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## Lifestyle modifications in post CABG versus angioplasty

**Shital Arun Sawant and Aakanksha Waghe**

**Abstract**

**Objective:** To identify the lifestyle modification adopted by patient after CABG and Angioplasty, to find association between lifestyle modifications in patient after CABG and Angioplasty with selected variables such as age, gender, duration of intervention, education and occupation, to compare lifestyle modification adopted between patient after CABG and Angioplasty.

**Design:** A descriptive comparative approach is used in this study and survey design.

**Sample:** In this study sample size consisted of total 200 patients among them 100 samples had undergone Angioplasty and 100 samples had undergone CABG.

**Results:** The study showed there is difference between distribution of CABG patients performing activity as per age, gender and duration of intervention.

The study did not show significant difference between distributions of CABG patients performing activity as per education and occupation. In PTCA, show that there is difference between performing activity as per age. The statistical evidence from the study did not show significant difference between distribution of PTCA patients in performing activity as per gender, education, duration of intervention and occupation.

In case of comparison there is difference between patients who have undergone CABG and PTCA with regards to resuming normal daily activity independently. Whereas change in sleeping pattern, performing exercise, duration of performing exercise, restriction in oil, sugar and salt and resumption of normal sexual activity in that the statistical evident from the study did not show significant difference between patient who have undergone CABG and PTCA.

**Keywords:** Lifestyle modifications, CABG, angioplasty

**Introduction**

**Statement of the Problem**

“A comparative study to assess the lifestyle modifications adopted by patients who have undergone CABG versus Angioplasty in selected hospital of Mumbai.”

**Objectives**

1. To identify the lifestyle modification adopted by patient who have undergone CABG.
2. To identify the lifestyle modification adopted by patient who have undergone Angioplasty.
3. To find association between lifestyle modifications adopted by patients who have undergone CABG and Angioplasty with selected variables such as age, gender, duration of intervention, education and occupation.
4. To compare lifestyle modification adopted between patient who have undergone CABG and Angioplasty.

**Research Approach**

A descriptive comparative approach

**Sample and Sample Size**

In this study sample size consisted of total 200 patients among them 100 sample had undergone Angioplasty and 100 samples had undergone CABG, selected from cardiac OPD of selected hospital in Mumbai city.

**Sampling Technique**

Non Probability convenient sampling was used for the selection samples in this study. The samples were selected as per the availability and criteria laid down for sample selection.

**Tool and Technique for Data Collection**

The tool used in this study was the structured interview schedule and the technique used for data collection was interviewing. The tool was prepared with the help and guidance of expert, literature review and investigators clinical observation and experience. The tools used for data collection consisted of the such as, Demographic data, Medical data, Assessing lifestyle modification of patients undergone angioplasty and CABG, Activity rest and sleep, Occupation, Exercise, Diet, Habits, Treatment, Sexual activity, Stress management, Follow up.

**Validity**

To establish the content validity the prepared tool was given to 17 experts from the field of Nursing, Medicine, Physiotherapist and Dietician. There was agreement among experts regarding the content of the tool. Their suggestions were incorporated and the tool was translated in Hindi and Marathi by language expert. The translated tool was

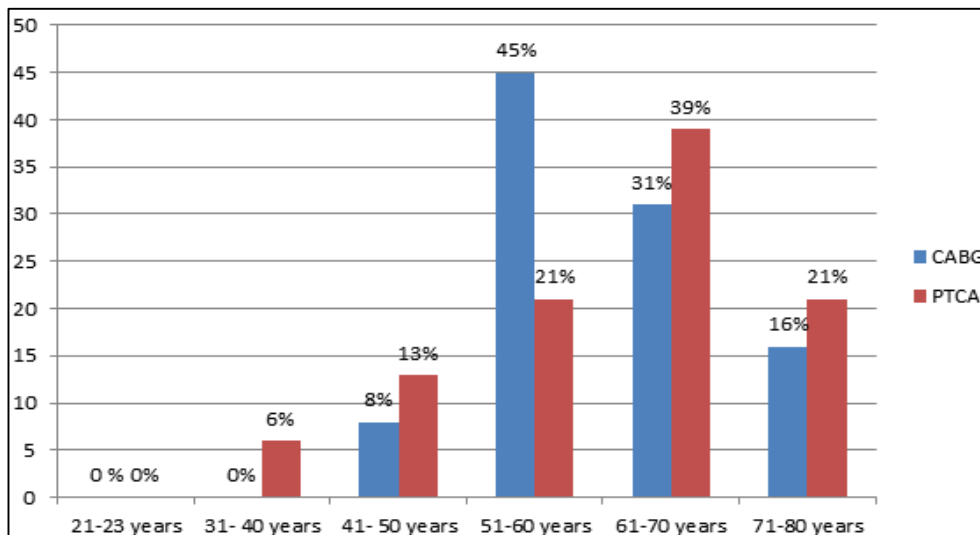
retranslated back by an expert in English. Thus the content validity of tool was established.

The changes were made in the section of demographic data, occupation, exercise, diet, and habit as per the suggestions of the experts.

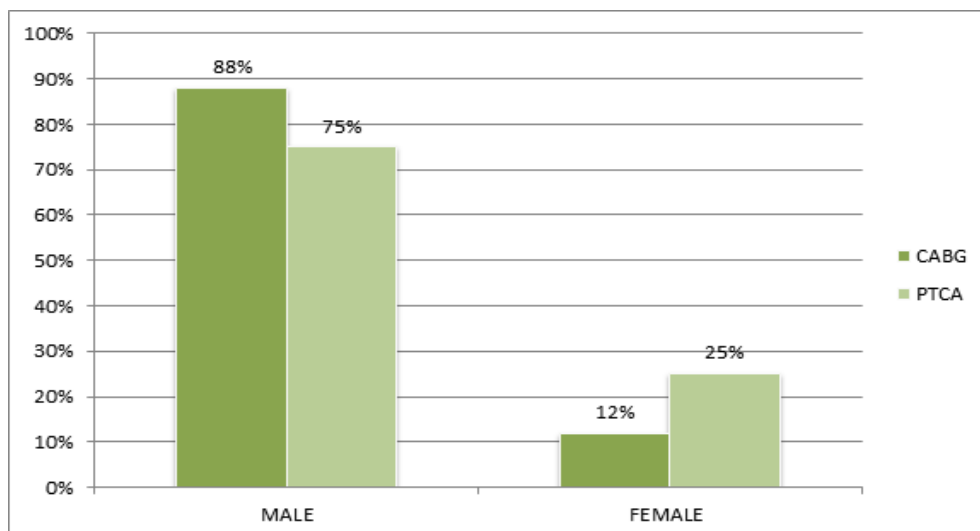
**Significant finding of study**

**Findings Related to Distribution of Sample Regarding Demographic Data**

With regard to age of the subject in the CABG group, majority (45%) were from the age group of 51 to 60 years, whereas in PTCA group majority (39%) belong to the age group of 61 to 70 years. The CABG group consisted of 88 percent male and 12 percent female whereas the PTCA group consisted of 75 percent males and 25 percent samples were females. The marital status of CABG group 95 percent were married and PTCA group included a majority that is 87 percent were married. The educational qualification of the CABG group showed that majority (30%) graduate and PTCA group included a majority (32%) who completed their secondary education. Majority of people from CABG 36 percent and PTCA 28 percent were retired. With regards to the monthly income majority of samples i.e.50 percent from CABG group and 59 percent from PTCA group reported an income of below Rs. 15000 per month.



**Fig 1: Distribution of Sample with Regards to Age Group**



**Fig 2: Distribution of Samples with Regards to Gender**

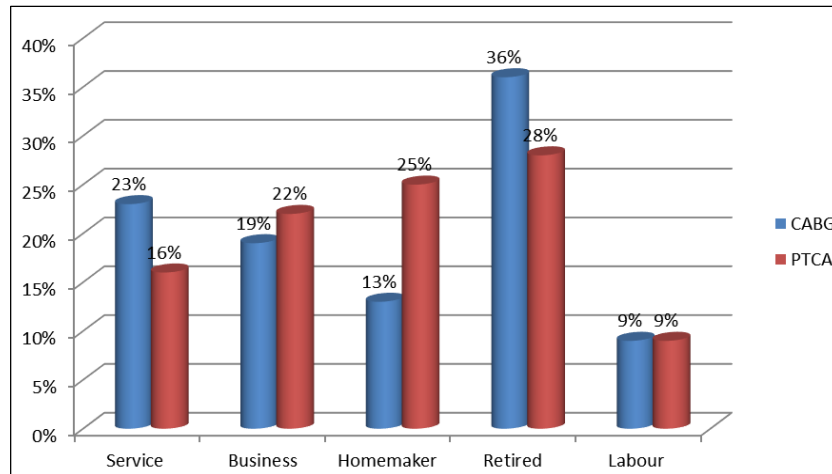


Fig 3: Distribution of Sample with Regards to Occupation

**Findings Related to Distribution of Sample Regarding Their Medical Data**

With regards to duration of illness both CABG group consisted 76 percent and PTCA group 76 percent samples suffered since one to three years. A majority (61%) samples from CABG group reported with three blockages whereas PTCA group reported majority (61%) had one artery blockage. With regards to the coronary artery blocked both CABG 72 percent and PTCA 70 percent had blockages in left anterior descending (LAD). Majority of sample from CABG group i.e. 49 percent reported diabetes mellitus as

associated problem whereas in PTCA group majority (44%) had reported hypertension. In PTCA group all 100 percent samples had implanted drugs eluting stents. With regards to the duration of surgery, majority (45%) of samples from CABG group were in category in four to six month whereas in PTCA group majority (34%) were found in seven to nine month category. The CABG group had 51 percent and PTCA group had 50 percent samples having family history of heart disease. In CABG 37.25 percent and in PTCA 52 percent samples had history of heart disease in their fathers.

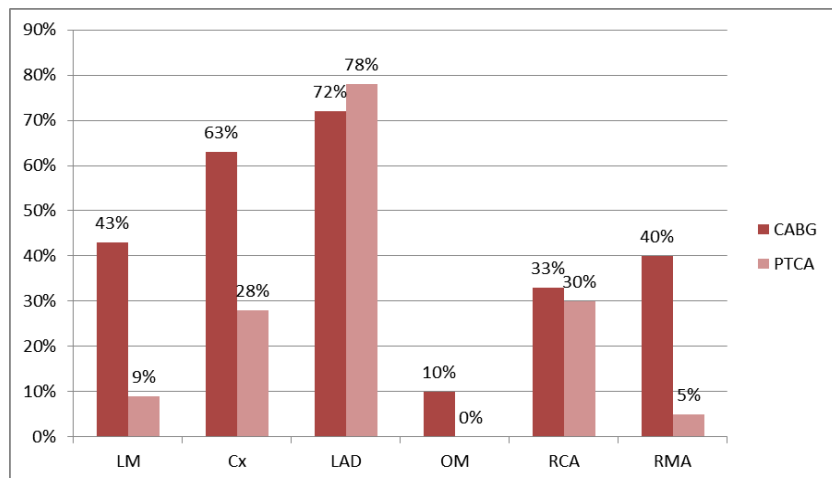


Fig 4: Distribution of Sample With Regards to the Name of Coronaries Blocked

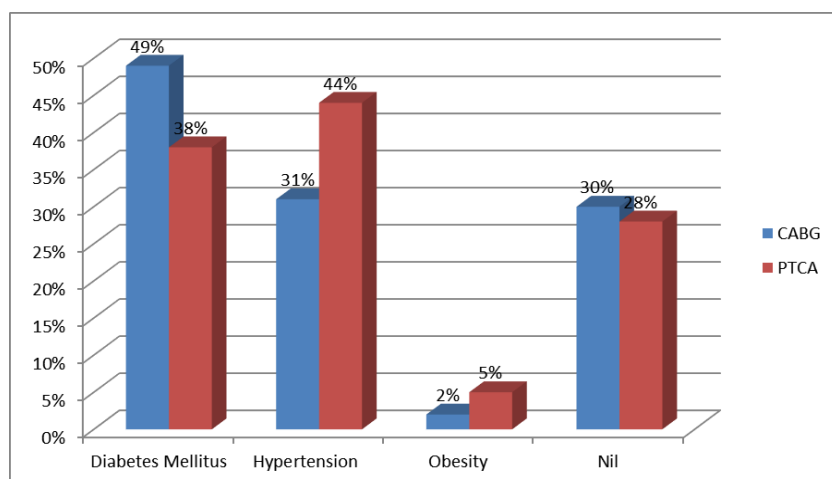


Fig 5: Distribution of Sample with Regards to Associated Problems

**Findings Related to Distribution of Sample Regarding Knowledge of Lifestyle Modification**

All samples from CABG group and PTCA group were aware about the lifestyle modification after undergoing surgery. In CABG 98 percent and in PTCA 100 percent stated they were informed regarding lifestyle modification by doctors. All samples from CABG and PTCA group modified their lifestyle after undergoing intervention/surgery. The 100 percent samples from CABG group were compliance to drugs regimen, whereas in PTCA group majority of them 89 percent made changes in diet.

**Findings Related to Distribution of Sample Regarding Lifestyle Modifications in Activity Rest and Sleep**

In CABG group majority (45%) resumed normal daily activity within 16 days to 30 days after discharge whereas in PTCA group 42 percent resumed normal daily activity immediately after discharge. Unnecessary travelling was avoided by majority (74%) from CABG and 61 percent from PTCA group. A majority (59%) from CABG and 57 percent from PTCA had changed sleeping pattern after intervention / surgery. Waking up frequently during night was reported by 76.27 percent in CABG and 68.42 percent in PTCA groups. A majority (61%) samples from CABG and 58 percent from PTCA took nap/rest during daytime. With regards to hours of sleep during daytime 54.10 percent from CABG and 56.9 percent from PTCA slept for two hours. A majority (79%) samples from CABG and 85 percent from PTCA had regular bowel movements after undergoing intervention/ surgery. In CABG group 91.14 percent and in PTCA group majority (91.76%) samples ate high fibre diet to achieve regular bowel movement. With regards to taking precaution while passing stool 57 percent from CABG group and 78 percent from PTCA group were avoiding straining while passing stool, after undergone intervention/surgery.

**Findings Related to Distribution of Sample Regarding Lifestyle Modifications in Occupation**

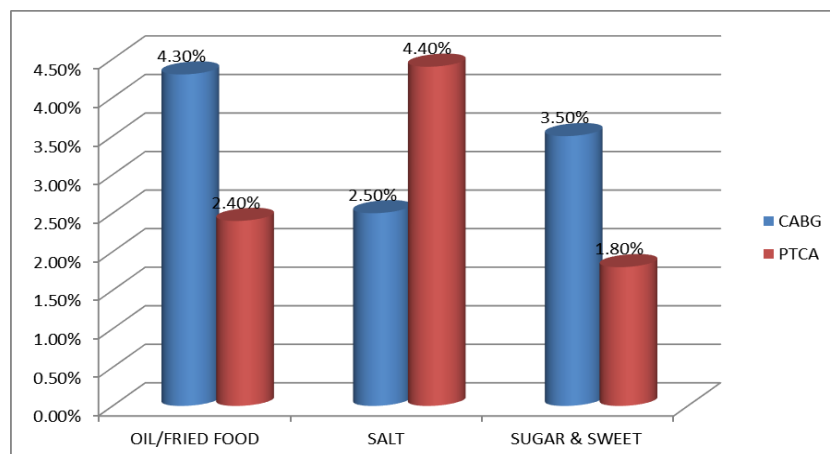
Ninety percent of samples from CABG group reported resumed work after three month to six month after undergone surgery, whereas in PTCA group 45percent samples resumed after one month of undergone intervention. In CABG group 49 percent did not change anything in job after intervention / surgery while from PTCA group 30 percent changed hours of work. In CABG group 71 percent and in PTCA group 72 percent samples worked for eight hours in a day

**Findings Related to Distribution of Sample Regarding Lifestyle Modifications in Exercise**

Initiating exercise regime after intervention / surgery from CABG group 93 percent and 88 percent from PTCA did regularly. Majority (91.40%) samples from CABG and 96.59 percent from PTCA performed exercise daily. Jogging was preferred exercise after surgery by 84.95 percent samples in CABG and 86.36 percent samples in PTCA. Majority (74.19%) samples from CABG and 84.09 percent from PTCA performed warm up and cool down before and after exercise. From CABG group 39.78 percent samples performed exercise for 45 mins while in PTCA group 30.64 percent samples performed for 30 mins. Fifty two percent samples from CABG group and 68 percent from PTCA group were vegetarian.

**Findings Related to Distribution of Sample Regarding Lifestyle Modifications in Diet**

Changes in diet were adopted by 99 percent samples from CABG and 98 percent samples from PTCA group. Majority (93%) samples from CABG and 93.81 percent from PTCA avoided heavy meals. Eating green leafy vegetables in diet 48 percent samples from CABG ate daily, whereas in PTCA group 46 percent ate twice in a week. Yogurt was ate occasionally by 51 percent sample from CABG group and 60 percent from PTCA group. Fifty five percent samples from CABG group were eating walnut, 35 percent samples were reported eating salmon fish, 28 percent were eating soybean and seven percent were eating seafood (oyster) whereas in PTCA group 21 percent were reported to eating soybean, 19 percent were eating salmon fish, and few 13 percent were eating walnut. A majority 98 percent samples from CABG group stated that they followed restriction with respect to consume oil fried food, 87 percent reported that they followed restriction in using salt in diet, and 78 percent followed restriction in consuming sugar and sweet, whereas, in PTCA group 95 percent samples were following restriction with respect to consume oil fried food, 87 percent restricted consuming sugar and sweet, and 85 percent restricted consuming salt in diet. Fifty two percent samples from CABG group and 68 percent from PTCA did not eat chicken and fish. Majority (77%) from CABG and 56 percent from PTCA ate chicken and fish once in a week. With regards preparation of poultry from CABG group 83 percent and in PTCA group 94 percent of samples were removing skin and fats from poultry before preparation,

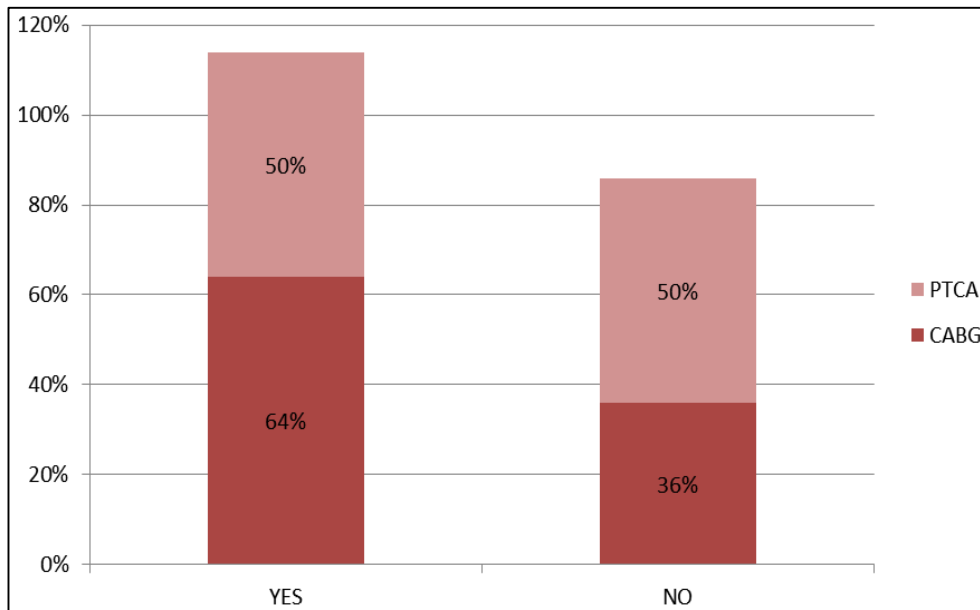


**Fig 6:** Distribution of Samples with Regards to Keep Restriction in Diet

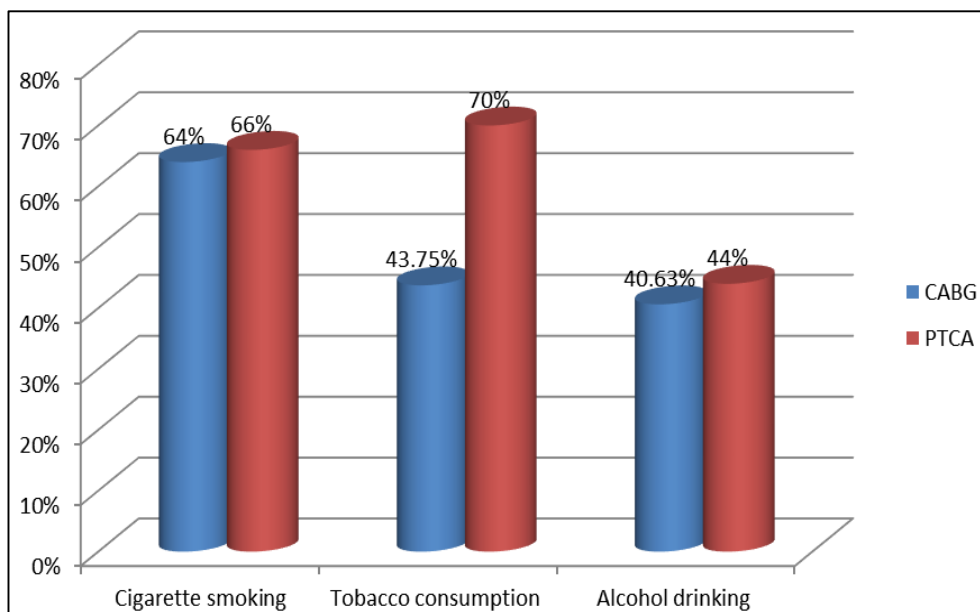
**Findings Related to Distribution of Sample Regarding Lifestyle Modifications in Habit**

Majority (64%) from CABG and 50 percent from PTCA group had addiction. From CABG group 64 percent samples stated that having addiction like cigarette smoking before surgery and out of that 4.69 percent continued after surgery. Where as in PTCA group 70 percent samples were reported to having tobacco consumption before intervention and out of it only 10 percent were continuing with tobacco consumption after intervention. From CABG group 43.90 percent samples were smoking one full packet before surgery and seven percent samples continued smoking one to four cigarettes after surgery whereas in PTCA group 39.39 percent samples were smoking seven to eight cigarettes before intervention and three percent samples

continued smoking one to four cigarettes after intervention. From CABG group majority (89.06%) samples and in PTCA 78 percent were addicted for more than 15 years. Sixty five percent samples from CABG group were consuming alcohol daily, whereas in PTCA group 31.82 percent samples consumed two to three times in a week. From CABG group all 100 percent samples and 63.64 percent samples from PTCA group had whiskey. From CABG group 57.69 percent samples reported that 60ml of alcohol before surgery and 15.38 percent of samples 60ml of alcohol after surgery. Whereas in PTCA group 31.82 percent of samples consumed 90ml to 120ml of alcohol before intervention and 18.18 percent of samples consumed 60ml of alcohol after intervention. Both from CABG and PTCA group had majority (91%) consuming tea.



**Fig 7:** Distribution of Samples with Regards to Addiction



**Fig 8:** Distribution of Samples with Regards to type of Addiction before Surgery/Intervention

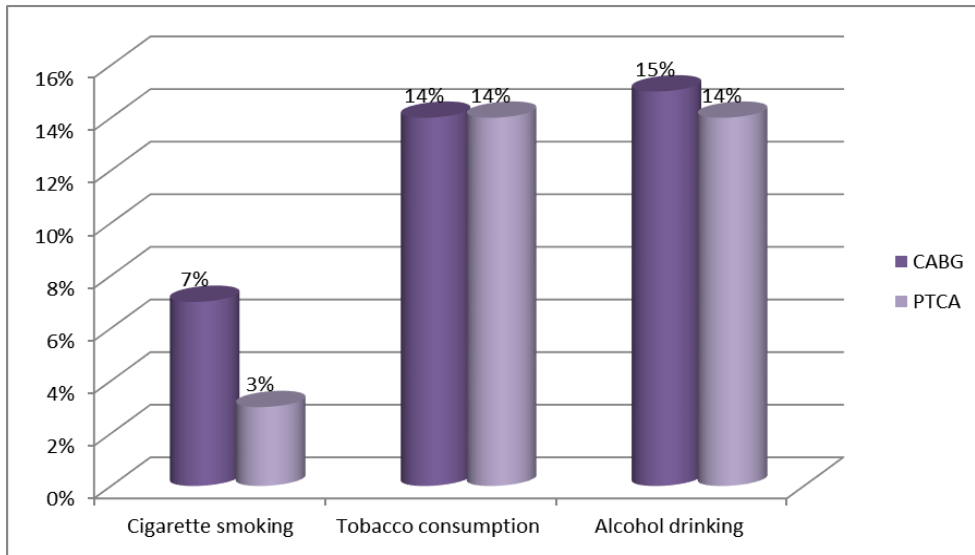


Fig 9: Distribution of Samples with Regards to Type of Addiction after Surgery / Intervention

**Findings Related To Distribution of Sample Regarding Lifestyle Modifications in Treatment**

Antiplatelets were consumed by majority (99%) in CABG group and 93 percent in PTCA group. Ninety percent of samples from CABG group and 87 percent from PTCA group kept reminding themselves for taking medication regularly

**Findings Related to Distribution of Sample Regarding Lifestyle Modifications in Sexual Activity**

With regards to resume sexual activity after intervention / surgery 43 percent of samples were reported that they had resumed normal sexual activity, and 52 percent of samples had not resumed normal sexual activity and five percent were not applicable to this question due to widow or divorce, whereas in PTCA group only 30 percent resumed

normal sexual activity and 57 percent did not resume normal sexual activity, and 13 percent were not applicable to this question due to widow or divorce. In CABG group out of 43 percent samples not resuming sexual activity, 80.77 percent of them had lack of interest, whereas in PTCA group out of 30 percent samples majority 73.68 percent were lacking interest in sexual activity. From CABG group 88.37 percent and from PTCA group 70 percent samples experienced tiredness and fatigue during sexual activity after intervention / surgery. The night time was preferred for sexual activity by majority (62%) from CABG and 93.33 percent samples from PTCA. If chest pain was experienced during sexual activity majority (93.02%) from CABG group and 100 percent from PTCA group stopped activity immediately and took rest.

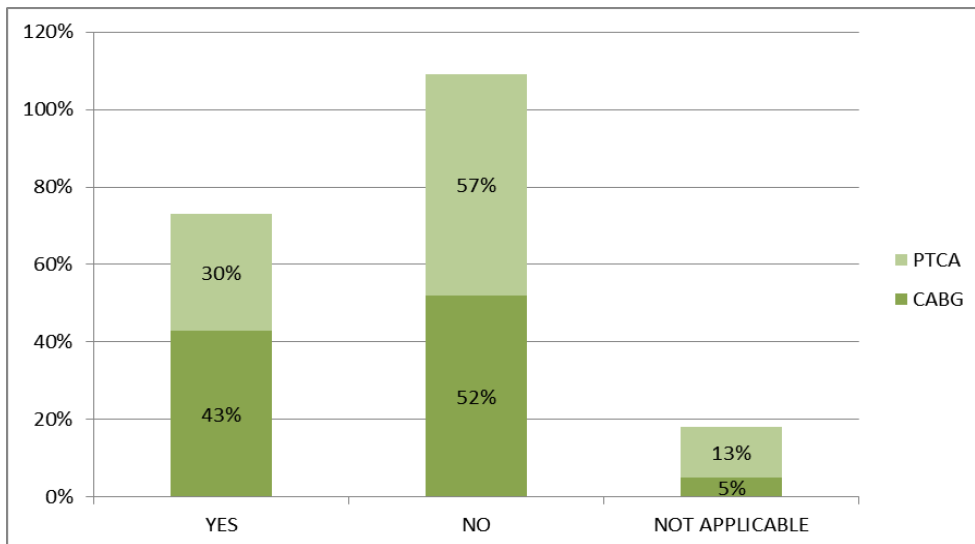


Fig 10: Distribution of Samples with Regards to Resuming Sexual Activity after Surgery/Intervention

**Findings Related to Distribution of Sample Regarding Lifestyle Modifications in Stress Management Different Aspects That Cause Stress in Daily Life**

With regards to different aspects of cause of stress from CABG group 37 percent had stress due to job. Whereas in PTCA group majority 40 percent did not faced any kind of stress, 36 percent due to family problems. When asked

about experiencing any kind of emotions after intervention/ surgery from CABG group 50 percent experienced anger, 48 percent irritability, in PTCA group majority 65 percent experienced anger, 51 percent irritability. With regards to activities initiated to reduce stress, both from CABG group majority (58%) and PTCA group majority (80%) were talking with close related people.

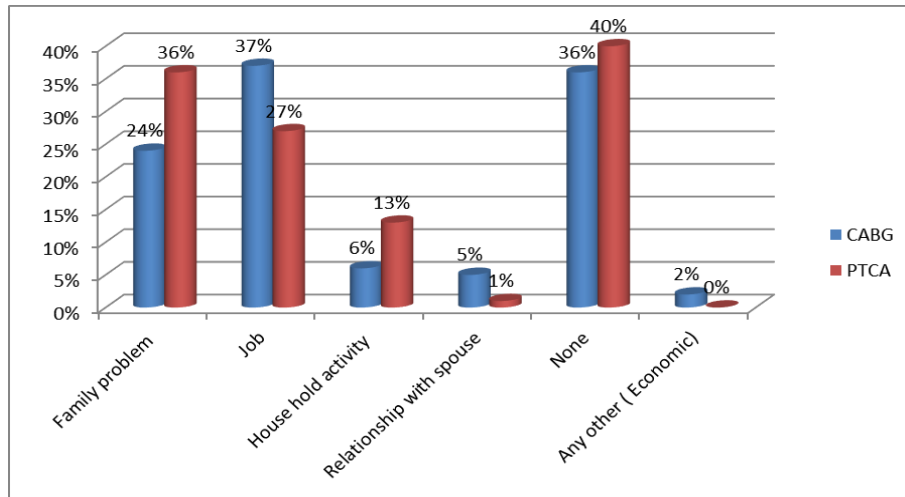


Fig 11: Distribution of Samples with Regards to Different Aspects that Cause Stress in Daily Life

### Findings Related to Distribution of Sample Regarding Lifestyle Modifications in follow up

From CABG group 75 percent of samples and PTCA group 40 percent samples were visiting physician as per need. With regards to monitoring sign and symptoms majority 94 percent from CABG group stated palpitation, 83 percent breathlessness, 48 percent stated chest pain which do not respond to NTG and 18 percent stated weight gain and 15 percent edema should be monitor after surgery, whereas in PTCA group 98 percent breathlessness, 72 percent stated palpitation, 39 percent stated chest pain which do not respond to NTG, 15 percent edema and 11 percent weight gain should be monitor after intervention.

### Findings Related to association between selected variables and performance of activity independently in CABG and PTCA

The study provides statistically significant evidence (at  $\alpha = 0.05$ ) to show that there is difference between distribution of CABG patients performing activity as per age, gender and duration of intervention. The statistical evidence from the study did not show significant difference between distributions of CABG patients performing activity as per education and occupation. In PTCA, the study provides statistically significant evidence (at  $\alpha = 0.05$ ) to show that there is difference between performing activity as per age. The statistical evidence from the study did not show significant difference between distribution of PTCA patients in performing activity as per gender, education, duration of intervention and occupation.

### Findings Related to Comparison of lifestyle modification between samples of CABG and PTCA

The study provides statistically significant evidence (at  $\alpha = 0.05$ ) to show that there is difference between patients who have undergone CABG and PTCA with regards to resuming normal daily activity independently. Whereas change in sleeping pattern, performing exercise, duration of performing exercise, restriction in oil, sugar and salt and resumption of normal sexual activity in that the statistical evident from the study did not show significant difference between patient who have undergone CABG and PTCA.

### Discussion

The objective of study was to assess the lifestyle modification in patients after CABG and Angioplasty

(PTCA). From CABG group the majority (52%) and PTCA group (57%) patient did not resume normal sexual activity after intervention / surgery. Whereas in CABG group out of 43 percent samples the reason given for not resuming sexual activity was, 80.77 percent of them had lack of interest, 28.85 percent were afraid that it may precipitate chest pain, and 3.85 percent reported to fear of getting tired and fatigue whereas in PTCA group majority 73.68 percent were lacking interest in sexual activity, 24.56 percent were afraid that it may precipitate chest pain, 1.75 percent of samples had fear of getting tired and fatigue. Therefore sexual activity is affected after CABG and PTCA. Even in the study done by Jennifer Barsky Reese (2011) conducted on sexual quality of life in patients undergoing coronary artery bypass graft surgery. It was found that fears of sexual activity may play a role in lowering CABG patients' motivation for sexual activity [5].

On finding association between lifestyle modifications adopted by patients who have undergone CABG and Angioplasty with selected variables. Among all the selected variables age, gender and duration of intervention were found to be having major impact on performance of regular activities for CABG and PTCA patients. For patients who had undergone PTCA, age was the only variable which proved significant enough to have effect on performance of regular activities.

While comparing lifestyle modifications, we conclude that type of intervention has significant effect on time required in resuming normal activities independently. Patients who have undergone PTCA fare much better in this respect than the ones who underwent CABG. Other lifestyle modifications did not have any significant contribution.

### Conclusion

From the study, the investigator concluded that the patients undergone CABG and Angioplasty needed information regarding lifestyle modification to be brought after surgery. Although they were aware about their condition and they had to modify their lifestyle pattern. These patients lacked specific information and knowledge regarding the changes to be adopted especially patient lacked knowledge about exercise regimen, sexual activity. The noncompliance for lifestyle modification can be attributed to lack of knowledge in some patient, where as in some it was due to lack of time, interest ignorance.

The changes adopted by the patient varied from individual to individual. Education and occupation of the individual played an important part in adapting to the lifestyle modification in lifestyle. The investigator also gained insight that although it is easy to advice lifestyle changes, sustaining the practice require lot of endurance, support and encouragement from everyone.

### Recommendations for Further Study

On the basis of the present study following recommendation are made:

- The study can be done to find out the effect of planned teaching on lifestyle modification after CABG and angioplasty.
- The study can be done to find out the effect of information booklet on lifestyle modification after CABG and angioplasty.
- A study can be done on psychological / emotional impact of the surgery in patient undergone CABG and Angioplasty.

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