

Effectiveness of phone follow up discharge program on life style of patients admitted to CCU

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Abstract

Background: There is raft of document which highlights the effectiveness of life style on improvement of diseases. This study aimed to investigate the effectiveness of phone follow up program on life style of patients after discharge from cardiac care of CCU.

Methods: this was a quasi-experimental study included 144 patients admitted to CCU. The data gathered via demographic and life style related questionnaires comprising five subscale i.e. nutrition, physical activity, smoking and alcohol, sleep patterns, stress. Gathered information analyzed through SPSS software.

Results: The results indicated phone follow up program improved nutrition habits ($P<0/05$), sleep pattern ($P<0/05$), physical activity ($P<0/05$), and stress ($P<0/05$), although smoking was not significantly different with control group.

Conclusion: Considering effectiveness of phone follow up with nurses and reduces the health care cost in health centers. Therefore, it is suggested to nurse departments to apply this program after patients discharge.

Keywords: phone follow up, discharge program, life style o, CCU.

Introduction

Today regarding high economic burden of health care programs, safe and cost effective care methods are more emphasized in order to higher health safety in society (WHO, 2013). The hearth diseases are one of the most common cause of mortality in worldwide and Iran which is responsible for main reason of disability also. According WHO report (2005) hearth diseases were responsible for 41/3 percent of mortality in Iran and it is estimated will reach to 44.8% up to 2020. Coronary artery disease is the first cause of death in Iranian over 35 years (Siam et al,2012). Frothy percent of hospital additions also belongs to heart disease (Bethayie et al, 2009).

Recent studies believed that main reason of disease and mortality is related to life style i.e. smoking, inactivity and inadequate dietary habits, inadequate fruit and vegetable consumption are risk factors for cardiovascular disease and cancer (Loprinzi et alT 2015). Life style is included all health related behaviors which is in our control. One comprehensive approach recommended that health protective behaviors (risk reduction and prevention) and health improvement behaviors are considered as two item of healthy life style (Caruana et al ,2016). Health protective behaviors reduces disease risks and boosted self-satisfaction (Davies et al ,2015). Meanwhile Navaneethan et al (2015) in a recent research indicated life style patterns is interrelated with health and life span. Life style improvement is as effective as medication (Naghiyei and Alamdadi , 2011). Some patients are distressed in discharge time (Dudas,2001). They face with daily functions difficulties, low level of knowledge and awareness about medication and nutrition. Therefore, in some studies discharge problem considered to reduce these complications (Mistiaen, 2008). Phone follow up is frequently considered as part of discharge program (Clark et al , 2007). Phone follow up is appropriate tool to contact and deliver educations and health awareness, controlling symptoms, side effects and giving confidence to patients family in order to make warm and confident relationship between patients and nurses (Courtney et al, 2009). This method is efficient and economical which approved in previous studies (Dabirian, 2012).

Considering significance of life style and effectiveness of phone follow up on reduction of mortality, meanwhile no available domestic study in this area, this study aimed to investigate the effectiveness of phone follow up discharge program of life style of patients after discharge from CCU.

Methods

This quasi-experimental study included all patients with cardiovascular diseases referred to the Valiasr Hospital who meet inclusion criteria. The following formula used to calculate the sample size:

$$n = \left(\frac{(z_{\alpha/2} + z_{\beta})^2 \times \sigma^2}{\varepsilon^2} \right)$$

$$n = \left(\frac{1.96 + 0.84}{0.33} \right)^2 = 71.99$$

All sample size considered 144 cases administered randomly in two groups of intervention (N=72) and control group (N=72) (Allavi-majd, 20005). The inclusion criteria were as following:

- Native of Mazandaran-Iran
- Literate
- No visual of audial impairment
- Having phone
- Willing to participation

Tools

Life style accessed via a questionnaire developed by Beig-Mohammadi(2012), the first part included 16 items regarding demographic characters and second part included 60 items in five subscales i.e. nutrition and drinking habits (31 questions), physical activity (5item), smoking (7 items), stress (9items) and sleep patterns (8 items). The questionnaire completed through interview with patients and caregivers. Each item considered 1 to 4 options with different values. Some questions scored vice versa. Total score included 100% which divided to four parts week (0-25), average (25-50), good(50-75) and very good (75-100).

Procedure

Patients divided to intervention and control group randomly. The control group received only routine care program. Case group participate in two educational sessions via educational let book. Education stopped when patients received and understand all educational items. The phone follow up administered via contacting by phone in second, forth, sixth day after discharge and continued each week and each month during 9:30am -1pm.

Let book included information about physician visit times, necessary recommendations about medications, symptoms, physical activity and nutrition.

Patients asked about situation, method of using medications (knowledge about medicine and doses), side effects, nutrition (food type, digestive problems), activity (problems due to activity, level of activity), level and quality of sleep, digestive, personal activities, health. The responses recorded in checklist and needed information given to patient.

Analysis

The SPSS -21 used to analysis data via descriptive and mac-nemar test to compare the mean score.

Ethical approve

This study approved with ethics code number: IR.MUI.REC.1395.4.8.

This clinical trial to study the system IRCT2015040713156N11 number has been registered.

Results

Demographic characters of participants

Variable		N	%
gender	Male	82	57
	Female	62	43
Marriage status	Married	125	86/8
	Unmarried	8	7/7
	widow	11	9/7
Education	Literate	14	9/7

	High school	33	22/9
	Diploma	51	36
	academic	48	33
Age	40-49y	14	9/7
	50-59	57	39/5
	60-69	38	26/3
	70-79	26	18
	Above80	9	6/5
Residency	Urban	98	68
	rural	46	32
Chronic disease	Yes	89	61/7
	No	55	38/3
Medication use	Yes	111	76/7
	No	33	23/3

According results presented in the table 57 percent were male, 86 percent married and most of them were educated in diploma level. Most of them aged between 50-59 and resident of urban areas. 89 cases have other chronic disease and of 144 cases 111 use medications.

Table 2. Nutrition after discharge between control and intervention groups

SUBJECTS	Group	N	mean	SD	sig
	Liquid oil	Control	72	3/77	0/41
	Intervention	72	2/83	0/75	
Solid vegetable oil	Control	72	1/72	0/56	0/017
	Intervention	72	1/93	0/42	
Olive oil	Control	72	3/38	0/48	0/001
	Intervention	72	2/62	0/79	
Skinless chicken	Control	72	3/65	0/79	0/001
	Intervention	72	2/81	0/65	
Heart, liver and kidney meat	Control	72	1/75	0/49	0/001
	Intervention	72	2/25	0/64	
Red meat	Control	72	2/04	0/61	0/001
	Intervention	72	2/26	0/67	
Rice	Control	72	2/59	0/62	0/048
	Intervention	72	2/41	0/49	
bread	Control	72	2/79	0/60	0/004
	Intervention	72	2/50	0/50	
Noodles and pasta	Control	72	2/26	0/62	0/001
	Intervention	72	2/00	0/00	
High-fat dairy	Control	72	1/79	0/40	0/007
	Intervention	72	1/94	0/23	
Fresh vegetables	Control	72	3/79	0/16	0/0001
	Intervention	72	3/34	0/99	
Fresh fruits	Control	72	4/00	0/00	0/001
	Intervention	72	3/63	0/48	

beans	Control	72	2/06	0/65	0/001
	Intervention	72	3/04	0/77	
Spices, pickles and condiments	Control	72	1/72	0/65	0/001
	Intervention	72	1/95	0/77	
Walnuts, hazelnuts, almonds and dried fruit	Control	72	2/48	0/78	0/001
	Intervention	72	2/81	0/48	
Ketchup	Control	72	1/38	0/78	0/001
	Intervention	72	1/70	0/48	
Tea& coffee	Control	72	1/95	0/49	0/001
	Intervention	72	2/94	0/46	
Salt with foods	Control	72	1/29	0/49	0/001
	Intervention	72	1/76	0/49	

As it is obvious in the table two intervention and control group are significantly different after discharge in case of nurtrittun ($P < 0/05$).

Table 3. Physical activity and smoking after discharge in control and intervention groups

Groups	Variable	N	Macnemar	sig
Control Intervention	Physical activity	72	3/13	0/077
		72	10/50	0/001
Control Intervention	Smoking	72	0/664	0/056
		72	0/092	0/90

The table 3 shows two intervention and control group are significantly different after discharge in physical activity ($P < 0/05$) although there was no significant difference in smoking.

Conclusion

The results showed there was not significant difference between nutrition habits of control and intervention groups while after intervention group indicted significant improvement. They showed lower usage of oil, red meat, rice, bread consumption, consumption of nuts, tea. Kamrani et al (2014) also showed intervention group improved after education among patients with Acute Coronary Syndrome. This finding are supported in other studies i.e. Sadeghi et al (2011); Kamalifard et al (2015) and Sneed(2003).

Abedi et al (2013) reported average life style for most of patients with heart disease (41/1%). They were average in case of nurtrittun habits (54/4%), physical activity (35/9%); sleep pattern (52%); stress (33%)and 52 percent were in high level in case of smoking. Vahedian-azimi et al (2009) showed effectiveness of educational programs on nutrition habits, physical activity, sleep pattern, smoking and stress. In another study Shojayee et al (2012) boosted life hope among patients with heart disease through phone follow up program.

Kaur et al (2015) and Nesari et al (2008) also revealed effectiveness of phone follow up on life style of patients with diabetes. .Astin et al (2014) reported same results. Phone follow up even was reported as effective method on depression, anxiety and stress in hymodialysis patients. Harrison et al (2011) showed interesting results wich indicated phone follow up is

effective in reduction of readmission. This means this method help to reduction of health care costs. This finding is confirmed in the study of Dudas (2001). Considering positive results of phone follow up after patients discharge as a cost effective method. Therefore it is suggested to health care professionals to develop official programs to follow up the patients.

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