

PATIENT COMPLIANCE TOWARD MEDICATION AND LIFE STYLE CHANGE AFTER CORONARY ARTERY BYPASS GRAFTING IN AHMED GASSIM HOSPITAL KHARTUOM LOCALITY – SUDAN 2018

Widad Ibrahim A/gadir A/moula<sup>1</sup>, Hager Musa Abdalgader Abdalla<sup>2</sup> Ahmed A. Irahim alryah<sup>3</sup>

College of applied medical sciences- Taif University- KSA. Rented from College of nursing sciences, University of Bahri – Sudan  
College of applied medical sciences- Taif University- KSA  
College of nursing sciences, University of Bahri - Sudan

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Abstract

**Background:** Non-compliance after coronary artery bypass graft is a complex problem and major health care issue worldwide. It may result in poor health outcome.

**Methodology:** This is descriptive cross –sectional hospital based study, aimed at assessing of patient’s compliance to medication and life style changes after coronary artery bypass graft. Sample size was 50 patients total coverage; Data was collected by using interview questionnaire and analyzed by statistical package for social science (SPSS25).

**Result:** The results revealed that about (96%) of participants were compliance to medication. And (76%) of participants don't practice exercise. about (62%) of participants were take high fat and salts diet.

**Conclusion:** The study concluded that noncompliance to life style changes, in spite of had good compliance to medication.

**Recommendation:** Also the study recommended implementing further research to observe changes of compliance through time.

**Keywords:** compliance- medication- lifestyle- coronary artery bypass.

Introduction

**Background:** Coronary heart disease (CHD) is a major cause of morbidity and mortality throughout the world. (WHO, 2004).

Coronary artery bypass grafting (CABG) has been the main stay of treatment for revascularization in CHD patients, since 1960, in providing symptomatic relief and increasing life expectancy, According to the American and European guidelines CABG has been assigned as Class 1A indication for multi-vessel revascularization. (Sheikh et al., 2014).

CABG are common surgeries were performed, Most of the evidence on post CABG surgery management focuses on medication and commitment to lifestyle change (increase physical activity, cessation of smoking and tobacco, health diet). Sparse evidence exists regarding long-term (more than 1years) impact of lifestyle change on outcomes of patients who are undergoing to CABG surgery. Poor known about medication and life style change may lead to worsening of CAD after CABG surgery, and recent studies suggested that. In light of little is known about long-term impact of medication and lifestyle changes after CABG surgery. (Curtis M. Rimmerman M, 2005).

Non-compliance after CABG is a complex problem and a major health care issue worldwide. It may result in poor health outcome and places a substantial burden on national economies by increasing health care costs. It serves as an obstacle in the attainment of treatment goals and may actually worsen the disease. ( Culler et al., 2008 ).

**Problem Statement:** Cardiovascular diseases contribute to the maximum number of deaths globally. In 2012, nearly 17.5 million deaths were reported due to cardiovascular diseases, representing 31.0% of the global death

statistics. Out of the 17.5 million due to stroke. The number of deaths is anticipated to reach over 23.6 million by 2030. In 2012, the number of CABG surgeries performed in the U.S. was 519,000, out of which 371,000 were performed on men and 148,000 on women. In addition, the estimates state that the numbers of CABG surgeries performed worldwide are more than 800,000 every year. (CABG industry report, 2015). In South Africa, approximately 8,400 coronary bypass operations are performed per year, with the majority done in the private sector. There's an alarming incidence of heart disease in South Africa: one in three men and one in four South African women will suffer a heart attack before their 60th birthday. Every year, more than 50, 000 South Africans suffer heart attacks. Of these 50, 000, 25% - about 12, 000 people – die immediately. (Health24, 2000).

In Sudan from period of 1998 to 2007, 2,868 open heart operations were done in the three centers in Khartoum, the number of CABG surgeries done from 2000-2007 is 275. (ElSayed and Elnur, 2016).

**Justification:** Coronary artery bypass graft surgery is standard method used for treatment of coronary artery disease, however little known about impact of medication and lifestyle change after coronary artery bypass, the lack of compliance to medication and lifestyle change may result in serious complex problem that need re-operation and increase death rate.

The nurses and other staff play significant role to advance and educated patient to maintain regular medication and newly lifestyle change.

### Objective

**General Objective:** To assess the patient compliance to medication and lifestyle change after coronary artery bypass graft.

### Specific Objective

- 1- To determine the patient adhere to medication and lifestyle change (cessation of smoking, tobacco, weight loss, increase physical activity, health diet, avoid stress) post coronary artery bypass graft.
- 2- To identify the patient knowledge regarding problem behind incompliance.

### Methodology

**Study design:** A descriptive cross-sectional hospital based study.

**Study Area:** Khartoum locality, Khartoumstate.

**Study setting:** Ahmed Gassim teaching hospital ,it was established in 1994,located in Khartoum north ,limited from east by Almona street ,and south even of Almouassasa center and northern by SaadGeshra market , it include medical department ,surgical department, intensive care unit , HDU, emergency department , Pharmacy, nutrition department, and dialysis center, cardiac catheterization center ,cath lab, ward, emergency pediatric.

**Study population:** Adult male and female patients after coronary artery bypass graft in Ahmed Gassim hospital.

**Inclusion Criteria:** Adult male and female patients after coronary artery bypass graft (CABG) in Ahmed Gassim hospital, with follow up and willing to participant.

**Exclusion criteria:** Severely ill patient not able to answer question, Patients in recovery room and Patients with criteria but refuse to participate.

**Sample size:** Total coverage.

**Data collection tools:** The data collection by direct interview questionnaire which consist open and close questionnaire composed of two parts:

First part consist of sociodemographic data (sex, age, level of education, married status, occupation)

Second part contain question related to medication and life style changes.

**Data analysis:** Data was coded, entered, process, scanned and analyzed by using statistical package for social sciences (SPSS 25) and interpret in term of table and figure.

**Ethical consideration:** Ethical approval was obtained from Bahri University and Khartoum state ministry of health research department and from hospitals (Ahmed Gassim teaching hospital). The research purpose and objective will be explained to participant in clear simple words, informed verbal consent was obtained from every desirable patient included in this study before the interview. Participants had right to withdraw or to ended interview at any time without any deprivation. Also has right to benefit from the researcher knowledge and skills, questionnaire will be filled at rest time to prevent interruption of health care workers.

**3. Result**

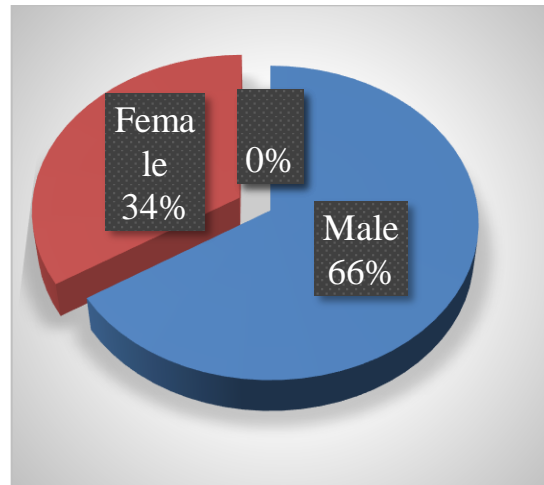


Figure (1): Distribution of study sample according to gender. n=50

The figure shown more than two third of participants (66%) was male

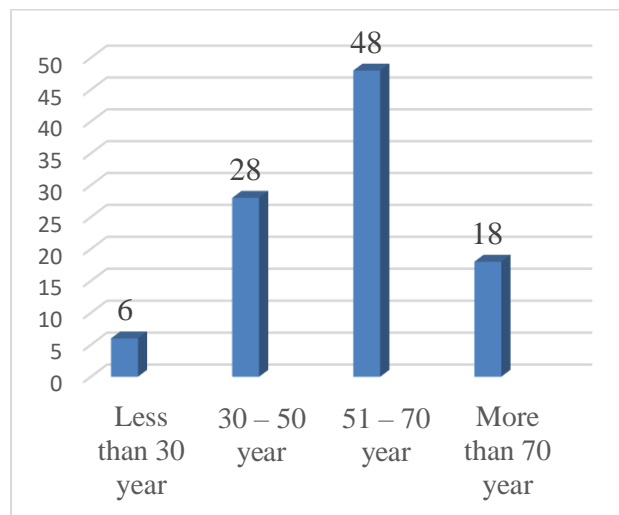


Figure (2): Distribution of study sample according to age. n=50

The figure showed near half (48%) of participants age form 51-70 years.

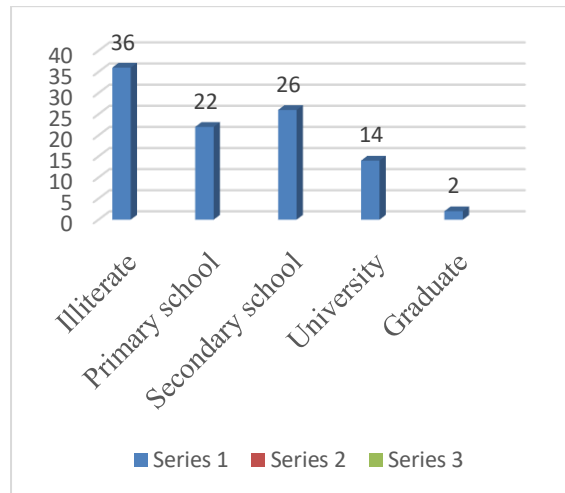


Figure (3): Distribution of study sample according to level of education.n=50The figure showed approximately one third of participants (36%) were illiterate.

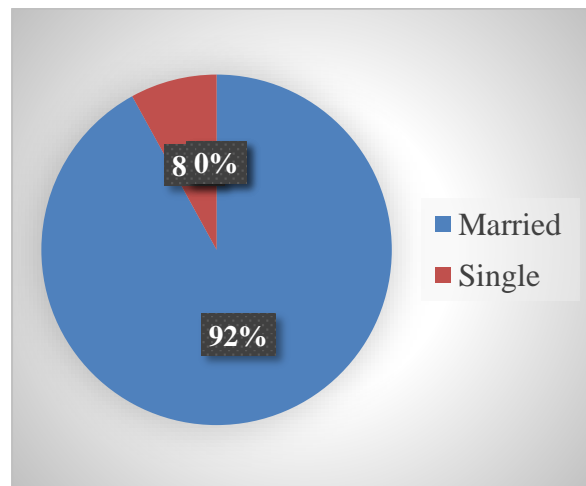


Figure (4): Distribution of study sample according to marital status.n=50

The figure showed great majority of participants (92%) of study were married.

Table (1): Distribution of study sample according to knowledge of occupation n=50

Variable	Frequency	Percent
Labor	5	10.0
Housewife	19	38.0
Employer	6	12.0
Free businesses	13	26.0
Not work	7	14.0
Total	50	100.0

The result shown that more than one third (38%) of participants were housewife.

Table (2): Distribution of study sample according to Knowledge about history of disease n=50

Variable	Frequency	Percent
Before 1 year or less	29	58.0
Before 2 years	8	16.0
Before 3 years	6	12.0
Before more than 3 years	7	14.0
Total	50	100.0

The result shown that nearly half (48%) of participants had history of disease before one years.

Table (5): knowledge of delaying surgery n=50

Variable	Frequency	Percent
The money is incomplete	17	34.0
A change in the proportions of blood tests	2	4.0
Carried in time	31	62.0
Total	50	100.0

The result shown that two third (62%) of participants hadn't delay surgery.

Table (7): knowledge about treatments to regulate sugar n=50

Variable	Frequency	Percent
Yes	15	30.0
No	35	70.0
Total	50	100.0

The results shown that majority (70%) of participants were uncontrolled diabetic.

Table (9): knowledge about smoking before the operation n=50

Variable	Frequency	Percent
Yes	29	58.0
No	21	42.0
Total	50	100.0

The results shown that more than half (58%) of participants were smoking.

**4.1 Discussion:** Noncompliance after coronary artery bypass graft may result in health worse and increase the risk of re-operation, Descriptive cross sectional hospital base, aimed to assessment of patient compliance to medication and life style change after coronary artery bypass graft.

The present study revealed that two third of participants were men, that implies high rate of risk regarding age to coronary artery disease. This is disagree with Giloyan, and other (2013), regarding Patients' knowledge about coronary artery disease risk factors after coronary artery bypass surgery and adherence to medication and lifestyle in Armenia. They reported that eighty five point eight were men.(Giloyan, and other, 2013). Also the study showed majority of participant were married this is match with Ali et al, (2017) regarding Frequency and predictors of non-adherence to lifestyle modifications and medications after coronary artery bypass grafting in Indian, They reported that seventy six point six of patients were married.( Ali et al, 2017).Regarding the level of education the study reported that one third of participants were illiterate which reflect low knowledge of participants behind compliance, and needed more advance and health education. In addition the result showed majority of participants believed that smoking are the main contributing factor of coronary artery disease, which reflect neglect of other factors, and participants needed health education to improve their knowledge about the disease.Also the research demonstrated majority of participants of participants had diabetic and there is no controlled, this implies uncontrolled diabetic mellitus is main causes to CAD for those participants and more than half of participants had hypertension but on regular treatment.

The result showed more than two third of participants of patients were still used smoking after operation this is disagree with Giloyan, and other (2013),regarding Patients' knowledge about coronary artery disease risk factors after coronary artery bypass surgery and adherence to medication and lifestyle in Armenia. They reported thatseventy five present of patients were adherent to smoking cessation. (Giloyan, and other, 2013).In addition, the result demonstrated that majority of participants had noncompliance to exercise this is match with Ali et al, (2017) regarding Frequency and predictors of non-adherence to lifestyle modifications and medications after coronary artery bypass grafting in Indian, They reported thatforty one point one present of participants reluctance to follow exercise regimen.( Ali et al, 2017).Concerning to diet majority of participants were take high salt and fat diet, which reflect noncompliance to diet.This is similar with Ali, (2017) regarding Frequency and predictors of non-adherence to lifestyle modifications and medications after coronary artery bypass grafting in Indian , They reported that four point seven present were illustrate noncompliance to diet which would increase risk of heart attack (Ali, et al 2017).In addition the result revealed that majority of participants were take medication regularly and at prescribe time which reflect good advance and participants had regular follow up, this is contradicted with Giloyan, and other (2013)regarding Patients' knowledge about coronary artery disease risk factors after coronary artery bypass surgery and adherence to medication and lifestyle in Armenia, They reported that non adhere to medication. (Giloyan, and other, 2013)

**Conclusion:** Base on result, the study concludes noncompliance to life style changes (diet, exercise, and smoking) in spite of had compliance to medication.Participants need modification of life style to save life and prevent health risk occurrences.

**Recommendation:** Based on conclusion, the study recommended to:

1- Encourage patient to modification of life style by take low fat and low sodium diet, regular doing of exercise and help them to avoid smoking through explanation of the effect of smoking on health and more health education to motivate life changes.

2- Implementing further research to observe changes of compliance through time.

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