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A Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge regarding Diet and Exercise in Non-Alcoholic Fatty Liver Disease among Patients in Apollo Adlux Hospital, Kochi

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Abstract: ***This study sheds light on an often-overlooked aspect of Non-Alcoholic Fatty Liver Disease (NAFLD) management-the patient's knowledge of diet and exercise as preventive and therapeutic tools. Conducted among 50 patients at Apollo Adlux Hospital, Kochi, the research followed a quasi-experimental design to evaluate how a structured teaching program influenced awareness levels. It is evident that prior to the intervention, many patients had limited understanding of dietary patterns and physical activity suitable for NAFLD. However, after participating in the program, there was a remarkable improvement in knowledge scores, reflecting a meaningful shift toward informed self-care. This suggests that when healthcare systems invest in patient education, the outcomes can extend far beyond clinical treatment to lifestyle empowerment. What stands out to me is that the teaching intervention bridged the gap between medical advice and patient comprehension-a crucial factor in managing lifestyle-related diseases. By linking structured education with measurable gains in awareness, the study highlights the human side of medical care, where knowledge truly becomes a form of healing.***

Keywords: Non-alcoholic fatty liver disease, structured teaching program, patient education, diet and exercise, awareness improvement

1. Introduction

Non-alcoholic fatty liver disease (NAFLD) is a major chronic liver disease that can lead to liver cirrhosis, liver cancer, and ultimately death. NAFLD is pathologically classified as non-alcoholic fatty liver (NAFLD) or non-alcoholic steatohepatitis (NASH) based on the existence of ballooned hepatocytes.

Problem Statement

A study to assess the effectiveness of structured teaching programme on knowledge regarding diet and exercise in Non alcoholic fatty liver disease among patients in Apollo Adlux Hospital. Kochi.

Objectives

- To assess the knowledge of patients regarding diet and exercise in NAFLD before and after structured teaching programme.
- To find the effectiveness of structured teaching programme on diet and exercise in NAFLD patients.
- To determine the association between demographic variable and knowledge regarding diet and exercise in NAFLD patients.

Research Variables

Dependent Variables

Knowledge of the patient regarding diet and exercise in NAFLD.

Independent Variables

Structured teaching programme

Demographics variables

- Age
- Gender
- Education
- Previous knowledge

Hypotheses

H1: There will be a significant difference between the pre test and post test knowledge score regarding diet and exercise in NAFLD patients.

H0: There will be no significant difference between the pre test and post test knowledge score regarding diet and exercise in NAFLD patients.

- Research Approach: A quantitative Evaluative Research Approach
- Research design: Quasi experimental study
- Setting of the study:The study will be conducted in Gastro OPD at Apollo Adlux Hospital, Kochi
- Duration of study: 6 months
- Target population: 50 adults knowledge regarding diet and exercise in Non- alcoholic fatty liver disease among patients in Apollo Adlux Hospital. Kochi.
- Sample size: 50

Inclusion Criteria:

- Age between 30 - 60 yrs
- NAFLD patients who are visiting in gastro OPD with Grade 2 fatty liver.
- Willing to participate in study

Exclusion Criteria:

- Patients who are not willing to participate in the study
- Patients who are under psychiatric treatment.

Data Collection Method

The demographic variables collected from the samples include Age, Gender, Education, Previous knowledge. The

pre-test was conducted by using questionnaire that consists of

Section I- Demographic data
Section II- MCQ

2. Procedure Methodology

A written consent was obtained from ethical committee in Apollo Adlux Hospitals, Kochi. Verbal consent taken from the patient, and a well-designed questionnaire used to collect the data required for the study. The questionnaire includes a section—A is socio-demographic characteristics like age, gender, education, previous knowledge, section-B is the questionnaire. There were 15 multiple choice questions. 1 marks each question. Here,1-5marks are for poor, 6-9 marks are for average, and 10-15 marks are for good. A pretest was conducted, and a structured teaching program was provided before taking the post-test.

3. Results

Data was analyzed of 50 patients using Non-Probability Convenient Sampling and Chi-square test Analysis. Interpretation was done as per the objectives of the study and the hypothesis formulated. Descriptive and inferential statistics were used for the analysis of the data.

Section 1

Table 1: Demographic profile

S. No	Demographics Data		No. of Patients	Percentage
1	Age	a)30-40 b)40-60 C)>60	9 28 13	18% 56% 26%
2	Gender	MALE Female	28 22	56% 44%
3	Education	Primary Secondary Tertiary	18 20 12	36% 40% 24%
4	Previous knowledge	Yes No	15 35	30% 70%

Table 1 shows the demographic information regarding diet and exercise in NAFLD patients. Distribution of the study according to the socio demographic variable with frequency and percentage.

Table 2: Analysis of pre-test and post-test knowledge score of structured teaching program according to criteria.

Knowledge	Pre test		Post test	
	Frequency	Percentage	Frequency	Percentage
Poor	32	64%	0	0%
Average	8	16%	20	40%
Good	10	20%	30	60%
Total	50	100%	50	100%

Table 2 shows the analysis of pre-test and post-test knowledge score of structured teaching program according to criteria.

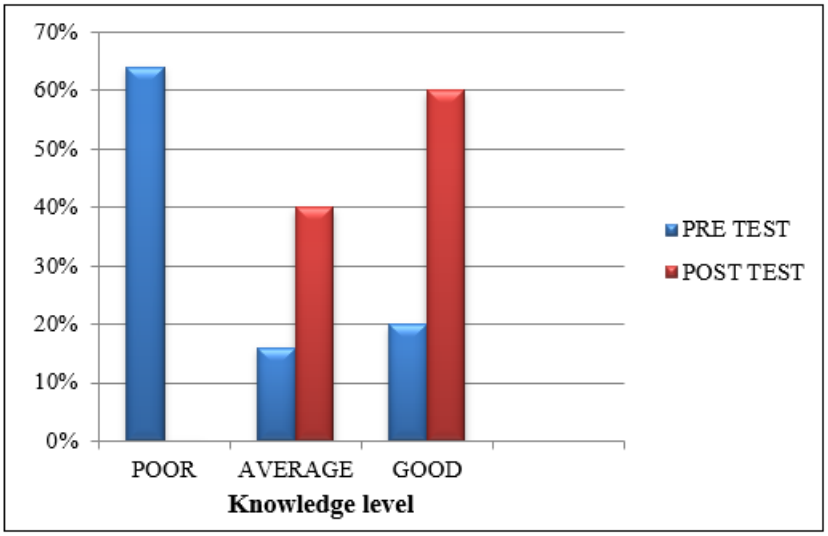

Figure 1

Figure 1 represent that 32 (64%) were poor, 8(16%) were average and 10(20%) were good in pretest and post-test majority 0 (0%) were poor, 20 (40%) were average & 30 (60%) were good.

Table 3: Effectiveness of structured teaching program by using difference between pre-test mean different percentage and post-test mean different percentage. N=50

Group	Pre test Total mean percentage	Post test Total mean percentage	Knowledge gain
NAFLD	34.40%	71.46%	37.06%

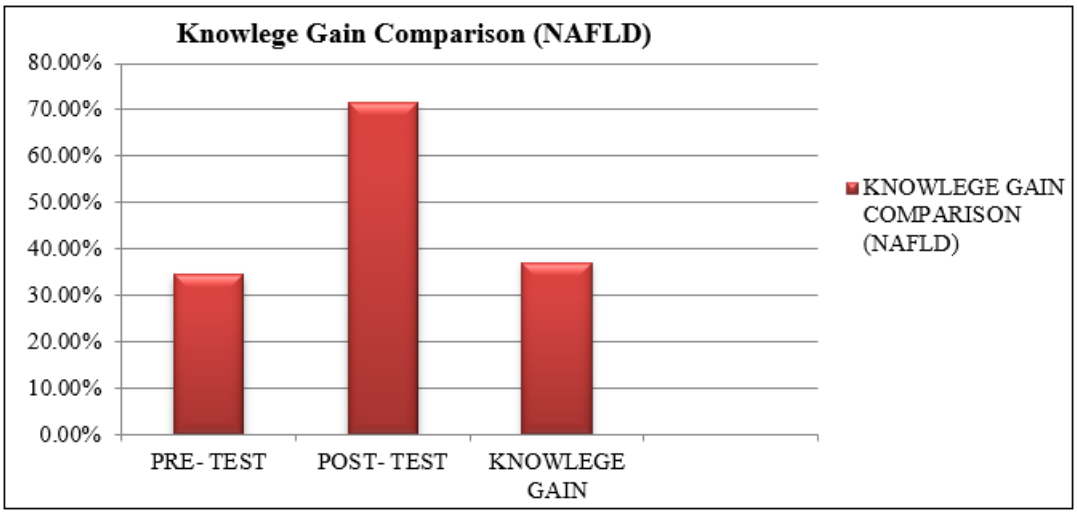

Figure 2

Table 3 Stacked cylinder diagram showing the percentage of gain knowledge.

Figure No-2 It shows the pre-test total mean percentage was 34.40% and the post-test total mean percentage was knowledge 71.46%. So, the percentage of knowledge gain was 37.06%.

Table 4: Effectiveness of structured teaching program by using "t" test level of significance

Types of test	Mean ± SD	df	Paired 't' value	Table value
Pre - test	5.16±3.69	49	11.03	2.01
Post- test	10.72±2.86			

Table No-4
It represent that there was significant difference in the pre-test and post-test knowledge score of structured teaching program as calculated value 11.03; (df.49) was greater than table value 2.01 at 0.05 level of significance. This data signifies that the structured teaching program was effective.

4. Discussion

The incidence and prevalence of non-alcoholic fatty liver disease (NAFLD) are rising and will continue to grow due to increasing obesity and lifestyle changes. Patient education on dietary decisions and portions is essential. Nutrition and lifestyle education are the mainstays of therapy. During every healthcare provider encounter, the issues of food choices, food portions, and exercises, including weight-bearing exercises, should be emphasized and reviewed. The present study demonstrated that the implementation of structured teaching program significantly enhanced patient's knowledge. In the pre- test phase, the total score was 258, with the mean 5.16, a percentage average of 34.40%, and the standard deviation of 3.69.In contrast, Post test phase reflected substantial improvement, with the score of 536, a mean of 10.72, a percentage average of 71.46%, and a standard deviation of 2.86.

A diagram illustrating pre- and post-test performance revealed that prior to the intervention, 64% of participants had poor knowledge, and 16% had average knowledge. Following the intervention, 40% attained average scores, while 60% reached good levels of understanding. To determine the effectiveness of the teaching intervention, a t-test was conducted. Results showed a statistically significant improvement in knowledge scores between the pre-test and post-test, with a calculated t-value of 11.03 (df = 49), which exceeds the critical value of 2.01 at the 0.05 significance level. These findings confirm that the structured teaching program was effective in enhancing awareness among participants.

5. Conclusion

This study aimed to evaluate the effectiveness of structured teaching programme on knowledge regarding diet and exercise in Non- alcoholic fatty liver disease (NAFLD). The findings revealed a significant improvement in post-intervention knowledge scores, indicating that the structured program was effective in enhancing participants' understanding of NAFLD.

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