

A Study to Assess the Effectiveness of Cumin Powder on Body Composition and Changes in Lipid Profile among Over Weight and Obese Women in Selected Villages

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ABSTRACT

Background: The present study aim was to assess the effectiveness of cumin powder on body composition and changes in lipid profile among over weight and obese women at Kondanchery village, Thiruvallur District. **Purpose:** The current study was aim to assess the effectiveness of cumin powder on body composition and changes in lipid profile among over weight and obese women. **Materials and Methods:** A quantitative research approach and Pre- experimental research design was adopted for the present study. 60 over weight and obese women selected by Convenient sampling technique. Structured questionnaire was used to collect the demographic variables and observation schedule to assess the BMI level among overweight and obese women. **Results:** Among 60 study participants the pre-test mean score was 7.72 ± 2.43 and the posttest mean score was 17.85 ± 2.29 . The calculated paired 't' test value of $t=21.547$ was found to be statistically highly significant at $p < 0.001$ level. This clearly infers that significant impact of cumin powder intervention among obese women. **Conclusion:** Hence the findings of present study concluded that, which clearly infers that significant impact of cumin powder intervention among obese women in the posttest.

KEYWORDS: Cumin powder, Over weight and Obese women, Body Mass Index level

INTRODUCTION

Obesity is an abnormal increase within the proportion of fat cells. Overweight and fat results from a fancy interaction between genes and therefore the environment. the planet health organization (WHO) defines 'overweight' as a BMI adequate or over 25, and 'obesity' as a BMI equal to or more than 30. These cut-off points give a benchmark for individual assessment, however there's proof that risk of chronic disease in populations increase more and more from a BMI of 21. vessel diseases (CVDs), corresponding to coronary cardiovascular disease (CHD), hypertensive heart disease, heart failure, and stroke, are the leading reason for death worldwide [1]. Obesity is outlined because the accumulation of abnormal or excessive amounts of animal tissue within the body in a very method that disrupts health. Body mass index (BMI) may be a straightforward height-weight index ordinarily wont to classify overweight and fat in

adults. it's defined as a human weight in kilograms divided by the sq. of his height in meters (kg/m^2). though the terms "overweight" and "obese" are similar, the distinction between the 2 arises with BMI [2]. Global increase in overweight and obesity are due to variety of things as well as a worldwideshift in diet towards will increase intake of energy-dense foods that are high in fat and sugars however low in vitamins, minerals and different micronutrients; and a trend towards ablated physical activity because of the progressively inactive nature of the many sorts of work, dynamical modes of transportation and urbanization. Obesity and dyslipidemia are rising as important public health challenges in South Asian countries. This study aimed to assess the association of fat with dyslipidemia by activity lipoprotein and HDL in adolescents. the consequences of obesity on a girls health are huge. obesity has been coupled to the

How to cite this paper: Anitha D | Venugopal U | Jonah Abraham R "A Study to Assess the Effectiveness of Cumin Powder on Body Composition and Changes in Lipid Profile among Over Weight and Obese Women in Selected Villages" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-6 | Issue-7, December 2022, pp.1028-1032,

URL: www.ijtsrd.com/papers/ijtsrd52557.pdf

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subsequent sickness and conditions: kind II polygenic disorder, high blood pressure, high cholesterol, heart disease stroke high blood pressure sleep disorder degenerative joint disease bound style of cancer, including breast cancer. only if today use of ancient drugs and healthful plants has become rife within the treatment of the many diseases. mistreatment of medicinal plants may be a viable different for artificial drugs [3]. intensive studies are performed on impacts the consequences {the results} of various medicinal plants on plasma lipids and weight loss. Cumin, mutually of those medicinal plants, contains over a hundred different chemicals, as well as essential fatty acids and volatile oils [4]. fat can even have a significant impact on a women's fertility. Some effect obesity can wear a woman generative health embrace reduced ovulation, a down response to fertility treatments, ablated physiological state rate, risks to pregnancy outcome. In addition, obese girls face major health risks throughout pregnancy, fat has been coupled to the subsequent pregnancy complications: physiological condition polygenic disorder cesarian birth defects; significantly exoderm defects (NTDs) corresponding to rachischisis (because being corpulent interferes with the absorption of folate, that wards off NTDs) pregnancy hypertension [5]. Some studies have shown that cumin could have decreasing effects of blood lipids and weight. However, to the simplest information of us, the bulk of those studies are done on animals and the revealed human studies are conducted on patients affected by polygenic disorder or symptom fat can even cause post physiological state complications, corresponding to tract infections and wounds that don't heal easily. In recent years, the general public trends for mistreatment flavourer medicines as an adjuvant approach to enhance obesity treatment have exaggerated, dramatically. 10 Meanwhile, several studies have reportable the suitable anti-obesity effects of some herbal supplements such as nutmeg flower (*N. sativa*) [6]. Obesity and overweight are referred to as risk factors of vessel diseases, hypertension, diabetes mellitus, osteoarthritis, and a few cancers resulting in increased morbidity and mortality. herb *L.* is one in all the healthful plants happiness to the family Apiaceae family [7]. The prevalence of overweight Associate in Nursing fat is increasing worldwide at an dreadful rate. each developed and developing countries are affected. In developing countries, obesity is more common in old woman, folks of upper socio-economic standing and people living in urban communities. Its plant grows up with delicate branches stem which nearly 20- 30cm tall and their leaves are 5-10cm long. The fruit is lateral fusiform containing single seed or 4-5mm long in size. Their flowers also are white or

pink in color and little in size [8]. in additional affluent developed countries, fat is common not solely within the middle -aged, however additionally changing into progressively rife among younger adults and children. Changing biological process patterns and specifically use of some healthful herbs are factors moving body's metabolic factors so these days numerous medicinal herbs have wide been unfold in treatment of the many diseases and also improvement of sports performances (strength and endurance). one in all these herbs is cumin that studies conducted on that have indicated that it's historically utilized in treatment of vessel diseases and contains a decreasing result on triglycerides, sterol and weight in traditional and diabetic mice [9]. National Family Health Survey -I&II, India, shows that the prevalence of each overweight Associate in Nursing fat will increase in every cluster from fifteen years old-time to forty nine years. Except humor total cholesterol, different markers of macromolecule profile yet as anthropometrical indexes improved in intervention group. Subgroup analyses diagrammatic that lipid profile and anthropometric indexes were ameliorated in girls once intervention, whereas didn't show important improvement in men. It may be terminated that cumin oil can be used as an adjuvant medical care to ameliorate metabolic standing in pre-diabetics [10]. To reach a correct digestion and helping the burden reduction process, to overweight /obese participants, the spice mixture had been enclosed as intervention during this study [11].

Statement of the problem:

“A study to assess the effectiveness of cumin powder on body composition and changes in lipid profile among over weight and obese women in selected villages”.

Objectives:

1. To assess the demographic variables of overweight and obese women. 2. To assess the pre-test and post-test level of overweight and obese women.
2. To assess the effectiveness of cumin powder on body composition and changes in lipid profile among over weight and obese women.
3. To associate between posttest level of obesity with selected demographic.

Methods and Materials:

The study used quantitative research approach and Pre-experimental research design with the sample size of the study was 60 who has over weight and obese women who were selected by Convenient sampling technique and who fulfilled the inclusion criteria. The inclusion criteria Women who are overweight and obese, Who

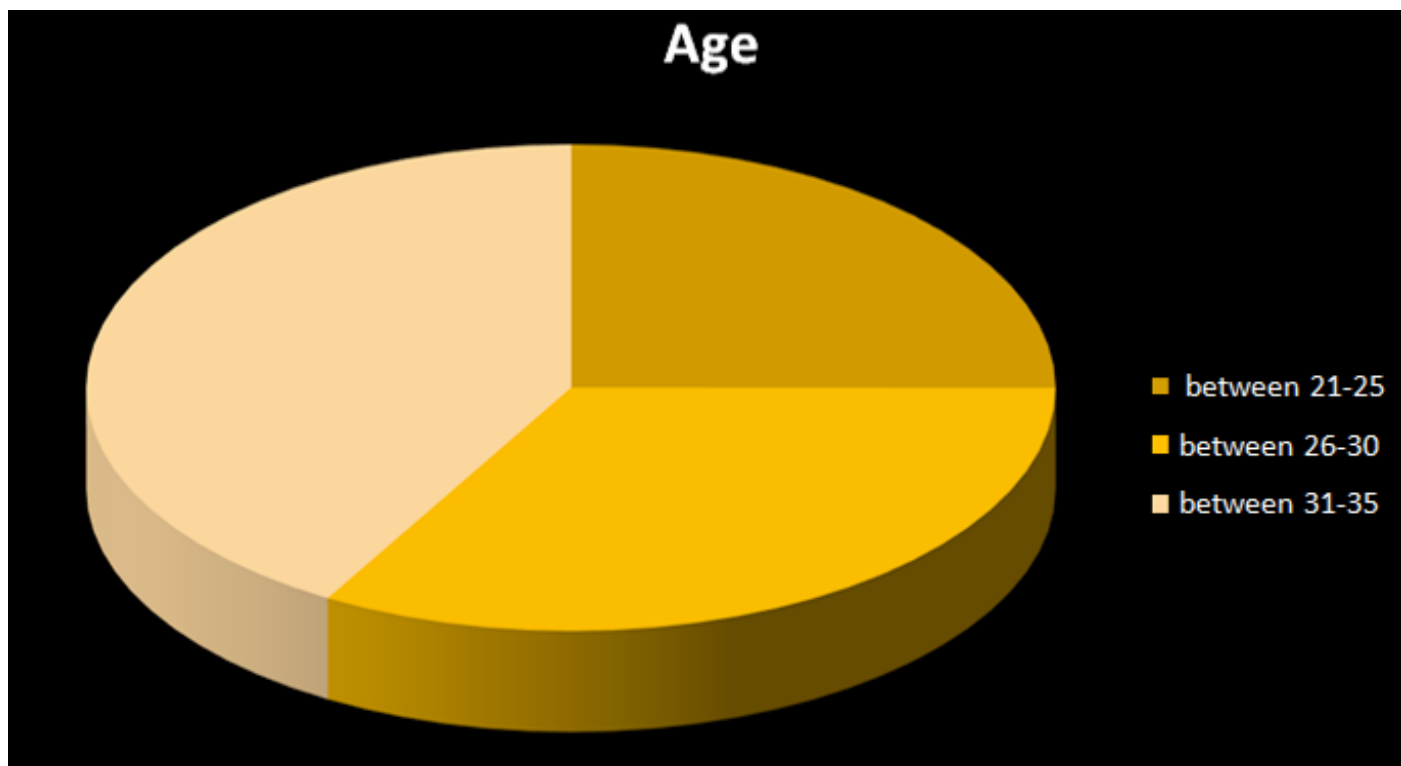
are willing to participate in the study, Who are not migrating during the time of study and the exclusion criteria were Women who are underweight, Mothers who are not willing to participate in the study with the child, Clients who are not available at the time of study. The study was conducted at Kondanchery village, Thiruvallur District. Structured questionnaire was used to collect the demographic variables and observation schedule to assess the BMI level. On day 1 pre-test was conducted among the samples and on the same day cumin powder water was given to the samples and the posttest was conducted after 14 days. The data was collected for a period of 2 weeks and the collected data were analyzed using descriptive and inferential statistics.

Results and Discussion:

SECTION A: Description of the demographic variables of obese women

Table shows that about maximum of them were in the age group between 26-

30, 58.3% maximum of them were in body mass index of 27-35, maximum of them were of non-consanguineous marriage .88.3% heavy type of working ,93.3% of them were of walking as physical activity ,66.7% of the mother were of family history of hypertension, about 51.6% them had more than 3 coffes per day, about 50% of them had non veg foods and 68.3% had 8-12 hrs of rest per day.



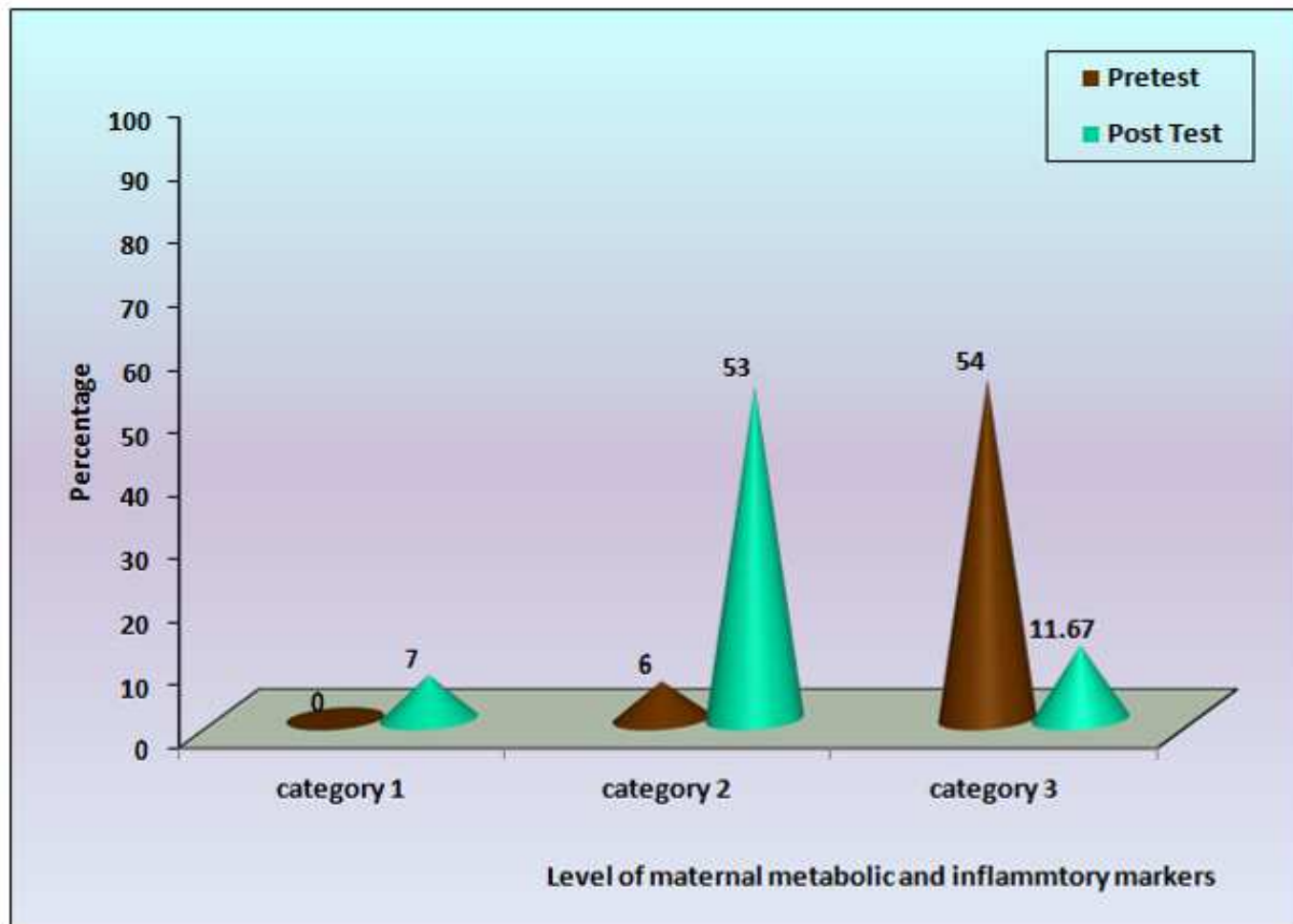
Percentage distribution of age group between body mass index among overweight and obese women in the experimental group

SECTION B: Assessment of level of obesity among obese women

Table 2: Frequency and percentage distribution of pre-test and posttest level of obesity

Obesity	Category 1		Category 2		Category 3	
	No.	%	No.	%	No.	%
Pre-test	0	0	6	10.0	54	90.0
Post-test	7	11.67	53	88.33	0	0

The above table 2 shows that in the pre-test, 54 (90%) had 3rd category and 6 (10%) had 2 category. Whereas in the post-test , 53 (88.33%) had 2nd category and 7 (11.67%) had category 1.



Percentage distribution of pre-test and posttest level of obesity in the Experimental group

SECTION C: Effectiveness of cumin powder on body composition and lipid profile

Table 3: Comparison of pre-test and posttest level of obesity

Variables	Test	Mean	S.D	Paired 't' test Value
OBESITY	Pre-test	7.72	2.43	t = 21.547 p = 0.0001 S***
	Post-test	17.85	2.29	

***p<0.001, S – Significant

The table 3 shows that, the pre-test mean score was 7.72±2.43 and the post-test mean score was 17.85±2.29. The calculated paired 't' test value of t=21.547 was found to be statistically highly significant at p<0.001 level. This clearly infers that significant impact of cumin powder intervention among obese women.

Discussion:

In the present study, consuming cumin powder was accompanied by reduced serum levels of fasting cholesterol, triglyceride, and LDL and increased serum levels of HDL; but, it had no effect on the serum levels of fasting blood glucose. Meanwhile, adding cumin to a hypocaloric diet reduced weight, BMI, and waist circumference and improved body composition, i.e. reduced fat mass and fat mass percentage but did not change fat-free mass.

Conclusion:

Findings of the present study, it was evidenced that there was significant effect of cumin powder on body mass index among overweight women. Therefore, cumin powder can be included in their daily diet.

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