

# Effects of Follow-Up Care Model on Different Aspects of Quality Of Life of Patients: A Review Article

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**Abstract:** Background: The most important clinical goal or purpose of clinical care is to reduce the severity of symptoms and stresses caused by it, so that the quality of life is preserved. Due to the nature of chronic diseases and the inadequacy of existing programs, there is a need for pattern and follow-up care affecting the quality of life of these patients. One of these models is the follow-up care. The purpose of this study was to have an integrative review and to provide a comprehensive understanding and discovering the effects of follow-up care model on different aspects of quality of life of patients based on the studies that have been up to this day.

**Materials and Methods:** This study is a review article which has been conducted with the use of all articles published in this regard so far (2002-2015) and the key words of follow-up care, quality of life and chronic diseases on internet search databases such as Yahoo, Google and other medical databases like Google Scholar, Pubmed, Scopus, SID, Iranmedx; by searching and obtaining the original articles, the current article have been written.

**Results:** That most studies had been conducted on patients with physical chronic disease, and only one study had been conducted on patients with chronic mental disorders, all studies confirm the effectiveness of follow-up care model on quality of life are of variety of chronic diseases

**Conclusion:** Based on the results, it is suggested that more studies should be conducted on patients with chronic mental disorders so the effects of follow-up care model on all aspects of chronic mental disorders would be determined and more precise results would be obtained. On the other hand, based on its pandemic benefits of this model, and due to a need for using new care models for improving the health of patients with chronic diseases, it is suggested that follow-up care model should be used in health policies as an organized and appropriate model alongside with other care and family models.

**Keywords:** Follow-up care model, Quality of life, Chronic diseases.

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## 1. INTRODUCTION

In year 1920 the term quality of life have been used for the first time by Pigou in the book of Economic and welfare; and in the mid-60s Ellington in an article regarding medical liability associated with renal transplant patients also noted the importance of the quality of life of these patients. Regarding the meaning of quality of life, scientists acknowledge several interpretations and definitions [1].

World Health Organization (WHO) defines the quality of life as the perception of one's position in life, in culture and social values and regarding goals, expectations, standards and individual interest [2].

Important features of the quality of life that most humanity and social scientists agree upon include its multi-dimensional, dynamic and subjectivity characteristics. The term quality of life and its specific form (the quality of life in relation to health) is a multi-dimensional concept that includes physical, emotional and social components to be included with the disease or its treatment. Quality of life is a broad concept that includes all aspects of life including health components, but is not limited to just that [1]

Quality of life is one of the important outcomes of the health system. In particular, this becomes more important regarding diseases that are more abundant [3]

Impairment of quality of life not only has a negative effect on social life, family, work and activities, but also increases the risk of hospitalization and death from the disease[3].

Studies on health-related quality of life in chronic diseases indicate an adverse impact on physical, mental and social functioning of patients[3]. Studies show that the quality of life of patients is reduced in six to thirty months after the first acute myocardial(1,2,3. A study that had been conducted by Alonso et al (2003) as an international research project to investigate the relationship between quality of life and chronic diseases in eight countries of Italy, Norway, Denmark, America, Japan, Germany, France and the Netherlands had indicated that the quality of life of people with chronic diseases was worse than other people who did not report chronic disease[7].

In recent years the increasing chronic disease has led to excellence in the delivery of health care services. Due to the nature of the health care needs in chronic diseases, concepts and patterns such as transmission of health care from hospitals and community clinics to homes have become a concern of health policy makers[8].

Due to the nature of chronic diseases and the inadequacy of existing programs, there is a need for pattern and follow-up care affecting the quality of life of these patients. One of these models is the follow-up care[9].

The fundamental functions of this follow-up care model include the recognition of disease and its nature, potential and actual problems regarding the disease, the role of continuous control (in favorable health behaviors), play the role of continuous self-control (regarding desirable health behaviors), investment for maintaining health and value attitude toward health, family participation in managing issues, changes in the pattern and lifestyle and improvement of confidence, understanding the health care team and the process of using it is[10].

The main purpose of follow-up care model is to design and modify programs that lead to acceptance and increase of insight and effective performances suitable for continuous care, so that be effective in controlling the disease and possible complications. To achieve this goal, four stages in the follow-up care model have been considered which are: orientation, sensitization, control and evaluation.(10)

This model introduced the client as the follow-up care and effective factor in the progress of their health; and follow-up or continuous care is a regular process for effective, balanced and follow-up communication between nurses and clients that helps health care services identify the needs and problems, and sensitization of the clients to accept continuing health behaviors and help maintaining their health improvement; which is consistent with dynamic characteristics of chronic disease and its problems. The purpose of follow-up in this study is to create and develop a continuous caring relationship in order to increase knowledge and practice of effective care process and subsequently improve the quality of life, reduce complications, increase client satisfaction and improve health and quality of care services. Continuous effective caring relationship means interactive, balanced and dynamic interaction that has been established between the nurse, patient and his family and in this established relationship both the quality of care and the nature of the provided services are considered. The most important clinical goal or purpose of clinical care is to reduce the severity of symptoms and stresses caused by it, so that the quality of life is preserved[11].

All the above information shows researches and efforts that have been done for determining the effects of follow-up care on all aspects of quality of life and its benefits. The purpose of this study was to have an interrogative review and to provide a comprehensive understanding and discovering the effects of follow-up care model on different aspects of quality of life of patients based on the studies that have been up to this day.

## 2. METHODS

This study is a review article which has been conducted with the use of all articles published in this regard so far (2002-2015) and the key words of follow-up care, quality of life and chronic diseases on internet search databases such as Yahoo, google and other medical databases like Google Scholar, Pubmed, Scopus, SID, Iranmedex; by searching and obtaining the original articles, the current article have been written. It must be said that from 17 published articles regarding the follow-up care model, 11 articles have been conducted on the effects of this model on quality of life that had the inclusion criteria for this study; and all other articles have been excluded from the study.

## 3. RESULTS

Based on the nature of chronic and dynamic diseases, and their potential and actual problems, using an appropriate model according to the conditions of these patients seems necessary: a model that is compatible with the status of these patients can help as much as possible in maintaining and improving health status(11).

Accordingly, based on the conducted studies, the effects of follow-up care model as one of the new models of care on quality of life have been examined. Now, we discuss related articles which are to be discussed.

In Iran, a model called “continuous care model” have been designed and evaluated by Ahmadi (1381) regarding to patients with chronic coronary vessels. The findings of this research show that with the use of this model on 70 patients with chronic coronary vessels, some characteristics such as number of hospitalizations, the number of doctor visits, blood lipid levels, modification of diet, frequency of using nitroglycerin tablets, and especially the quality of life of patients have been improved after 6 months(1).

Sallar et al. (1382) in an experimental study on 200 elderly have performed follow-up care model for 4-month and during the two measurements of quality of life score, all aspects of quality of life have increased in the experimental group[4].

Sadeghi et al. in a 2-month clinical trial that had been conducted in three stages of 1, 2, 3 months on 66 patients who had undergone coronary artery bypass graft surgery have found that using this model can improve the quality of life of patients[13].

In another study that this researcher and his colleagues had conducted on 52 congestive heart failure patients for 3 months, they have found that the implementation of effective care models such as follow-up care model can have a positive impact on the quality of life for heart failure patients[14].

Ghavami et al in a quasi-experimental study that had been conducted using follow-up care model on experiment group and completing the quality of life and demographic questionnaires on 74 patients who had been diagnosed with diabetes type 2 and with the use of both an experiment and a control group, had found that the score for quality of life in the experiment group reached 111 from 98 which indicates the effects of using this model on increasing the quality of life on diabetic patients[10].

Rahimi et al. in a quasi-experiment, studied 38 patients with end stage renal disease for 6 months, and based on the results of this study the researchers have concluded that by applying follow-up care, there is a significant difference in the levels of general and specific aspects of quality of life in hemodialysis patients, so applying follow-up care model can enhance quality of life in hemodialysis patients[11].

Khanke et al in a quasi-experiment study with the aim of examining the effects of follow-up care model on the quality of life of schizophrenia patients on 36 patients have concluded that there is no significant difference in the average of total scores of quality of life and its aspects between experiment and control groups before the intervention; and by using follow-up care model there was a significant difference only in interpersonal aspect between the two groups[9].

In a study by Arjeini et al that studied the effects of follow-up care model on the quality of life of patients after angioplasty, concluded that this model has a positive effect on the quality of life of these patients[15].

In another study by Sadeghi et al. (2013) on the effects of follow-up care model through telephone and SMS on the quality of life of patients who had valve replacement, it had been concluded that using both methods can improve the quality of life of patients[16].

A study by Hagh-doost et al (2014) that had been conducted on 70 patients with coronary artery bypass graft surgery in both intervention and control groups, they have concluded that using follow-up care model on patients after coronary artery bypass graft surgery improves the quality of life and reduces the incidence of complications after the surgery[17].

In a clinical trial study by Bghaai et al. (2014) that had been conducted on 60 patients with heart failure, it has been concluded that using follow-up care models, training and prevention accompanying lifestyle changes in patients with heart failure can improve and increase the quality of life of patients[18].

#### 4. DISCUSSION

According to the results of this review study we can conclude that follow-up care model improves the quality of life in all dimensions.

Since in this model all factors controlling the problems caused by chronic diseases such as physical activity, nutritional diet, medication, carrying method for activities, post-operative care and ... have been considered, and sensitization have been continues and family involvement in tracking and training have been regarded as a principle, increasing quality of life after the implementation of this model had an uptrend comparing to pre-intervention period. Based on the results of studies of Ahmadi(1), Salaaar(12) and Baghai(18) it can be concluded that quality of life of groups that this model has been used on them increases, and not using the follow-up care model in the control group cause a decline of quality of life in all aspects.

From 11 studies that have been examined, 90% (10 studies) have been conducted on physical chronic disease and only 10% (1 study) have been conducted on patients with psychological disorders(9); and this is while that the results from the later study shows no difference between the impact of this model on quality of life of patients with schizophrenia which is one of the most chronic mental diseases and the control group; for the reason that the total quality of life in schizophrenic patients had not a significant increase after 3 months, and it only had an increase on interpersonal which is one of the indicators of Hendrik’s quality of life questionnaire.

This is while in studies by Baghai(18) and Saadeghi(13) that examined the effects of follow-up care model on quality of life of patients with heart failure and coronary artery bypass graft, have concluded that using follow-up care model for 3 months had a positive effect on quality of life of these patients.

It is possible to relate these differences to the duration on performing this model for mental health patients because the performance of follow-up care model would respond later in mental health patients comparing to patients with physical chronic disease; therefore, it seems that denying or accepting this hypothesis requires more studies on chronic psychiatric patients; such studies should be conducted in a longer periods comparing to patients with physical chronic diseases and with an emphasize on repeated measurements of quality of life variables and its aspects.

Another issue that is worth consideration in this review study is that in the examination of articles that have considered different aspects of quality of life, most results of the studies (90 percent) indicate an increase of scores in physical aspect than in the mental aspect. Although these studies did not used same questionnaires, it can be seen that there is a differences in the scores of physical aspect are higher and significant than scores of mental aspects.(table 1)

**Table.1: Comparing the scores of the quality of life dimensions of the studies before and after intervention**

Dimensions of quality of life studies	physical aspect			mental aspect		
	before	after	difference	before	After	difference
Ahmadi	43	60.1	17.1	41	50.7	<b>9.7</b>
Salar	37.2	55.7	18.5	43.3	57.2	<b>13.9</b>
Rahimi	184.9	223.3	38.4	147.6	172.7	<b>25.1</b>
Sadegi(13)	3.9	6.1	2.2	4.6	6.5	<b>1.9</b>
Arjeini	64.5	74.6	10.1	66.9	78.5	<b>11.6</b>
Sadegi(14)	40.46	21.85	18.6	11.54	3.81	<b>7.73</b>
Baghai	38	18	20	14	6	<b>8</b>

In the examination of consistent studies also the result of a study by Sararoudi with the title of “Effectiveness of brief psychoeducational intervention on improving the quality of life in chronic obstructive pulmonary patients” also has not shown a significant difference in the mental aspect between the two groups while this difference have been significant for physical aspect[19]; while in a study by Khodadadi on the quality of life of schizophrenic patients, the highest score of quality of life have been reported for the mental aspect which these results are consistent with the result of a Arjeini’s study[20].

Regarding this and based on the details of follow-up care model, it seems that this model emphasizes more on matters such as exercise, more activities, changing nutrition diets, losing weight, and medical diet; moreover, this relative increase of differences in scores in physical and psychological aspects between the groups are justifiable and reasonable for the reason that in psychological factors such as knowledge and previous attitudes, previous experiences, patients’ interest in accepting the model and its details, emotional and psychological characteristics, cultural roots and their family play more important role which by considering these factors, equal improvement can be expected in both aspects.

On the other hand, based on the nature of chronic diseases, especially due to the duration and severity of disease, the issue of quality of life can be affected and the tedious and boring nature of these disease even with relative improvement in physical conditions, affects the mental conditions of individuals. A study by Zamanzade et al.[21] on ESRD patients showed that even with the use of dialysis as a certain treatment for these patients, approximately 22 to 51 percent of patients have common mental problems which by exercising for a year and an intervention method effective on quality of life, no positive changes have seen on mental aspect.

Some studies suggest that in chronic disease, from the beginning the quality of life score is higher for physical dimension comparing to mental dimension; so in a study by Chan and Yu that had been conducted on schizophrenic patients in Hong Kong, the highest quality of life score have seen in physical health and the lowest have been observed in the psychological domain (22).

## 5. CONCLUSION

Since one of the main problems of patients with chronic diseases is the quality of life condition and the manner of passing life, all studies confirm the effectiveness of follow-up care model on quality of life are of variety of chronic diseases. Based on the fact that most studies had been conducted on patients with physical chronic disease, and only one study had been conducted on patients with chronic mental disorders, and based on the results, it is suggested that more studies should be conducted on patients with chronic mental disorders so the effects of follow-up care model on all aspects of chronic mental disorders would be determined and more precise results would be obtained. On the other hand, based on its pandemic benefits of this model, and due to a need for using new care models for improving the health of patients with chronic diseases, it is suggested that follow-up care model should be used in health policies as an organized and appropriate model alongside with other care and family models.

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