapeutic touch as a safe intervention in reducing the anxiety of patients. This result as well as the side-effects of drugs and their expenses suggest that nurses should be trained to use the technique of therapeutic touch and apply it in necessary situations to help patients, other nurses and medical personnel because nursing and other medical professions are potentially stressful.

Finally, it is important to mention that using therapeutic touch as a technique with professional structure in nursing performance is applicable and feasible in many occasions and it is the duty of nurses to use their skills to improve patients' health and solve their problems.

The researchers declare that have no conflict of interest in this study and they have surveyed under the research ethics.

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