Original Article

Evaluation of the Quality Of Life in Patients with Coronary Heart Disease: Using Two Measuring Assessment Tools

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ABSTRACT:

Background: Coronary heart diseases (CHD) are considered to be as a major cause of morbidity and mortality worldwide. Health-Related Quality of Life (HRQL) test and assessment is considered as a major an important measuring tool of the disease effects results and other variables related to the patient's life.

Objectives: The purpose of this observational study is to assess and compare the quality of life in patients with coronary heart disease.

Materials and Methods: This study was conducted at Al-shaab Teaching Hospital, where 100 patients with definite diagnosis of CHD were responded. The data was collected using two quality of life assessment tools: the Seattle angina questionnaire (SAQ) (disease specific measuring tool) and the SF-36 questionnaire (generic measuring tool).

Results: Based on the 1) SAQ, out of the 50 patients who were recruited, the patients physical functioning in terms of activities performed 58% said "not limited" and 42% said "limited" in case of chest pain 26% noted "much more often" while 10% "much less often"
Based on the 2) SF-36, out of the 50 patients who were recruited, the patients physical functioning in terms of activates performed 26% said "no, not limited" and 74% said "limited". 34% had felt full of life "all the time" while 10% "none of the time".

Conclusion: HRQL measurement gives health care providers an additional tool for the assessment of the impact of specific clinical decisions on the health status of patients. Of the SAQ and SF-36, the SAQ offers more reliable assessment of quality of life.

Key wards: Coronary heart Disease, measuring assessment tools.

Coronary heart diseases (CHD) are considered to be as a major cause of morbidity and mortality worldwide, and as a great cost burden to the societies[1]. Apart from their clinical, economic misfortunes they have other negative effects on the quality of life of those living with them. Patients with coronary heart disease usually suffer specifically from angina, limited exercise capacity, psychological stress, and may also suffer from sleep troubles. Such conditions may have unfavorable effects of physical, social, and mental dimensions which can affect social wellbeing and status. Therefore, assessing all health related problems to these patients is an important step.

Health-Related Quality of Life (HRQL) test and assessment is considered as a major an important measuring tool of the disease effects results and other variables related to the patient's life[3], it's often used to assess those important elements of the life quality and its wellbeing of the patients in physical, mental, emotional and social dimensions. Thus it is important to know the healthy status of the patient, the public situation, and the results of the health care intervention. HRQL test is

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therefore, a subjective, and a multidimensional concept composed of a range of fields that generally include physical, social, emotional, mental and functional health aspects[2].

The treatment of the disease is now not concentrating only on improving the life expectancy, symptoms, and treatment, but also on improving the life quality of the patients. Thus developing HRQL test is now considered as an important primary outcome to achieve the therapeutic benefits. It uses two quality of life measuring tools, Seattle Angina questionnaire (specific measuring tool) and the SF-36 questionnaire (generic measuring tool)[8].

Coronary health disease CHD is the highest prevalent heart disease, and the main cause of mortality and morbidity in the world. Reports on CHD prevalence and incidence in the developing countries are rare and routinely collected data is often insufficient. It is predict that by 2020, 25 million people will be the victims of cardiovascular disease, and it will be the first causes of deaths and morbidity and disability[7-9].

HRQL is defined as the personal unique recognition way to express feelings about his\her health status. It indicates the personal view of life in its different aspects such as its physical and psychological functions that kept in line with patient's health standard and hopes. Moreover HRQL is a good predictor of the heart attack and the need of hospitalization[4].

In Sudan the recent Household Survey 2006 had showed that the prevalence of heart diseases was 2.5% and according to the Federal Ministry of Health, Annual Health Statistical Report of 2008; heart disease ranked fourth in the leading causes of in-hospital deaths.

The study was conducted aiming at evaluating and comparing the quality of life of the patients with CHD who make majority of patients admitted to the cardiology unit at Al-shaab Teaching Hospital that by using two assessment standard tools, the Seattle angina questionnaire (disease specific), and the short-term 26 questionnaire (generic).

MATERIALS AND METHODS:

This observational study was undertaken at Al-shaab Teaching Hospital in Khartoum. The study was initiated in July 2015 and was completed in September 2015. It was done through these steps:

100questionnaires 50 (SAQ) and 50 (SF-36) were distributed to people with a definitive diagnosis of CHD.

This sample was allocated at patients at the age between 20-65 specifically irrespective of other characteristic such as sex, or the demographic descriptions after being referred or admitted to the cardiology unit, emergency room with the definitive diagnosis of CHD.

2 widely accepted and frequently applied assessment tools disease specific and generic for HRQL were used for self-detection of the patient's quality of life (Seattle, Angina, and SF-36 questionnaires).

The two questionnaires were randomly distributed between the patients (50\50) to give reliable results after receiving an ethical clearance from the Ministry of Health, and Al-shaab Teaching Hospital and after getting the patient's informed verbal consent to participate in the study.

Demographic data and the major risk factors for coronary heart disease were also included in the questionnaires.

The collected data were analyzed using the SPS software.

RESULTS:

Based on the 1) SAQ, out of the 50 patients who responded 56% (28) were males while 44% (22) were females. In term of Age 16% (32) of patients were in

46 – 55 age group. Table (1) shows the patients physical functioning: in terms of activities performed in a typical day there were 150 repetitions of "not limited" and 107 repetitions of "limited". In case of chest pain/tightness/angina when doing most strenuous level of activity: 26% (13) noted "slightly more often" and "much more often" in-comparison to 4 weeks ago. chart (1) shows over the past4weeks on average how many times the patients experienced chest pain/tightness their response were "none over the past 4 weeks" by 45 responses and 40% of them did not prescribed any medication for their symptoms. In case of their treatment satisfaction: 44% said they were "mostly satisfied".

Table (1): The physical functioning during the week of the studied patients.

	severely limited	Moderately limited	somewhat limited	A little limited	Not limited	limited
	Freq(%)	Freq(%)	Freq(%)	Freq(%)	Freq(%)	Freq
Dressing yourself	3(6%)	1(2%)	8(16%)	5(10%)	24(48%)	9(18%)
Walking indoors on ground level	2(4%)	2(4%)	4(8%)	3(6%)	28(56%)	11(22%)
Showering	2(4%)	2(4%)	7(14%)	6(12%)	25(50%)	8(16%)
Climbing a hill or a flight of stairs without stopping	6(12%)	4(8%)	7(14%)	10(20%)	10(20%)	13(26%)
Gardening, vacuuming, or carrying groceries	8(16%)	1(2%)	8(16%)	6(12%)	15(30%)	12(24%)
Walking more than a block at brisk space	6(12%)	2(4%)	5(10%)	7(14%)	18(36%)	12(24%)
Running or jogging	12(24%)	2(4%)	4(8%)	10(20%)	10(20%)	12(24%)
lifting or moving heave objects	9(18%)	4(8%)	4(8%)	8(16%)	13(26%)	14(28%)
Participating in strenuous sports	15(30%)	1(2%)	3(6%)	8(16%)	7(14%)	16(32%)

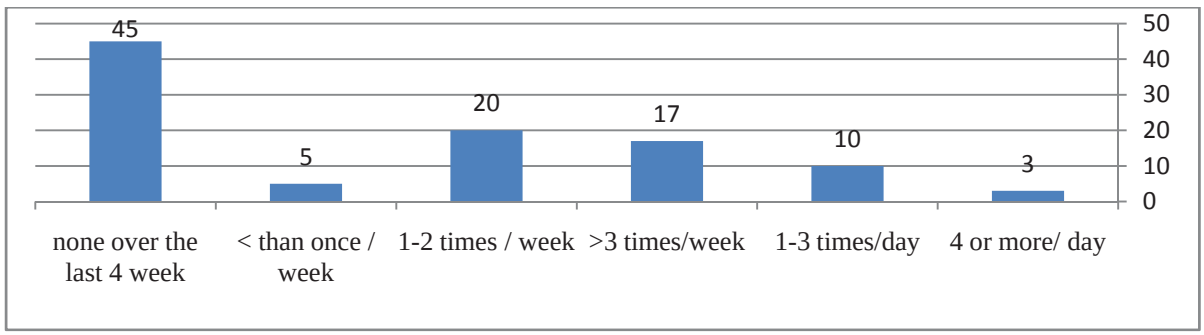

Figure (1): The frequency of chest pain/tightness/angina over the past 4 weeks among the study group.

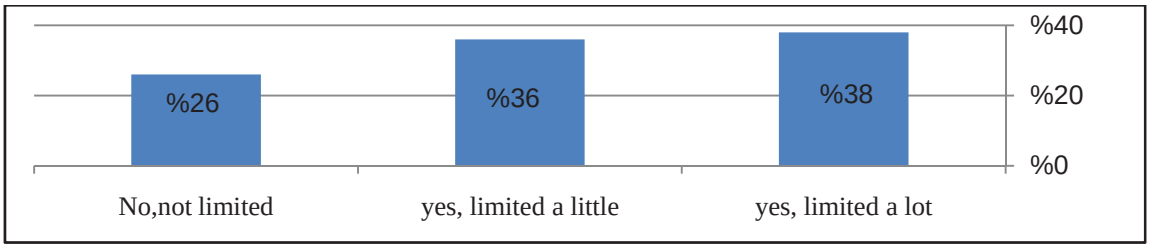

Figure (2): The frequency of limited typical day activities of the studied patients.

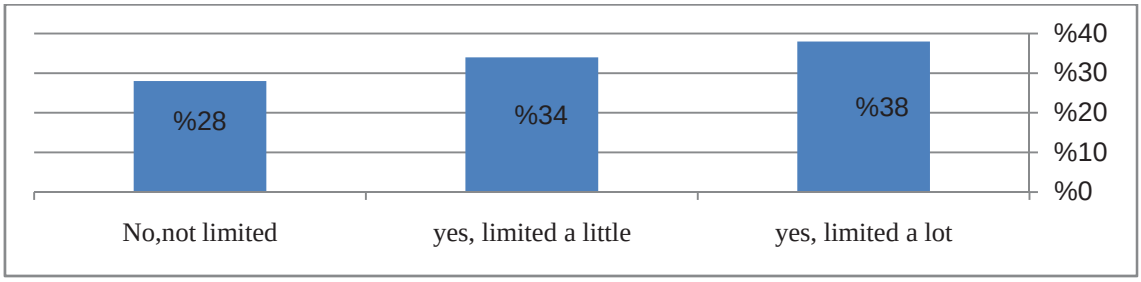

Figure (3): The frequency distribution of limited walking more than a mile among the respondents.

Based on the 2) SF-36, out of the 50 participants who were responded, 52% (26) of them were females while 48% (24) were males. In terms of age, 32% (16) of the patients were in 46-55 age groups. In terms of patient's general health perception: 32% (16) said that their health is excellent, while 30% (15) said that their health was "much worse than 1 year ago". In terms if the questions of physical functioning: vigorous activities, moderate activities, lifting/carrying groceries, climbing several flight of stairs, climbing one flight of stairs, bending/kneeling, walking more than a mile, walking several blocks, walking one block, bathing/dressing; 38% (19) said "yes, limited a lot", 40% (20) said "yes, limited a lot", 38% (19) said "yes, limited a lot", 52% (26) said "yes, limited a lot", 40% (20) said "yes, limited a lot), 46% (23) said "no, not limited", 38% (19) said "yes limited a lot", 44% (22) said "yes, limited a lot"", 44% (22) said "yes, limited a lot", 52% (28) said "no, not limited", respectively, see chart (2 , 3). In terms on whether role performance was limited by physical problems: 72% (36) of them said "yes" that they spent less time in work and other activities. 72% said that they accomplished less than they would like. Chart (4) shows that 72% (36) said that they had difficulties performing work on other activities .In terms of whether emotional problems interfered with their social function and how much of the time their physical and emotional problems interfered with their social activities: 52% (26) said "not at all". In case of physical pain: 40% (20) noted "None" over the past 4 weeks, how much pain interfered with normal work during the past 4 weeks 44% (22) said "not at all". The patients emotional function during the past 4 weeks: 34% (17) had felt full of life "all the time", 28% (14) had been nervous "none of the time", 40% (20) had felt so down that nothing can cheer them up "none of the time", 50% (25) said that they had felt calm and peaceful "all the time", 34% (17) said that they have a lot of energy "all the time", 38% (19) had felt downhearted and blue "none of the time", 32% (16) had felt worn out "all the time", 32% (16) had felt worn out "all the time", 32% (16) had felt tired "all the time" .

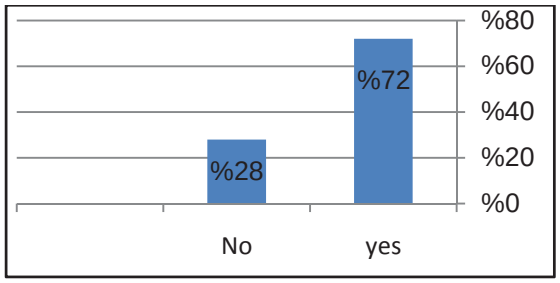

Figure (4): The frequency distribution difficulty performing the work or other activities among the study group.

In case of how much of the time has physical health/ emotional problems interfere with social activities during the past 4 *weeks:* 38% (19) said "none of the time". In case of if patients think they got sick easier than others; Chart (5) shows that 30% (15) said "definitely false". In terms of if the patient thinks he / she is as healthy as anyone else; 32% (16) said "mostly true". In case of whether patients expect their health to get worse, 26% (13) responded "mostly false" and "definitely false". 32% (16) responded as "mostly true" to whether they think their health is excellent.

DISCUSSION:

The Present study represents the best of our knowledge as the first study in Sudan about the evaluation of the quality of life of patients with CHD. The results obtained by the two measuring tools SAQ and SF-36Q showed that the quality of life is very low for those who have CHD. As shown in-terms of activities performed in a typical day there were 107 repetitions of "limited". In case of chest pain during the last 4 weeks 20% had chest pain once – "in case of the thinking they get sick easier than others" 14% said "mostly true". This showed that this study is similar to other studies[5,6]. In any case, since quality of life test describe the patient's self-test, and experience of his/her health and life status, they should be considered and taken into account together with the traditional measurements of physiological and biological factors of life when managing patient's conditions. A head to head comparison between the SAQ reliability and the SF-36 was conducted; the SAQ is able to differentiate between classes of angina. But the treatment satisfaction and angina stability may not be accurate for evaluative purposes, and we should not expect treatment satisfaction to improve along with an improvement in the other SAQ variables.

It is possible that a patient's health can

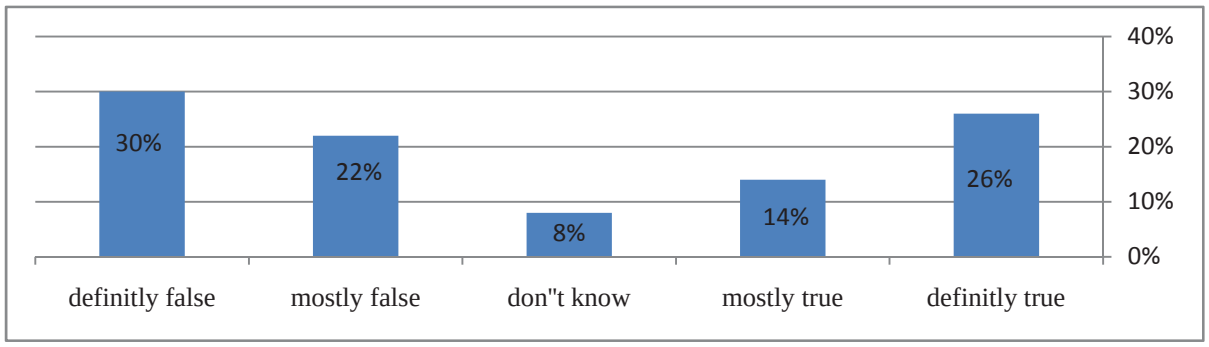

Figure (5): The response of the study group to how it seems to get sick a little easier than other people.

Table (2): Comparison between the Seattle Angina and the Short -36 Questionnaire form among the study group

	Questionnaire	N	Mean	Std-deviation	Std-Error Mean
Degree	Short from-36 Questionnaire(SF-36)	35	31.71	10.246	1.732
	Seattle angina Questionnaire (SAQ)	14	34.43	14.511	3.878

improve with their HRQL improvement, but the patient's satisfaction with treatment may not increase any further.

The SF-36 appears to have good psychometric properties; though further research is required to test it's the sensitivity to change. There is no evidence however, to indicate that it can differentiate between classes of angina.

For comparison between the two questionnaires in terms of preference, a statistical test was performed for two independent samples and we found that there is no obvious significance difference between the two questionnaires, but there is presence of a slight difference which lies in favor of the Seattle Angina Questionnaire (SAQ). Table (2)

One of the limitations we faced in this study is that it was an observational study and patients were only interviewed once. No follow up was done so as to further assess and evaluate their HRQL. The study has only covered one area and one hospital (Alshaab Cardiology unit in Khartoum). It could have been done in a larger scale but there was a lack of resources.

The results may not be finally representative of the total population because the sample size was relatively small. If a larger sample was done the results would have been more accurate and more representative of the general population, this was also due to the fact that it was a self budget study.

The most recent of (CHD) focus on life expectancy extension, and also on symptom management and improvement in physical and mental functions. Thus, in assessing the therapeutic benefit from different interventions, quality of life should also be taken into account.

CONCLUSION:

HRQL measurement gives health care providers an additional tool for testing the impact of specific clinical decisions on the health status of patients, particularly those who suffer from CHD. The present study has shown that the quality of life is very low in those suffering from CHD.

Our recent study showed that although there were no accurate statistical significance test values between the two questionnaires, but there is slight difference which favors the SAQ and the patients have been also more responsive to the SAQ; it is shorter than the SF-36 measure, which makes it more acceptable to the patients, clinicians, and service providers. We recommend that HRQL questionnaires should be joined into clinical practice to assist in evaluation of HRQL in those with CAD, especially in longitudinal follow-up following procedures. We think that all patients should be assessed of depression, given that is now a recognized as independent risk factor for CAD. Patients should be referred for cardiac rehabilitation which takes multidisciplinary approach to ensure and optimal management and knowledge of their behavioral and their medication adherence.

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