



Effects of Nursing Care Based on the Therapeutic Communication Helping Model on Patient and Family Satisfaction in Coronary Care Units

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Abstract

Background: Effective communication is considered a key factor affecting patients and their family satisfaction. The Therapeutic Communication Helping Model (TCHM) facilitates comprehensive care delivery by focusing on effective communication.

Objectives: Evaluate the effects of nursing care based on the Therapeutic Communication Helping Model (TCHM) on patient and family satisfaction in the coronary care unit (CCU).

Methods: This quasi-experimental was conducted based on the posttest-only design between June and October 2017 in the Educational and Treatment Center of Mousavi in Zanjan, Iran. In this study, the time sequence sampling method was used. A total of 58 patients and 58 family members from CCU with inclusion criteria were included through the convenience method in each sequence as the control and intervention groups. One week after the end of the control group sampling, the sampling of the intervention group began. In the meantime, a 4-hour workshop was conducted twice for the ward nurses to get acquainted with TCHM. Trained nurses provided holistic nursing care based on TCHM for patients (n=58) and their family members (n=58). Data were collected using the Patient Satisfaction Instrument, and the Family Members Satisfaction Questionnaire for adult patients. The satisfaction rate of both control and intervention groups were assessed at the time of discharge. Data were analyzed using the Chi-square test, independent t-test, and paired t-test in the SPSS software (version 22) at the significance level of 0.05.

Results: The mean scores of patient and family satisfaction were respectively 3.47 ± 0.84 and 3.91 ± 0.67 in the intervention group. In the control group, these values accounted for 3.14 ± 0.5 and 3.20 ± 0.78 , respectively. The mean scores of patient and family satisfaction and their subscales in the intervention group were significantly greater than those in the control group ($P < 0.05$).

Conclusion: The TCHM significantly improved patient and family satisfaction. It is suggested that by incorporating this model into nursing practice the delivery of care will be enhanced.

Keywords: Communication, Coronary care unit, Family, Nursing care, Patient satisfaction

1. Background

Ensuring patient and family satisfaction is among the main goals of healthcare organizations (1). Patient satisfaction with healthcare services can affect treatment adherence (2, 3), treatment outcomes, and recovery (3). On the other hand, low patient satisfaction causes irritability and anxiety, delays recovery, prolongs hospital stay, and increases bed occupation rate and healthcare costs (4). The results of studies in Iran have reported that almost 70% of hospitalized patients have been satisfied with healthcare services (5, 6). In two more recent studies in the oncology and cardiac intensive care units, patients' satisfaction with nursing care was reported to be moderate (7, 8). A study in Turkey (2019) has reported a patient satisfaction rate of 63.9% (9). The results of a mixed method study in a pediatric ward in Indonesia showed that 53.5% of parents (n=101) reported that therapeutic communication by nurses was poor (10). Similarly, a systematic review study by Kwame and Petruca (2020) in Sub-Saharan Africa reported poor nurse-patient relationships (11).

Patient satisfaction is affected by different factors, such as medical and nursing service quality, healthcare providers' communication skills, patients' personal characteristics, insurance coverage, and patients' awareness of their rights (12, 13). Nurses have also significant effects on patient satisfaction due to their direct communication with patients (6). Effective communication is considered a key factor affecting the success of holistic nursing care and patient satisfaction (14, 15). In holistic nursing, meeting the patient's family needs is also addressed (16). Families experience a crisis when a loved one is admitted to the critical care units (17). Nursing staff is responsible for identifying and meeting the needs of patients and their families during hospitalization (18). Over the years, several theories of communication therapy have been proposed by experts, including Peplau (1991) emphasizing psychiatric patients (19), Knapp and Hall (2013) on nonverbal communication (20), and Potter et al. (2021) on the communication process (21). Nonetheless, the basis of effective therapeutic communication involves good professional interpersonal communication between a patient and a nurse (22).

The Therapeutic Communication Helping Model (TCHM) introduced by Sharon Scandret-Hibdon helps holistic care delivery by focusing on the interpersonal relationship with patients and their families (23). In this model, the communication skills that can be used in each stage are expressed in a very tangible way; as a result, the nurse can easily identify the actions that he should take in each stage based on this model. This model helps the patient/family learn how to cope with difficult conditions during hospitalization and seems to have been efficient and applicable in cardiac care patients.

Previous studies have evaluated the effects of holistic care on patient satisfaction in surgical wards (24-26), emergency departments (27), and trauma care settings (28). In these studies, family satisfaction has not been taken into consideration. In two studies in Iran, the satisfaction of the family of patients in critical care units has been studied without considering patient satisfaction (16, 29). None of these studies used therapeutic communication models to assess patient and family satisfaction. Therefore, TCHM, which is designed with an emphasis on effective communication, was selected as an intervention. The TCHM provides a framework to examine the nature of the helping relationship. It is suggested that by incorporating this model into nursing practice the delivery of care will be enhanced.

Considering both the lack of studies emphasizing the provision of holistic care using TCHM and the uncertainty of the effectiveness of the TCHM in patients hospitalized in the cardiac intensive care unit, this study was performed to determine the effectiveness of TCHM on the level of satisfaction of patients and their families in the cardiac intensive care unit.

2. Objectives

The present study was conducted to evaluate the effects of nursing care based on the TCHM on patient and family satisfaction in a coronary care unit (CCU).

The hypothesis of this study is that "providing nursing care based on therapeutic communication helping model is effective on patient and family satisfaction levels."

3. Methods

This quasi-experimental study was conducted in 2017 using a non-equivalent control group posttest-only design. In this study, the time sequence sampling method has been used. A total of 58 patients and 58 family members with inclusion criteria were recruited through the convenience method in each of the control and intervention groups from the CCU of Educational and Treatment Center of Mousavi, Zanjan, Iran. Based on the results of a previous study

(28) and considering a confidence level of 95% and a power of 0.90, the sample size was estimated at 54 cases per group.

Inclusion criteria for patients as study participants were hospitalization in the CCU for at least 3 days; being oriented to person, time and place; no affliction by known mental disorders; age more than 18; ability to establish verbal communication; and consent for participation. Patients were excluded if they passed away, voluntarily withdrew from the study, or were discharged before 3 days of stay from the CCU during the study. Inclusion criteria for the family members included age of 18-65 years; no cognitive, lingual, or cultural barrier to communication; close family of the patient (spouse, father, mother, sister, brother, or child); patient visitation at least twice during hospital stay; and significant role in clinical decision-making. They were excluded if they refused to fill out the study instruments.

Participants were non-randomly and equally allocated to a control group and an intervention group (58 patients and 58 family members in each group). To prevent direct contact between participants in these groups, we conducted the study first on patients in the control group and then on their counterparts in the intervention group with a one-week interval. In the meantime, to acquaint the nurses of the cardiac intensive care unit with the therapeutic communication model, a 4-hour workshop with retraining points was held twice by the main researcher and a psychiatrist. The efficiency of the workshop was assessed and verified with the 51-item Interpersonal Communication Skills Scale designed by Vakili et al. (2011) (30) before and after the workshop. Participating nurses in workshops (17 of 28 CCU nurses) were asked to use TCHM to communicate with patients under the care and their family members; identify their physical, informational, emotional, and spiritual needs; and help them fulfill the identified needs. The content of this workshop was developed based on chapter eleven of the "Holistic Nursing: A Handbook for Practice" (23). The TCHM consists of three steps, including relationship building, deeper exploration, and implementation. The educational content of the workshop based on TCHM steps is presented in Table 1 (23).

The workshop was held on two different days to increase the participation of nurses. However, 11 nurses did not attend any of the two days of the workshop. Therefore, two senior nursing students were invited and trained to provide holistic nursing care to the patients who received care from those eleven nurses. After two workshop sessions, intervention group sampling was started. At the time of hospital discharge, patient and family satisfaction was assessed through face-to-face interviews held by a senior medical student who was not involved in the intervention.

Table 1. Workshop educational content on TCHM steps

Steps	Aim	Skills	Description
Relationship building	Creating a safe caring atmosphere	Empathy Respect Genuineness Concreteness	The nurse attempts to build a relationship that gives the patient and family feelings of peace, support, and confidence and helps him/her concretely express his/her experiences, behaviors, and feelings about health.
Deeper exploration	Exploring and clarifying the patient's patterns of life which he/she may be reluctant to disclose	Additive empathy Self-disclosure feedback giving Confrontation Immediacy	The nurse helps patients obtain a clear understanding of the ineffective patterns of his/her life and the consequences of their continuation.
Implementation	Setting the desired goals and implementing plans to attain them	Problem-solving Support Action plan	In this step, the patient has a clear definition of the goals, and the plan is developed by both the nurse and the patient. All facilitators and barriers to goal attainment are determined and the implementation of the plan is continuously monitored. Finally, a plan is developed to terminate this facilitating communication.

Two steps of questionnaires were used for data collection. The first step of the questionnaires consisted of demographic information and a Persian translation and modified version of the Hindshaw and Atwood (1981) Patient Satisfaction Instrument (PSI) taken from a study by Joolaie et al. (2011) (31). The 26-item PSI assesses patient satisfaction in three domains, namely technical-professional care (7 items), trust (13 items), and patient education (6 items). Items are scored on a 5-point Likert scale from 1=completely disagree to 5=Completely agree. Items with negative wording are reversely scored. The possible total score of the instrument is obtained in the range of 1-5. The results of two studies in Iran have reported that Cronbach's alpha of the instrument was 0.75 (2) and 0.90 (31). In the present study, Cronbach's alpha coefficient of this instrument was estimated at 0.91.

The second step of the questionnaires consisted of a family demographic questionnaire and the 30-item Persian version of the Family Members Satisfaction Questionnaire FS-ICU 34 for adult patients taken from Heyland and Tranmer (2001) (32). This instrument contains three subscales, namely family members' satisfaction with medical staff's performance (12 items), decision-making (6 items), and comfort (12 items). Items are scored on a 5-point Likert scale from 1=poor to 5=excellent and their total score can range at 1-5. A former study reported a Cronbach's alpha of 0.95 for this questionnaire (29). In this study, Cronbach's alpha of this instrument and its subscales were obtained at 0.97, 0.94, 0.91, and 0.94, respectively.

Data were analyzed using the SPSS software (v. 22.0) using the measures of descriptive statistics, including frequency, mean, and standard deviation. The Chi-square, independent t-test, and paired- t-tests were also used for data analysis. Normality testing was done using the Kolmogorov-Smirnov test.

4. Results

In total, 108 patients and 108 family members

participated in the study. The number of male and female patients accounted for 55 (50.9%) and 53 (49.1%), respectively. The mean age scores of the patients in the intervention and control groups were 64.31 ± 12.11 and 63.03 ± 13.47 , respectively. Regarding family members, 45 (41.7%) and 63 (58.3%) individuals were male and female, respectively. Their mean age scores were estimated at 39.87 ± 10.04 and 41.81 ± 12.15 in the control and intervention groups, respectively. The results of the independent-sample t-test and the Chi-square test illustrated no significant differences between the groups concerning patients' age, gender, marital status, income level, place of residence, previous history of hospitalization, and diagnosis, as well as family members' age, place of residence, previous history of attending hospital, and the type of relationship with the patient ($P > 0.05$) (Table 2).

In line with the first objective of the study, "Determining the effectiveness of the intervention on the level of satisfaction of patients", the results showed that the total mean scores of patient satisfaction in the intervention and control groups were 3.47 ± 0.84 and 3.14 ± 0.52 , respectively. The independent t-test showed that the mean scores of total patient satisfaction and its technical-professional care and trust subscales in the intervention group were significantly greater than those in the control group (effect size=0.47; $P < 0.05$) (Table 3).

The results of the second objective of the study, "Determining the effect of the intervention on the level of satisfaction of patients' family members", revealed that the total mean scores of family satisfaction in the intervention and control groups were 3.91 ± 0.67 and 3.20 ± 0.78 , respectively. The independent t-test indicated that the mean scores of total family satisfaction and its subscales (satisfaction with care, decision-making, and comfort) in the intervention group were significantly greater than those in the control group (effect size=0.97; $P < 0.001$) (Table 3).

Table 2. Between-group comparisons respecting participants' demographic and clinical characteristic

Characteristics	Group	Control		Intervention		P-value*
		n	%	n	%	
Patient gender	Male	23	42.6	32	59.3	0.08
	Female	31	57.4	22	40.7	
Marital status	Single	2	3.7	4	7.4	0.44
	Married	41	75.9	43	79.6	
	Widowed	11	20.4	7	13	
Educational level	Illiterate	23	42.6	23	42.6	0.33
	Below diploma	23	42.6	25	46.3	
	Diploma	8	14.8	4	7.4	
	University	0	0	2	3.7	
Occupation	Employee	5	9.3	7	13	0.13
	Laborer	12	22.2	11	20.4	
	Housewife	27	50	24	44.4	
	Unemployed	7	13	2	3.7	
	Other	3	5.6	10	18.5	
Income level	Sufficient	10	18.5	6	11.1	0.55
	Almost sufficient	28	51.9	30	55.6	
	Insufficient	16	29.6	18	33.3	
Family member's type of relationship	Spouse	8	14.8	8	14.8	0.25
	Parent	5	9.3	10	18.6	
	Sibling	5	9.3	4	7.4	
	Child	32	59.3	31	57.4	
	Other	4	7.4	1	1.9	
Diagnosis	Angina	14	25.9	11	20.4	0.9
	Myocardial infarction	11	20.4	23	42.6	
	Acute coronary syndrome	24	44.4	16	29.6	
	Other	5	9.3	4	7.4	
Hospitalization history	Yes	41	75.9	36	66.7	0.28
	No	13	24.1	18	33.3	

*Chi-square test

Table 3. Between-group comparisons respecting patient and family satisfaction

Satisfaction	Group	n	Mean±SD	t-value	P-value*	
Patient satisfaction	Trust	Control	54	3.29±0.59	2.44	0.01
		Intervention	54	3.55±0.49		
	Patient education	Control	54	2.89±0.65	1.29	0.198
		Intervention	54	3.92±0.41		
	Technical-professional	Control	54	3.14±0.47	8.14	<0.001
		Intervention	54	3.80±0.36		
Total ¹	Control	54	3.14±0.52	3.90	<0.001	
	Intervention	54	3.47±0.84			
Family satisfaction	Medical staff's performance	Control	54	3.29±0.84	4.41	<0.001
		Intervention	54	3.94±0.67		
	Comfort	Control	54	3.04±0.87	0.63	<0.001
		Intervention	54	3.79±0.81		
	Decision-making	Control	54	3.31±0.91	0.87	<0.001
		Intervention	54	4.10±0.76		
	Total ²	Control	54	3.20±0.78	4.41	<0.001
		Intervention	54	3.91±0.67		

*Independent sample t-test

1 effect size = $(3.47 - 3.14) / 0.69857 = 0.472394$ 2 effect size = $(3.91 - 3.2) / 0.727083 = 0.976504$

5. Discussion

This study aimed to evaluate the effects of TCHM on patient and family satisfaction in CCU. The findings of this study showed that the level of satisfaction of cardiac patients admitted to the cardiac intensive care unit and their family members who were under nursing care with the approach of helping therapeutic communication (the intervention group) had a statistically significant difference compared to patients under routine nursing care (the control group).

Our findings revealed that TCHM significantly

improved patient satisfaction. The TCHM is based on a holistic approach to providing nursing care. In line with this finding, the results of previous studies have shown the positive effects of providing holistic care on patient satisfaction with a dialogue approach (17, 25), comprehensive care program (21, 28), and family-oriented program (25, 33). The significant effects of the study intervention are attributable to the accordance of care services with patients' needs as well as to the nurses' continuous monitoring of patients' conditions.

According to our study findings in the control group, the mean score of the subscale of trust was the

lowest and that of the patient education was the highest. This finding was consistent with that of a study conducted by Shafiei et al. investigating the effect of primary nursing care on patient satisfaction after coronary angioplasty (8). Although in both studies the intervention led to an increase in satisfaction, this difference was significant in Shafiei's study only in the field of technical professional care and in the present study in the trust subscale as well. This difference may be due to the inherent difference between the samples of the two studies or the difference in the intervention. It is noteworthy that Shafiei et al. found no significant difference between the total mean scores of satisfaction rate in the control and intervention groups. This finding showed that the TCHM might play a more effective role in promoting patient satisfaction in total and its domains.

Study findings also showed that TCHM-based holistic care significantly improved family satisfaction in all subscales. Similarly, the results of a former study in Iran indicated that need-based nursing care delivery was effective in improving patients' and their family member's satisfaction significantly (16).

In our study, the lowest mean score of family satisfaction level was related to the comfort subscale. This finding was in agreement with those of a study by Meadows et al. (2010) showing that family members of intensive care unit patients were mostly dissatisfied with the waiting room environment and communication with doctors (26, 34). The results of the present study showed that the highest level of family satisfaction mean score was related to the decision-making subscale both in the control and intervention groups. Dolatyari et al. (2014) conducted a descriptive study in five military hospitals and reported that the lowest satisfaction subscale mean score among family members was related to the decision-making subscale (29). This difference is attributable to the difference between the studies respecting goals and settings; while our clinical trial study was conducted in the CCU of a teaching hospital, the mentioned descriptive study was carried out in critical care units of military hospitals. It seems that nurses in educational hospitals paid more attention to the involvement of the patient's family in decision-making than in military hospitals.

One of the limitations of this study was related to the method of data collection which was through the self-report method; therefore, the results might have been subjected to some levels of social desirability bias. Moreover, randomization was not possible due to the small number of eligible patients in the study setting and the likelihood of between-group information leakage. Another limitation of the study was the fact that 11 out of 28 nurses in the study setting did not participate in the holistic care

workshop. We attempted to overcome this limitation by requesting two trained eighth-semester nursing students to provide TCHM-based holistic care to patients who received care from those nurses. Future studies are recommended to assess the effects of TCHM-based holistic care in larger settings and by adjusting the effects of potential confounders.

6. Conclusion

This study concluded the effectiveness of TCHM-based holistic care in significantly improving patient and family satisfaction in CCU. This model can be integrated into nursing academic curricula and in-service training programs for nurses. Family members' low satisfaction with the comfort subscale of satisfaction highlights the necessity of considering adequate welfare services and facilities in hospital settings for patients' family members.

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Footnotes

Conflicts of Interest: The authors declare that there is no conflict of interest.

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Ethical considerations: This study was approved by the Ethics Committee of Zanjan University of Medical Sciences, Zanjan, Iran (code: ZUMS.REC.1395.146) and was registered in the Iranian Registry of Clinical Trials (code: IRCT20120507009664N8). Participants were provided with information about the aim of the study and were asked to provide informed consent for participation.

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