ASSESSMENT ON OUTCOME OF GREEN TEA ON LEVEL OF WEIGHT AMONG OBESE WOMEN WITH THE AGE GROUP OF 30-50 YEARS

DISSERTATION SUBMITTED TO

THE TAMIL NADU DR.M.G.R.MEDICAL UNIVERSITY CHENNAI

IN PARTIAL FULFILMENT OF REQUIREMENT FOR THE AWARD OF DEGREE OF

MASTER OF SCIENCE IN NURSING

APRIL, 2012

A QUASI EXPERIMENTAL STUDY TO ASSESS THE OUTCOME OF GREEN TEA ON LEVEL OF WEIGHT AMONG OBESE WOMEN WITH THE AGE GROUP OF 30-50 YEARS IN SELECTED VILLAGES, VILLUPURAM DISTRICT 2011-2012

Certified that this is bonafide work of

Ms.ARIVUKKARASI.S

VEL R.S MEDICAL COLLEGE- COLLEGE OF NURSING,

NO.42, AVADI – ALAMATHI ROAD,

CHENNAI-600 062

COLLEGE SEAL

SIGNATURE: **…….**

M. ANURADHA,
R.N.,R.M.,M.SC(N).,
Principal,
Vel R.S. Medical College – College of Nursing,
No.42, Avadi – Alamathi Road,
Chennai- 600 062, Tamil Nadu.

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Approved by Dissertation Committee in December, 2010

PROFESSOR IN NURSING RESEARCH

M.ANURADHA, R.N, R.M., M.Sc. (N). _____
Principal,
Vel R.S. Medical College - College of Nursing,
No.42, Avadi - Alamathi Road,
Chennai – 600 062, Tamil Nadu.

CLINICAL SPECIALITY EXPERT

J.DARCUS DEVA SINTHIYA, R.N, R.M., M.Sc.(N)., _____

Reader –Community health nursing department,
Vel R.S. Medical College - College of Nursing,
No.42, Avadi - Alamathi Road,
Chennai – 600 062, Tamil Nadu.

MEDICAL EXPERT

S.JALAJA M.B.B.S, D.P.H, _____
Medical Officer,
Kolathur Health Post,
Corporation of Chennai.

Dissertation submitted to

THE TAMILNADU DR.M.G.R.MEDICAL UNIVERSITY

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(ARIVUKKARASI)

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ABSTRACT

Green tea has been consumed throughout the ages in India, China, Japan and Thailand. In traditional Chinese and Indian medicine practitioners used green tea as a stimulant, diuretic (to promote the excretion of urine) astringent (to control bleeding and help heal wounds), and to control heart problems. Other traditional uses of green tea include treating flatulence (gas). Regulating body temperature, weight, blood sugar, promoting digestion, and improving mental processes.

A study was conducted to evaluate the outcome of green tea on obesity among women with age group of 30-50 year in selected village, Villupuram district, 2011-2012. The objectives of the study was to evaluate the outcome of green tea on obese women in experimental and control group

The study was conducted by adopting a quasi experimental research design. 60 women who have fulfilled the inclusion criteria were selected by using Non probability purposive sampling technique. The research hypothesis formulated stated that there will be a significant outcome of green tea on level of weight among obese women with age group of 30-50 years. The conceptual framework adopted was modified on Weidenbach's Helping Art Theory

In experimental group, the investigator assesses height, weight and waist circumference by using standardized scale (BMI scale). Followed by the investigator prepared tea with 5gm of green tea extract and mixed in 150 ml boiled water and added 10ml of honey administered orally to the obese women and following of normal diet in the experimental group. Control group samples were taken normal diet. After 30 days post-test level of obesity was measured by the investigator to the experimental and control group.

Analysis revealed that the level weight in the experimental group showed a significant decrease in the level of weight at $p < 0.001$ when compared with the control group .Providing green tea for the women enhances the decreases of level of weight. Therefore, green tea can be used as a safe and effective diet, which helps in reducing the level of weight.

CHAPTER –I

INTRODUCTION

‘An ounce of prevention is worth a pound of cure’

Obesity is no longer an isolated problem but now has become a significant public health concern. Its prevalence has increased over the last decades, especially in developed countries but a similar trend has been seem in developing countries, like India. The highest prevalence of obesity has been seen in India which is similar or even higher than those found in developed countries.

Excess body weight is a very serious problem, especially in North America and Europe. It has been referred to as a "pandemic “since it has progressively increased over the past several decades. Moreover, excess body weight significantly increases the risk of numerous diseases and clinical disorders, including all-cause mortality, coronary and cerebro vascular diseases, various cancers, type 2 diabetes mellitus, hypertension, liver disease and asthma, as well as psychopathology, among others. Unfortunately, overweight and obesity is now common in both young children and adolescents. Although the causes of excess body weight are multi-factorial, the most important factors are excess caloric intake coupled with limited energy expenditure. Therefore, lifestyle modification can significantly reduce the risk of morbidity and mortality and thereby increase longevity and improve the quality of life.

Obesity negatively impacts the health of women in many ways. Being overweight or obese increases the relative risk of diabetes and coronary artery disease in women. Women who are obese have a higher risk of low back pain and knee osteoarthritis. Obesity negatively affects both contraception and fertility as well. Maternal obesity is linked with higher rates of caesarean section as well as higher rates of high-risk obstetrical conditions such as diabetes and hypertension. Pregnancy outcomes are negatively affected by maternal obesity (increased risk of neonatal mortality and malformations). Maternal obesity is associated with a decreased intention to breastfeed, decreased initiation of breastfeeding and decreased duration of breastfeeding. There seems to be an association between obesity and depression in women, though cultural factors may influence this association. Obese women are at higher risk for multiple cancers, including endometrial cancer, cervical cancer, breast cancer, and perhaps ovarian cancer.

The development of obesity is characterized by an increase in adipose tissue mass and by changes in almost all organ functions leading to diseases such as hypertension, diabetes mellitus and coronary heart disease. Would drinking green tea or taking a green tea supplement lead to weight loss and thus reduce the risk of chronic diseases. Human studies regarding the benefit of green tea for weight loss have shown inconsistent results. In one study mentioned here green tea daily consumption of green tea for 3 months reduced body fat. See below for more green tea and weight loss research information. It is quite likely that the combination of green tea extract and other supplements that influence appetite or metabolism could lead to weight loss.

BACK GROUND OF THE STUDY

"Simple diet is best, for many dishes bring many diseases"

Obesity mean is an abnormal growth of the adipose tissue due to an enlargement of fat cell size (hypertrophic obesity) or increase in fat cell number (hyperplasic obesity) or combination of both. Obesity is often expressed in terms of body mass index (BMI).Overweight is usually due to obesity but can arise from other causes such as abnormal muscle development or fluid retention.

However, obese individuals differ not only in the amount of excess fat that they store, but also in the regional distribution of the fat within the body. The distribution of fat induced by the weight gain affects the risk associated with obesity, and the kind of disease that results

New recommendations for the Asia –pacific population suggest that a body mass index (BMI) of greater than 23 for overweight and greater than 25 for obesity be used, as opposed to the usual limits of greater than 25 and greater than 30 used internationally for overweight and obesity respectively.

The double burden is increasing .It is noted in a study done on WHO found 30-70 percentage of India adults to be underweight, greater than the proportion in sub –Saharan Africa.

Daily consumption of green tea for 12 weeks reduced body fat. Green tea could enhance metabolism. Scientists are still evaluating whether a green tea pill by itself leads to weight loss.

SIGNIFICANCE AND NEED FOR THE STUDY

In 2001 the prevalence of obesity (BMI ≥30) was 20.9% vs. 19.8% in 2000, an increase of 5.6%. Overweight and obesity were significantly associated with diabetes, high blood pressure, high cholesterol, asthma, arthritis, and poor health status. Compared with adults with normal weight, adults with a BMI of 40 or higher had an odds ratio (OR) of 7.37 (95% confidence interval [CI], 6.39-8.50) for diagnosed diabetes, 6.38 (95% CI, 5.67-7.17) for high blood pressure, 1.88 (95% CI,1.67-2.13) for high cholesterol levels, 2.72 (95% CI, 2.38-3.12) for asthma, 4.41 (95% CI, 3.91-4.97) for arthritis, and 4.19 (95% CI, 3.68-4.76) for fair or poor health.

Obesity is a major public health problem in the industrialized countries. Recent data from USA reveal that 53% men aged 20-74 years are obese, having BMI 25 or more. It may be mentioned that the prevalence of obesity in women was found to 1.3- 1.5 times higher according to different criteria. Prevalence of obesity in developing countries is believed to be on the rise. Not much data is available from India regarding prevalence of obesity. Two small studies have been carried out recently in urban Delhi to find the prevalence of obesity .In one of them the prevalence (BMI>25) was 20% in men and 27.1%in women.

Preliminary research suggests that drinking green tea may have same effects on body weight, fat accumulation and insulin activity. While it may be premature to draw firm conclusions based on early research, key findings include the following:

Green Tea extract was found to significantly increase 24 hour energy expenditure and fat oxidation in healthy men.

After three months of consumption of Green Tea extract by moderately obese patients, body weight decreases by 4.6 percent and waist circumference decreases by 4.48 percent.

Researchers examined human which were fed either a low-fat diet, high-fat diet or high-fat diet supplemented with 0.1-0.5 percent tea catechins for 11 months. The scientists then measured body weight, fat tissue mass and liver fat content and discovered that

supplementation with tea catechins resulted in a significant reduction of high-fat diet-induced body weight gain and visceral and liver fat accumulation.

KhonKaen et al (2010) to investigate the effects of green tea on weight reduction in obese Thais. A randomized, controlled trial involving 60 obese subjects (body mass index, BMI > 2 5kg/m (2)) was conducted. All subjects consumed a Thai diet containing 3 meals for 12weeks. The diet contained 65% carbohydrates, 15% protein, and 20% fat. In comparing the two groups, differences in weight loss were 2.70, 5.10, and 3.3kg during the 4th, 8th, and 12th weeks of the study, respectively. At the 8th and 12th weeks of the study, body weight loss was significantly different. They conclude that green tea can reduce body weight in obese Thai subjects by increasing energy expenditure and fat oxidation.

J.Herb et al. (2010) conducted a descriptive study that Effect of long-term oral administration of green tea extract on weight gain and glucose tolerance. There have been some claims that green tea reduces weight and lowers blood glucose in diabetes. Intra peritoneal injections of green tea catechins in diabetic person have shown beneficial effects. To determine if oral administration of green tea would prevent development of diabetes, young diabetic client were dose with green tea extract containing 50-125 mg/kg of Epigallocatechingallate (EGCG) starting at 7 weeks of age, before the appearance of excessive weight gain and glucose elevation. While there was a trend toward lower weight gain and average daily glucose, there was no statistically significant difference.

The above findings made the researcher feel that green tea play a major role in reduction of the level of weight among obese women thus the investigator has selected the topic to assess the outcome of green tea on the level of weight among obese women

TITLE

Assessment on outcome of Green tea on level of weight among obese women (aged between 30-50 years).

STATEMENT OF THE PROBLEM

A quasi experimental study to assess the outcome of green tea on level of weight among obese women with the age group of 30-50 years in a selected Village, Villupuram District, 2011 – 2012

OBJECTIVES

1. To assess the pre-test level of weight among obese women aged between 30-50 years in experimental and control group
2. To assess the post-test level of weight among obese women aged between 30-50 years in experimental and control group
3. To compare the pre and post-test level of weight between the experimental and control group
4. To assess the outcome of green tea among obese women aged between 30-50 years in experimental group.
5. To associate mean difference between obese women age group 30-50 years with demographic variables in the experimental group.

VARIABLES

Independent Variable

Green tea

Dependent Variable

Level of weight

RESEARCH HYPOTHESIS

H_1 _There is a significant relationship between pre and post-test level of weight among obese women age group between 30 to 50 years, in the experimental group and control group.

H_2- There is a significant association of mean difference level of weight among obese women age group between 30 to 50 year with demographic variables in the experimental group.

OPERATIONAL DEFINITIONS

Outcome

It refers to the impact of green tea which contains large amount of polyphenols and catechins, it helps to reduce the body fat and weight loss of human body. so the green tea with honey 140ml given before breakfast and dinner consequently for 30 days of duration . Pre and post -test was measured by means of BMI scale among obese women at selected setting.

Obese Women

It refers to the women age between 30-50 years having body mass index greater than 30-35 BMI.

Formula used for BMI weight (kg)/height (m2).

Green Tea

Green tea comes from the same camellia sinensisplant, It is prepared by the investigator freshly every day with boiling 150ml of water and 5gm of green tea leaves for 15-20 minutes with slow stream after that filter and added honey 10ml into it. It should be consuming 140 ml before breakfast and dinner. Followed by normal diet

ASSUMPTIONS

1. Obesity may be prevalent among women age group between 30-50 years.
2. Green tea may have some effect on weight among obese women.
3. Green tea comes from the same camellia sinensis plant, it contain large amount of polyphenols and catechins, it helps to reduce the body fat and weight loss of human body

DELIMITATIONS

1. The study was delimited to a period of 4 weeks of data collection.
2. The study was delimited to selected setting.

SUMMARY

The first chapter dealt with the background of the study, significance and need for the study, statement of the problem, objectives, variables of the study, assumption, hypothesis of the study, operational definition and delimitation of the study and organizational report.

PROJECTED OUTCOME

The community health nurse can recommend use green tea in reducing obesity which will be a health promotion activity in the general population

ORGANIZATION OF REPORT

The following chapter contains,

Chapter II→ Review of literature

Chapter III→ Methodology

Chapter IV→ Analysis and interpretation of data

Chapter V → Discussion

Chapter VI→ Summary and conclusion

(This is followed by reference and appendices)

CHAPTER – II

REVIEW OF LITERATURE

Review of literature is an important step in the development of a research project. It helps the investigator to develop a deeper insight into the problem and gain information on the problem and on what has been done before. It provides basis for future investigation justified the need for replication, through light on the feasibility of the study to another with a hope to establish a comprehensive body of scientific knowledge in professional discipline from which, valid and pertinent theories may be developed.

Review of literature is a critical summary of research on a topic of interest generally proposed to put a research problem in context or to identify gaps and weakness in prior studies and as to justify new investigation. A review of literature involves systematic identification, location, scrutinizing and summary of the written material that contains information on a research problem.

The investigation carried out extensive review of literature relevant to the research topic to gain insight and to collect information for laying the foundation of the study.

This chapter has two sections:

Part I : Deals with review of literature

Part II: Deals with conceptual framework

PART I:

Section A: Literature related to obesity

Section B: Literature related to green tea on level of weight on obesity

Section C: Literature related to green tea on other parameters

PART I

SECTION A: LITERATURE RELATED TO OBESITY:

St Clair Avenue .E (2010) conducted a study to compare the prevalence of obesity among adults age 18 and above in 1978 /79 and 2004. Prevalence by demographic, socio – economic and lifestyle characteristics is presented. Along with association between obesity

and selected chronic condition. In 2004, 23percentage of adults, 5.5 million people aged 18 or older, were obesity up substantially from 14 percentages in 1978/79. An additional 36percentage (8.6 million) were overweight. Obese individuals tended to have sedentary leisure –time pursuits and to same fruit and vegetables infrequently .As body mass index (BMI) increased, so did an individual's likelihood of reporting high blood pressure, diabetes and heart diseases.

Russell P Lopez., et al. (2010) a study to conduct Obesity, physical activity, and the urban environment: public health research needs Persistent trends in overweight and obesity have resulted in a rapid research effort focused on built environment, physical activity, and overweight. Much of the focus of this research has been on the design and form of suburbs. It suggests that several features of the suburban built environment such as low densities, poor street connectivity and the lack of sidewalks are associated with decreased physical activity and an increased risk of being overweight. But compared to suburban residents, inner city populations have higher rates of obesity and inactivity despite living in neighbourhoods that are dense, have excellent street connectivity and who's streets are almost universally lined with sidewalks.

Erin M. Siegel, Ph.D, MPH, et al. (2010) A descriptive study of individuals successful at long-term maintenance of substantial weight loss. Despite extensive histories of overweight, the 629 women and 155 men in the registry lost an average of 30 kg and maintained a required minimum weight loss of 13.6 kg for 5 year. A little over one-half of the sample lost weight through formal programs; the remainder lost weight on their own. Both groups reported having used both diet and exercise to lose weight and nearly 77% of the sample reported. Mean (+/-SD) current consumption reported by registry members was 5778 +/- 2200 kJ/d, with 24 +/- 9% of energy from fat, they reported expending approximately 11830 kJ/wk. through physical activity. So the study concluded that nearly all registry members indicated that weight loss led to improvements in their level of energy, physical mobility, general mood, self-confidence, and physical health.

McGuire MT, .et al...(2010) Set point theory suggests that successful maintenance of weight loss ("weight suppression") may be associated with psychological distress. This study examined the association between psychological symptoms and body weight suppression by using a registry of 629 women and 155 men who lost at least 13.6 kg (mean loss = 30 +/- 15

kg) and maintained the loss for at least 1 year (mean duration = 5.5 +/- 6.8 years). Participants completed measures of mood and distress. Maintainers' levels of distress and depression were lower than those of psychiatric samples and resembled those of community-based samples. Maintainers' levels of restraint and disinheriting were markedly different from those of eating-disordered samples, resembling levels found in patients recently treated for obesity. There was no evidence that long-term suppression of body weight is associated with psychological distress.

Kilicarslan .A (2008) conducted a study to find out the risk factor for obesity. He used descriptive approach and multinomial logistic regression analysis and gave the following results. Risk of obesity was 57% less in participants lacking a family of obesity. Being married increases the risk of obesity 2.5 times; being a primary school graduate increases the risk about 1.5% time; lower educational level, unemployment and lack of counseling seem to be risk factors associated with obesity reduced changes in abdominal fat and serum triglycerides.

National family health survey -2 (1999) had revealed that prevalence of overweight and obesity among Indian women of child bearing age 15-49 years in India. Overweight or obese ranges from four to 34 percentages. Among states, the level of overweight or obesity ranges in Delhi (34%) to least common (less than 10percent) in Rajasthan and Orissa. prevalence of underweight among Indian women of child bearing age 15 to 49 years in India are underweight and it ranges from 11to 48 percent. Prevalence of overweight or obesity among women of child bearing age (15to49years) in Nadu is 12% and prevalence of underweight is 29.3 %(BMI less than 18.5kg/m2).

M.Saidie .et al (1997) conducted across sectional study was performed with 2171 women and 2010 men in Isfahan –the large city of Iran –in the first phase of Isfahan healthy heart program (IHHP). The subjects were selected by random cluster sampling method. Result was 6%of women and 7.2% men had overweight.

National health survey, India, (1990-1994), conducted a study in rural India to find the prevalence of obesity for adolescence aged 13-18. The finding of the study revealed that from low, middle to high socioeconomic status (SES) was 9%, 15% and for rural areas and 21%, 27%and 42% for urban areas respectively. Prevalence of under nutrition, stunting and

wasting has been studied widely in Asia; 70%of the world's malnourished children live in Asia.

SECTION B: LITERATURE RELATED TO GREEN TEA ON LEVEL OF WEIGHT AMONG OBESE WOMEN

Auvichayapat P (2010) Effectiveness of green tea on weight reduction in obese .This study was undertaken to investigate the effects of green tea on weight reduction in obese Thais. A randomized controlled trial involving 60 obese subjects (body mass index, BMI >25kg/m (2)) was conducted. All subjects consumed a Thai diet containing 3 meals for 12 weeks. The diet contained 65% carbohydrates, 15% protein, and 20% fat. In comparing the two groups, differences in weight loss were 2.70, 5.10. And 3.3kg during the 4, 8 and 12 weeks of the study, respectively. At the 8 and 12 weeks of the study, body weight loss was significantly different. We conclude that green tea can reduce body weight in obese Thai subjects by increasing energy expenditure and fat oxidation.

MolNutr Food Res. (2010) Anti-obesity effects on green tea: This study under took the effects of green tea on weight reduction obesity. Green tea, catechins, and epigallocatechingallate (EGCG) have been demonstrated in cell culture and animal models of obesity to reduce adipocyte differentiation and proliferation, lipogenesis, free fatty acids, cholesterol, glucose, insulin and leptin, as well as to increase beta-oxidation and thermogenesis. Adipose tissue, liver, intestine, and skeletal muscle are target organs of green tea, mediating its anti-obesity effects. Studies conducted with human subjects report reduce body weight and body fat, as well as increased fat oxidation and thermo genesis and thereby confirm findings in cell culture system and animal models of obesity.

Thikhamrop.B (2009) .There are few studies, however, on the effects catechins on body fat reduction in humans. We investigated the effects of catechins from green tea on body fat reduction and the relation between oxidized LDL and body fat variables. After a 2-wk diet run-in period, healthy men were divided into 2 groups with similar BMI and waist circumference distributions. A 12-wk double-blind study was performed in which the subjects ingested 1 bottle oolong tea/d containing 690 mg catechins (green tea extract group; n=17) or 1 bottle oolong tea/d containing 22 mg catechins (control group; n=18).Body weight, BMI, waist circumference, body fat mass and subcutaneous fat area were significantly lower in the green tea extract group than in the control group.

Panagoitakas DB, et al. (2009) the effects of green tea on weight loss and weight maintenance have been reported in studies with subjects differing in ethnicity and habitual caffeine intake. To elucidate by Meta analysis whether green tea indeed has a function in body regulation. Result catechins significantly decreased body weight and significantly maintain body weight after a period of weight loss (μ=-1.31 kg; $p<0.001$). Inhibition of this effect by high habitual caffeine intake (>300mg/day) fail to reach significance (μ=-0.27 kg for high and μ=-1.60 kg for low habitual caffeine intake; $p=0.09$). Also, the seemingly smaller effect of catechins in Caucasian (μ=0.82kg) subjects compared with Asians (μ=-1.51 kg; $p=0.37$) did not reach significance. Interaction of ethnicity and caffeine intake was a significant moderator ($p=0.04$).

Christopher E Aston,(2009) conducted a study was to compare the effects of supplementation of green tea beverage or green tea extract with controls on body weight, The design was used for randomized, controlled prospective trail. In the settings of general clinical research centre. 35 subjects with obesity and metabolic syndrome were recruited in age and genders matched trios and were randomly assigned to the control. (4 cups water/day),green tea(4 cups/day),or green tea extract(2 capsules and 4 cups water /day) group for 8 weeks. .Anthropometrics, blood pressure, and free catechins were analyzed at screen and at 4 and 8 weeks of the study. Pair wise comparison showed green tea beverage and green tea extract caused by a significant decreased in body weight and body mass index (BMI)verses controls at eight weeks (-2.5±0.7 kg, $p<0.$ 01, and -1.9±0.6,$p<0.05$,, respectively).

Carmen Cabrer. (2009) green tea catechins (GTCs) with or without caffeine have been studied in randomized controlled trials (RCTs) for their effect on anthropometric measures. The objective was to perform a systematic review and Meta –analysis of RCTs of GTCs on anthropometric variables, including body mass index (BMI), body weight, waist circumference, and waist –to – hip ratio (WHR). The weighted mean difference of change from baseline (with 95% CIs) was calculated by using a random – effect model. Result fifteen studies (n= 1243 patients) met the inclusion criteria. On meta- analysis, GTCs with caffeine decreased BMI, body weight, and WC. The administration of GTCs with caffeine is associated with statistically significant reduction in BMI, body weight, and WC.

Reeves, M. (2009) this study evaluated the influence of a green tea catechin beverage on body composition and fat distribution in overweight and obese adults during exercise –induced weight loss. Participants (n=132)with 107 completers) were randomly assigned to receiving a beverage containing -625mg of catechins with 39 mg caffeine or a control beverage (39mg caffeine , no catechins) for 12wks. Participants were asked to maintain constant energy intake and engage in ≥180 min/wk moderate intensity exercise, including ≥3 supervised sessions per weeks. Clinical laboratory tests were measured at baseline and wk 12. There was a trend (p=0.079) toward greater loss of body weight in the catechin group compared with the control group. However, percentage changes in total abdominal fat area, subcutaneous abdominal fat area and fasting serum triglycerides were greater in catechin group.

SECTION C: LITERATURE RELATED TO GREEN TEA ON OTHER PARAMETERS

Akhlaghi m, bandy b (2010) conducted a study on dietary green tea extract increases phase 2 enzyme activities in protecting against myocardial ischemia reperfusion. Rats were fed for 10 days with either control diet (sham and control group s) or the diet mixed with 0.25 % green tea extract .At the end of 10 days, hearts were excised and subjected to global ischemia for 20 min followed by reperfusion for 2 hours. Heart from the green tea group had a 65% to 85% decrease in markers of apoptosis, a tendency to higher total glutathione, and higher activities of the phase 2 enzymes glutamate cysteine ligase and quinine reductase. The result supports a possible involvement of phase 2 enzymes in the protection by green tea catechins against myocardial IR injury

Lambert JD, Elias. (2010) conducted a study on antioxidant and pro oxidant activities of green tea polyphenols .a role in cancer prevention .Many potential mechanism have been proposed including both antioxidant and pro oxidant effects, but questions remain regarding the relevance of these mechanisms to cancer prevention. In the study it was discussed about the redox chemistry of the tea catechins and the current literature on the antioxidant and pro oxidative effects of the green tea polyphenols as they relate to cancer prevention. These pro oxidant effects may also induce endogenous antioxidant systems in normal tissues that protection against carcinogenic insult.

Wang H (2010) conducted a study on effect of catechin enriched green tea on body composition. In a Randomized placebo controlled trial. 182 moderately overweight Chinese subject. consumed either two serving of the control drink and one serving of a control drink (c; 30 mg catechins , 10 mg caffeine /day).one serving of the control drink and one serving of an extra high catechins GTI (458 mg catechins ,104 mg caffeine /day),two serving of a high catechin GT2 (468mg catechins, 126mg caffeine /day)or two serving of the extra high catechinsGT3 (886mg catechins , 198mg caffeine /day) for 90 days. The result indicated that decreases of 1.9 cm in waist circumference and 1.2kg body weight in the GT3 group vs. c ($p=0.05$).It was also observed reduction in total body fat (GT2,0.7kg $p=0.05$)and body fat %(GT1 ,.6%,$P<0.05$).

Westerterp –plantenga MS (2010) conducted a study of green tea catechins, caffeine and body – weight regulation. Positive effects on body weight management have been shown using green tea mixtures. Green tea, by containing both catechins and caffeine.May act through inhibition of catechol O – methyl transferase, and inhibition of phosphodiesterase. Here the mechanism may also operate synergistically. These functional ingredients have the potential to product significant effects on metabolic targets such thermogenesis, and fat oxidation. An ethnic or genetic effect, and habitual caffeine or green tea catechin intake my act as a confounder.

Khan N, Adhami VM, Mukhtar H (2009) reviewed on green tea polyphenols in chemoprevention of prostate cancer: preclinical and clinical studies. PCa remains surrounded by puzzles in spite of the considerable progress in research, diagnosis and treatment. It is an ideal target for chemoprevention. As clinically significant PCa usually requires more than decades for development. They highlighted the evidences of green tea polyphenols from preclinical and clinical studies in the chemoprevention /chemotherapy of pCa.

Polychronopoulos .E et al. (2008) conducted a study on effects of green tea consumption on blood glucose levels in non-obese elderly men and women from Mediterranean islands. 300 men and women from Cyprus, 142 men from mitilini and 100 from Samothraki islands (aged 65-100 years) were enrolled. Dietary habits (including tea consumption) were assessed through a food frequency questionnaire. A significant interaction was observed between tea intake, obesity status on glucose levels ($p<0.001$). Tea intake was associated with lower blood glucose levels in non-obese (P for trend <0.001), but not in obese

people (p=0.24). Multiple logistic regression analysis revealed that moderate tea consumption (1-2 cups per day) was associated with 88% (95% CI 76-98%) lower odds of having diabetes among non-obese participants, irrespective of age, smoking and dietary habits.

Tinahones Fj, et al. (2008) conducted a study on green tea reduces LDL oxidability and improves vascular function. The study was undertaken with 14 healthy women, none of whom were receiving any medical treatment. Measurements were made of antibodies and immune complexes by ELISA, endothelial dependent vascular function by Doppler ultrasound, and the concentration of oxidized LDL by TBARS. The mean diameter of the brachial artery following the post-compression hyperemia Phase rose significantly ($p<0.0001$) after treatment with green tea extract. Flow–mediator brachial artery vasodilatation ranged from 5.68% for the placebo phase to 11.98% after the green tea extract ($p=0.02$) .the consumption of green tea extract was associated with a significant 37. 4% reduction in the concentration of oxidized LDL (P=0. 017) .The levels of anti- oxidized LDL, IGM antibodies fell significantly after treatment ($p=0.002$).

Wolfarm S (2008) conducted a study of green tea and EGCG on cardiovascular and metabolic health. The studies have indicated that pronounced cardiovascular and metabolic health benefits can be obtained by regular consumption of 5-6 or more cups of green tea per day. Furthermore, intervention studies using similar amounts of green tea, containing 200-300 mg of EGCG, have demonstrated its usefulness for maintaining cardiovascular and metabolic health. The study concluded that the manuscript is to provide an overview of the research investigating the effects of green tea and green tea catechins on cardiovascular and metabolic health.

Cheng TO (2006) conducted a study on all teas are not created equal: the Chinese green tea and cardiovascular health. It can be categorized into three types, depending on the level of fermentation, i.e., green (unfermented), oolong (partially fermented) and black (fermented) tea. In general, green tea has been found to be superior to black tea in terms of antioxidant activity owing to the higher content of (-)-epigallocatechingallate. The cardio protective effect of flavonoids' from green tea can be attributed to not only antioxidant antithrombogenic anti-inflammatory properties but also improvement of coronary flow velocity reserve.

PART – II

CONCEPTUAL FRAMEWORK

Conceptual framework is an interrelated concept on abstraction that is assembled together in some rational scheme by virtue of their relevance to a common scheme. It is a device that helps to stimulate research and the extension of knowledge by providing both direction and impacts.

The conceptual framework of this study was based on modified Weidenbach's Helping Art Model.

The present study is aimed at determining the outcome of green tea on reduction of weight level among obese women. The conceptual framework for the study was derived from modified Weidenbach's Helping Art of Clinical Nursing Theory (1964). It describes a desired situation and a way to attain it. It directs action towards the explicit goal. This theory has three factors.

1. The central purpose in the model refers to what the nurse wants to accomplish. It is the overall goal towards which a nurse strives. It transcends the immediate intent of the assignment or task by specifically directing activities towards the patient's goal.

2. Prescriptions refer to the plan of care for a patient. It specifies the nature of action that will fulfill the nurse's central purpose and the rationale of that action.

3. Realities refer to the physical, psychological, emotional and spiritual factors that come into play in a situation involving nursing action.

The five realities are

1. Agent
2. Recipient
3. Goal
4. Means
5. Environment

The conceptualization of nursing practice according to this theory consists of three steps which are as follows:

Identification:

Involves viewing the patients as an individual with unique experiences and understanding the patients' perception of the conditions.

Determines a patient need for help based on the existence of a need whether the patient cannot meet the need alone.

Ministration:

a) Refers to provision of needed help.
b) Requires an identified need and patient who wants help.

Validation

1. Refers to collection of evidence that shows a patient's need have been met and that his functional ability has been restored.
2. It is based on patient oriented evidence.

The model adopted for this study was a modified form of Weidenbach's Helping Art of Clinical Nursing Theory. Investigator adopted this model and perceived apt in enabling to assist the outcome of green tea on weight of level.

This model views the obese women as an individual with unique experiences who are in need for reduction of weight level.

The investigator planned the prescription that would fulfill the central purpose by identify the various means to achieve the goal. Thus the investigator selected the dietary intervention green tea 5g which was considered as effective, safe and reduces weight without serious side effects.

The investigator selected two groups where green tea was provided for one group and only diary restriction was provided for other group. The realities identified in the study are

A	-	Agent	-	Investigator
B	-	Recipient	-	obesity women
C	-	Goal	-	Decrease the level of weight
D	-	Means	-	Green Tea
E	-	Environment	-	Community

In the present study, evaluates the outcome of green tea on obesity women. The investigator having analyzed the data and has come to the conclusion that green tea has an effect on weight reduction.

CHAPTER – III

RESEARCH METHODOLOGY

This chapter explains the methodology adopted by the investigator to assess the level of weight among obese women.

It deals with the research approach, research design, and setting of the study, population, sample and sampling technique, method of developing the tool, description of the tool, validity of the tool, ethical consideration, pilot study, data collection procedure and data analysis procedure.

RESEARCH APPROACH

A Quantitative approach was used to assess the outcome of green tea on level of weight among obese women.

RESEARCH DESIGN

A Quasi Experimental design was chosen for this study, to assess the outcome of green tea on level of weight among obese women.

VARIABLES UNDERSTUDY

Demographic Variables

Age, education, marital status, occupation, type of food, physical activity, drugs and family history.

RESEARCH SETTING

The study was conducted in selected Periyasevalai village, Villupuram district. The village which is comprised of 2200 population. It is located 200 Kilometers from Vel R.S.Medical College- college of Nursing, Chennai.

POPULATION

Population refers to the entire 2200 aggregation of cases that met the designated criteria. Population refers to the entire set of individual who has some common characteristics and it is important to make distinction between the target and accessible population.

Target Population

The target population of the present study comprised of obese women with the age group of 30-50 years in Periyasevalai Village, Villupuram district.

Accessible Population

Accessible population comprises 60 clients having obesity and residing in Periyasevalai village, Villupuram district.

SAMPLE

The study sample comprises of women aged between 30-50 years and who fulfills the inclusion criteria residing at Periyasevalai Village, Villupuram District.

SAMPLE SIZE

60 obese women who met the inclusion criteria were selected as the sample for the study. 30 women each were selected for the experimental group and control group.

SAMPLE TECHNIQUE:

Non probability purposive sampling was used to evaluate the outcome of green tea on level of weight among obese women age group between 30-50 years.

CRITERIA FOR SAMPLE SELECTION

Inclusion Criteria

1. All women aged between 30-50 years residing at selected village.
2. Those who were willing to participate in the study.
3. Women who were able to read and write Tamil and English.
4. Women with BMI between 30 – 40 (mild and moderate obese women).

Exclusion Criteria

1. Women who suffered from disease like heart disease endocrine, CHD, Hypertension, Diabetes etc.,
2. Women who had started exercise or on the treatment for obesity
3. Women under Menopause age.
4. Women who are allergic to green tea.
5. Those who were on restricted diet.

DESCRIPTION OF TOOLS

The tool used for the data collection had two sections.

Section -I: Description of demographic variables

Age, education, marital status, occupation, types of food, physical activity, drugs, and family history.

Section-II:

This section consists of bio physiological measure for assessing the level of weight. Pre and post test level of weight were measured by weighing scale.

SCORING PROCEDURE

Body mass index scale was used to assess the level of obesity among women aged between 30-50 years. A score less than 18.5 is underweight , 18.5224.9 is normal, 25-29.9 is over wight,30-34.9 obesity class 1,35-39.9 obesity class2,above 40 is category 3 Interpretation of score is as follows:

Category	BMI(Kg/m2)	Obesity class	Status
Underweight	<18.5	_	_
Normal	18.5-24.9	_	_
Over Wight	25.0-29.9	_	_
Obesity	30-34.9	Category 1	High
	35.0-39.9	Category 2	Very high
Extreme obesity	>40.00	Category 3	Extremely high

VALIDITY OF TOOLS

The validity was obtained from four nursing experts, one medical officer, one dietician, and from one siddha physician. No harm certified was obtained from the dietician. All the corrections said by the experts were incorporated into the study

RELIABLITY

The reliability of the tool was done in biomedical department at Vijay hospital in Chennai. It was established by inter rater method. The reliability was obtained by using Karl Pearson's correlation co efficient method. The correlation value was r=0.85 the score indicates a high correlation and hence the tool was considered as reliable.

ETHICAL CONSIDERATION

The study was conducted after the approval of dissertation committee. The written consent was taken from village administrative officer and medical officer before proceeding with study. The patients were clearly explained about the study purpose and written consent was obtained. All information about samples was kept confidential.

PILOT STUDY PROCEDURE

The pilot study was conducted at Vellanoor village, Avadi, Chennai from 20|05|11 to 19|06|11. The formal permission was obtained from the Counselor, Avadi municipality. Six obese women who fulfilled the inclusion criteria were selected by non probability purposive sampling technique. A brief introduction about the self and study were given and data was collected from the obese women. Written consent was taken from samples and confidentiality of the responses was assured. The data related to variables were collected. Pretest level of obesity was assessed by using standardized scale on 20.05.2011 and 3 subjects who fulfilled the inclusion criteria were selected. Followed by the investigator prepared tea with 5gm of green tea extract and mixed in 150 ml boiled water and added 10ml of honey administered orally to the obese women and following of normal diet in the experimental group. Control group samples were taken normal diet. After 30 days post- test level of obesity was measured by the investigator to the experimental and control group.

The statistical analysis of the pilot study suggested a positive correlation of green tea on weight reduction. The 'r' value 0.85 was found to be reliable and appropriate and hence the procedure was decided to be followed in the main study.

DATA COLLECTION PROCEDURE

The study was conducted in Periyasevalai village in Villupuram district. From 23|06|2011 to 22|07|2011. Formal consent was obtained from the president & medical officers.

Periyasevalai village was selected by main study sampling. The obese women who fulfilled the inclusion criteria were selected by non- probability purposive sampling technique. Based on the selection criteria each of the 60 subjects was selected and 30 subjects were assigned to the experimental and control group respectively by client centered intervention.

A brief introduction about self and study was explained. The data related to the variables were collected. Written consent was taken from the samples. Confidentiality of responses was assured.

The investigator, after selecting the samples visited their houses. Then made the clients to sit in a comfortable chair in their own house and assessed the weight, height and waist circumference in both experimental and control group using a standardized scale. Followed by the investigator prepared tea with 5gm of green tea extract and mixed in 150 ml boiled water and added 10ml of honey administered orally to the obese women and following of normal diet in the experimental group. For control group advice was given for normal diet. Around one month intervention was given to the obese women. After 30 days post- test level of obesity was measured by the investigator to the experimental and control group.

DATA ANALYSIS PROCEDURE

Descriptive Statistics

Frequency and percentage distribution was used to analyze the variables of the study, mean and standard deviation was used to compute the level of obesity, before and after effective of green tea among women with obesity

Inferential Statistics

1. Paired “t” was used to assess the effectiveness of green tea on obesity women
2. ANOVA was used to associate the mean difference level of weight among obese with demographic variables

CHAPTER – IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with the data analysis and interpretation to assess the outcome of green tea on level of weight among obese women with the age group of 30 – 50 years at selected Periyasevalai village, Villupuran district.

Descriptive and inferential statistics were used for the analysis of the data. According to the study objectives the interpretation has been tabulated and organized as follows:

ORGANIZATION OF DATA

Section A: Description of demographic variables in both experimental and control group.

Section B: Assessment of pre and post test level of obesity in the experimental and control group.

Section C: Comparison of pre and post test level of obesity in the experimental group.

Section D: Comparison of pre and post test level of obesity in the control group.

Section E: Comparison of post test level of obesity between the experimental and control group.

Section F: Association of mean improvement level of obesity with selected demographic variables in experimental group.

SECTION – A

Table - I

Frequency and percentage distribution of demographic variables in the experimental and control group.

n = 60

Demographic Variables	Experimental Group		Control Group	
	No.	%	No.	%
Age in Years				
30 - 35	7	23.33	4	13.33
36 - 40	13	43.33	12	40.00
41 - 45	7	23.33	11	36.67
46 - 50	3	10.00	3	10.00
Education of the women				
Non literate	4	13.33	4	13.33
Primary	6	20.00	11	36.67
Middle	9	30.00	9	30.00
Higher Secondary	7	23.33	4	13.33
Diploma / Degree	3	10.00	2	6.67
Other	1	3.33	0	0.00
Marital Status				
Unmarried	2	6.67	2	6.67
Married	24	80.00	24	80.00
Widows	2	6.67	3	10.00
Separated	2	6.67	1	3.33
Occupation				
Unemployment	14	46.67	4	13.33
Self employment	7	23.33	10	33.33
Technical	5	16.67	10	33.33
Professional	4	13.33	6	20.00
Type of food				
Vegetarian	11	36.67	12	40.00
Non vegetarian	19	63.33	18	60.00
Physical activity				
Walking	13	43.33	13	43.33
Arousal exercise	2	6.67	4	13.33
Yoga	1	3.33	1	3.33
Meditation	0	0.00	2	6.67
Others	14	46.67	10	33.33
Drugs				
Cortico – steroids	2	6.67	2	6.67
Insulin	1	3.33	3	10.00
Contraceptive	8	26.67	5	16.67
None of the above	19	63.33	20	66.67
Family history				
Hereditary	12	40.00	12	40.00
Thyroid problem	7	23.33	6	20.00
Any other	11	36.67	12	40.00

Demographic Variables	Experimental Group		Control Group	
	No.	%	No.	%
Waist				
88 – 93 cm	5	16.67	6	20.0
94 – 98 cm	16	53.33	12	40.0
99 – 102 cm	7	23.33	10	33.33
103 – 105 cm	2	6.67	2	6.67
Height				
150 – 155 cm	5	16.67	6	20.0
156 – 160 cm	16	53.33	12	40.0
161 – 165 cm	7	23.33	10	33.33
166 – 170 cm	2	6.67	2	6.67
Weight				
70 – 75 Kg	7	23.33	3	10.0
76 – 80 Kg	12	40.0	13	43.33
81 – 85 Kg	3	10.0	6	20.0
86 – 90 Kg	6	20.0	5	16.67
91 – 95 Kg	2	6.67	3	10.0
BMI				
30 – 33	8	26.66	6	20.0
34 – 37	17	56.67	18	60.0
38 – 40	5	16.67	6	20.0

The table I shows that in the experimental group, majority of the women 13(43.33%) were in the age groups of 36 – 40 years, 9(30%) had middle school level education, 24(80%) were married, 14(46.67%) were unemployed. It further shows that majority 19(63.33%) were non vegetarian, 14(46.67%) had other form of physical activity, 19(63.33%) had not taken drugs, 12(40%) had family history of hereditary, 16(53.33%) had waist measurement between 94 – 98 cm, 16(53.33%) were in the height range of 156 – 160 cm, 12(40%) were in the range of 76 – 80 kg of weight and 17(56.67%) had 34 – 57 range of BMI.

Whereas in the control group, majority of the women 12(40%) were in the age groups of 36 – 40 years, 11(36.67%) had primary school level education, 24(80%) were married, 10(33.33%) were self employed and technical type of employment. It further shows that majority 18(60%) were non vegetarian, 13(43.33%) had the activity of walking, 20(67.77%) had not taken drugs, 12(40%) had family history of hereditary and other form of history, 12(40%) had waist measurement between 94 – 98 cm, 12(40%) were in the height range of 156 – 160 cm, 13(43.33%) were in the range of 76 – 80 kg of weight and 18(60%) had 34 – 57 range of BMI.

Age of the woman the experimental group

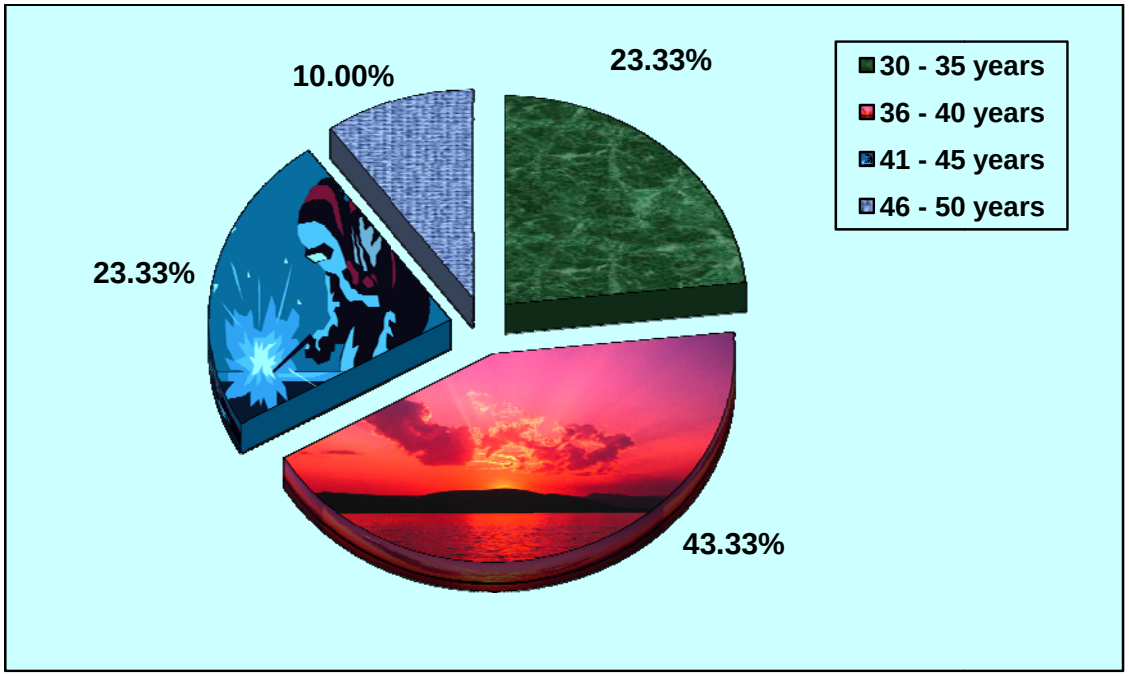

Fig.2: Percentage distribution of age of the women in the experimental group

Age of the women in the control group

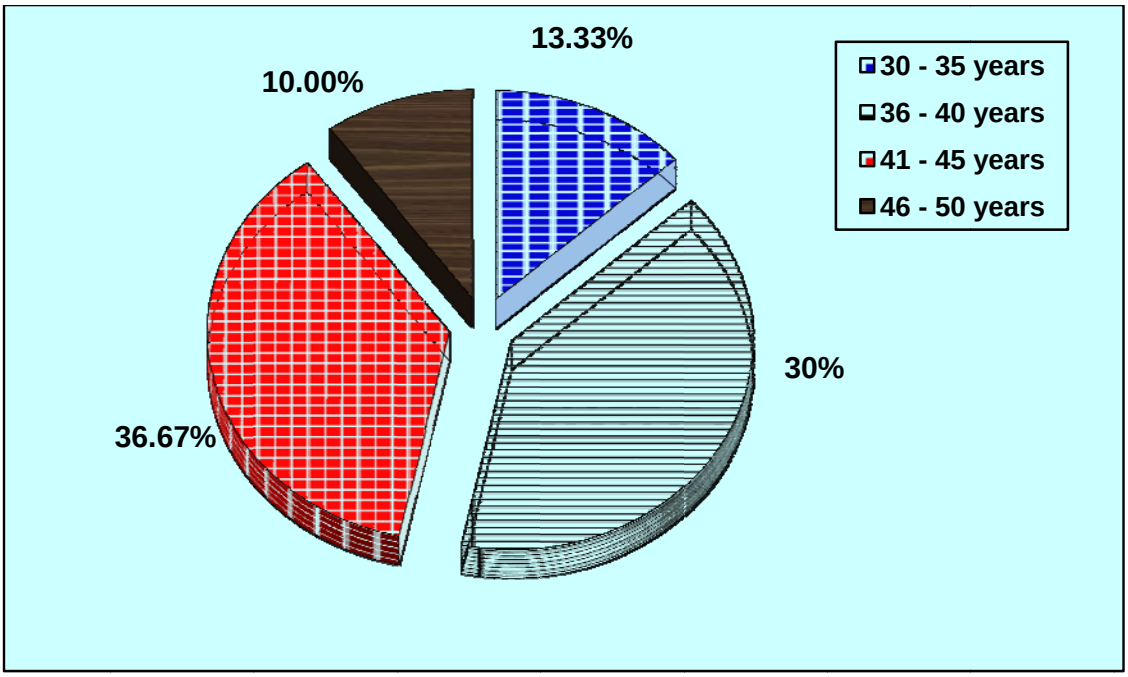

Fig.3: Percentage distribution of age of the women in the control group

Marital status of the women in the experimental group

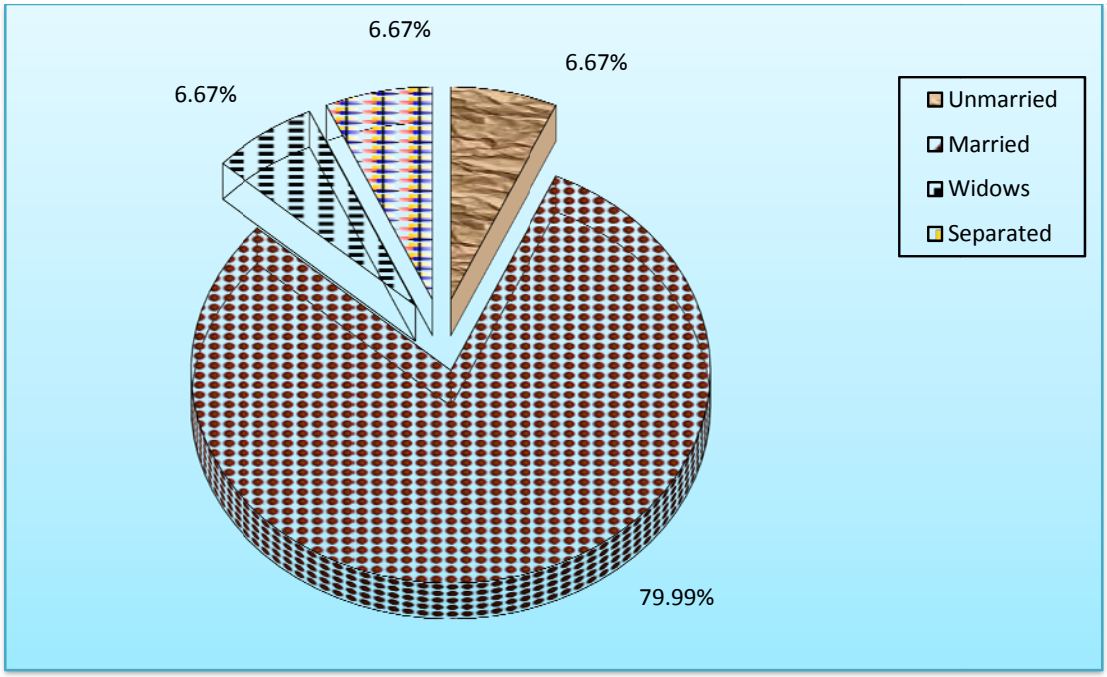

Fig.4: Percentage distribution of marital status of the women in the experimental group

Marital status of the women in the control group

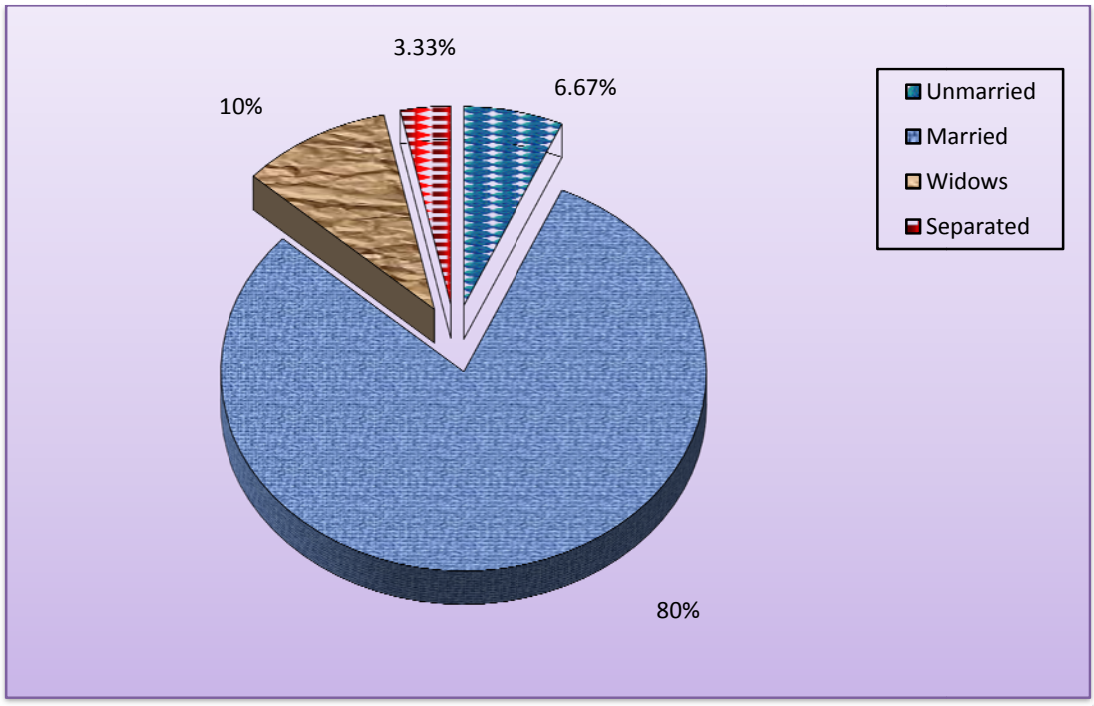

Fig.5: Percentage distribution of marital status of the women in the control group

Occupation of the obese women in the experimental group

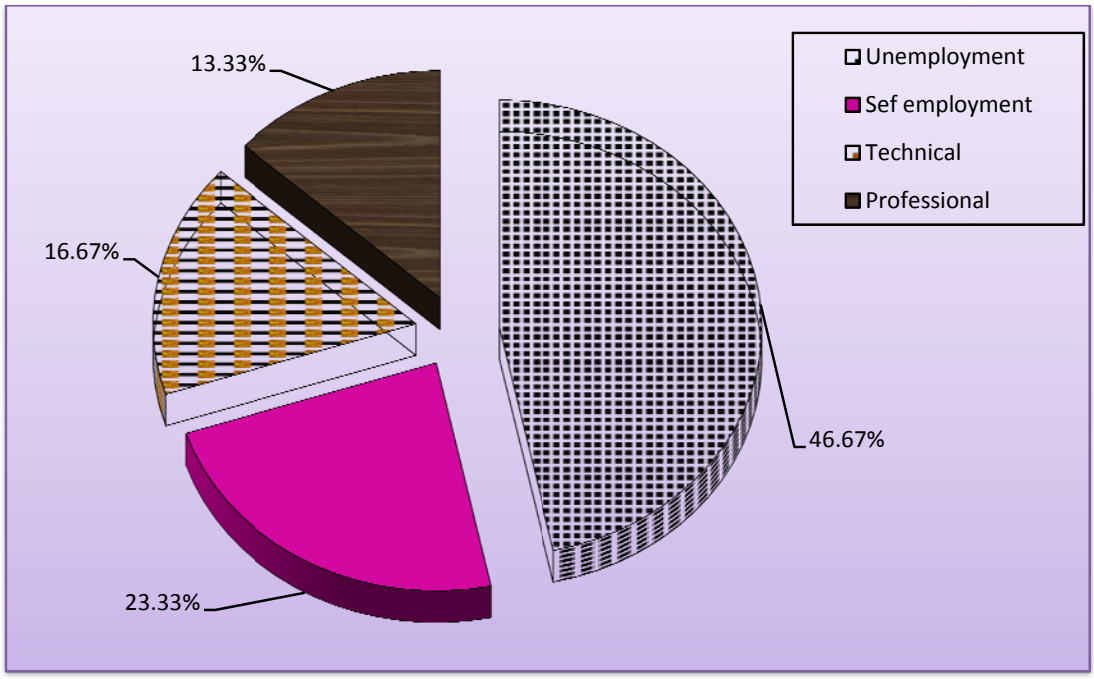

Fig.6: Percentage distribution of occupation of the obese women in the Experimental group

Occupation of the women in the Control group

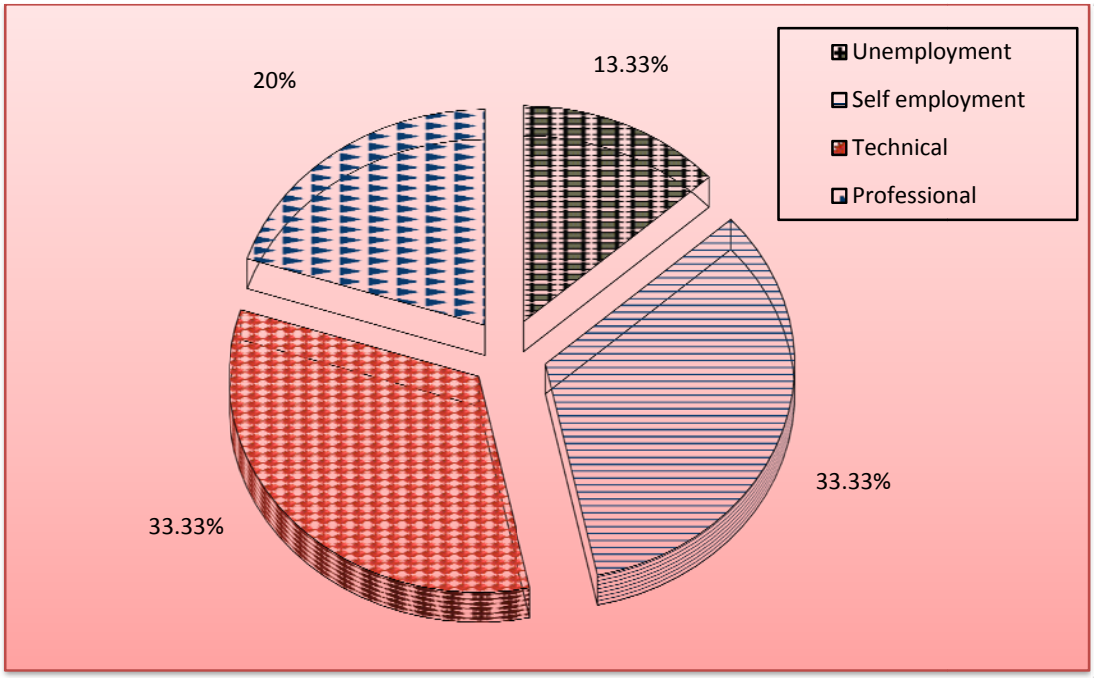

Fig.7: Percentage distribution of occupation of the women in the Control group

Drugs taken by the women in the experimental group

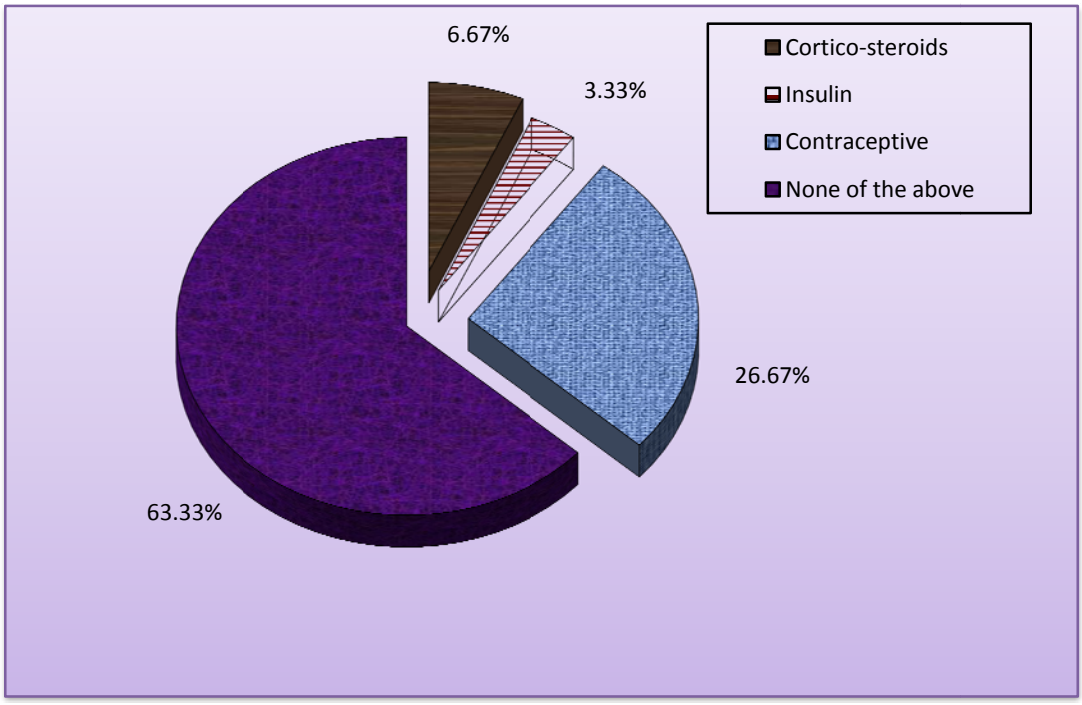

Fig.8: Percentage distribution of drugs taken by the women in the experimental group

Drugs taken by the women in the experimental group

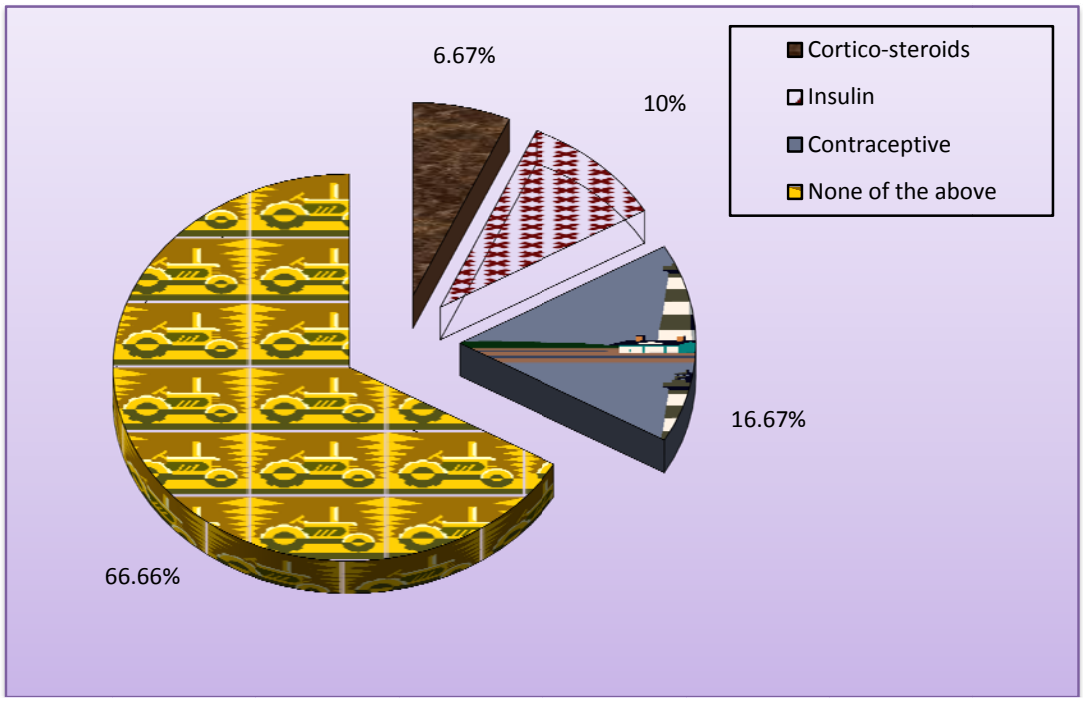

Fig.9: Percentage distribution of drugs taken by the women in the experimental group

Physical activity of the women in the experimental group

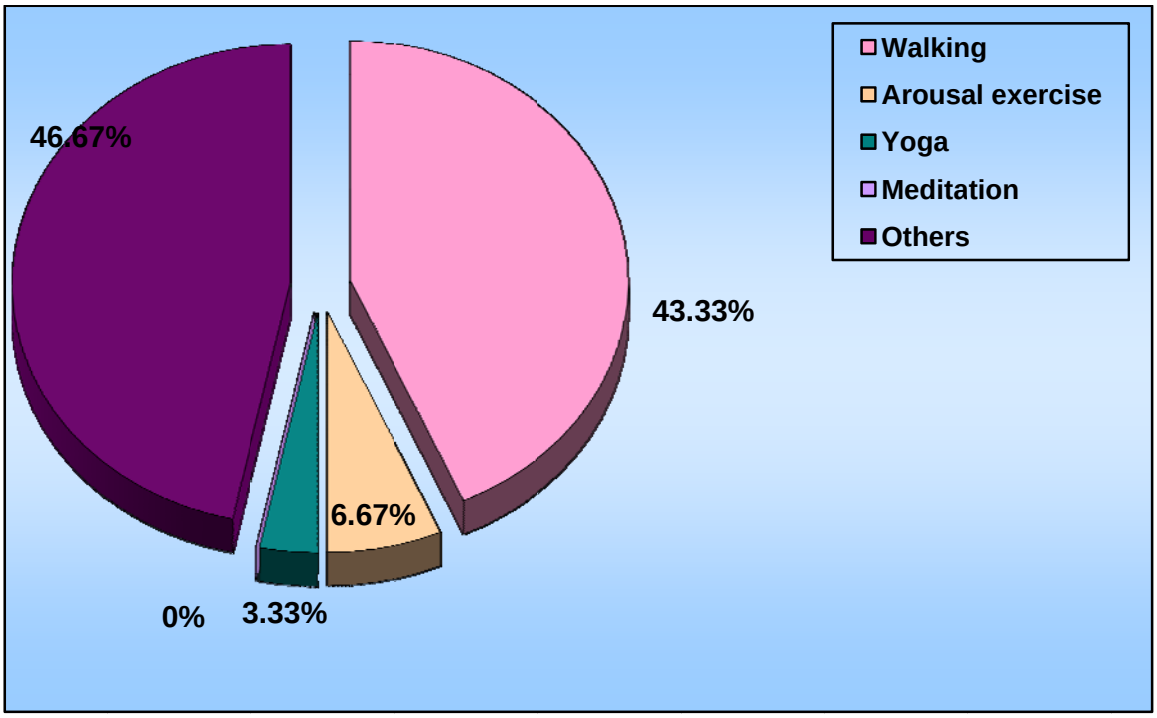

Fig.10: Percentage distribution of physical activity of the women in the experimental group

Physical activity of the women in the control group

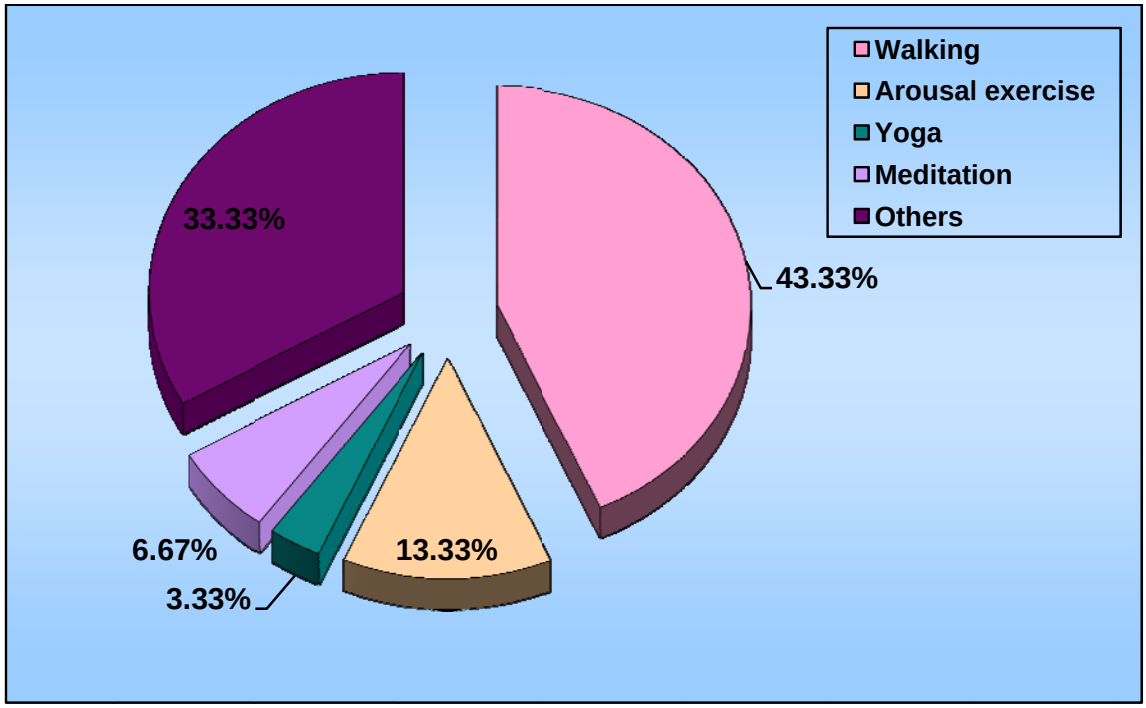

Fig.11: Percentage distribution of physical activity of the women in the control group

SECTION – B

Table - II

Frequency and percentage distribution of level of pre and post test level of obesity in the experimental group.

n =30

Obesity	Normal (18.5 – 25)		Overweight (25 – 30)		Obese Cl-1 (30 – 35)		Obese Cl-2 (35 – 40)		Obese Cl-3 (>40)	
	No.	%	No.	%	No.	%	No.	%	No.	%
Pretest	0	0	0	0	21	70.0	9	30.0	0	0
Post Test	0	0	3	10.0	18	60.0	9	30.0	0	0

The above table shows that in the pretest 21(70%) were in the obese class-1 category and 9(30%) were obese class-2 category and in the post test 18(60%) were in obese -1 category, 9(30%) were obese class-2 category and 3(10%) were overweight.

Table – III

Frequency and percentage distribution of level of pre and post test level of obesity in the control group

n = 30

Obesity	Normal (18.5 – 25)		Overweight (25 – 30)		Obese Cl-1 (30 – 35)		Obese Cl-2 (35 – 40)		Obese Cl-3 (>40)	
	No.	%	No.	%	No.	%	No.	%	No.	%
Pretest	0	0	0	0	22	73.33	8	26.67	0	0
Post Test	0	0	0	0	22	73.33	8	26.67	0	0

The above table shows that in the pretest 22(73.33%) were in the obese class-1 category and 8(26.67%) were obese class-2 category and in the post test 22(73.33%) were in obese -1 category and 8(26.67%) were obese class-2 category.

SECTION – C

Table – IV

Comparison of pre-test and post test level of obesity in the experimental group.

n = 30

Obesity	Mean	S.D	't' Value
Pretest	34.92	2.62	t = 4.705***
Post Test	28.93	2.27	p = 0.000, (S)

***p<0.001, S – Significant

The above table shows that in the experimental group the pretest mean score was 34.92 with S.D 2.62 and the post test mean was 28.93 with S.D 2.27. The calculated 't' value of 4.705 was statistically highly significant at p<0.001 level which clearly indicates that there is significant difference between the pretest and post level of obesity in the experimental group.

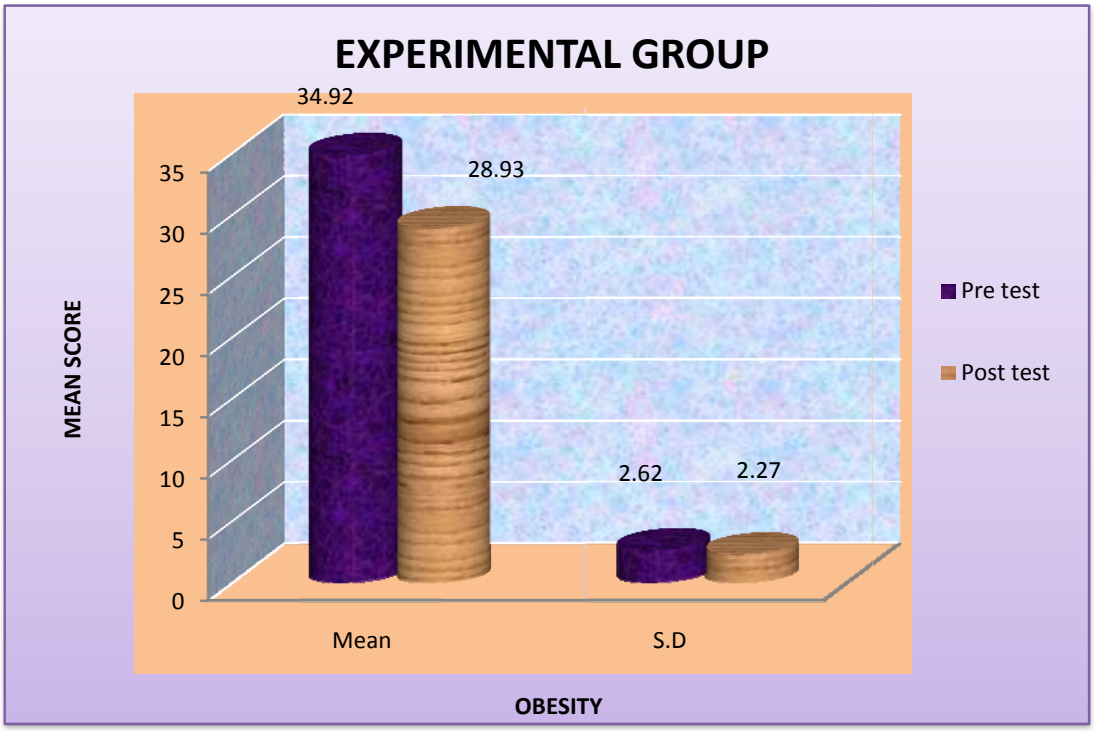

Fig.12: Comparison of pre-test and post test level of obesity in the experimental group.

Table - V

Comparison of pre-test and post- test level of obesity in the control group.

n = 30

Obesity	Mean	S.D	't' Value
Pretest	28.78	2.61	t = 1.046
Post Test	30.73	2.45	p = 0.304, (N.S)

N.S – Not Significant

The above table shows that in the control group the pretest mean score was 34.78 with S.D 2.61 and the post test mean was 30.73 with S.D 2.4528 The calculated 't' value of 1.046 clearly indicates that there is no significant difference between the pretest and post level of obesity in the control group.

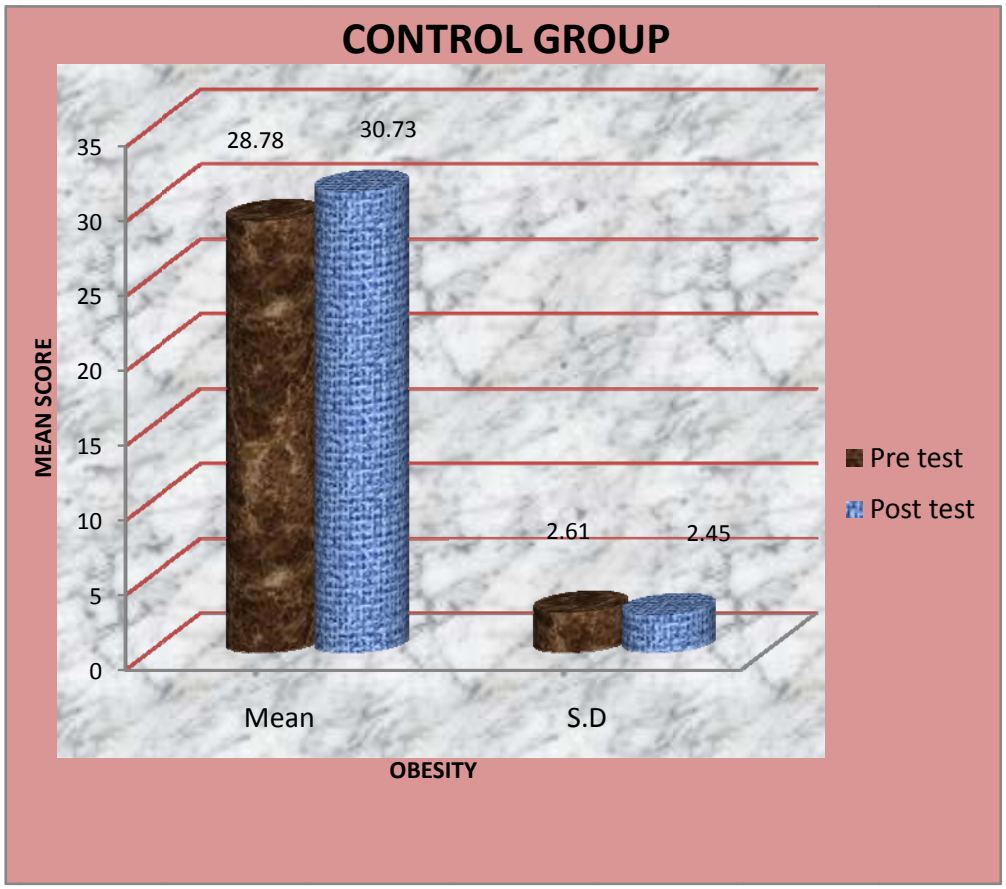

Fig. 13: Comparison of pretest and post test level of obesity in the control group

SECTION – D

Table – VI

Comparison of post test level of obesity between the experimental and control group.

n = 30

Post Test	Mean	S.D	't' Value
Experimental Group	28.93	2.27	t = -2.9518***
Control Group	30.73	2.45	p = 0.0046(S)

S ***– Significant

The above table shows that in the experimental group the post-test mean score was 28.93 with S.D 2.27 and in the control group the post test mean was 30.73 with S.D 2.45. The calculated 't' value of 2.9518 was statistically highly significant at $p<0.0046$ level which clearly indicates that there is significant difference between the post-test level of obesity in the experimental group and control group.

LEVEL OF OBESITY BETWEEN THE EXPERIMENTAL AND CONTROL GROUP

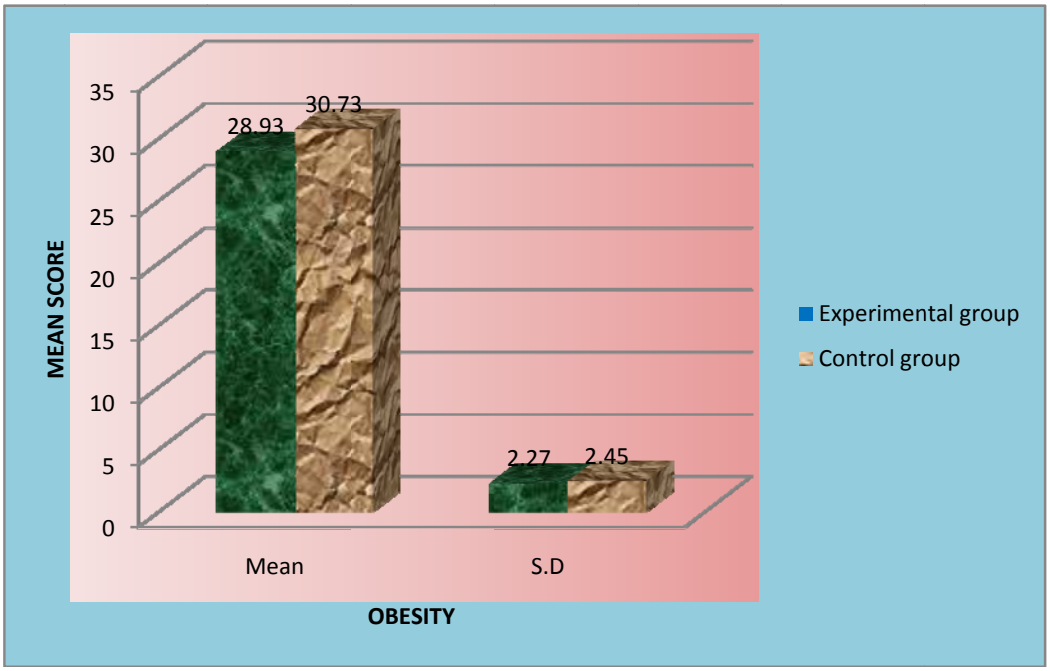

Fig.14: Comparison of post test level of obesity between the experimental and control group.

SECTION - E

Table – VII

Association of mean difference score of obesity with the demographic variables in the experimental group

n = 30

Demographic Variables	Pretest		Post Test		Mean Diff.		ANOVA / 't' Value
	Mean	S.D	Mean	S.D	Mean	S.D	
Age in Years							F = 0.758 d.f = 3, 26 p = 0.528 N.S
30 - 35 yrs	34.00	3.95	32.43	3.13	1.57	2.06	
36 - 40 yrs	34.84	2.25	34.02	2.39	0.82	0.88	
41 - 45 yrs	35.59	1.69	34.83	1.35	0.77	0.41	
46 - 50 yrs	35.87	2.85	34.93	2.72	0.93	0.15	
Education of the women							F = 0.823 d.f = 5, 24 p = 0.545 N.S
Non literate	34.06	0.28	33.55	0.52	0.51	0.55	
Primary	35.37	2.33	34.47	2.17	0.90	0.32	
Middle	34.05	3.47	32.42	2.92	1.63	1.81	
Higher Secondary	35.94	2.75	35.33	2.48	0.61	0.96	
Diploma / Degree	35.50	2.38	34.60	2.31	0.90	0.10	
Other	34.80	-	34.00	-	0.80	-	
Marital Status							F = 0.866 d.f = 3, 26 p = 0.471 N.S
Unmarried	35.48	2.01	35.70	0.14	-0.22	1.87	
Married	35.30	2.62	34.17	2.46	1.12	1.18	
Widows	33.40	1.41	32.45	1.34	0.95	0.07	
Separated	31.40	1.69	30.70	1.84	0.70	0.14	
Occupation							F = 0.509 d.f = 3, 26 p = 0.680 N.S
Unemployment	34.61	2.87	33.77	2.69	0.83	0.33	
Self employment	35.24	2.73	33.77	2.59	1.47	2.39	
Technical	36.40	2.55	35.44	2.41	0.96	0.21	
Professional	33.64	0.88	32.87	1.04	0.77	0.49	
Type of food							t = -1.297 d.f = 22 p = 0.208 N.S
Vegetarian	34.46	1.76	33.74	1.65	0.71	0.37	
Non vegetarian	35.19	3.03	34.04	2.89	1.16	1.42	
Physical activity							F = 0.994 d.f = 3, 26 p = 0.411 N.S
Walking	35.09	2.08	33.80	1.66	1.29	1.49	
Arousal exercise	36.93	4.06	37.10	2.12	-0.17	1.94	
Yoga	33.70	-	33.00	-	0.70	-	
Meditation	-	-	-	-	-	-	
Others	34.58	3.03	33.66	3.01	0.91	0.58	

Demographic Variables	Pretest		Post Test		Mean Diff.		ANOVA / 't' Value
	Mean	S.D	Mean	S.D	Mean	S.D	
Drugs							F = 1.035 d.f = 3, 26 p = 0.393 N.S
Cortico - steroids	37.03	4.20	37.20	2.26	-0.17	1.94	
Insulin	32.60	-	32.00	-	0.60	-	
Contraceptive	35.29	2.48	34.50	2.29	0.79	0.39	
None of the above	34.67	2.61	33.45	2.39	1.22	1.29	
Family history							F = 0.124 d.f = 2, 27 p = 0.884 N.S
Hereditary	34.93	3.28	33.88	3.26	1.05	0.49	
Thyroid problem	35.28	1.62	34.48	1.38	0.79	0.42	
Any other	34.68	2.53	33.63	2.14	1.06	1.87	

N.S – Not Significant

Table VII depicts that none of the demographic variables had shown significant association with the mean improvement level of obesity in the experimental group.

CHAPTER – V

DISCUSSION

This chapter discusses the findings of the study derived from descriptive and inferential statistical analysis.

The statement of the problem was ‘’A study to assess the outcome of green tea on level of weight among obese women in selected villages.

The objectives were

1. To assess the pre-test level of weight among obese women aged between 30-50 yrs in experimental and control group
2. To assess the post-test level of weight among obese women aged between 30-50 years in experimental and control group
3. To assess the outcome of green tea among obese women aged between 30-50 years in experimental group.
4. To compare the pre and post-test level of weight between the experimental and control group
5. To associate mean difference between obese women age group 30-50 years with demographic variables in the experimental group.

The demographic variables selected in the study was age ,education of the women , marital status, occupation, type of food , physical activity, drugs, family history.

In the experimental group, majority of the women 13(43.33%) were in the age groups of 36 – 40 years, 9(30%) had middle school level education, 24(80%) were married, 14(46.67%) were unemployed. It further shows that majority 19(63.33%) were non vegetarian, 14(46.67%) had other form of physical activity, 19(63.33%) had not taken drugs, 12(40%) had family history of hereditary, 16(53.33%) had waist measurement between 94 – 98 cm, 16(53.33%) were in the height range of 156 – 160 cm, 12(40%) were in the range of 76 – 80 kg of weight and 17(56.67%) had 34 – 57 range of BMI.

Whereas in the control group, majority of the women 12(40%) were in the age groups of 36 – 40 years, 11(36.67%) had primary school level education, 24(80%) were married, 10(33.33%) were self employed and technical type of employment. It further shows that majority 18(60%) were non vegetarian, 13(43.33%) had the activity of walking, 20(67.77%) had not taken drugs, 12(40%) had family history of hereditary and other form of history, 12(40%) had waist measurement between 94 – 98 cm, 12(40%) were in the height range of 156 – 160 cm, 13(43.33%) were in the range of 76 – 80 kg of weight and 18(60%) had 34 – 57 range of BMI.

The first objective was to assess the pre-test level of obesity in experimental group and control group.

Considering the experimental group, in the pre-test 21(70%) were in the obese class-1 category and 9(30%) were obese class-2 category.

Where as in the control group the pre-test 22(73.33%) were in the obese class-1 category and 8(26.67%) were obese class-2 category.

The second objective was to assess the post test level of obesity among women aged between 30-50 years in experimental and control group.

Considering the experimental group, in the post-test 18(60%) were in the obese class-1 category and 9(30%) were obese class-2 category and 3(10%) were overweight.

Where as in the control group the post test 22(73.33%) were in the obese class-1 category and 8(26.67%) were obese class-2 category.

The third objective was to assess the outcome of green tea among women aged between 30-50 years in experimental group.

In the experimental group the outcome of green tea among obese women aged between 30-50 years before and after providing green tea was done by using “t” test .The pre-test mean score was 34.92 with S.D 2.62 and the post test mean was 33.93 with S.D 2.47. The calculated t’ value of 4.705 was statistically highly significant at $p<0.001$ level which clearly indicates that there is significant difference between the pre-test and post level of obesity in the experimental group.

Hence the research hypothesis H_1 states that there is significant difference between pre test and post test level of weight among obese women aged between 30-50 years was accepted.

The finding of the study was consistent with the study conducted by khon kaen (2010) to investigate the outcome of green tea on weight reduction in obese. This study was undertaken to investigate the effects of green tea on weight reduction in obese Thais. A randomized controlled trail involving 60 obese subjects (body mass index, BMI greater than 25kg/m (2) was conducted. All subjects consumed a Thai diet containing 3 meals for 12 weeks. The diet contained 65 percentage carbohydrates, 15 percentage proteins, and 20 percentage fats. In comparing the two groups, differences in weight loss were 2.70, 5.10. And 3.3 kg during the 4, 8, and 12 weeks of the study, respectively. At the 8 and 12 weeks of the study, body weight loss was significantly different. We conclude that green tea can reduce body weight in obese Thai subjects by increasing energy expenditure and fat oxidation.

The fourth objectives was to compare the post –test level of obesity between the experimental and control group

Considering the experimental group the post-test mean score was 28.93 with S.D 2.27 and in the control group the post test mean was 30.73 with S.D 2.45. The calculated 't' value of 2.9518 was statistically highly significant at $p<0.0046$ level which clearly indicates that there is significant difference between the post-test level of obesity in the experimental group and control group.

The study finding was found to be consistent with the study Carmen Cabrer(2009) conducted a study to evaluate the outcome of green tea catechins (GTCs) with or without caffeine have been studied in randomized controlled trials (RCTs) for their effect on anthropometric measures. The objective was to perform a systematic review and Meta – analysis of RCTs of GTCs on anthropometric variables, including body mass index (BMI), body weight, waist circumference, waist–to–hip ratio (WHR). The weighted mean difference of change from baseline (with 95 percentage CIs) was calculated by using a random – effect model. Result fifteen studies (n= 1243 patients) met the inclusion criteria. On meta- analysis, GTCs with caffeine decreased BMI, body weight, and WC. The administration of GTCs with caffeine is associated with statistically significant reduction in BMI, body weight, and WC.

The fifth objective was to associate mean difference between women age group between 30-50 years with demographic variable:

In experimental group none of the demographic variables had shown significant association with the mean improvement level of obesity in the experimental group.

Thus the research hypothesis H_2 stated that "there is a significant association of mean difference on level of obesity with the selected demographic variables in the experimental group" was rejected by the researcher.

The conceptual frame work of this study was based on the modified Weidenbach's Helping Arts Model.

The conceptual framework for the study was derived from Weidenbach's Helping Art of Clinical Nursing Theory (1964). It describes a desired situation and a way to attain it.

Investigator adopted this model and perceived apt in enabling to assist the effectiveness of green tea on weight level.

This model views the obese women client as an individual with unique experiences who were in need for reduction of weight level.

The investigator planned the prescription that would fulfill the central purpose by identifying the various means to achieve the goal. Thus the investigator selected the dietary intervention green tea 5g which was considered as effective, safe and reduces weight without serious side effects

The investigator selected two groups where green tea with oral agent was provided for one group and no intervention was provided for other group. The realities identified in the study are

A	-	Agent	-	Investigator
B	-	Recipient	-	obese women
C	-	Goal	-	Reduction of weight
D	-	Means	-	Green Tea
E	-	Environment	-	Community

In the present study, evaluates the outcome of green tea on obesity patients. The investigator having analyzed the data and has come to the conclusion that green tea has an effect on obesity.

CHAPTER – VI

SUMMARY, NURSING IMPLICATIONS, RECOMMENDATIONS AND LIMITATION

This chapter presents the summary of the study and conclusion drawn. It clarifies the Nursing implication, Recommendation and Limitation of the study in different areas of life Nursing practice, Nursing administration, Nursing education, Nursing research.

SUMMARY

Statement of the Study

Statement of the study was "A quasi experimental study to assess the outcome of green tea on level of weight among obese women with the age group of 30-50 years in a selected Periyasevalai Village at Villupuram "district .

OBJECTIVES OF THE STUDY

1. To assess the pre-test level of weight among obese women aged between 30-50 yrs in experimental and control group
2. To assess the post-test level of weight among obese women aged between 30-50 years in experimental and control group
3. To assess the outcome of green tea among obese women aged between 30-50 years in experimental group.
4. To compare the pre and post-test level of weight between the experimental and control group
5. To associate mean difference between obese women age group 30-50 years with demographic variables in the experimental group.

ASSUMPTIONS OF THE STUDY

1. Obesity may be prevalent among women age group between 30-50 years.
2. Green tea may have same effect on weight among obese women
3. Green tea comes from the same camellia sinensis plant, It contain large amount of polyphenols and catechins, it helps to reduce the body fat and weight loss of human body

HYPOTHESIS FORMULATED WERE:

H_1 – There is a significant relationship between pre and post-test level of weight among obese women age group between 30 to 50 years, in the experimental group and control group.

H_2 – There is a significant association of mean difference level of weight among obese women age group between 30 to 50 years with demographic variables in the experimental group.

Review of literature revealed studies related to obesity, green tea on weight reduction, green tea on other parameters.

The conceptual framework adopted for the study was based on Weidenbach's Helping Art Model.

The study was conducted at Periyasevalai village at Villupuram district.

Quasi experimental research design was adopted to evaluate the outcome of green tea on level of weight among obesity women.

Non probability purposive sampling technique was selected for the research subject. The investigator selected 60 samples that fulfill the inclusion criteria. The obesity women in the experimental group (30) got green tea for 30 days and in the control group (30) no intervention was assessed with standardized weighing machine. The tool consisted of demographic variables.

Analysis revealed the following:

The demographic variables selected in the study was age ,education of the women, marital status, occupation , type of food , physical activity, drugs and family history

In the experimental group, majority of the women 13(43.33%) were in the age groups of 36 – 40 years, 9(30%) had middle school level education, 24(80%) were married, 14(46.67%) were unemployed. It further shows that majority 19(63.33%) were non vegetarian, 14(46.67%) had other form of physical activity, 19(63.33%) had not taken drugs,

12(40%) had family history of hereditary, 16(53.33%) had waist measurement between 94 – 98 cm, 16(53.33%) were in the height range of 156 – 160 cm, 12(40%) were in the range of 76 – 80 kg of weight and 17(56.67%) had 34 – 57 range of BMI.

Whereas in the control group, majority of the women 12(40%) were in the age groups of 36 – 40 years, 11(36.67%) had primary school level education, 24(80%) were married, 10(33.33%) were self employed and technical type of employment. It further shows that majority 18(60%) were non vegetarian, 13(43.33%) had the activity of walking, 20(67.77%) had not taken drugs, 12(40%) had family history of hereditary and other form of history, 12(40%) had waist measurement between 94 – 98 cm, 12(40%) were in the height range of 156 – 160 cm, 13(43.33%) were in the range of 76 – 80 kg of weight and 18(60%) had 34 – 57 range of BMI.

Considering the experimental group**,** in the pretest 21(70%) were in the obese class-1 category and 9(30%) were obese class-2 category and Control group in the pretest 22(73.33%) were in the obese class-1 category and 8(26.67%) were obese class-2 category.

Considering the experimental group**,** in the posttest 18(60%) were in the obese class-1 category and 9(30%) were obese class-2 category and 3(10%) were overweight & Control group in the post- test 22(73.33%) were in the obese class-1 category and 8(26.67%) were obese class-2 category.

In the experimental group the pretest mean score was 34.92 with S.D 2.62 and the post test mean was 28.93 with S.D 2.27. The calculated ’t’ value of 4.705 was statistically highly significant at $p<0.001$ level which clearly indicates that there is significant difference between the pretest and post level of obesity in the experimental group.

In the control group the pretest mean score was 34.78 with S.D 2.61 and the post test mean was 30.73 with S.D 2.45. The calculated ‘t’ value of 1.046 clearly indicates that there is no significant difference between the pretest and post level of obesity in the control group.

Considering the experimental group the post-test mean score was 28.93 with S.D 2.27 and in the control group the post test mean was 30.73 with S.D 2.45. The calculated 't' value of 2.9518 was statistically highly significant at $p<0.0046$ level which clearly indicates that there is significant difference between the post-test level of obesity in the experimental group and control group.

In experimental group none of the demographic variables had shown significant association with the mean improvement level of obesity in the experimental group.

NURSING IMPLICATIONS

The investigator has derived from the study the following implications which are of vital concern in the field of nursing practice, nursing administration, nursing research and nursing education.

Nursing Practice

The nurse have to health educate in reducing weight level as an independent nursing intervention. This can be facilitated by motivating the nurses to

1. Insist the obesity clients to take green tea in their daily diet.
2. Teach the obesity clients and significant others about the benefits of taking green tea in reduction of weight.

Nursing Education

The nurse educator can include dietary management as a means of non pharmacological therapy in the curriculum. The effect of dietary management on health and illness can be adopted by the students and the nursing personnel too.

1. The holistic care approach should be emphasized more during the training period of nursing students.
2. The student nurses should have greater involvement in the current workshop, seminar and symposium related to dietary management of obesity being organized by the same or any other institution.
3. Article on dietary management of Green Tea for obesity should be made available in the nursing journals.
4. Journals should be made available at nursing schools and colleges related to dietary management of Green Tea.

Nursing Administration

1. Nursing administrator can formulate the protocols and insist the nurses to give dietary management intervention on obesity clients.
2. In service education can be conducted to disseminate the dietary management of obesity research findings through continuing nursing education to all nurses.

Nursing Research

1. Nurse researcher can conduct more research on dietary management of obesity in all settings.
2. Disseminate the findings of dietary management of obesity through conferences, seminars, publication in professional, national and international journal and World Wide Web.

RECOMMENDATIONS

1. A similar study can be conducted on a large sample size.
2. Comparative study may be conducted to evaluate the effectiveness of dietary management and in combination with other complementary therapies.
3. A similar study can be conducted among urban and rural obesity women
4. A similar study can be carried out in other areas such as hospital.

LIMITATION

Review of literature contains few Indian studies related to dietary management of Green Tea on obesity.

REFERENCES

BOOKS

Annamma Jacob (1994). *Comprehensive textbook of midwifery* (1st ed). New Delhi: Jaypee Brothers Publication. P.No 110-112

Bennet Brown (1986). *Textbook of obstetrics & gynaecology* (13th ed.). Churchill Livingstone Publication. P.No 320-324

Bennett Ruth, B., & Linda, V. (2003). *Myle's Textbook for Midwives*. London: Churchill Livingstone. P.No 510-511

Berklaura.E. (2001). *Child development*. (2nd edition).New Delhi: Prentice Hall publishers. P.No 120-122

Bonnie Bullough, Vern Bullough. (1990). *Nursing in the community*. USA: The C.V.Mosby Company. P.No 343-344

Carol Bellamy. E. (2002). *Oxford textbook of public health*. (4th edition).New York: Oxford University Press. P.No 564-565

Claudia, M., Francis, A. (1995). *Community Health Nursing*. (6th edition).USA: W.B.Saunders Company. P.No 440-441

Deitra Leonard, Lowderrilk. (1997). *Maternity and women's health care*. USA: Mosby Publishers. P.No 525-530

Gupta, LC. (2006). *Food and Nutrition*.(6th edition).New Delhi: Jaypee Brothers Publishers. P.No 96-97

KasturiSundarRao. (2000). *Introduction to community health nursing*. (3rd edition). Chennai: B.I.PublicationPvt. Ltd. P.No 115-117

Lutz Carroll. A. (1997). *Nutrition and Diet Therapy*. (2nd edition).Philadelphia: F.A David Company. P.No 125-130

Molly Sam & Geetha N. (2000). *A textbook of nutrition for nurses*. New Delhi: Jaypee Brothers Publishers. P.No 115-117

Park.K. (2006). *Textbook of preventive and social medicine*. (19th edition).Jabalpur: M/s.Banarsidas Bhanot Publishers P.NO 220-222

Prabhakara Rao. (2006). *Biostatistics*. New Delhi: Jaypee Brothers Medical publishers (P) Ltd.P.NO 456-457

Prabhakara, GN. (2004). *Textbook of community health for nurses*.New Delhi: Jaypee Publishers and Distributors (P) Ltd.P.NO 200

Rao, K., & Visweswara Rao (1999). *Biostatistics – A manual of statistical methods for use in Health, Nutrition and Anthropology*. New Delhi: Jaypee Brothers Medical Publishers (P) Ltd.P.NO258-259

Reeder Martin, Griffin (2001). *Maternity nursing*. (18thed.). New Delhi: Lippincott Publication. P.NO 123-124

Roger Detels. (2002). *Oxford Textbook of public health*. (4th edition).New York: OxfordUniversity Press. P.NO 426-427

Shanti Gosh. (2004). *Nutrition and Child Care*. (2nd edition). New Delhi: Jaypee Brothers Publishers. P.NO 412-413

Swaminathan.M. (1998). *Textbook on food and nutrition*. (2nd edition).Bangalore: Bangalore Printing and Publishers.P.NO 213.

TNAI.(1999). *Community Health Nursing Manual*. (3rd edition). New Delhi: TNAI Publishers.P.NO.235-236

Wardlaw Gordon, M. (1992). *Contemporary nutrition issues and insights*. Philadelphia: Mosby Publishers.P.NO 321-322

Whaley & Wong's. (1999). *Nursing care of infants and children*. (6th edition). USA: Mosby Publishers.P.NO231 2-32

JOURNALS

Chacko J.M et al., (2010). A study on benefits of effects of green tea. *Eurj Nutr.* 90(1).

Fenrcioglu AK, et al., (2010). A study on the effect of polyphenol containing antioxidants on oxidative stress and lipid peroxidation in obesity without complications, *J. Sci. Food Agri.*, 90(5), 779 – 83.

Hara et al (2009). Green tea catechin on obesity. *Can Fam Physician*. 55(6), 591 – 6.

HNRCA (2008).Green tea on weight level maintenance. *Am J. Chin. Nutr*, 88

Imatoh .T, et al., (2010). A cross-sectional study on coffee consumption Vs. Green tea conception on adipomection in Japanese. *J. Endocrinal Invest*. 33(2), 118 – 24.

Islam MS, Choi H (2007).Green tea on obesity. *Ann Intern Med*. 6145(8), 634.

KU & CRI)(2008). Demonstrated that green tea catechins modulate glucose transport in adipose tissue.Metabolism, 56(12), 1694 – 8.

Panagoitakas DB, et al., (2009). Long term intake of green tea intake reduces. Prevalence of obesity. *Atherosclerosis.* 206(1), 47 – 53.

Shetty .A (2008). Effects of green tea and wine had on people with obesity. *Wien, Med WocheSchr.* 157(13 – 14), 320 – 4.

Skopinski .P, et al., (2010). Suppression of angiogenic activity of sero from obesity.

Tamaya .K (2009).Suppression of weight level by new fermented tea. *You Sei Med J.* 50(1), 37 – 8.

Wolfram .S (2008).Green tea and EGCG on cardiovascular and metabolic health. *Chem Bio Interact*. 160(13 – 14).

NET REFERENCES:

http://en.wikipedia.org/wiki/green-tea

http://www.umm.edu/altmed/articles/greentea-0002455.htm

www.altmedicine.about.com

www.amazing-greentea.com

www.annals.org

www.bedsp.org.

www.benefitsofgreentea

www.buzzel.com

www.greentea.weightloss.net

www.ihealthtube.com

www.level1diet.com

www.mbmc.org/healthgate

www.wh.foods.com

APPENDIX – A

LIST OF EXPERTS FOR CONTENYT VALIDITY

NURSING EXPERTS:

1. **Celina, M.Sc(N)., Ph.D,**
   Reader,
   OmayalAchiCollege of Nursing,
   Avadi, Chennai - 62.

2. **Manonmani, M.Sc(N).,**
   Reader,
   OmayalAchiCollege of Nursing,
   Avadi, Chennai - 62.

3. **Mahalaksmi, M.Sc(N).,**
   Vice Principal,
   M.S.A.J. College of Nursing,
   Chennai - 1.

4. **Laksmi, M.Sc (N)., Ph.D.,**
   Principal,
   Chettinad College of Nursing,
   Padur, Kanchipuram Dt,
   Chennai-103.

MEDICAL EXPERT:

1. **Jalaja M.B.B.S, DPH,**

   Kolathur health post,

   Corporation of Chennai,

   Chennai – 26

.

DIETICIAN

1. **Muralikrishnan**

   M.RHospital,

   Reg.No.244,

   Aminjikarai, Chennai -12

APPENDIX – B

LETTER SEEKING EXPERTS OPINION FOR CONTENT VALIDITY

From

Ms. ARIVUKKARASI.S
M.Sc.(Nursing), II year,
Vel.R.S.Medical College, College of Nursing,
Avadi, Chennai.

To

Respected Madam/Sir,

Sub: Requisition for expert opinion on suggestion for content validity of the tools-reg.

I am Mrs.Arivukkarasi, student of M.Sc.(N) II YEAR at Vel.R.S.Medical College, College of Nursing, Avadi, Chennai.

As a partial fulfillment of requirement in the M.Sc(Nursing) programme, I have to complete a dissertation topic I have selected is **"A quasi experimental study to assess the outcome of green tea on level of weight among obese women with the age group of 30-50 years in selected villages, Villupuram district".** Here with I am sending the developed tools for content validity and for your expert opinion and valuable suggestions.

Thanking you,

Yours sincerely,

ENCLOSURES:

1. Statement and objectives of study
2. Blue print of the tools.
3. Content validity certificate.

CERTIFICATE FOR CONTENT VALIDITY

This is to certify that the tools developed by **Ms.Arivukkarasi** , M.Sc.(N), II year Student, VelR.S.MedicalCollege, College of Nursing, Chennai on the topic. "**A quasi experimental study to assess the outcome of green tea on level of weight among obese women with the age group of 30-50 years in selected villages, villupuram district"** is validated by the undersigned and she can proceed with this tool to conduct the main study.

Place :

Date :

Signature

CERTIFICATE FOR CONTENT VALIDITY

This is to certify that the tools developed by S. Arivukkarasi M.Sc Nursing Student Vel R.S Medical College –College of Nursing, Avadi Chennai-62 on topic **"A study to assess the effectiveness of green tea on weight loss among obese women with age (30-50 years) at selected settings"** is validate by the under designed and she can process with his tools to conduct the main study.

Place: Kelambakkam

Date: 28/6/11

Signature 28/6/11

PRINCIPAL
CHETTINAD COLLEGE OF NURSING
PADUR KANCHIPURAM DT.
PINCODE : 603 103

CERTIFICATE FOR CONTENT VALIDITY

This is to certify that the tools developed by S. Arivukkarasi M.Sc Nursing Student Vel R.S Medical College –College of Nursing, Avadi Chennai-62 on topic **"A study to assess the effectiveness of green tea on weight loss among obese women with age (30-50 years) at selected settings"** is validate by the under designed and she can process with his tools to conduct the main study.

Place: AVADI

Date: 8/6/2011

K. Manimeni

Signature

OMAYAL ACHI COLLEGE OF NURSING
King Cross Road,
S. M. Nagar,
CHENNAI-600 062.

CERTIFICATE FOR CONTENT VALIDITY

This is to certify that the tools developed by S. Arivukkarasi M.Sc Nursing Student Vel R.S Medical College –College of Nursing, Avadi Chennai-62 on topic **"A study to assess the effectiveness of green tea on weight loss among obese women with age (30-50 years) at selected settings"** is validate by the under designed and she can process with his tools to conduct the main study.

Place: Chennai

Date: 3.6.11

Signature 3/6/11

M.S.A.J. COLLEGE OF NURSING
180, Thambu Chetty Street,
CHENNAI-600 001.

CERTIFICATE FOR CONTENT VALIDITY

This is to certify that the tools developed by S. Arivukkarasi M.Sc Nursing Student Vel R.S Medical College –College of Nursing, Avadi Chennai-62 on topic **"A study to assess the effectiveness of green tea on weight loss among obese women with age (30-50 years) at selected settings"** is validate by the under designed and she can process with his tools to conduct the main study.

Place: Chennai

Date: 7/6/11

Signature

MEDICAL OFFICER
KOLATHUR HEALTH POST
CORPORATION OF CHENNAI

APPENDIX - C

INTRODUCTION

Dear participants,

I Miss.Arivukkarasi.,M.Sc(N) II year student from Vel R.S.Medical College-College of Nursing, Avadi, Chennai. I would like to conduct a study to assess the outcome of green tea on level of weight among obese women with the age group of 30-50 years in selected setting. I request you participate in the study. Basal body mass index assessment scale will be used to assess the level of weight in obesity women. I assure you that the responses given by you will be used only for my study purpose. So I request you to kindly give your full co-operation and willingness.

Thanking you.

CONSENT FOR PARTICIPATING IN THE STUDY

I hereby consent to participate in the study title "**A quasi experimental study to assess the outcome of green tea on level of weight among obese women with the age group of 30-50 years in selected villages, villupuram district",** with the clear conscience and free will. I have been clearly explained about the purpose and the benefits of anonymity and freedom to withdraw at any point of the study period.

Thus I hereby consent to participate in the study.

SECTION-A

DEMOGRAPHIC VARIABLES

1. Age in years

a) 30-35
b) 36-40
c) 41-45
d) 46-50

2. Education of the women

a) Non literate
b) Primary
c) Middle
d) Higher secondary
e) Diploma/degree
f) Other

3. Marital status

a) Un married
b) Married
c) Widows
d) Separated

4. Occupation

a) Un employment
b) Self employment
c) Technical
d) Professional

5. Type of food

a) Vegetarian
b) Non-vegetarian

6. Physical activity

a) Walking
b) Arousal exercise
c) Yoga
d) Meditation

7. Drugs

a) cortico-steroids
b) Insulin
c) Contraceptives
d) Non of above

8. Family history

a) Hereditary
b) Thyroid problem
c) Any other

9. Waist circumference

a) 88 – 93 cm
b) 94 – 98 cm
c) 99 – 102 cm
d) 103 – 105 cm

10. Height of women

a) 150 – 155 cm
b) 156 – 160 cm
c) 161 – 165 cm
d) 166 – 170 cm

11. Weight of the women

a) 70 – 75 Kg
b) 76 – 80 Kg
c) 81 – 85 Kg
d) 86 – 90 Kg
e) 91 – 95 Kg

12. BMI of the women

a) 30 – 33
b) 34 – 37
c) 38 – 40

Kft[iu

vd; bgau; mwpt[f;furp. nr. ehd; nty; Mh;. v!;. kUj;Jtf; fy;Y]hp-brtpypah; fy;Y]hpapy; ,uz;lhk; Mz;L KJfiy gl;lgog;ig gapy;fpnwd;. vd;Dila gl;la gog;gpy; Ma;t[nkw;bfhs;s ntz;oa[s;sjhy;, “fpuPd; njdPu; _yk; cly; gUkdpy; Vw;glf;Toa tpist[fs;” gw;wpa Ma;tpid elj;j cs;nsd;. vdnt ehd; elj;jtpUf;Fk; ,e;j Ma;t[f;F j';fs; xj;JiHg;g[jUkhW nfl;Lf; bfhs;fpnwd;.

ed;wp

jdpegu; tptuk;

1. **jftyhupd; taJ tuk;G:**

   a) 30-35
   b) 36-40
   c) 41-45
   d) 46-50

2. **jha;khHfspd; fy;tp jFjp:**
   a) vOj gbf;fj; njupahjtu;
   b) Muk;g epiyg; gs;sp
   c) ,il epiyg; gs;sp
   d) caH epiyg; gs;sp
   e) ,sepiyg; gs;sp
   f) vJTk; ,y;iy

3. **jpUkzj; jFjp:**
   a) jpUkzk; MfhjtH
   b) jpUkzk; MdtH
   c) tpjit
   d) jdpj;J tho;gtH

4. **njhopy; epiy:**
   a) Ntiyapy;yhjtH
   b) Ra njhopy; GupgtH
   c) njhopy; El;gk; Ntiy GupgtH
   d) njhopy; rhHe;j Ntiy GupgtH

5. **czT Kiw:**
   a) irtk;
   b) mirtk;

6. **gapHr;rp Kiw:**
   a) elj;jy;
   b) %r;R gapHr;rp
   c) Mrd gapHr;rp
   d) jpahd gapHr;rp
   e) vJTk; ,y;iy

7. **kUe;J:**

a) fHbNfh-];buha;L
b) ,d;Rypd;
c) fUjilj; kUe;Jfs;
d) vJTk; ,y;iy

8. **FLk;g tuyhW:**
   a) guk;giuahf
   b) ijuha;L gpur;rpid
   c) VjhthJ

9. **,Lq;G Rw;wsT:**
   a) 88 - 93 nr.kP
   b) 94 - 98 nr.kP
   c) 99 - 102 nr.kP
   d) 103 -105 nr.kP

10. **cauk;:**
   a) 150 -155 nr.kP
   b) 156 -160 nr.kP
   c) 161 -165 nr.kP
   d) 166 -170 nr.kP

11. **vil:**
   a) 70 -75 fpNyh.fp
   b) 76 -80 fpNyh.fp
   c) 81-85 fpNyh.fp
   d) 86-90 fpNyh.fp
   e) 91-95 fpNyh.fp

12. **cly; gUkd; msT**:
   a) 30 - 33
   b) 34 - 37
   c) 38 - 40

VEL R.S. Medical College

(College of Nursing)

Owned by R.S. Trust

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No. 42, Avadi - Alamathi Road,
Vellanur (Post), Avadi, Chennai - 600 062
Phone : 044 - 26840605, E-mail : vrsmc_con@yahoo.com

Administrative Office:
"Santi Sudha", # 38 (Old No. 24),
ABM Avenue, (Opp. Park Sheraton Hotel),
Chennai - 600 028. India.
Phone off : 24355648, 24334845, 24335828
Residence : 24344708
Fax : 24340386, 24357591
Grams : VELGROUP CHENNAI - 28
E-mail : veltech@md3.vsnl.net.in
Website : WWW.vel-tech.org
Phone : 26841093 Fax : 26841601

13/01/2011

To

Sub: Seeking permission for conducting main and pilot study-reg.

Respected Sir/ Madam,

This is to introduce Ms. S.Arivukkarasi, Master Degree Nursing student of this college. She has selected the following topic for the Research study to be submitted to the T.N Dr. M.G.R Medical University as partial fulfillment of the master degree in nursing program.

The topic for the study is "Effectiveness of Green tea on weight loss among obesity women".

She is interested in conducting Main Study & Pilot study at your estimated institution.

I assure you that our student will abide by the rules and regulations of the Institution. I request you're at most help in regard to the same.

Thanking you,

Place:
Date

ஸ்ரீ. சாந்தி
விலாக்கம் ஒன்றிய வழக்கில்
5-வது வார்டு
வேளாளூர் மாவட்டி சென்னை-6

Prof. Mrs. M. Anuradha
PRINCIPAL
VEL R. S. MEDICAL COLLEGE
(COLLEGE OF NURSING)
42, AVADI-ALAMATHI ROAD

NO HARM CERTIFICATE

This is to certify that the tools developed by S.Arivukkarasi M.Sc(Nursing) 2nd year student Vel.R.S Medical College, College of Nursing, Avadi Chennai on the topic **"A true experimental study to assess the effectiveness of green tea on obesity among women aged 30 to 55 years at selected settings."** Is validated by the undersigned and she can proceed with this to conduct the main study.

Place: Chennai

Date: 29.6.2011

Signature

M. R. HOSPITAL
REGD No. 244
12/20 GO[illegible] STREET,
AYYAVOO[illegible]
MINJIKARA [illegible]
[illegible]

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TO WHOM IT MAY CONCERN

This is to Certify that the dissertation work **"A Quasi Experimental study to assess the outcome of green tea on level of weight among obese women in age between 30 to 50 years at Periyasevalai village, Villupuram District2011 – 2012,"**was done by **Ms.Arivukkarasi.S** II year M.Sc(Nursing) student**,** of Vel. R.S Medical College- College of Nursing,Chennai, is edited for English Language appropriateness by

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PLACE: Chennai

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_____

Name:

Signature:

PLACE: Chennai

DATE:

M. SREEDHARAN, M.Sc., M.Ed., M.Phil., M.B.A.,
P.G. Asst (Chemistry)
Vijayanta Hr., Sec., School,
HVF Estate, Avadi, Chennai-600 054.

CERTIFICATE FOR TAMIL EDITING

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Name:

Signature:

11.1.12

D. AMALA SUJEEVANA M.A., M.Ed. 11/1/12
Headmistress
Avadi Municipal Middle School
Kovilpadagai
Avadi, Chennai-600 0[illegible]