



## **Effect of Dietary Education Program on Health Status of Heart Failure Patients**

***\*Younus Khudhur<sup>1</sup>, Yousif Mohammed<sup>2</sup>***

1. *Department of Adult Nursing, College of Nursing, Kirkuk University, Kirkuk, Iraq*
2. *Department of Adult Nursing, College of Nursing, Hawler Medical University, Erbil, Iraq*

**\*Corresponding Author:** Email: yuns34@yahoo.com

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### **Dear Editor-in-Chief**

Heart failure (HF), that is the end stage of heart diseases, it considered as the main reason of death (1). Approximately about 5% of all hospital inpatients are a result of HF, and this percentage is expected to grow over the next years. This result is attributed to both population ageing and advance therapy that gives to patients, which led to increasing numbers of patients surviving from HF (2). Generally, chronic diseases affect the nutritional status of the patient and malnutrition the affects course of the chronic disease (3). The incidence of malnutrition in HF is high and lead to an increase in in-hospital mortality. Moreover, unbalanced nutrition also aggravated the disease. (4). Taking various nutritional diets have an effect on the management of HF (5). Estimation of nutritional status should be unified as an essential point in the global assessment of HF patients. Reinforcing nutritional supply within the health maintenance individuals may lead to reducing the concern of disease among HF, this, in turn, improves their quality of life (6).

However, in Kurdistan of Iraq, there is no study on the nutritional status of patients with heart failure. This study aimed to gather as much information as possible on this topic as well as to investigate the effectiveness of nutrition education programs in HF patients to improve their

abilities to face the malnutrition effects that happened in heart failure patients.

A quasi-experimental design was applied to achieve the goal of the study. Non-probability, purposive sample, with the use of pre-post-test approach for both study and control group. A sample of 400 heart failure patients chosen among patients who attended to three main hospitals; Hawler Teaching Hospital, Rojhelat Emergency Hospital, and Rizgary Teaching Hospital, Kurdistan of Iraq. The samples were divided into two groups; 200 patients as a study group were exposed to the nutritional education program and the other 200 patients were not exposed to the nutritional educational program, considered as the control group with the same demographic characteristic for both groups.

An improvement in patients' knowledge has been shown immediately after program implementation (Table 1). Moreover, the results showed an improvement in patients' nutritional status immediately after the implementation of the educational program (Table 2).

After implementation of a nutritional health education program, the patients' knowledge has significantly increased and this confirms the success of the health education program in improving patients' knowledge about HF. HF patients who



are illiterate have less knowledge about their disease and low level of education lead to difficulty with self-care, furthermore, low level of educa-

tion leads to more HF symptoms worsening, poorer quality of life as well as increased the risk of hospitalization and death (7).

**Table 1:** Study and control groups' knowledge regarding heart failure (Pre-Post) periods

Groups	Period	No.	GMS	SD	SE	MP t-test	P-value
Study group	Pre	200	0.426	0.106	0.008	-46.4	P<0.01
	Post	200	0.739	0.085	0.006		
Control group	Pre	200	0.419	0.098	0.007	-7.92	P<0.01
	Post	200	0.475	0.128	0.009		

GMS= Grand mean of scores, SD= Standard deviation, SE= Standard error, MP t-test= Matched paired t-test, P-value= Probability value

**Table 2:** Nutritional status for study and control group along (pre-post) periods

Groups	Period	No.	GMS	SD	SE	MP test	P-value
Study group	Pre	200	0.502	0.101	0.007	19.46	P<0.01
	Post	200	0.385	0.104	0.007		
Control group	Pre	200	0.514	0.109	0.008	2.91	P<0.01
	Post	200	0.500	0.109	0.008		

GMS= Grand mean of scores, SD= Standard deviation, SE= Standard error, MP t-test= Matched paired t-test, P-value= Probability value

Our results stated that the use of a nutritional education program based on the individual patient's pre-test scores and used telephone follow up leads to an improvement in patients' awareness about the nutritional requirement for HF patients. Furthermore, the result indicates the success of the current program and this can be attributed to the content of the nutritional education program based on the extensive literature review and the design used in the presentation of the program.

### Conflict of interests

The authors declare that there is no conflict of interest.

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