



Impact of Counselling on Coronary Artery Disease Patients Adherence to Medications and Frequency of Physical Activity

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ABSTRACT:

INTRODUCTION: Coronary artery disease (CAD) is the most common kind of cardiovascular disease. This study used a retrospective cohort of CAD patients from tertiary care hospitals. **OBJECTIVES:** The study's primary goal is to increase patient benefits by offering clinical pharmacist advice on physical activity and medication adherence. **METHOD:** During the course of six months, 220 patients were included in the study, which was conducted at the cardiology department. **RESULTS:** Of the 220 patients, 110 are in the group receiving counseling, while the other 110 are in the group not receiving counseling. The frequency of physical activity increased in the counseled group and decreased in the non-counseled group (p-value 0.0001), according to our study, and the counseled group's medication adherence gradually got up while the non-counseled group's medication adherence decreased. **CONCLUSION:-** Clinical pharmacist counseling increased the frequency of physical activity and medication adherence in patients with CAD, resulting in lower blood pressure and total cholesterol levels in the subject of the study population.

KEY WORDS: Clinical pharmacist, Medication adherence, Physical activity, Counseled group, Not counseled group Coronary artery diseases

INTRODUCTION:

Coronary Artery Disease (CAD), the most common form of cardiovascular disease, is brought on by poor lifestyle choices, insufficient preventative measures, and increased exposure to risk factors. ¹. Diabetes, dyslipidemia, alcoholism, smoking, and hypertension are all recognized to be substantial cardiovascular risk factors. ² Lifestyle decisions have a big impact on these risk factors. For the prevention of CAD, it is essential to adhere to medical care in addition to adopting good lifestyle practices. ³. By educating, counseling, and supporting patients regarding medication adherence and physical activity, we may reduce cardiac events. ⁴⁻⁵. Similarly, some studies on the effect of Clinical Pharmacist revealed positive Results on various outcomes such as Medication Adherence, Physical Activity along with these weight, dietary behaviors also shows positive effect ⁶ Clinical pharmacists can play an active part in Patient education regarding the usefulness of taking Antiplatelet drugs and thereby lessen the gap between patients and Physicians. Additionally, pharmacists can support patients in managing their illness states through a variety of lifestyle changes and sensible medicine use. ⁷. Because of their extensive training and expertise in pharmacology and the responsible use of medications, they can also offer post-discharge follow-up and medication counseling upon discharge. ⁸. The mortality effect of prescribed medications requiring the participation of a clinical pharmacist is not very significant. Consequently, it's critical to evaluate how the clinical pharmacist's participation may impact mortality. ⁹. By providing counseling on medication adherence and frequency of physical activity, the current study believes to reduce hospitalization, improve quality of life, and improve the patient's overall health benefits.

METHODOLOGY:

220 CAD patients from a tertiary care hospital's cardiology department participated in a retrospective cohort research. The ethics committees of Guntur Medical College gave their approval to this project. Two groups participated in the study in each group 100 members were participated : Group A, which was counseled by a pharmacist, received clinical care in addition to counseling from the pharmacist. Clinical pharmacists followed up with patients for six months after discharge and offered organized counseling at that time. At the time of release, Group B (Pharmacist Not Counseled group) received clinical care but no pharmacist counseling. The standard of care provided by cardiologists was unchanged in both groups, and the level of care needed in the pharmacist counseling group was also similar. Evaluation of drug compliance The medication adherence rating scale (MARS) was used to measure medication compliance at baseline, six months later, and during phone interviews. Ten yes/no questions make up the MARS, and the total of the questions results in a final score that ranges from 0 (poor treatment adherence) to 10 (excellent treatment adherence). Three groups were classified based on a scale: poor adherence, denoted by a score of 0-3, medium adherence, denoted by a score of 4-7, and high adherence, representing a score of 8-10. At every telephone interview, counseling about medicine and lifestyle changes was reiterated, and at the follow-up, the patients' comprehension of the prescribed

drugs was reassessed. Medication adherence was evaluated only based on the patient's answers to the questions; no other independent verification was used, such as pill counts, pharmacy data, or electronic medication event monitoring systems. Data on patients' physical activity level and sedentary behaviour were collected using the Questionnaire. Patients were considered physically active if they achieved more than 30 mins of physical activity. The SPSS program was used to do statistical analysis on the collected data after it was entered into a Microsoft Excel spreadsheet. The confidence interval level for the chi-square test was set at $p < 0.05$ (95% confidence interval). The chi-square test was applied to evaluate variables including medication adherence and physical activity

RESULTS:

Table 1 The gender distribution within the study population is shown in Table 1. Men were overrepresented in the study in comparison to women. According to the data, women made up 28% (n=61) of the participants, while men made up 72% (n=159). The distribution of risk variables among the patients is shown in Figure 2. Among the risk factors, hypertension (HTN) is the most common, making up the largest percentage (68.63%; n=151). Following at 50.9% (n=112) is diabetes mellitus (DM), with stress being present in 24.54% (n=54) of the subjects. 52.72% (n=116) of the subjects reported smoking, while 48.63% (n=107) of the subjects reported drinking alcohol. There were 220 participants in all for the study.

PARAMETERS	N(%)
SEX/GENDER	
Male	159(72%)
Female	61(28%)
RISK FACTORS	
Diabetes mellitus	112 (50.9%)
Hypertension	151(68.63%)
Stress	54(24.54%)
Smoking	116 (52.72%)
Alcohol	107(48.63%)
Genetics	107(48.63%)

FIG 1 : Illustrates the difference in medication adherence between patients who had pharmacist counseling and those who didn't. In patient counselled group high medication adherence is 94(85.45%) and low adherence is 4(3.63%). In pharmacist not counselled group High adherence is 56(50.90%) and low adherence is 18(16.3%). According to the statistics, patients who received pharmacist counseling had significantly higher medication adherence than those who did not get counselled.

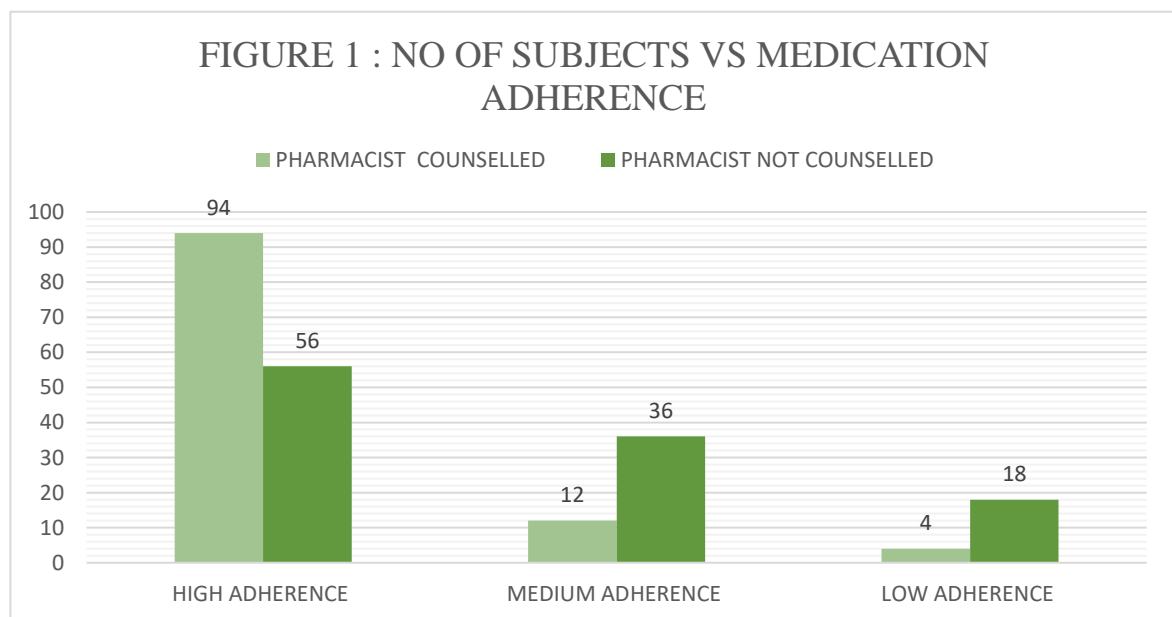


Fig 1: No of subjects vs Medication Adherence

FIG 2 : Provides data on the levels of physical activity among patients who had pharmacist counseling and those who did not. According to the findings, patients who got counseling had a tendency to be more physically active than those who did not get counselled.

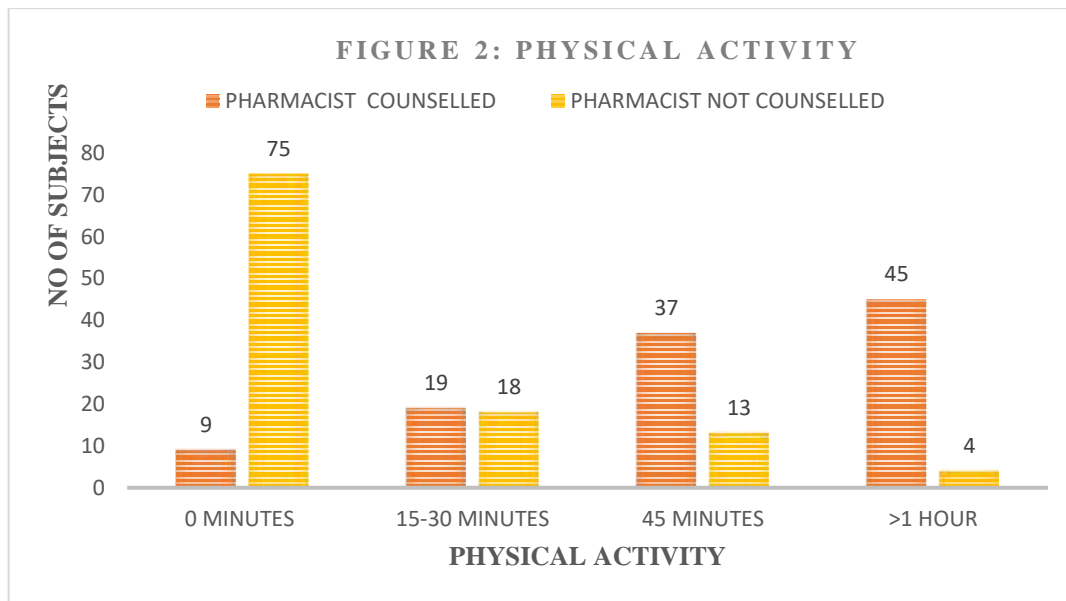


Fig 2 : No of subjects vs Physical activity

DISCUSSION:

Physical activity was found to be higher in the pharmacist-counseled group and lower in the pharmacist-non-counseled group in our study (0.00001). The p-value (0.602) was discovered in the other study that Pramila Gaudel et al.,¹⁰ presented. Both groups of patients received advice to refrain from strenuous activity if it causes dyspnea and chest pain.

Using MARS, medication adherence was assessed for six months between the groups. Compared to the pharmacist-not-counseled group, the medication adherence in the former group was higher. Our research showed that a note worthy distinction has been noted between the pharmacist-counseled and pharmacist-not-counseled groups. The group that received counseling exhibited higher medication adherence (p-value 0.00001). The other study showed that adherence to medicine ($p < .001$) was demonstrated by Pramila Gaudel et al.¹⁰ The effect of patient education on the management of CAD and the necessity of clinical pharmacist advice that education could improve health-related quality of life.

CONCLUSION :

These results demonstrate that when paired with clinical care, pharmacist counseling may enhance the medication adherence and lifestyle adjustments such as physical activity in CAD patients.

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