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The effects of the family-centered orientation program on satisfaction with healthcare services among patients with coronary artery disease

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ABSTRACT

Aims: Hospitalization in critical care units is associated with anxiety for patients and family members due to encountering unfamiliar and strange equipment and procedures. Such anxiety and unfamiliarity can bring patients dissatisfaction. This study was conducted "to examine the effects of the Family-Centered Orientation Program on satisfaction with healthcare services among patients with coronary artery disease".

Methods: A convenience sample of 80 patients with coronary artery disease was recruited to this clinical trial study from the coronary care unit of a teaching hospital affiliated to Zanjan University of Medical Sciences, Zanjan, Iran. Patients were randomly allocated to the control and the experimental groups. The Family-Centered Orientation Program was implemented for patients in the experimental group. Patient satisfaction with care services was evaluated at the time of hospital discharge by using the Patient Satisfaction Scale. Study data were analyzed by employing the $SPSS_{17}$ software as well as the Kolmogorov-Smirnov, the independent-samples t, and the Fisher's exact tests.

Results: After the study, the level of satisfaction with care services in the experimental group was significantly higher than the control group ($p<0.0001$).

Conclusion: Family-Centered Orientation Program is effective in enhancing patient satisfaction. Using this program for improving care quality and enhancing patient satisfaction is recommended.

Conclusions: Conclusion: Family-Centered Orientation Program is effective in enhancing patient satisfaction. Using this program for improving care quality and enhancing patient satisfaction is recommended.

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1. Introduction

Patients who are hospitalized in critical care units experience high levels of anxiety [1]. Beside life-threatening conditions, other factors such as hospitalization, unfamiliar environment, inability to communicate, mobility restrictions, financial problems, loss of control, separation from family members, noisy and strange equipment, frequent diagnostic and treatment procedures, and sudden changes in household and professional responsibilities are among the most important stressors in critical care units [1

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and 2]. These stressors affect both patients and their family members [2–4].

In order to cope with their anxiety, patients and their families need timely and precise information regarding their concerns particularly during the first day of hospitalization. Such information should be provided by critical care nurses [5]. Fulfillment of patients and families' educational needs by nurses can alleviate their stress and anxiety [6–8]. However, a great deal of nurses' time is spent on managing patients' physical problems and hence, they fail to assess and alleviate patients and families' concerns [3].

One of the strategies for providing information to patients is the Family-Centered Orientation Program (FCOP) [5–9]. The FCOP can alleviate families' psychological stress, improve their perception of patients' underlying conditions and prognoses, facilitate their coping with changes, enhance the quality of decision making, increase the effectiveness of treatments, and promote patients' well-being [3, 5–9]. It enables nurses to establish effective communication with patients and families, provide informational and social support to them, and enhance their satisfaction with care services [3, 10, and 11]. Greater satisfaction with services fosters positive attitudes toward the related service-providing institutes [11–13] and increases customers' interest in referring to those institutes [14]. On the other hand, inadequate information provision to patients and their families about the environment, procedures, and equipment of critical care units can negatively affect their satisfaction with care services [3].

Patient satisfaction is one the criteria for care quality assurance [10–15]. Consequently, nurses need to adopt strategies for alleviating patients and families' post-hospitalization anxiety and thereby enhancing their satisfaction with cares services.

Chan et al. (2012) found that orientation programs can significantly alleviate patients' stress and enhance their knowledge and satisfaction [16]. Mohammadi et al. (2012) also found that a motivational program developed based on the expectancy theory significantly enhanced patient satisfaction [15]. Moreover, Dehghannayyeri and Aghajani (2007) reported a significant correlation between protection of patients' privacy and the level of their satisfaction [12].

One of the reasons behind patient dissatisfaction with care services is nurses' poor communication with patients and their failure to educate patients about the aim(s) of hospitalization, equipment, and procedures [17]. The results of our literature review revealed that there are handful studies on the effects of different interventions on patient satisfaction. This study was conducted to examine the effects of the FCOP on satisfaction with healthcare services among patients with coronary artery disease.

2. Methods

This was a clinical randomized trial. Patients with coronary artery disease hospitalized in a the coronary care unit of a teaching hospital affiliated to Zanjan University of Medical Sciences, Zanjan, Iran, as well as their family members formed the study population. The inclusion criteria were having an age of 35–80, suffering from myocardial infarction or unstable angina, being completely alert and able to communicate, having a stable hemodynamic status, having no acute pain, having no previous history of hospitalization in critical care units, and having no life-threatening dysrhythmia. Patients were excluded if they died lost consciousness, developed problems which affected their communication ability, and opted for withdrawing from the study. Family members were included in the study provided that they were literate and actively involved in giving care to their patients. Family members who failed to participate in the FCOP or opted for withdrawing from the study were excluded. After conducting a pilot study, the study sample size was determined to be 80. Study participants were conveniently recruited and

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randomly allocated to either the control or the experimental groups. We used the alternation technique in order to prevent the exposure of patients in the control group with educations provided to the patients in the experimental group. Accordingly, in odd weeks of month, patients were allocated to the experimental group while in the even weeks; patients were allocated to the control group.

This study was registered in the Iranian Registry of Clinical Trials with the registry code of IRCT2014030516843N2. Moreover, the study was approved by the Ethics Committee of Zanjan University of Medical Sciences, Zanjan, Iran, with the approval code of ZUMS.REC.1392.52. Before implementing the intervention, the aim of the study was explained to the participants and their informed consent was obtained. Moreover, they were assured that withdrawal from the study was voluntary and that their information would be managed confidentially.

Initially, the demographic data of patients and their family members were collected simultaneously in both study groups by using a demographic questionnaire. The content validity of the demographic questionnaire was assessed and confirmed by a panel of ten faculty members affiliated to Zanjan University of Medical Sciences, Zanjan, Iran. Then, the orientation program was implemented for patients and their family members in the experimental group according to an orientation checklist. After providing verbal educations, we provided patients and their family members with a booklet containing the same educations in the written form together with embedded pictures. We reviewed the content of the booklet with patients and family members, answered their questions, and clarified any probable ambiguities. The length of educations was 40–60 minutes. In order to ensure family members involvement in the education process, we asked them to refer to the study setting every morning and remind patients of the educations. We supervised the process of providing education to patients by their family members in order to ensure the accuracy of educations and clarify probable ambiguities. Patients in the control group solely received routine care.

Patient satisfaction was assessed by using the Patient Satisfaction Instrument (PSI). The validity and the reliability of the PSI had been assessed and confirmed in previous studies [13 and 18]. The PSI contains 26 items in three subscales including technical professional care (seven items), trust (thirteen items), and patient education (six items). PSI items are scored on a five-point Likert scale from 1 (Completely disagree) to 5 (Completely agree). Twelve items are scored reversely. Scores of less than 78, 78–104, and greater than 104 are interpreted as dissatisfaction, moderate satisfaction, and complete satisfaction, respectively. Similarly, the scores representing dissatisfaction, moderate satisfaction, and complete satisfaction in the three subscales of technical professional care, trust, and patient education were respectively equal to ‘less than 21, 21–28, and greater than 28’, ‘less than 39, 39–52, and greater than 52’, and ‘less than 18, 18–24, and greater than 24’ [13]. Literate patients completed the questionnaires individually while for illiterate patients, questionnaires were completed by using the interview technique.

Study data were analyzed by employing the $SPSS_{17}$ software as well as the Kolmogorov-Smirnov, the independent-samples t, and the Fisher’s exact tests.

3. Results

Primarily, the Kolmogorov-Smirnov test was done for examining the distribution of the study variables. The results of this test showed that all the variables had normal distribution. Therefore, parametric statistical tests were used for data analysis.

Table 1 and 2 show the demographic characteristics of the participating patients and their family members, respectively. Most of the participating patients were male (51.2%) and aged higher than 55 years (68.75%).

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After the study, all patients in the experimental group reported having either complete (17.5%) or moderate (82.5%) satisfaction and none of them were dissatisfied. However, in the control group, 35 patients (87.5%) were moderately satisfied, five patients (12.5%) were dissatisfied, and none of them were completely satisfied with care services.

Table 1: Patients' demographic characteristics

Groups / Variables		Control N (%)	Experimental N (%)	P value (The Fisher's exact test)
Gender	Female	17 (42.5)	22 (55)	0.371
	Male	23 (57.5)	18 (45)	
Age	35–45	2 (5)	8 (20)	0.117
	46–55	7 (17.5)	8 (20)	
	56–65	12 (30)	11 (27.5)	
	66–75	9 (22.5)	10 (25)	
	76–80	10 (25)	3 (7.5)	
Marital status	Single	0 (0)	1 (2.5)	0.781
	Married	31 (77.5)	31 (77.5)	
	Divorced	0 (0)	1 (2.5)	
	Widowed	9 (22.5)	7 (17.5)	
Employment	White-collar worker	6 (15)	6 (15)	0.393
	Blue-collar worker	7 (17.5)	9 (22.5)	
	Other	5 (12.5)	3 (7.5)	
	Housewife	15 (37.5)	20 (50)	
	Unemployed	7 (17.5)	2 (5)	
Education	Illiterate	20 (50)	15 (37.5)	0.431
	Below diploma	10 (25)	15 (37.5)	
	Diploma or higher	10 (25)	10 (25)	
Insurance	Have	40 (100)	39 (97.5)	1.00
	Do not have	0 (0)	1 (2.5)	
Supplementary insurance	Have	5 (12.5)	7 (17.5)	0.755
	Do not have	35 (87.5)	33 (82.5)	
History of previous hospitalization	Have	22 (55)	18 (45)	0.503
	Do not have	18 (45)	22 (55)	
Diagnosis	Angina pectoris	23 (57.5)	23 (57.5)	1.00
	Myocardial infarction	17 (42.5)	17 (42.5)	

Table 2: Demographic characteristics of family members in the experimental group

Groups / Variables		N (%
Gender	Female	21 (52.5)
	Male	19 (47.5)
Marital status	Single	20 (50)
	Married	20 (50)
Employment	White-collar worker	10 (25)
	Blue-collar worker	4 (10)
	Other	3 (7.5)
	Housewife	15 (37.5)
	Unemployed	8 (20)
Education	Below diploma	5 (12.5)
	Diploma or higher	35 (87.5)
Kinship	Spouse	6 (15)
	Children	24 (60)
	Parents	1 (2.5)
	Sibling	2 (5)
	Grandchildren	3 (7.5)
	Daughter-in-law	4 (10)
Living with patient	Yes	27 (67.5)
	No	13 (32.5)

The results of the independent-samples t test revealed that after implementing the study intervention, the mean of PSI score in the experimental group was significantly higher than that of the control group (97.88 vs. 85.15; $p<0.0001$). Moreover, the scores of the three sub-scales of technical professional care, trust, and patient education in the experimental group were significantly higher than the control group ($p<0.05$; Table 3).

4. Discussion

The findings of the current study revealed that implementing the FCOP enhanced satisfaction with care services among patients with

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coronary artery disease. We also found that the FCOP enhanced patient satisfaction in the three PSI sub-scales of technical professional care, trust, and patient education. Overall, our participating patients had moderate satisfaction with care services. However, Lee et al. (2008) reported that the rate of satisfaction with primary care services among patients with myocardial infarction in Canada was 91.7% [19].

Our participants' greatest satisfaction was with technical professional care. This is in line with the findings reported by Hajinezhad et al. (2007) and Wolf et al. (2003) [18 and 20]. However, Joulaei et al. (2011) reported that patients' greatest satisfaction was related to the trust sub-scale of the PSI [13]. Our participants' great satisfaction with technical professional care can be attributed to the overriding importance of technical care behaviors from the perspective of nurses which makes them focus on patient care despite having heavy workload. Moreover, compared with other aspects of patient satisfaction, technical professional care is more tangible and observable and hence, it can be directly assessed and easily scored by patients. Arefi and Talaei (2010) also found that patients' greatest satisfaction was related to nurses' timely attendance at their bedside [14], confirming nurses' greater attention to technical care behaviors.

On the other hand, the lowest level of satisfaction was related to the patient education sub-scale. This is in congruence with the findings of previous studies [13, 18, and 20]. Patient education is among nurses' main professional responsibilities and patients tend to receive educations from their nurses [21]. However, our patients had low satisfaction with patient education, denoting nurses' poor patient education practice. This finding can be attributed to the fact that the participating patients evaluated all nurses who had provided care to them during the course of their hospitalization.

Table 3: Patient satisfaction with the three sub-scales of technical professional care, trust, and patient education

Subscales	Groups	Complete satisfaction		Moderate satisfaction		dissatisfaction		P value (the independent-samples t test)
		N	%	N	%	N	%	
Technical professional care	Control	3	7.5	27	67.5	10	25	0.01
	Experimental	12	30	23	57.5	5	12.5	
	Total	15	18.8	50	62.5	15	18.8	
Trust	Control	2	5	28	70	10	25	< 0.0001
	Experimental	12	30	26	65	2	5	
	Total	14	17.5	54	67.5	12	15	
Patient education	Control	2	5	27	67.5	11	27.5	0.008
	Experimental	8	20	28	70	4	10	
	Total	10	12.5	55	68.8	15	18.8	

5. Conclusions

Study findings indicate that the FCOP can enhance patient satisfaction. Given the low score of the patient education subscale of patient satisfaction, greater attention should be paid by nurses to patient education.

One of the study limitations was that the study instrument mainly assessed patient satisfaction with nursing care. Future studies are recommended to use more comprehensive instruments for assessing different aspects of patient satisfaction. Moreover, satisfaction is an abstract concept which can be affected by patients' mood and psychological state. Accordingly, study findings might have been

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affected by patients' mood and psychological state.

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