

A study on patterns of Diet and Physical Activity among adults with Dyslipidemia

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ABSTRACT:

Background: Dyslipidemia is a significant risk factor for cardiovascular disease, and its prevalence is steadily increasing worldwide. Despite the widespread availability of screening tools, dyslipidemia often remains inadequately treated. Assessing diet and physical activity patterns following diagnosis can provide valuable insights for enhancing lifestyle-based interventions. Encouragingly, patients may show greater adherence to behavioural modifications, which offer distinct advantages over pharmacological therapy, including fewer side effects and long-term sustainability.

Aims & objective: Study of diet patterns and physical activity among adults with dyslipidemia.

Materials and methods: This is a descriptive study done on 100 adult patients with dyslipidemia visiting the outpatient and in-patient services of a tertiary medical college hospital in coastal Karnataka. A prevalidated questionnaire was administered to the study subjects in their native language.

Inclusion criteria: Adults above 30 years with dyslipidemia.

Exclusion criteria: Patients with conditions altering serum lipid levels like nephrotic syndrome, hypothyroidism. The data collected was analysed by frequency, percentage and ratios.

Results: Age group of 38 to 70 years was the most common. Majority of the subjects (70) were from urban area. Only 40% (24) of the subjects resorted to exercise on regular basis. Only 60 subjects did exercise, out of which aerobic exercise (walking, jogging) was the most common with 64% (39) of the subjects. 78 percent (43) consumed red meat with 20 percent (9) of it consuming red meat atleast three times a week. 39 percent of the subjects consumed vegetarian diet, 5 percent vegan diet, and 56 percent non-vegetarian diet. Fish being the most common non-vegetarian food. Sunflower oil was the most common type of oil used for cooking. 80 percent of the subjects reused cooking oil. Same oil was reheated and used atleast 4 times before discarding. 27 percent of the subjects resorted to smoking, consisting of 90 percent (24) male population. Alcohol was consumed by 54% of the subjects with majority of it being male (78%, 42). 70 percent of the subjects consumed atleast two serving of vegetable per day. 83 percent of the subjects consumed dairy products, with milk and curd being the most common dairy product. Only 10 percent of the subjects consumed nuts on daily basis.

Conclusion: The Dietary habits and physical activity for managing dyslipidemia were significantly influenced by area of residence, level of education and occupation. Alcohol consumption and smoking were positively associated with dyslipidemia. Therefore, this study emphasize the need to raise public awareness about the role of diet, physical activity and lifestyle changes in managing dyslipidemia.

Keywords: Dyslipidemia, Diet, Physical Activity

I. INTRODUCTION:

Dyslipidemia is a significant risk factor for cardiovascular disease, and its prevalence is steadily increasing worldwide. Despite the widespread availability of screening tools, dyslipidemia often remains inadequately treated. Assessing diet and physical activity patterns following diagnosis can provide valuable insights for enhancing lifestyle-based interventions. The use of lipid-lowering medications such as statin and fibrate are important for the treatment of dyslipidemia, especially in high-risk patients¹. However, lifestyle interventions are also important for managing dyslipidemia and are considered initially after diagnosis¹. Pharmacological therapy requires a formal medical diagnosis and often faces initial resistance from patients due to the need for daily medication. In contrast, lifestyle interventions present a more accessible and appealing first-line approach. Patients are often more receptive to behavioural modifications, which offer the added advantage of being applicable at a population level. These interventions not only aid in managing dyslipidemia but also play a crucial role in preventing chronic diseases and reducing overall cardiovascular risk. Hence our

aim was to study diet patterns and physical activity among adults with dyslipidemia, so that it can be modified to prevent complications.

II. AIMS & OBJECTIVE:

Study of diet patterns and physical activity among adults with dyslipidemia.

III. MATERIALS AND METHODS:

Source of data: This is a descriptive study done on 100 adult patients with dyslipidemia visiting the outpatient and in-patient services of a tertiary medical college hospital in coastal Karnataka. The ethics and scientific committee approval was obtained. An informed consent was also obtained. A prevalidated questionnaire was administered to the study subjects in their native language.

Study design: This is a descriptive study done on 100 dyslipidemia patients.

Inclusion criteria: Adults above 30 years with dyslipidemia

Exclusion criteria: Patients with conditions altering serum lipid levels like nephrotic syndrome, hypothyroidism.

IV. ANALYSIS:

The data collected was transferred to an Excel data sheet and analysed by frequency, percentage and ratios.

V. RESULTS:

Data collected among total 100 dyslipidemia patients visiting the outpatient and in-patient services of a tertiary medical college hospital in coastal Karnataka was analysed.

Age group of 38 to 70 years was the most common, consisting of 63 subjects, 5 subjects above the age of 70 years and 32 subjects below 38 years. In our study majority of the subjects (70) were from urban area. 30 subjects were from rural area. 58 percent of the subjects were male and 42 percent of the subjects were female. 95 subjects received formal education, with 22 subjects being graduates, 45 subjects up to preuniversity, 20 subjects up to 10th grade, and 7 subjects up to primary school. Majority of the subjects (72%) belonged to upper middle and lower middle socioeconomic group according to modified Kuppuswamy scale.

Only 60 subjects did exercise, out of which aerobic exercise (walking, jogging) was the most common with 64% (39) of the subjects, swimming by 12% (7) of the subjects, weight lifting by 10% (6) of the subjects and yoga by 14% (8) percent of the subjects. Aerobic exercise, yoga was most common (86%) among subjects above the age of 50 years. Only 40% (24) of the subjects resorted to exercise on regular basis of 5 times/ week. 40 percent of the subjects, slept for 6-8 hours per day, 20 percent slept for less than 6 hours per day and 40 percent slept more than 8 hours a day. Majority of the subjects with less than six hours of sleep consisted of less than 50 years of age. 39 percent of the subjects consumed vegetarian diet, 5 percent vegan diet, and 56 percent non-vegetarian diet.

Out of 56 percent of the non-vegetarian subjects, 70 percent (39) consumed some source of non-vegetarian diet daily. Fish being the most common non-vegetarian food. 78 percent (43) consumed red meat with 20 percent (9) of it consuming red meat at least three times a week. Sunflower oil was the most common type of oil used for cooking. With 56% of the subjects, followed by coconut oil (16%) and hydrogenated vegetable oil (12%). 80 percent of the subjects reused cooking oil with more prevalence among semi-skilled workers. Same oil was reheated and used at least 4 times before discarding. Alcohol was consumed by 54% of the subjects with majority of it being male (78%, 42). Thirty percent (16) of the subjects consumed alcohol for more than three times a day, 5 percent (3) of the subjects consumed alcohol every day. 27 percent of the subjects resorted to smoking, consisting of 90 percent (24) male population. Beedi was smoked by forty percent of the subjects, cigarette by fifty percent. 70 percent of the subjects consumed at least two serving of vegetable per day. 83 percent of the subjects consumed dairy products, with milk and curd being the most common dairy product. 79 percent of the subjects consumed dairy products on daily basis. Only 10 percent of the subjects consumed nuts on daily basis. Most common source of knowledge was newspaper.

VI. DISCUSSION:

Cardiovascular disease (CVD) is one of the main cause of morbidity and mortality worldwide.¹ Previous studies have declared that dyslipidemia is an important risk factor for CVD by contributing to the initiation and progression of atherosclerosis; therefore, its management is important for reducing the burden of CVD.² Lifestyle interventions are important for managing dyslipidaemia and are considered initially after diagnosis, since dietary factors can influence lipid levels and regular exercise improves lipid profiles, while smoking has been known to have a detrimental effect.³ Villegas et al. reported that a combination of protective factors including normal body mass index (BMI), never smoking, light alcohol consumption, prudent diet and

regular physical activity was associated with a significantly lower prevalence of dyslipidaemia.⁴ In a study by Kitagawa et al, patients with high awareness of their health status showed a positive attitude towards diet and exercise as lipid-lowering treatment, and high adherence to drug therapy.⁵ Another study conducted in a Chinese province that analysed dyslipidemia awareness and influencing factors demonstrated that awareness was associated with a lower odds ratio for drinking and physical, and with higher odds ratio for increased BMI, age, education and family history of dyslipidemia.⁶ In the study performed on dyslipidaemia patients under pravastatin treatment in Japan, high awareness of health and positive attitude towards diet and exercise, and high adherence to drug therapy were related with favourable overall lipid levels.⁵ Fritsch et al. reported that lipid-based interventions at the worksite (education and coaching on lifestyle and lipid values through classes and phone call interventions) can improve lifestyle behaviour including exercise and diet, contribute to continuous health care, and lead to improved lipid values.⁷

VII. CONCLUSION:

The Dietary habits and physical activity for managing dyslipidemia were significantly influenced by area of residence, level of education and occupation. Alcohol consumption and smoking were positively associated with dyslipidemia. Therefore, this study emphasize the need to raise public awareness about the role of diet, physical activity and lifestyle changes in managing dyslipidemia.

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