

**A STUDY TO EVALUATE THE EFFECTIVENESS OF GREEN TEA
SUPPLEMENT ON WEIGHT REDUCTION AMONG OBESE
WOMEN IN SELECTED URBAN AREAS
AT COIMBATORE.**



By

Reg. No:301926001

**A DISSERTATION SUBMITTED TO THE TAMILNADU
Dr. M.G.R. MEDICAL UNIVERSITY, CHENNAI IN
PARTIAL FULFILLMENT OF REQUIREMENT
FOR THE DEGREE OF MASTER OF
SCIENCE IN NURSING**

OCTOBER 2021

**A STUDY TO EVALUATE THE EFFECTIVENESS OF GREEN TEA
SUPPLEMENT ON WEIGHT REDUCTION AMONG OBESE
WOMEN IN SELECTED URBAN AREAS
AT COIMBATORE.**



By

Reg. No: 301926001

Approved by

EXTERNAL

INTERNAL

**A DISSERTATION SUBMITTED TO THE TAMILNADU
Dr. M.G.R. MEDICAL UNIVERSITY, CHENNAI IN
PARTIAL FULFILLMENT OF REQUIREMENT
FOR THE DEGREE OF MASTER OF
SCIENCE IN NURSING**

OCTOBER 2021

**A STUDY TO EVALUATE THE EFFECTIVENESS OF GREEN TEA
SUPPLEMENT ON WEIGHT REDUCTION AMONG OBESE
WOMEN IN SELECTED URBAN AREAS
AT COIMBATORE.**

CERTIFIED THAT THIS IS THE BONAFIED WORK OF

Reg. No: 301926001

**P.P.G COLLEGE OF NURSING,
COIMBATORE**

SIGNATURE: _____ COLLEGE SEAL

Dr.P.MUTHULAKSHMI, M.Sc (N),M.Phil., Ph.D.,

Principal,

P.P.G College of nursing,

Coimbatore -35

**A DISSERTATION SUBMITTED TO THE TAMILNADU
Dr. M.G.R. MEDICAL UNIVERSITY, CHENNAI IN
PARTIAL FULFILLMENT OF REQUIREMENT
FOR THE DEGREE OF MASTER OF
SCIENCE IN NURSING**

OCTOBER 2021

**A STUDY TO EVALUATE THE EFFECTIVENESS OF GREEN TEA
SUPPLEMENT ON WEIGHT REDUCTION AMONG OBESE
WOMEN IN SELECTED URBAN AREAS
AT COIMBATORE.**

APPROVED BY THE DISSERTATION COMMITTEE ON APRIL 2020

PRINCIPAL:

Dr.P.MUTHULAKSHMI, M.SC (N)., M.Phil., Ph.D.,
Principal,
P.P.G College of nursing,
Coimbatore -35.

SUBJECT GUIDE :

Mrs. GANDHIMATHI, M.Sc(N).,
Department of Community Health Nursing,
PPG College of Nursing
Coimbatore- 35

MEDICAL GUIDE :

Dr.PADMAJA, M.D,
Department of Medicine,
Ashwin Hospital,
Coimbatore.

**A DISSERTATION SUBMITTED TO THE TAMILNADU
Dr. M.G.R. MEDICAL UNIVERSITY, CHENNAI IN
PARTIAL FULFILLMENT OF REQUIREMENT
FOR THE DEGREE OF MASTER OF
SCIENCE IN NURSING**

OCTOBER 2021

PLAGIARISM CERTIFICATE

This is to certify that the dissertation work titled “ **A STUDY TO EVALUATE THE EFFECTIVENESS OF GREEN TEA SUPPLEMENT ON WEIGHT REDUCTION AMONG OBESE WOMEN IN SELECTED URBAN AREAS AT COIMBATORE**”

” of the candidate with registration number **301926001** for the award of M. Sc Nursing in the Branch of Community Health Nursing. I personally verified the **PLAGARISM CHECKER X. COM** website for the purpose of plagiarism check. I found that the uploaded thesis file contains from introduction to conclusion pages and results shows **16%** of plagiarism in the dissertation.

**Signature of the
Subject Guide**

Dr.P.MUTHULAKSHMI, M.Sc(N)., M.Phil., Ph.D.,
Principal,
P.P.G College of nursing,
Coimbatore -35.

ACKNOWLEDGEMENT

ACKNOWLEDGEMENT

With heartfelt gratitude to **GOD ALMIGHTY** for the foundation of the knowledge, wisdom and grace whose salutary benign benison enabled us to achieve this target.

I sincerely acknowledge my indebtedness to **My parents, My Husband Mr. Jonson, Well Wishers and Friends** for their love, support, prayer, encouragement and help throughout my study.

I extend my deep sense of gratitude whole heartedly to **Dr. L. P. Thangavelu, M.S, F.R.C.S**, Managing Trustee and **Mrs. Shanti Thangavelu M.A.**, Correspondent, P.P.G. Memorial Charitable Trust, Coimbatore, and Mr. Akshaya, Managing Director P.P.G. Memorial Charitable Trust, Coimbatore, who helped us in making the project great success.

I express my upgraded thanks to **Dr.P. Muthulakshmi, M.Sc(N)., M.Phil., Ph.D.**, Principal and our research guide with professional competence. It is a matter of fact that without her esteemed suggestions, highly scholarly touch and piercing insight from the inception till the completion of the study, this work could not have been presented in the manner it has been made. Without her interest valuable guidance, creative suggestions, constant encouragement and support, this study would have never taken up shape. Being guided by her has been a great honour and privilege.

I express my sincere thanks to **Mr.Venugopal M.phil.**, Professor of Research methodology who helped for this project work and statistical analysis.

I extend my profound gratitude and sincere thanks to subject guide, **Professor R. Gandhimathi, M.Sc(N).**, Department of Community Health Nursing, P.P.G College of Nursing, who moulded us in to effective candidate by her encouragement, timely helps, guidance, valuable suggestion and enormous support to make this project a successful one.

Its my long felt desire to express thanks to subject **Professor Mrs. Menaka, M.Sc (N).**, Department of Community Health Nursing for the valuable contribution for completing the study constructive evaluation and valuable suggestions which have enabled me to shape this research.

My sincere thanks to class coordinator, **Prof. Umamaheswari M.Sc (N).**,
Department of Medical Surgical Nursing for their valuable guidance and supervision.

I express my heartfelt gratitude to **Prof. L. Kalaivani, M.Sc(N).**, **Vice Principal of P.P.G college of nursing** for their valuable guidance and supervision and all other faculty members of PPG College of Nursing for their valuable suggestions in my work.

My sincere thanks to all the **Dissertation Committee Members** for their healthy criticism, supportive suggestion which moulded the research.

We express our thanks to **Librarian** of P.P.G College of Nursing and all librarians of Tamil Nadu Dr. M.G.R.Medical University of Chennai.



*Dedicated to Almighty
God, Lovable Parents,
Husband, Sisters,
Brother, Friends &
Well wishers*

ABSTRACT

ABSTRACT

Statement of the problem A study to evaluate the effectiveness of green tea supplement on weight reduction among obese women in selected urban areas at Coimbatore.

Objectives To find the pre test and post test level of weight on green tea supplement among obese women in study and control group. To evaluate the effectiveness of green tea supplement on weight reduction among obese women in study group. To find out the association between the post test level of weight on green tea supplement among obese women with their selected demographic variable in study and control group.

Methodology: A Quantitative approach was used to assess the outcome of green tea on level of weight among obese women. Quasi experimental Non equivalent routine care group before and after design for this interventional. **Independent variable** Green tea supplement, **Dependent variable** body weight reduction. The interventional was conducted in Semmanichettipalayam Village, in Coimbatore District. The village is situated 2 km away from PPG College of Nursing, Saravampatti, and Coimbatore. A structured questionnaire was used to collect the demographic variables such as age, marital status, education, occupation, monthly income, religion and types of family. Clinical variables such as Dietary pattern, family history, drugs are used. Measurement of the BMI was assessed by measuring the weight in Kg with the help of weighing scale and the measurement of height in m² with the help of Inch tape.

FINDINGS: In pre test, in interventional group none of them had normal, overweight and high obesity, 8(72%) had very high and 22(73%) had extreme high obesity. In routine care group none of them had normal, overweight, high obesity, 9(30%) had very high obesity and 21(70%) had extreme high obesity. During post test, in interventional group none of them had normal and overweight, 17(57%) had high obesity, 10(33%) had very high obesity and 3(10) had extreme high obesity. In routine care group during pre test, none of them had normal, overweight and high obesity, 6(20%) had very high obesity and 24(80) had extreme high obesity. The mean score the level of weight in interventional group was 43.9 in pre test and 36 in post test. The estimated paired 't' value was 11* which is significant at p<0.05. It shows that green tea was effective in reducing the level of weight among obese women. In routine care group the mean score the level of weight among obese women was 41.36 in pre test and in post test. The estimated paired 't' value was 1 which is significant at p<0.05. The mean score on level of weight in interventional group was 36 ± 5.37 and in routine care group was 42 ± 3.78. The estimated unpaired 't' value was 4* which is significant at p<0.05. It

shows green tea supplement was effective in reducing the level of weight among obese women. **CONCLUSION** 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 interventional group (30) got green tea for 30 days and in the routine care group (30) no intervention was assessed with standardized weighing machine. The tool consisted of demographic variables. The conceptual framework adopted for the interventional was based on Pender's Health Promotion Model. The interventional was conducted at semmanichettipalayam village at Coimbatore.

CONTENTS

LIST OF CONTENTS

<i>CHAPTER</i>	<i>CONTENT</i>	<i>PAGE NO</i>
I	INTRODUCTION	1
	Background of the Study	1
	Need for the Study	7
	Statement of the Problem	7
	Objectives of the Study	7
	Hypothesis	7
	Assumptions	8
	Operational Definitions	8
	Delimitations	8
	Projected Outcome	8
	Conceptual Framework	9
II	REVIEW OF LITERATURE	12
III	METHODOLOGY	21
	Research Approach and Design	21
	Variables of the Study	22
	Settings of the Study	22
	Population and Sampling	22
	Sample Technique and Sample Size	23
	Sample Selection Criteria	23
	Instruments and Tools for Data Collection	24
	Validity and Reliability	24
	Technique of Data Collection	25
	Report of Pilot Study	25
	Data Analysis Plan	26
IV	DATA ANALYSIS AND INTERPRETATION	28
V	RESULTS AND DISCUSSION	52
VI	SUMMARY, CONCLUSION, LIMITATIONS AND RECOMMENDATION	56
	REFERENCES	
	ANNEXURES	

LIST OF TABLES

<i>S.NO</i>	<i>CONTENTS</i>	<i>PAGE NO</i>
1	Frequency and percentage distribution of obese women according to the demographic variables in interventional group and routine care group	29
2	Frequency and percentage distribution of obese women in interventional group and routine care group according to the level weight before intervention.	43
3	Frequency and percentage distribution of obese women in interventional group and routine care group according to the level of weight after intervention.	44
4	Comparison of mean, standard deviation and paired 't' value on pre and post test level of weight among obese women in interventional group and routine care group.	45
5	Comparison of mean, standard deviation and unpaired 't' value on post test level of weight among obese women in interventional group and routine care group.	47
6	Association between the post test levels of weight among obese women in interventional group with selected demographic variables.	48
7	Association between the post test levels of weight among obese women in routine care group with selected demographic and clinical variables	50

LIST OF FIGURES

<i>S.NO</i>	<i>CONTENTS</i>	<i>PAGE NO</i>
1.	Conceptual Framework Based On Modified Pender's Health Promotion Model	11
2.	Frequency and Percentage Distribution of Demographic Variables According to the Age of The Women	34
3.	Frequency and Percentage Distribution of Demographic Variables According to the Marital Status of Women	35
4.	Frequency and Percentage Distribution of Demographic Variables According to the Education of Women	36
5.	Frequency and Percentage Distribution of Demographic Variables According to the Occupation of Women	37
6.	Frequency and Percentage Distribution of Demographic Variables According to the Life Style of Women	38
7.	Frequency and Percentage Distribution of Demographic variables According to the Monthly Income	39
8.	Frequency and Percentage Distribution of Demographic Variables According to the Religion	40
9.	Frequency and Percentage Distribution of Demographic Variables According to the Disease	41
10.	Frequency and Percentage Distribution of Demographic Variables According to the Drugs	42
11.	Comparison of mean, standard deviation and paired 't' value on pre and post test level of weight among obese women in study group and control group	46

LIST OF ANNEXURES

<i>S. NO</i>	<i>TITLE</i>
1	Reference
2	Appendices
3	Letter seeking permission for conducting the study
4	Letter Seeking Permission From Experts For Content Validity of The Tool
5	Letter for English Editing
6	Letter for Tamil Editing
7	Format for the Content Validity
8	List of experts for Content Validity
9	Tools
10	Plagiarism Certificate

CHAPTER - I

CHAPTER I

INTRODUCTION

“To ensure good health: eat lightly, breathe deeply, live moderately, cultivate cheerfulness, and maintain an interest in life.”– William London

Background of the Study

Good nutrition, physical activity, and a healthy body weight are essential parts of a person's overall health and well-being. Nutrition is the biochemical and physiological process by which an organism uses food to support its life. It includes ingestion, absorption, assimilation, biosynthesis, catabolism and excretion.

Nutrition is a critical part of health and development. Better nutrition is related to improved infants, child and maternal health, stronger immune system, safer pregnancy, child birth and lower risk of non-communicable diseases.

Womanhood is the period in a human female's life after she has passed through childhood, puberty, and adolescence. Different countries have different laws, but age 18 is frequently considered the age of majority. Throughout human history, traditional gender roles have often defined and limited women's activities and opportunities; many religious doctrines stipulate certain rules for women. With restrictions loosening during the 20th century in many societies, women have gained access to careers beyond the traditional homemaker, and the ability to pursue higher education.

Obesity is considered a medical problem in many underdeveloping and developed countries across the world. India is the third most obese country in the world, just behind the US and China. In such a scenario, the rise in obesity and obesity-related disorders focuses on the increasing effect of lifestyle changes, specifically eating habits, i.e. misconception of junk foods. All healthcare professionals, especially in the field of community health nursing, must take an

extensive effort to educate the people to follow healthy lifestyle practices in reduction of weight and make efforts to reduce the obesity.

Weight that is higher than what is considered healthy for a given height is described as overweight or obesity. Body Mass Index is a screening tool for overweight or obesity. BMI is a person's weight in kilograms divided by the square of height in meters. The results of a BMI measurement can give an idea about whether a person has the correct weight for their height. If a person's body mass index is outside of the healthy range, their health risks may increase significantly. A body mass index (BMI) over 25 is considered overweight, and over 30 is obese.

Obesity is a pathological condition in with excess body fat. It is a chronic disorder with complex interaction between genetic and environmental factors. It is characterized by high cholesterol, fatty acids levels, imbalance in metabolic energy, insulin desensitization, lethargy, gallstones, high blood pressure, shortness of breath, emotional and social problem and excessive adipose mass accumulation with hyperplasia and hypertrophy. Unfortunately, overweight and obesity is now common in both 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. (Centers for Disease Prevention and Routine care,

Obesity is difficult to treat and has a high relapse rate. Many behavioral factors play a role in obesity as well, including eating habits and daily activity level. Many people develop their eating habits as children and have trouble refining them to maintain proper body weight as they age. As an adult, may be inactive at job and have less time for exercise, meal planning, and physical activity. Other factors, such as stress, anxiety, and lack of sleep, can lead to weight gain. People who quit smoking often experience temporary weight gain. Women may also have trouble losing the weight they gain during pregnancy, or may gain additional weight during menopause.

Most people who lose weight regain the weight within five years. Even though medications and diet can help the treatment of obesity cannot be a short term fix but has to be a

lifelong commitment to proper diet habits, increased physical activity and regular exercise. The goal of treatment should be to achieve and maintain a "healthier weight," not necessarily an ideal weight.

Konkani et al (2016) Green tea is touted to be one of the healthiest beverages on the planet. It's loaded with antioxidants that have many health benefits, which may include improved brain function, fat loss, protection against cancer, lowering the risk of heart diseases. Tea components possess antioxidant, antimutagenic, and anticarcinogenic effects and could protect humans against the risk of cancer by environmental agents. The first green tea was exported from India to Japan during the 17th century. It is estimated that about 2.5 million tons of tea leaves are produced each year throughout the world, with 20% produced as green tea, which is mainly consumed in Asia, some parts of North Africa, the United States, and Europe.

J.Herb et al. (2017) The green tea is made from the leaves of the *camellia sinensis* L plant, which is rich in polyphenol catechins and caffeine. Polyphenols of green tea considered as a main constitution attributed to anti-lipid effect of green tea. The four major flavonoids, epicatechin, epigallocatechin, epicatechingallate and epigallocatechin gallate are the catechins among all the bioactive polyphenol. There is increasing interest in the potential role of green tea extract in fat metabolism and its influence on health and exercise performance.

The processes that allow the body to convert food and drink into usable energy are collectively known as the metabolism. Green tea may be beneficial for weight loss by helping the body's metabolism to be more efficient. Green tea contains caffeine and a type of flavonoid called catechin, which is an antioxidant. The both of these compounds can speed up metabolism. Catechin can help to break down excess fat, while both catechin and caffeine can increase the amount of energy the body uses.

Green tea is considered safe to consume. Drinking between 2 and 3 cups of hot green tea throughout the day should be sufficient for supplement weight loss. The exact amount will vary from person to person, depending on how much caffeine they consume and their natural metabolism. Plain, minimally processed green tea are likely to have retained the richest nutritional content.

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. Green tea daily consumption of green tea for 3 months reduced body fat. It is quite likely that the combination of green tea extract and other supplements that influence appetite or metabolism could lead to weight loss.

Overweight or obesity is defined as abnormal or excessive fat accumulation that may impair health. Worldwide obesity has nearly tripled since 1975. In 2016, more than 1.9 billion adults, 18 years and older were overweight. Most of the world's population lives in countries where overweight and obesity kills more people than underweight. 39 million children under the age of 5 were overweight or obese in 2020. Over 340 million children and adolescents aged 5-19 were overweight or obese in 2016. (World Health Organization)

In India, the prevalence of overweight and obesity has increased rapidly in recent decades. Given the association between overweight and obesity with many non-communicable diseases, forecast of the future prevalence of overweight and obesity can help inform policy in a country where around one sixth of the world's population. In 2016, male obesity prevalence for India was 2.7% between 1997 and 2016; male obesity prevalence of India grew substantially from 0.8 to 2.7% rising at an increasing annual rate that reached a maximum of 12.50% in 1999 and then decrease to 3.85% in 2016. (According to National Family Health Survey, 2016)

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 body mass index 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. 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. (National Center for Health Statistics, 2016)

A person whose weight is higher than what is considered as a normal weight adjusted for height is as being overweight or having obesity. More than 2 in 3 adults were considered to be

overweight or have obesity. About 1 in 6 children and adolescents ages 2 to 19 were considered to have obesity. (National Health and Nutrition Examination Survey (NHANES), 2014)

Obesity is a leading preventable cause of death worldwide, with increasing rates in adults and children. In 2015, 600 million adults (12%) and 100 million children were obese in 195 countries. Obesity is more common in women than in men. Authorities view it as one of the most serious public health problems of the 21st century. Obesity is stigmatized in much of the modern world (particularly in the Western world), though it was seen as a symbol of wealth and fertility at other times in history and still is in some parts of the world. (American Medical Association)

Rajeev et al. (2015) conducted interventional to prevalence of obesity in India: approximately 2.8 million deaths are reported as a result of being overweight or obese. In India, more than 135 million individuals were affected by obesity. According to ICMR-INDIA interventional 2015, prevalence of obesity and central obesity are varies from 11.8% to 31.3% and 16.9% to 36.3% respectively.

Significance of the study

According to the Global Burden of Disease interventional 4.7 million people died prematurely in 2017 as a result of obesity. 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 seen 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.

According to Australian Bureau of Statistics, 2017, in 2017-18, two thirds (67.0%) of Australian adults were overweight or obese (12.5 million people), an increase from 63.4% in 2014-15.

According to 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.(Kris Gunnars, 2020)

Khon.K, et. Al, (2010) to investigate the effects of green tea on weight reduction in obese Thais. A randomized, routine careled trial involving 60 obese subjects (body mass index, BMI > 2 5kg/m) was conducted. All subjects consumed a Thai diet containing 3 meals for12weeks. 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, and12th weeks of the interventional, respectively. At the 8th and 12th weeks of the interventional, body weight loss was significantly different. They conclude that green tea can reduce body weight in obese. The subjects by increasing energy expenditure and fat oxidation.

Herb.J, et. al. (2010) conducted a descriptive interventional that Effect of long-term oraladministration of green tea extract on weight gain and glucose tolerance. There have bee 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, 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 gain. Green tea contains caffeine and a type of flavonoid called catechin, which is an antioxidant. So the researcher suggests that both of these compounds can speed up metabolism. Catechin can help to breakdown excess fat, while both catechin and caffeine can increase the amount of energy the body use. So the investigator has selected the topic to assess the outcome of green tea on weight reduction among women with obese.

Statement of the Problem

A study to evaluate the effectiveness of green tea supplement on weight reduction among obese women in selected urban areas at Coimbatore.

Objectives

1. To find the pre test and post test level of weight on green tea supplement among obese women in study and control group.
2. To evaluate the effectiveness of green tea supplement on weight reduction among obese women in study group.
3. To find out the association between the post test level of weight on green tea supplement among obese women with their selected demographic variable in study and control group.

Hypothesis

H₁ . There will be significant difference between pre test and post test level of weight reduction among obese women in the study and control group.

H₂ -There will be a significant association between post test level of weight reduction among obese women in study and control group with their selected demographic variables.

Assumption

- Effectiveness of green tea will be reducing obesity.
- There will be a significant improvement in the post intervention score.
- Green tea comes from the same camellia sinensis plant. it contain large amount of polyphenols and catechins, it help to reduce the body weight loss of human body

Operational definition

Effectiveness

It refers to the outcome of green tea supplement on weight reduction among obese women in interventional group.

Green tea supplement

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

Weight reduction

It refers to decreases in body weight of obese women after green tea supplement.

Obese women

It refers to women who have increase body weight as per body mass index calculation.

Delimitation

The interventional was delimited to

- Women with obesity.
- Four week period of data collection.

Projected Outcome

This interventional helps to identify the level of obesity among women. The community health nurse can recommend use green tea in reducing obesity and Green tea supplementation will help in reducing the weight of the women which will be a health promotion activity in the general population.

Conceptual Framework

Modified Pender's Health Promotion Model

The health promotion model (HPM) proposed by Nola J Pender (1982; revised, 1996) was designed to be a “complementary counterpart to models of health protection. It defines health as a positive dynamic state not merely the absence of disease.

The model focuses on following three areas:

- Individual characteristics and experiences
- Behavior-specific cognitions and affect
- Behavioral outcomes

Individual characteristics and experiences:

The person has unique personal characteristics and experiences that affect subsequent actions.

In this interventional, it includes the obese women personal factors such as age of the women, marital status of women, education of women, occupation of women, life style of women, monthly income, religion, dietary pattern of women, family type of women, any previous knowledge regarding green tea through media, do you have any of the following disease and do you take any following drugs.

Health promotional behavior:

Health promotion behavior emphasized ascend point or action outcome directed toward attaining positive health outcome such as optimal well-being, personal fulfillment, and productive living.

Health professionals such as nurses and doctors comprise the interpersonal environment which influences the individual behavior.

The health promotion notes that each person has unique personal characteristics and experiences that affect subsequent actions based on the behaviour. These variables can be modified through nursing actions such as green tea supplement on weight reduction. Health promoting behaviour should result in improved health, enhanced functional ability, better quality of life and it will reduce all other consequences related to green tea supplement.

This model emphasizes health promotion behaviours regarding personal factors with increased efficacy and perception reforming and strengthening behaviours that improve communication and situation. Therefore this model which is potentially used during especially obese women, nurses believe that identifying and providing applicable solutions in order to provide health improvement on green tea supplement on weight reduction based on this model the researcher had used the model to green tea supplement on weight reduction among obese women.

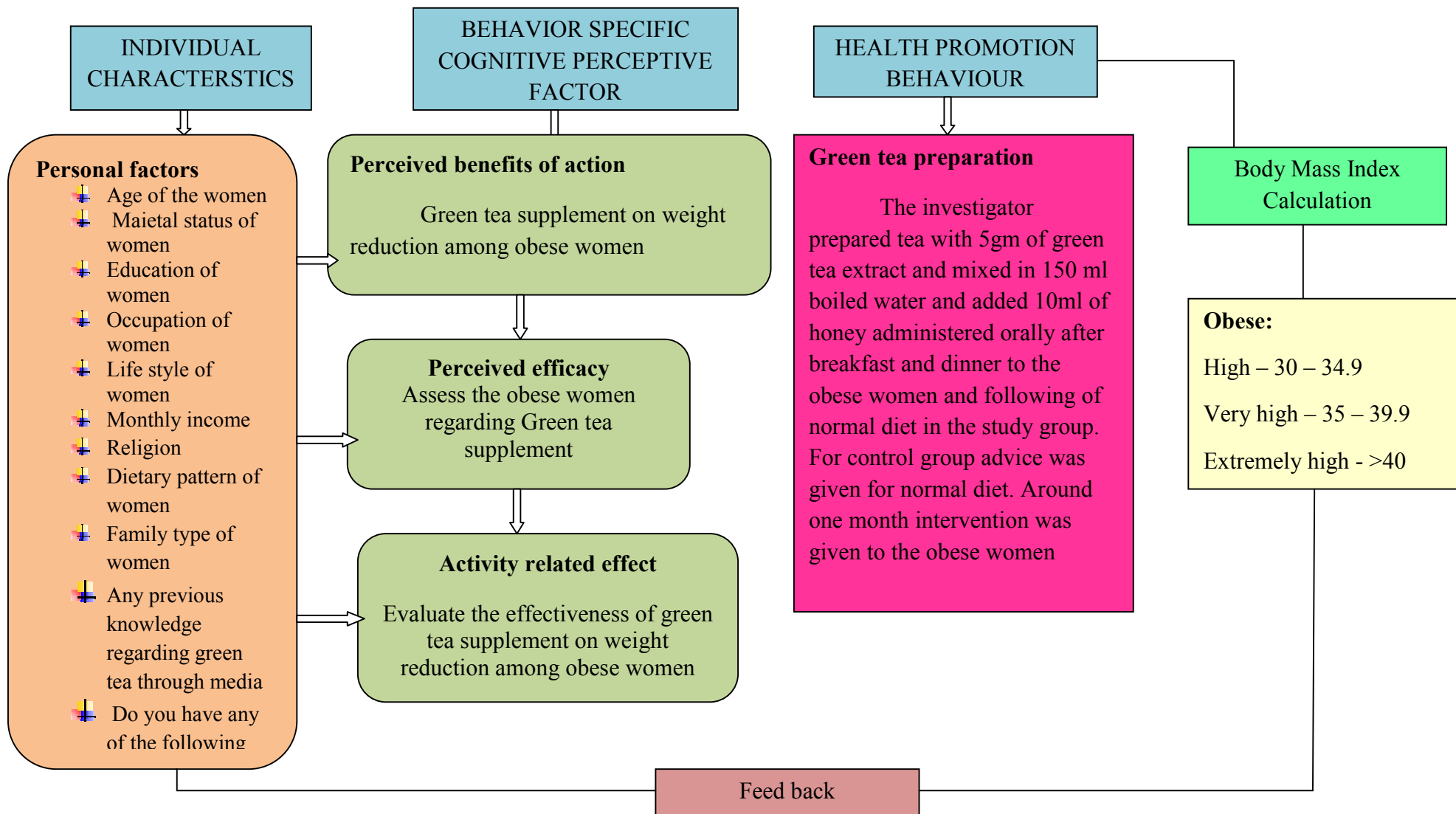


Fig.1.1 CONCEPTUAL FRAMEWORK BASED ON MODIFIED PENDER'S HEALTH PROMOTION MODEL

CHAPTER - II

CHAPTER II

REVIEW OF LITERATURE

Review of literature is a vital component of the research process. It gives the researcher orientation to the interventional. It provides the sources of research for the new researcher.

The review of literature presented in this chapter is organized systematically.

Section A: Studies related to prevalence of obesity

Section B: Studies related to green tea supplementation on reduction of body weight

Section C: Studies related to effectiveness of green tea other parameters

Section A: Studies related to prevalence of obesity

Suresh, et al, (2021) conducted a interventional to association of obesity with illness severity in hospitalized patients with COVID-19 patients. A retrospective interventional at a tertiary care health system of adult patients with COVID-19 who were admitted between March 1 and April 30, 2021. Patients were stratified by body mass index (BMI) into obese (BMI \geq 30 kg/m²) and non-obese (BMI < 30 kg/m²) cohorts. Duration of interventional is 30days. The result was total of 1983 patients were included of whom 1031 (51.9%) had obesity and 952 (48.9%) did not have obesity. Patients with obesity were er (P < 0.001), more likely to be female (P < 0.001) and African American (P < 0.001) compared to patients without obesity. The interventional was concluded that obesity in patients with COVID-19 is independently associated with increased risk for ICU admission and intubation. Recognizing that obesity impacts morbidity in this manner is crucial for appropriate management of COVID-19 patients.

Jenna, et al, (2021) conducted a interventional the role of obesity in inflammatory markers in COVID-19 patients. In this interventional to evaluated inflammatory markers in obese and non-obese individuals hospitalized for COVID-19 at Massachusetts General Hospital. Totally 781 patients, 349 were obese (45%). Obese individuals had higher initial and peak levels of C-Reactive Protein test and erythrocyte sedimentation rate as well as higher peak d-dimer (P <

0.05 for all) in comparison to non-obese individuals. In addition, obese individuals had a higher odds of requiring vasopressor use (OR 1.54, 95% confidence interval 1.00–2.38, P = 0.05), developing hypoxemic respiratory failure (OR 1.58, 95% confidence interval 1.04–2.40, P = 0.03) and death (OR 2.20, 95% confidence interval 1.31–3.70, P = 0.003) within 28 days of presentation to care. The interventional concluded that higher baseline levels of C-Reactive Protein and D-dimer were associated with worse clinical outcomes even after adjustment for Body Mass Index and suggest greater disease severity in obese individuals is characterized by more exuberant inflammation.

Xiumei, et al, (2020) conducted a interventional to skipping breakfast is associated with overweight and obesity. Cohort studies and cross-sectional studies were adopted for this interventional. The result was 45 observational studies (36 cross-sectional studies and 9 cohort studies) were included in this meta-analysis. In cross-sectional studies, the oral rehydration salt of low frequency breakfast intake per week versus high frequency were 1.48 (95% confidence interval 1.40–1.57; $I^2 = 54.0\%$; P = 0.002) for overweight/obesity, 1.31 (95% confidence interval 1.17–1.47; $I^2 = 43.0\%$; P = 0.15) for abdominal obesity. In cohort studies, the relative risk of low-frequency breakfast intake per week versus high frequency was 1.44 (95% confidence interval 1.25–1.66; $I^2 = 61\%$; P = 0.009) for overweight/obesity. The interventional concluded that this meta-analysis confirmed that skipping breakfast is associated with overweight/obesity, and skipping breakfast increases the risk of overweight/obesity.

Singh et al. (2018) conducted a interventional The prevalence of obesity among adult population and its association with food outlet density in a hilly area of Uttarakhand. This interventional was a community-based cross-sectional interventional. The result showed that 61.3% were females. The mean age of the interventional participants was 38.3 (± 13.6) years. The prevalence of overweight was 14.8% and obesity was 55.5%. The interventional was concluded that the early stage of urbanization as evident from the burden of obesity, and this might worsen by prevalent outlet density of food in the environment.

Vadera et al, (2018) conducted a interventional on Obesity and Influence of Dietary Factors on the Weight loss of an Adult Population in Jamnagar City of Gujarat. A Cross-

Sectional Analytical Interventional was adopted for this interventional. Cluster sampling technique was used to select interventional samples. Data were collected in a pre structured questionnaire by interviewing subjects through house-to-house visits. Data were analyzed and appropriate statistical methods were used. The result was prevalence of overweight and obesity was found to be 22.04% and 5.20%, respectively. Overweight was more prevalent in females than males. The prevalence rose with an increase in age up to 60 years. The interventional was concluded that among dietary factors, not only the total calorie intake but also the pattern of food consumption affects the weight status of people. Both the amount and frequency of consumption of various foods influence the weight pattern.

Clair (2017) conducted a interventional to compare the prevalence of obesity among adults age 18. Prevalence by demographic, socio – economic and lifestyle characteristics is presented. Along with association between obesity and selected chronic condition. In 2017, 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.

Cleyachetty et.al., (2016) conducted a on prevalence of overweight obesity and thinness in 9 to 10 year old children in Mauritius. 412 boys and 429 girls aged 9-10 years from 23 primary schools were selected using stratified cluster random sampling Technique , collected via anthropometry and self administered questionnaire. The distribution of BMI was 156kg/m² in boys and 15.4kg/m² in girls, respectively. The concluded that prevalence of overweight was 15.8% prevalence of thinness 12.4% among girls, in boys 95% were overweight, 5%were obese and 13% were him.

Section B: Studies related to green tea supplementation on reduction of body weight

Zang, et al, (2021) conducted a interventional on Preventive Effects of Green Tea Extract against Obesity Development in Zebrafish. Various natural products have been used to treat obesity and related diseases. We demonstrated that green tea extract is an anti-obesity using

a zebrafish obesity model. Based on a hypothesis that green tea extract can prevent obesity, the objective of this interventional was to assess green tea extract ability to attenuate obesity development. Juvenile zebrafish were pretreated with green tea extract for seven days before obesity induction via a high-fat diet; adult zebrafish were pretreated with green tea extract for two weeks before obesity induction by overfeeding. As a preventive intervention, green tea extract significantly decreased visceral adipose tissue accumulation in juveniles and ameliorated visceral adiposity and plasma triglyceride levels in adult zebrafish obesity models. Transcriptome analysis revealed that preventive green tea extract treatment affects several pathways associated with anti-obesity regulation, including activation of immediately and down regulation of enhancer – binding protein alpha signaling pathways. The interventional concluded that, green tea extract could be used as a preventive agent against obesity.

Singh.R, Kumar.R, (2019) conducted a interventional to Assess the Effectiveness of Green Tea on Reduction of Body Weight among Obese Adult Girls Residing at Selected Girl's Hostel of Sharda University, Greater Noida. Quantitative research approach is used for this interventional. Quasi experimental pre-test, post-test routine care group research design was used. The interventional has fulfilled the criteria of manipulation and routine care group. This interventional has been conducted in was Mandela, Sarojini, Kasturba, Mother Teresa and Indira girls hostels of Sharda University. It consists of total 60 obese adult girls. 30 obese adult girls in Experimental group and 30 obese adult girls in Routine care group. The results has revealed that the mean percentage of body weight during pre-test was 80.7% with standard deviation 8.6 and the post test mean was 79.0% with standard deviation 8.5. the interventional concluded that Green tea is effective in reducing the body weight among obese adult girls in the experimental group.

Pawer.P, (2018) conducted a interventional on Green Tea and Weight Loss: An update (Meta-Analysis). The purpose of this interventional was to elucidate by meta-analysis whether green tea has an effect on body weight. PubMed search was done for the term - Green tea and later limited by English-language, human studies published in last decade and available as full text. Out of the 704 initially retrieved articles 11 were included in the present meta-analysis after considering the exclusion and inclusion criteria of the interventional. The pooled results of all the

studies with the random effect model is -1.26 [-1.87 to -0.65]. It is imperative by this meta-analysis that green tea consumption leads to weight loss. The result shows that the substantial heterogeneity ($I^2 = 81.71\%$) among the studies warrants larger studies for confirmation and validation of the effect of green tea on weight of an individual.

Tomar.A,Ravi, (2017) conducted as interventional to Evaluate the Effectiveness of Green Tea in Reducing Weight among Obese Women in Urban Area, Dehradun. The interventional was conducted in urban area Banjarawala Dehradun. The research design used for this interventional was one group pre-test post-test design. Data collected using Non-Probability Purposive sampling. The data was collected to assess the effectiveness of 40 obese women. The data collected were analyzed and interpreted by using descriptive and inferential statistics. Major findings of the interventional- Revealed that after implementation of green tea the weight loss is between 0 to 2.5 kg. While pre-test mean weight score is 31.47 and post test mean weight score is 29.26 Significant difference ($p < 0.05$) is found between pre-test and post-test score. The interventional can be concluded that after implementation of (green tea) the post test weight among obese women is reduced.

Huang, et al, (2017) conducted a interventional on the anti-obesity effects of green tea in human intervention and basic molecular studies. Investigations on a larger scale and with longer periods of observation and tighter routine cares are needed to define optimal doses in subjects with varying degrees of metabolic risk factors and to determine differences in beneficial effects among diverse populations. Moreover, data from laboratory studies have shown that green tea has important roles in fat metabolism by reducing food intake, interrupting lipid emulsification and absorption, suppressing adipogenesis and lipid synthesis and increasing energy expenditure via thermogenesis, fat oxidation and fecal lipid excretion. The interventional concluded that combination of green tea intervention with lifestyle changes such as increased physical activity and energy-restricted diets, especially in western populations, would receive more encouraging outcomes.

Jurgens,et al, (2015) conducted as interventional on Green tea for weight loss and weight maintenance in overweight or obese adults. A number of randomized routine careled

trials evaluating the role of green tea in weight loss have been published. We synthesized data using meta-analysis and descriptive analysis as appropriate; subgroup and sensitivity analyses were conducted. Interventional length ranged between 12 and 13 weeks. The result shows that Analysis of two studies conducted to determine if green tea could help to maintain weight after a period of weight loss (184 participants) showed a change in weight loss of 0.6 to -1.6 kg, a change in BMI from 0.2 to -0.5 kg/m² and a change in waist circumference from 0.3 to -1.7 cm. the interventional concluded that Green tea preparations appear to induce a small, statistically non-significant weight loss in overweight or obese adults. Because the amount of weight loss is small, it is not likely to be clinically important. Green tea had no significant effect on the maintenance of weight loss.

Hursel. R, et al, (2015) conducted interventional on the effects of green tea on weight loss and weight maintenance: a meta-analysis. Out of the 49 studies initially identified, a total of 11 articles fitted the inclusion criteria and provided useful information for the meta-analysis. Result shows that The random-effects model indicated a modest, but significant positive effect of catechins on WL/WM ($\hat{m} = -1.31, 95\% \text{ CI: } -2.05 \text{ to } -0.57; P < 0.001$). Therefore, it is estimated that subjects in the treatment groups lost on average 1.31 kg more weight (or gained on average 1.31 kg less weight) than people in the routine care groups. The interventional concluded that Catechins or an epigallocatechin gallate (EGCG)–caffeine mixture have a small positive effect on weight loss and weight maintenance. The habitual caffeine intake and ethnicity may be moderators, as they may influence the effect of catechins.

Brown.L,(2014) conducted a interventional on Green Tea an Effective Aid in Weight Reduction. Randomized, double blind, placebo-routine careled trials comparing green tea extract to placebo were found using Ovidus Naso, Meidcal Literature Analysis and Retrieval System Online , PubMed, and Cochrane databases. Result shows that all three randomized routine care trail ,included in the review found that the green tea extract group experienced slight improvement in energy expenditure, but did not benefit in weight reduction. The studies above were performed over 12 weeks. The interventional concluded that the studies reviewed demonstrate that green tea extract does have association with minimal weight reduction, but does

not provide adequate statistical difference between the intervention and placebo. Green tea extract intake was considered safe during each of the studies.

Section C: Studies related to green tea other parameters

Wang, et al, (2019) conducted interventional on Effects of green tea extract on overweight and obese women with high levels of low density-lipoprotein-cholesterol (LDL-C): a randomised, double-blind, and cross-over placebo-routine careled clinical trial. Seventy-three out of 90 subjects aged between 18 and 65 years, with body mass index (BMI) ≥ 27 kg/m² and lipoprotein-cholesterol ≥ 130 mg/dl were included in the analysis. Result shows that Subjects treated with green tea extract ($n=73$) for 6 weeks showed significant differences, with 4.8% ($p=0.048$) reduction in lipoprotein-cholesterol and 25.7% ($p=0.046$) increase in leptin. The interventional concluded that green tea extract effectively increases leptin and reduces lipoprotein-cholesterol in overweight and obese women after 6 weeks of treatment even though there were no significant changes in other biochemical markers related to overweight.

Nagao.T,(2017) conducted a interventional on green tea extract high in catechins reduces body fat and cardiovascular risks in humans. : Japanese women and men with visceral fat-type obesity were recruited for the trial. After a 2-week diet run-in period, a 12-week double-blind parallel multicenter trial was performed, in which the subjects ingested green tea containing 583 mg of catechins (catechin group) or 96 mg of catechins (routine care group) per day. Result shows that Data were analyzed using per-protocol samples of 240 subjects (catechin group; $n = 123$, routine care group; $n = 117$). The interventional concluded that ingestion of a green tea extract high in catechins led to a reduction in body fat, systolic blood pressure, and low density-lipoprotein-cholesterol cholesterol, suggesting that the ingestion of such an extract contributes to a decrease in obesity and cardiovascular disease risks.

Thangapazham.R, et al (2017) conducted a interventional Green tea polyphenols and its constituent epigallocatechin gallate inhibits proliferation of human breast cancer cells in vitro and in vivo. In this interventional, we report the effectiveness of green tea polyphenols (GTP) and its constituent Epigallocatechin Gallate (EGCG) in tumor regression using both in-vitro cell culture models and in vivo athymic nude mice models of breast cancer. The anti-proliferative effect of green tea polyphenols and EGCG on the growth of human breast cancer cell was

studied using a tetrazolium dye-based (MTT) assay. Our results suggest that green tea polyphenols and constituent Epigallocatechin Gallate treatment inhibits proliferation and induce apoptosis of cells in-vitro and in-vivo. All together, these data sustain our contention that green tea polyphenols and constituent Epigallocatechin Gallate have anti-tumor properties.

Zaveri. T, (2016) conducted a interventional on Green tea and its polyphenolic catechins: medicinal uses in cancer and noncancer applications. The use of green tea as a cancer chemopreventive or for other health benefits has been confounded by the low oral bioavailability of its active polyphenolic catechins, particularly epigallocatechin-3-gallate (EGCG) the most active catechin. This review summarizes the purported beneficial effects of green tea and epigallocatechin-3-gallate in various animal models of human diseases. Dose-related differences in the effects of epigallocatechin-3-gallate in cancer versus neurodegenerative and cardiovascular diseases, as well as discrepancies between doses used in in vitro studies and achievable plasma understanding of the in vivo effects of green tea catechins in humans, before the use of green tea is widely adopted as health-promoting measure.

Mandel.S, et al, (2015) conducted a interventional on Multifunctional activities of green tea catechins in neuroprotection. Modulation of cell survival genes, iron-dependent oxidative stress and public key cryptography signaling pathway. Recent studies have indicated that in addition to the known antioxidant activity of catechins, other mechanisms such as modulation of signal transduction pathways, cell survival/death genes and mitochondrial function; contribute significantly to the induction of cell viability. This review will focus on the multifunctional properties of green tea and its major component (-)-epigallocatechin-3-gallate (EGCG) and their ability to induce neuro protection and neuro rescue in vitro and in vivo. In particular, their transitional metal (iron and copper) chelating property and inhibition of oxidative stress.

Weinreb.O, et al,(2014) conducted a interventional on Neurological mechanisms of green tea polyphenols in Alzheimer's and Parkinson's diseases. Green tea polyphenols are now being considered as therapeutic agents in well routine careled epidemiological studies, aimed to alter brain aging processes and to serve as possible neuroprotective agents in progressive neurodegenerative disorders such as Parkinson's and Alzheimer's diseases. In particular,

literature on the putative novel neuroprotective mechanism of the major green tea polyphenol, (-)-epigallocatechin-3-gallate, are examined and discussed in this review.

Hodgson. A, et al, (2014) conducted a interventional on the effect of green tea extract on fat oxidation at rest and during exercise: evidence of efficacy and proposed mechanisms. The changes in expression of fat metabolism genes with longer term GTE intake have been implicated at rest and with exercise training, including the upregulation of fat metabolism enzyme gene expression in the skeletal muscle and downregulation of adipogenic genes in the liver. The exact molecular signaling that activates changes to fat metabolism gene expression is unclear but may be driven by PPAR- γ coactivator 1- α and PPARs. However, to date, evidence from human studies to support these adaptations is lacking. Clearly, more studies have to be performed to elucidate the effects of GTE on fat metabolism as well as improve our understanding of the underlying mechanisms.

CHAPTER - III

CHAPTER III

RESEARCH METHODOLOGY

This chapter deals with the methodology adapted to this interventional. It includes Research approach, Research design, Variables, Settings, Population, Sample, Sample size, Criteria for sample selection, Sampling technique, Description of tool, Content validity, Reliability, Pilot interventional, Method of data collection, Plan for data analysis and protection of human rights.

RESEARCH APPROACH

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

RESEARCH DESIGN

Quasi experimental Non equivalent routine care group before and after design for this interventional

Table 3.1:-

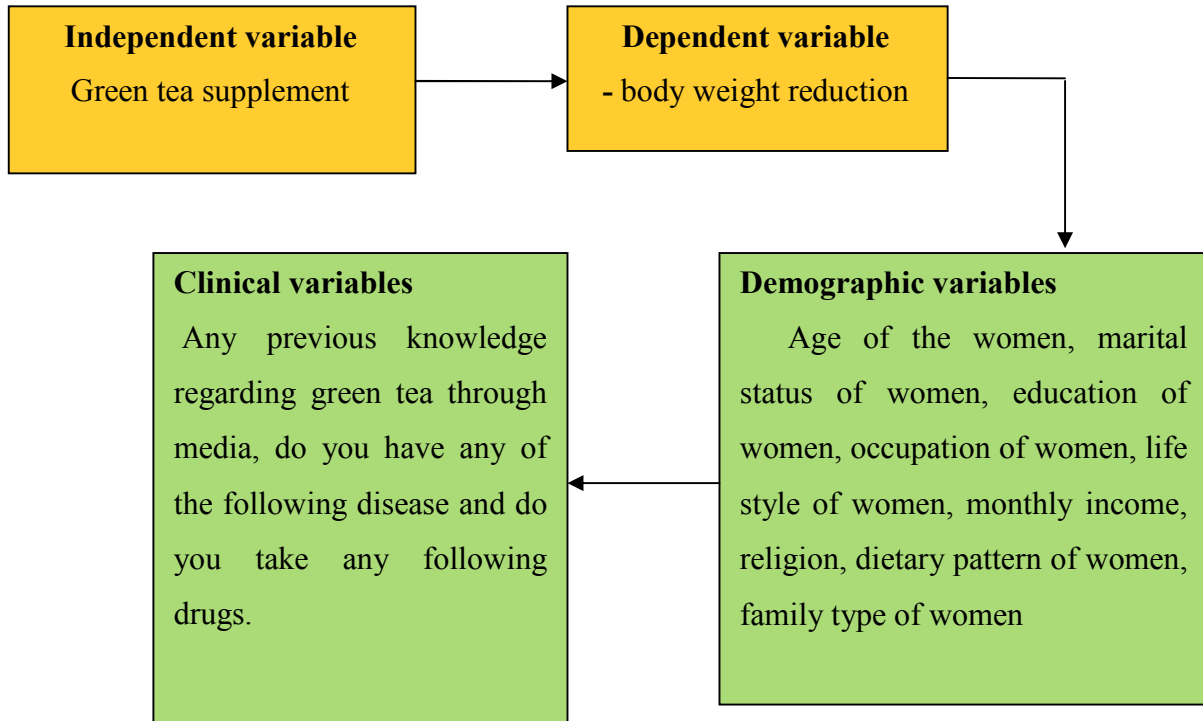
Group	Pre test	Intervention	Post test
Interventional group	O ₁	X	O ₂
Routine care group	O ₁		O ₂

O₁ - Assessment on level of body weight before intervention

X - Administer Green tea

O₂ - Assessment on level of body weight after intervention

VARIABLES



SETTING

The interventional was conducted in Semmanichettipalayam Village, in Coimbatore District. The village is situated 2 km away from PPG College of Nursing, Saravampatti, and Coimbatore.

POPULATION

Population refers to the entire set of individual who have some common characteristics and it is important to make distinction between the target and accessible population.

Target population

The target population of the present interventional consist of women those who are residing in Semmanichettipalayam Village, Coimbatore district.

Accessible population

Accessible population comprises 60 clients having obesity and residing in Semmanichettipalayamm village, Coimbatore district.

SAMPLE

The sample selected for the present interventional were obese women those who are residing at Semmanichettipalayamm Village, who are willing to participate and present during the time of data collection.

SAMPLE SIZE

The sample size consists of 60 women's. Among 60, 30 samples were selected for interventional group and 30 samples were selected for routine care group.

SAMPLING TECHNIQUE

The samples were selected by using non probability purposive sampling technique. From the samples the researcher selected obese women who fulfilled the inclusion and exclusion criteria in the present interventional.

SAMPLING CRITERIA

The sample selection was based on the following inclusion and exclusion criteria.

➤ Inclusion criteria

- ❖ All women aged between 20-40 years residing at selected village.
- ❖ Those who were willing to participate in the interventional.
- ❖ Women who were able to read and write in English.
- ❖ Women with BMI between 30 – 40 (mild and moderate obese women).

➤ Exclusion criteria

- ❖ Women who suffered from medical illness like heart disease endocrine, CHD, Hypertension ,Diabetes etc.,

- ❖ Women who had started exercise or on the treatment for obesity
- ❖ Women who are allergic to green tea.

DESCRIPTION OF THE TOOLS

The tool used for this interventional has 3 parts

- **Part – 1**

A structured questionnaire was used to collect the demographic variables such as age, marital status, education, occupation, monthly income, religion and types of family.

- **Part - 2**

Clinical variables such as Dietary pattern, family history, drugs are used.

- **Part – 3**

Measurement of the BMI was assessed by measuring the weight in Kg with the help of weighing scale and the measurement of height in m² with the help of Inch tape.

Category	BMI (Kg/M ²)	Obesity Class	Status
Underweight	<18.5	–	–
Normal	18.5-24.9	–	–
Overweight	25.0-29.9	–	–
Obese	30-34.9	Category 1	High
	35.0-39.9	Category 2	Very high
Extreme Obese	>40.00	Category 3	Extremely high

DESCRIPTION OF THE INTERVENTION

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

CONTENT VALIDITY

The content validity of the tool was ascertained by the expert opinion from 2 medical practitioners and 3 nursing experts. No harm certified was obtained from the dietician. The

experts gave their opinions and suggestions for further modification of items to improve the clarity and content of the question. The formal tool was prepared as per the suggestion and advice given by experts.

RELIABILITY OF THE INTERVENTIONAL

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

PILOT STUDY

Pilot interventional is a small scale version or trial done in preparation for a major interventional. Pilot interventional was conducted by after getting initial permission from PPG College of Nursing, Saravanampatti.

The pilot interventional was conducted at village, Coimbatore from 20|04|21 to 19|05|21. Six obese women who fulfilled the inclusion criteria were selected by non probability purposive sampling technique. A brief introduction about the self and interventional 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 20.04.2021 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 after breakfast and dinner to the obese women and following of normal diet in the interventional group. Routine care group samples were taken normal diet. After 30 days post-test level of obesity was measured by the investigator to the interventional and routine care group.

METHOD OF DATA COLLECTION

Step 1: Selection of obese women

After obtaining permission from the Semmanichettipalayam village, the participants are selected based on the inclusion and exclusion criteria and explained to the obese women about purpose of the intervention. The participants are selected from the Semmanichettipalayam Village.

Step 2: Pre assessment of women with obesity

The researcher prepared the demographic variable and clinical variable and the data was collected from the selected participants. Assessed the weight, height and calculate the BMI in both interventional and routine care group using a standardized scale.

Step 3: Intervention

The investigator prepared tea with 5gm of green tea extract and mixed in 150 ml boiled water and added 10ml of honey administered orally after breakfast and dinner to the obese women and following of normal diet in the interventional group. For routine care group advice was given for normal diet. Around one month intervention was given to the obese women.

Step 4: Post assessment

After 30 days post- test level of weight was measured by the investigator to the interventional and routine care group.

PLAN FOR ANALYSIS

Data collected was analyzed by using both descriptive and inferential statistics such as mean, standard deviation, chi square, paired and unpaired ‘t’ test.

DESCRIPTIVE STATISTICS

- Frequency and percentage distribution was used to analyze the demographic and clinical variables and to assess the level of weight reduction.
- Mean and standard deviation was used to assess the effectiveness of green tea supplement on weight reduction among women with obese.

Inferential statistics

- Paired 't' test was used to compare pre test and post test level of weight reduction among women with obese in interventional and routine care group.
- Chi-square was used to find out the association of post test level of weight in women with obese between the interventional and routine care group with their selected demographic and clinical variables.

CHAPTER - IV

CHAPTER IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with the data analysis and interpretation to assess the outcome of green tea supplement on weight reduction among obese women in selected urban areas at Coimbatore.

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

ORGANIZATION OF DATA

Section A:

- I. Distribution of samples according to the demographic variables of the obese women in interventional group and routine care group.

Section B:

- II. Distribution of obese women in interventional group and routine care group according to the level of weight before intervention.
- III. Distribution of obese women in interventional group and routine care group according to the level of weight after intervention.

Section C:

- IV. Comparison of pre test and post test level of weight among obese women in interventional group and routine care group.
- V. Comparison of post test level of weight among obese women in interventional group and routine care group.

Section D:

- VI. Association between the post test levels of weight among obese women in interventional group with selected demographic variables.
- VII. Association between the post test levels of weight among obese women in routine care group with selected demographic variables.

SECTION – A

I.DISTRIBUTION OF SAMPLES ACCORDING TO THE DEMOGRAPHIC VARIABLES OF THE OBESE WOMEN IN INTERVENTIONAL GROUP AND ROUTINE CARE GROUP.

Table 4.1:- Frequency and percentage distribution of obese women according to the demographic variables in interventional group and routine care group

n=60

S. No	Demographic variables	Interventional group n=30		Routine care group n=30	
		f	%	f	%
1	Age of the women				
	a) 41-45years	6	20	5	17
	b) 46-50 years	5	17	10	33
	c) 51-55 years	12	40	12	40
	d) 56-60 years	7	23	3	10
2	Marital status of women				
	a) Married	12	40	5	17
	b) Unmarried	14	47	8	27
	c) Others	4	13	17	59
3	Education of women				
	a) Uneducated	10	33	2	7
	b) Primary Education	2	47	18	60
	c) Secondary Education	8	27	4	13
	d) Professionals	10	33	6	20

4	Occupation of women				
	a) House wife	4	14	10	33
	b) Government	6	20	12	40
	c) Private	10	33	6	20
	d) Business women	10	33	2	7
5	Life style of women				
	a) Primary	3	10	2	7
	b) Secondary	20	67	18	60
	c) Moderate	4	13	4	13
	d) Severe work	3	10	6	20
6	Monthly Income				
	a) Rs.10000 – Rs.20000	3	10	15	50
	b) Rs.21000 – Rs.30000	7	23	11	37
	c) Rs.31000 – Rs.40000	14	47	3	10
	d) More than Rs.40000	6	20	1	3
7	Religion				
	a) Hindu	12	40	17	57
	b) Christian	8	27	6	20
	c) Muslim	10	33	7	23
8	Dietary Pattern of women				
	a) Vegetarian	8	27	7	23
	b) Non-Vegetarian	22	73	23	77
9	Family Type of women				
	a) Nuclear Family	22	73	24	80
	b) Joint Family	8	27	6	20
10	Do you have any previous knowledge regarding green tea through media				
	a) Yes	10	33	4	17
	b) No	20	67	26	87

11	Do you have any of the following disease				
	a) Hypothyroidism	7	23	6	20
	b) PCOD	12	40	8	27
	c) Psychiatric illness	5	17	12	40
	d) None of the above	6	20	4	13
12	Do you take any following drugs				
	a) Cortico – steroids	10	33	1	3
	b) Insulin	12	40	15	50
	c) Contraceptive	6	20	3	10
	d) None of the above	2	7	11	37

Table No.4.1 represents the distribution of obese women in the level of weight. According to age of the women in interventional group 6 (20%) of them belong to the age group between 41 – 45 years, 5(17%) of them belong to the age group between 46 – 50 years, 12 (40%) of them belong to the age group between 51 – 55 years and 7(23%) of them belong to the age group between 56 – 60 years. In routine care group 5 (17%) of them belong to the age group between 41 – 45 years, 10(33%) of them belong to the age group between 46 – 50 years, 12 (40%) of them belong to the age group between 51 – 55 years and 3(10%) of them belong to the age group between 56 – 60 years.

Distribution of obese women according to marital status in interventional group 12(40%) were married, 14(47%) were unmarried and 4(13%) were others. In routine care group 5(17%) were married, 8(27%) were unmarried and 17(59%) were others.

Besides, the table also represents distribution of obese women according to education in interventional group 10(33%) were uneducated, 2(7%) were primary education, 8(27%) were secondary education and 10(33%) were professionals. In routine care group 2(7%) were uneducated, 18(60%) were primary education, 4(13%) were secondary education and 6(20%) were professionals.

Moreover, it represents the distribution of level of knowledge among obese women according to occupation in interventional group 4(14%) were house wife, 6(26%) were Government, 10(33%) were private workers and 10(33%) were business. In routine care group interventional group 4(14%) were house wife, 6(26%) were government, 10(33%) were private workers and 10(33%) were business.

In the distribution of obese women, the table shows that according to their lifestyle changes income in interventional group 3(10%) were primary, 20(67%) were secondary, 4(13%) were moderate and 3(10%) severe worker. In routine care group 2(7%) were primary, 18(60%) were secondary, 4(13%) were moderate and 6(20%) were severe worker.

In the distribution of obese women, according to their monthly income in interventional group 3(10%) had Rs. 10000 to Rs. 20000, 7(23%) had Rs.21000 to Rs.30000, 14(47%) had Rs.31000 to Rs.40000 and 6(20%) had more than Rs. 40000. In routine care group 15(50%) had Rs. 10000 to Rs. 20000, 11(37%) had Rs.21000 to Rs.30000, 3(10%) had Rs.31000 to Rs.40000 and 1(3%) had more than Rs. 40000.

Regarding the women religion in interventional group 12(40%) were Hindu, 8(27%) were Christian and 10(33%) were Muslim. In routine care group 17(57%) were Hindu, 6(20%) were Christian and 7(23%) were Muslim.

In the allocation of obese women according to their dietary pattern in interventional group 8(27%) were vegetarian and 22(73%) were non-vegetarian. In routine care group 7(23%) were vegetarian and 23(77%) were non-vegetarian.

In the distribution of obese women, according to their family type in interventional group 22(73%) were in nuclear family and 8(27%) were joint family. In routine care group 24(80%) were in nuclear family and 6(20%) were in joint family.

Regarding any previous knowledge regarding green tea through media 10 (33%) were said yes and 20(67%) were said no. In routine care group 4(17%) were said yes and 26(87%) were said no.

According to the diseases of obese women, 7(23%) had hypothyroidism, 12(40%) had PCOD, 5(17%) had psychiatric illness and 6(20%) had none of the above diseases. In routine care group, 6(20%) had hypothyroidism, 8(27%) had PCOD, 12(40%) had psychiatric illness and 4(13%) none of the above diseases.

Distribution of obese women according to the drugs in interventional group 10(33%) had corticosteroids, 12(40%) had insulin, 6(20%) had contraception and 2(7%) none of the above drugs. In routine care group 1(3%) had corticosteroids, 15(50%) had insulin, 3(10%) had contraception and 11(37%) none of the above drugs.

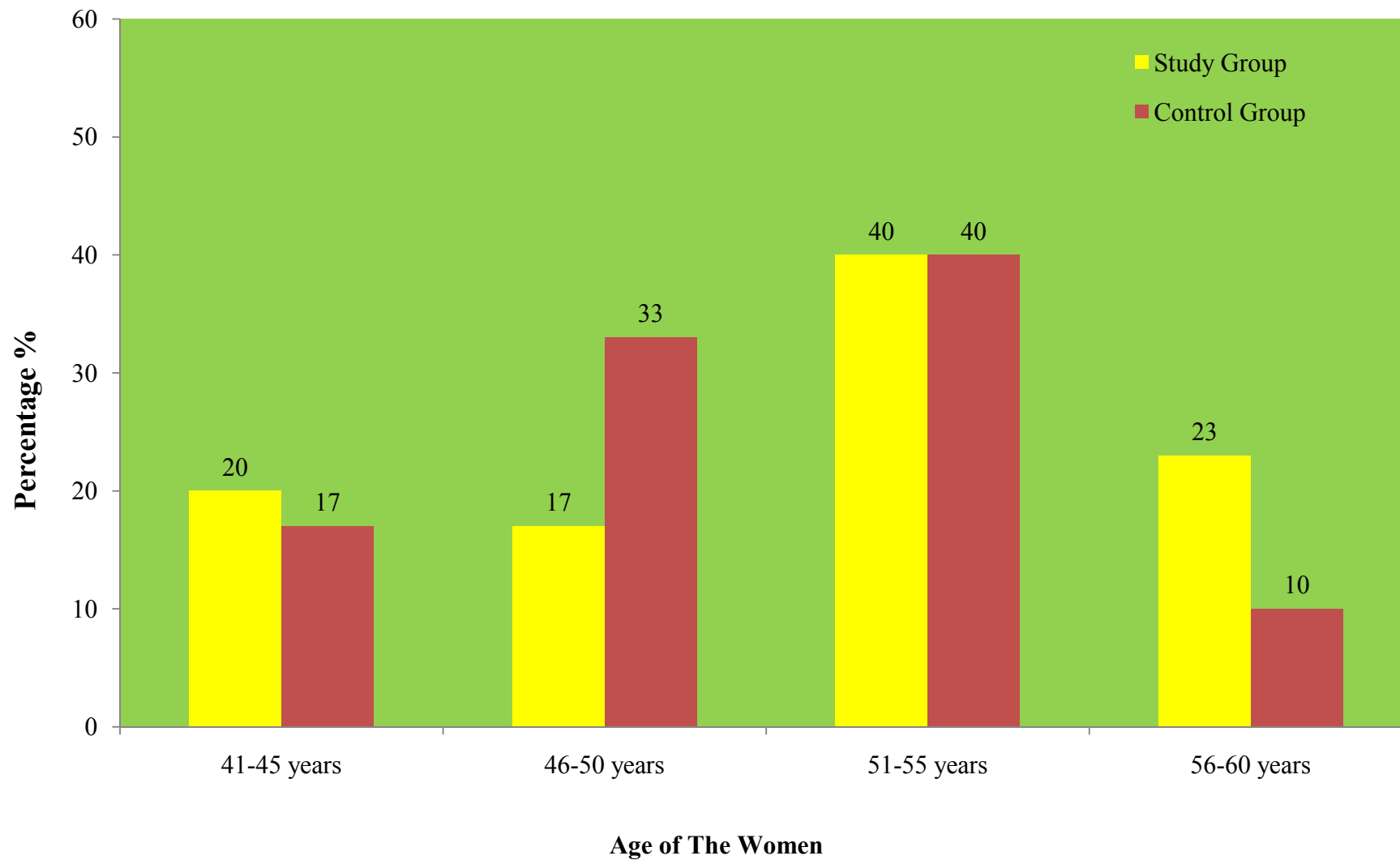


Fig.4.2 Frequency and Percentage Distribution of Demographic Variables According to the Age of The Women

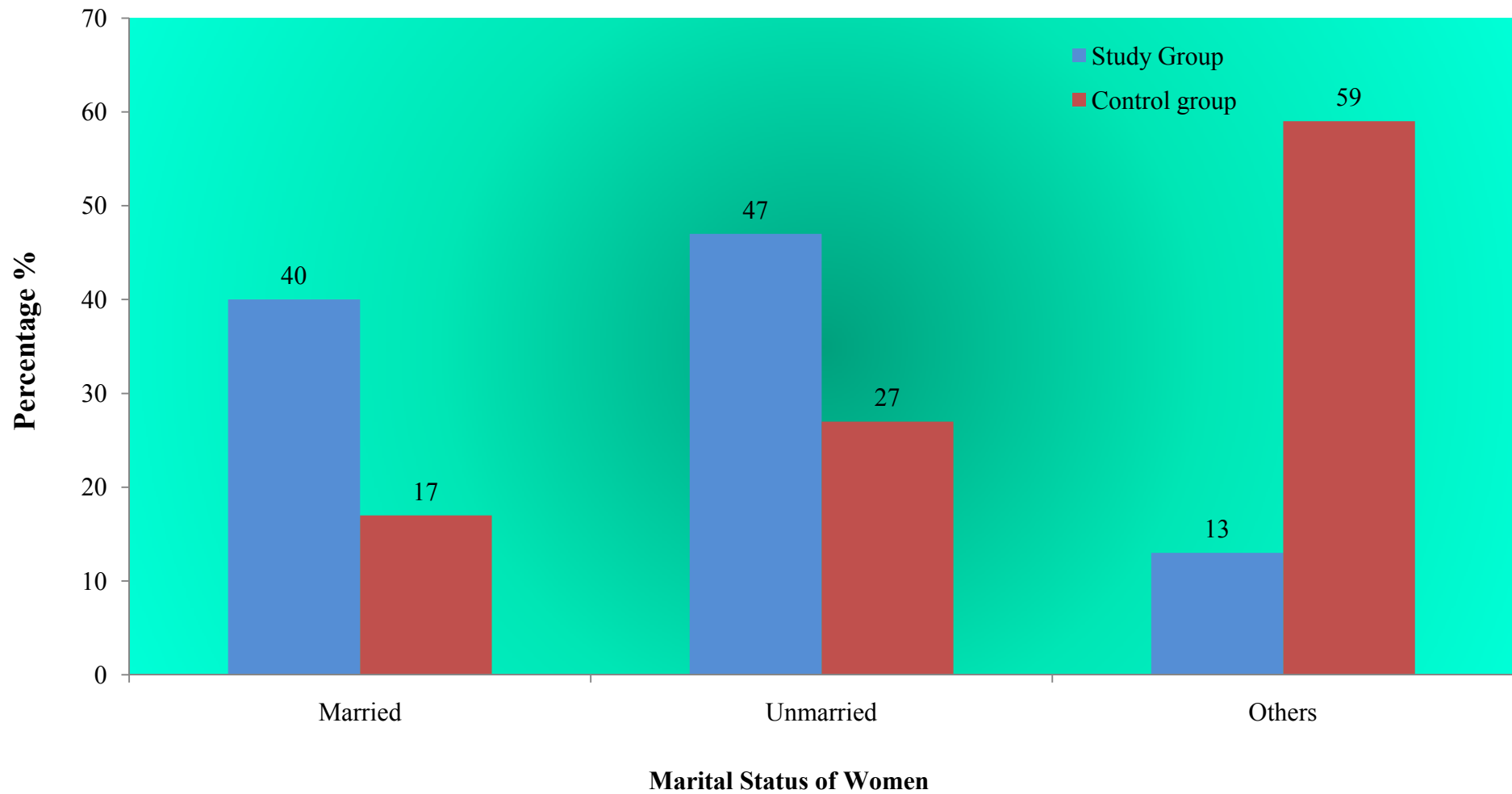


Fig. 4.3 Frequency and Percentage Distribution of Demographic Variables According to the Marital Status of Women

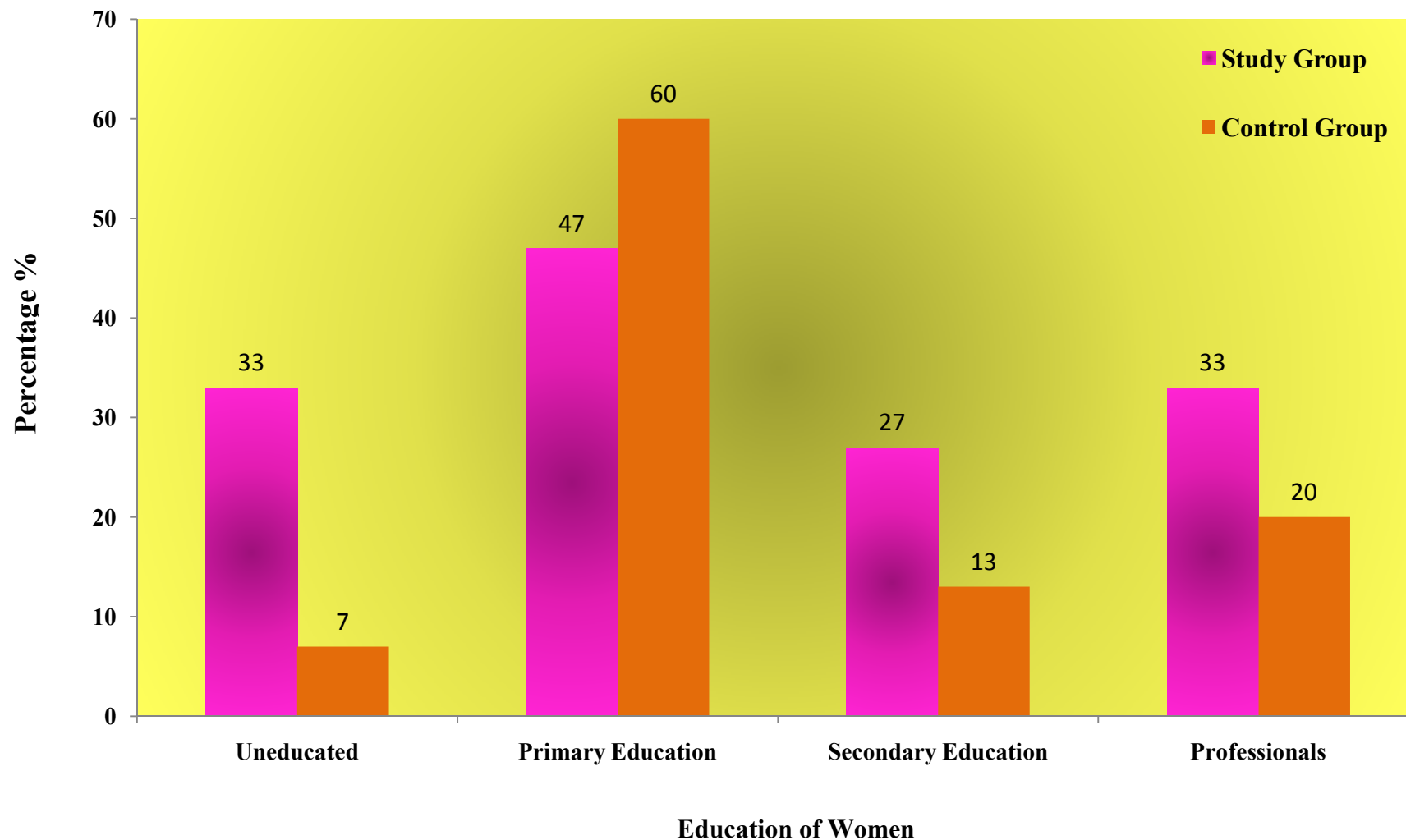


Fig.4.4 Frequency and Percentage Distribution of Demographic Variables According to the Education of Women

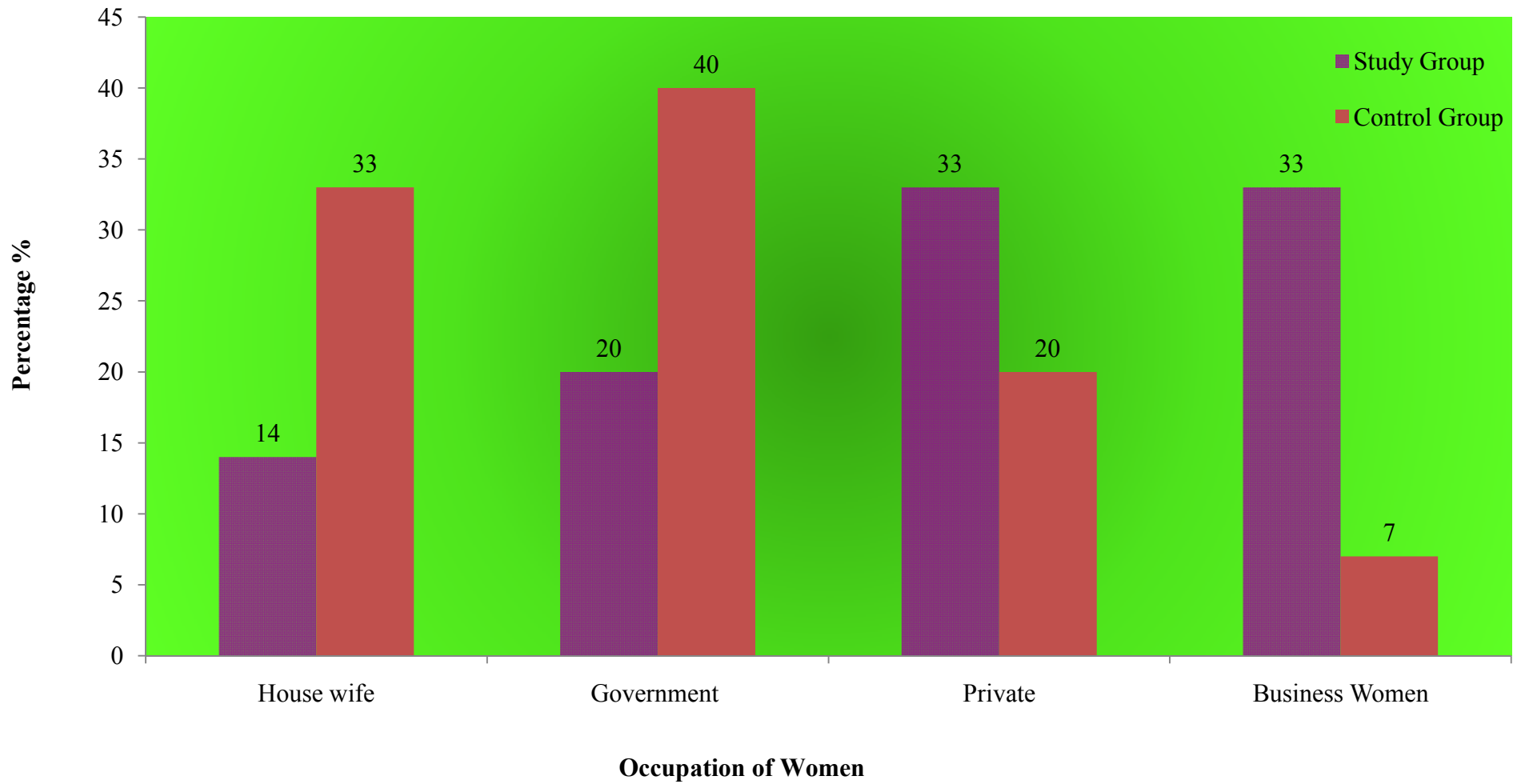


Fig.4.5 Frequency and Percentage Distribution of Demographic Variables According to the Occupation of Women

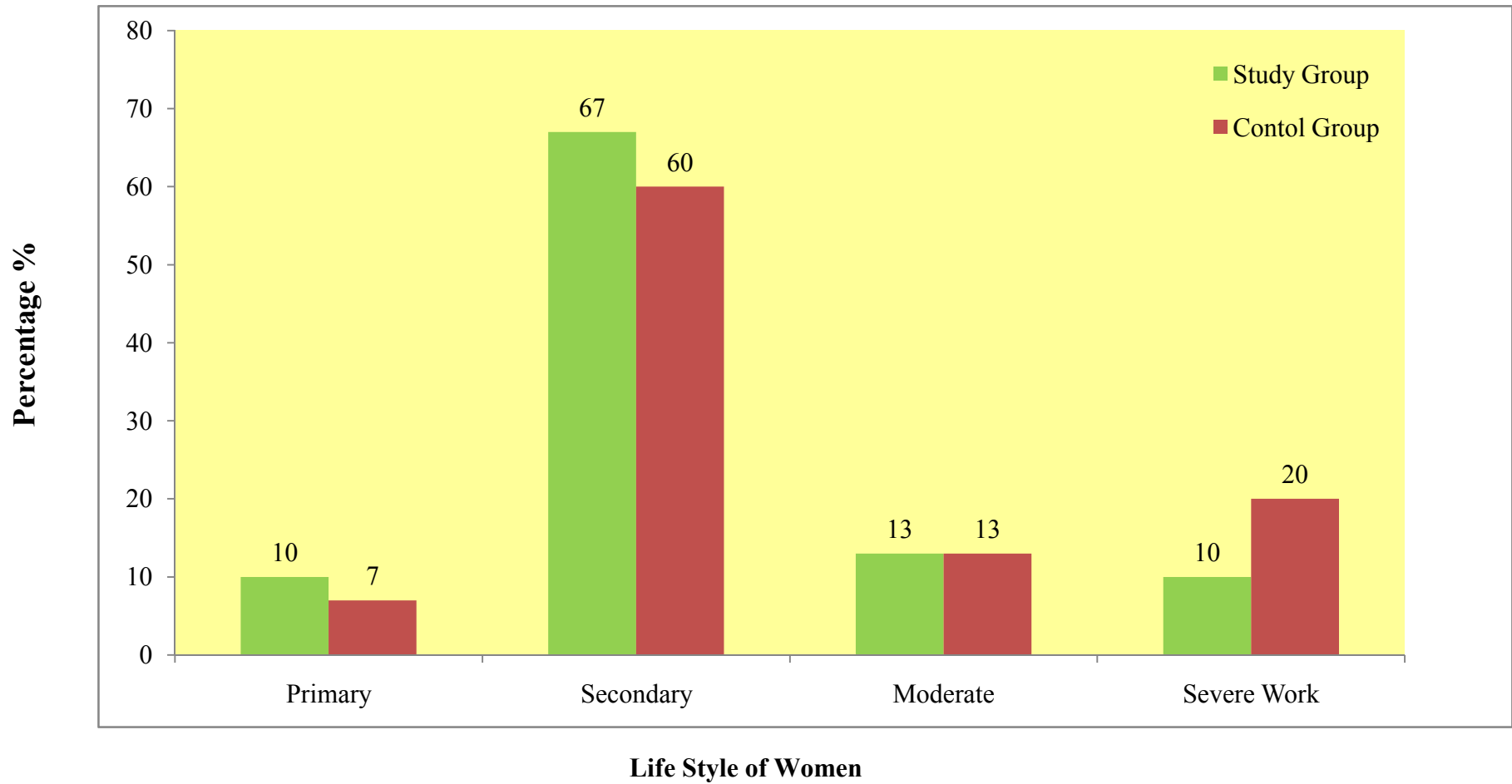


Fig.4.6 Frequency and Percentage Distribution of Demographic Variables According to the Life Style of Women

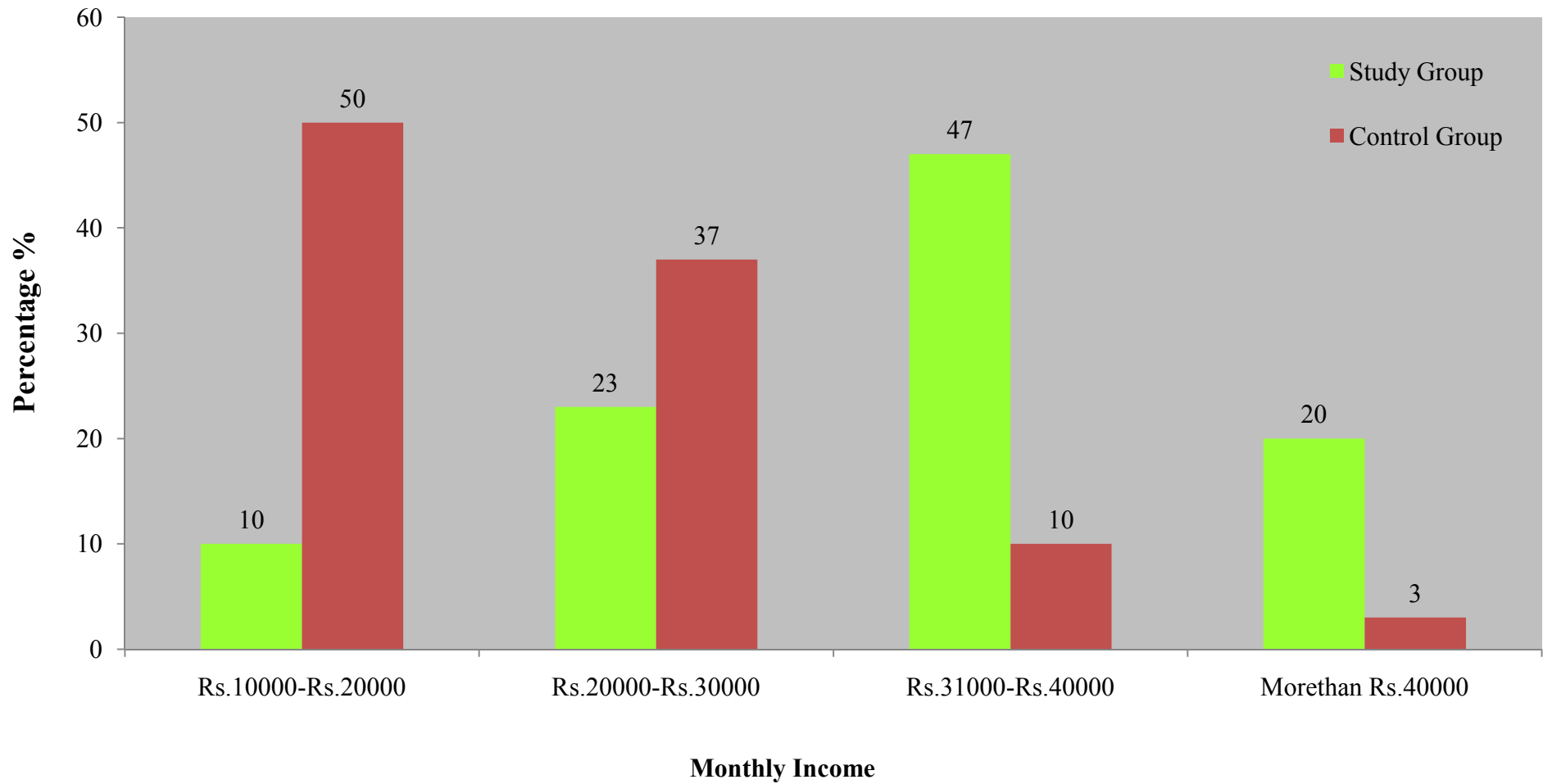


Fig.4.7 Frequency and Percentage Distribution of Demographic variables According to the Monthly Income

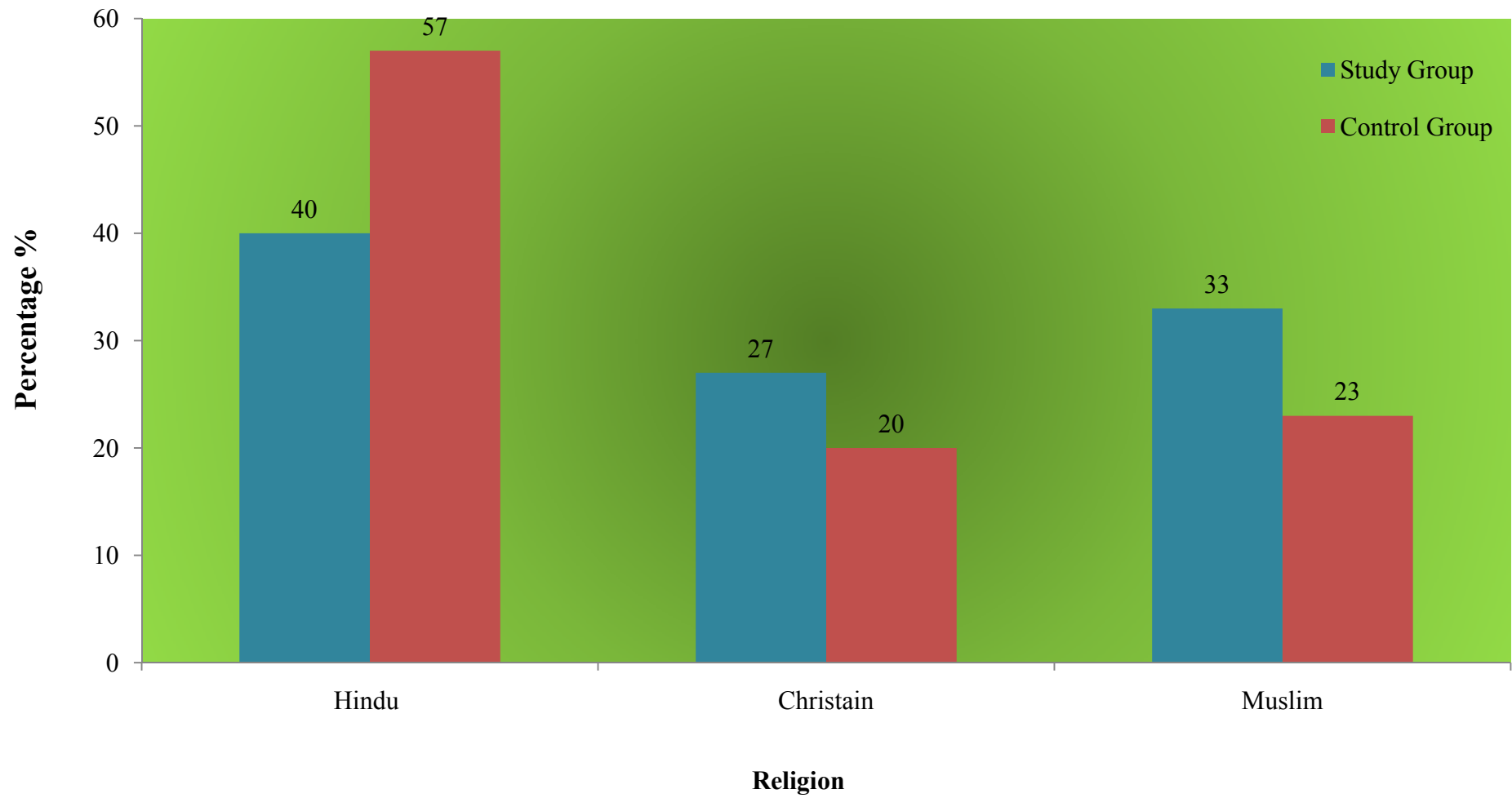


Fig.4.8 Frequency and Percentage Distribution of Demographic Variables According to the Religion

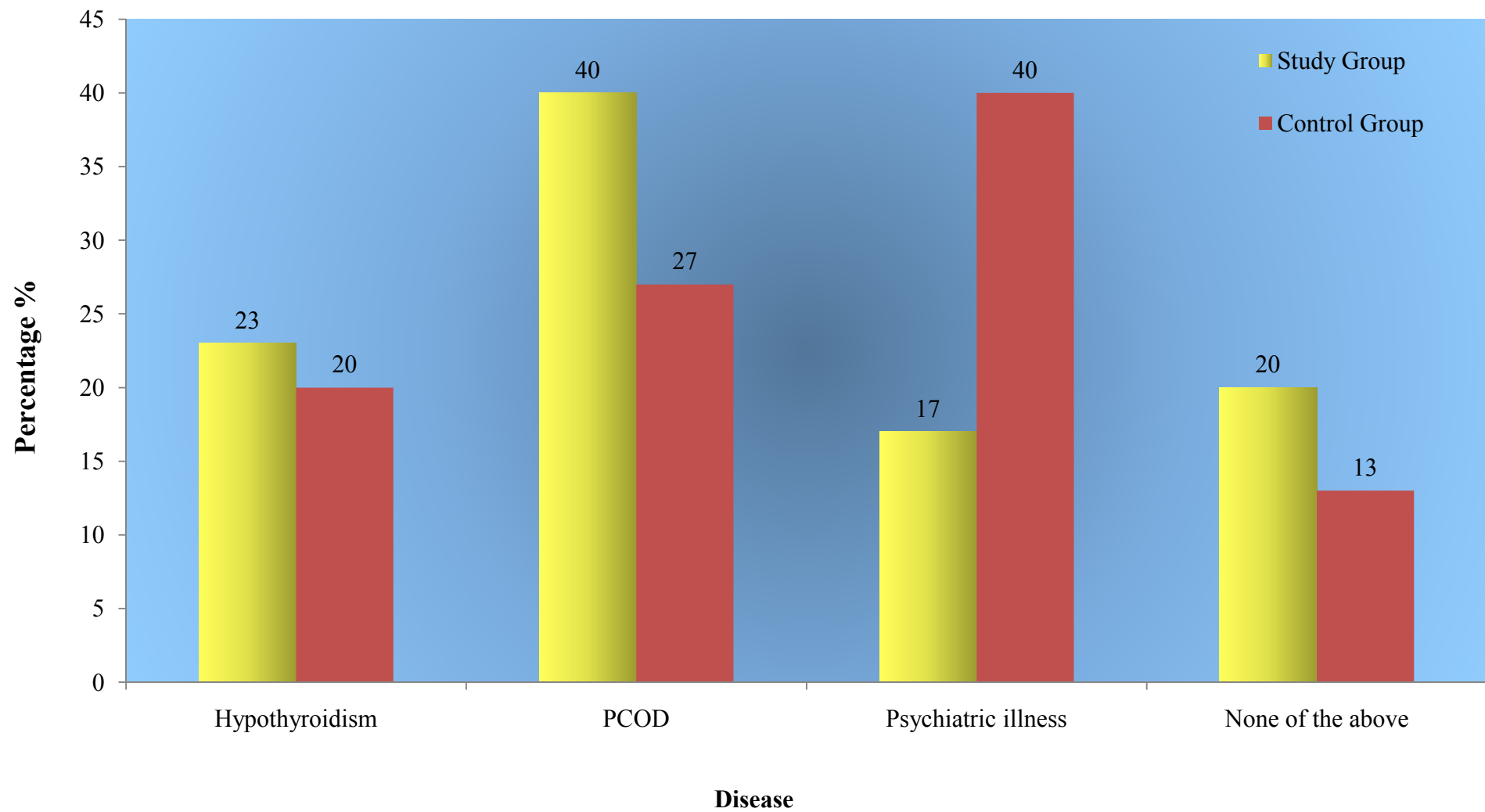


Fig.4.9 Frequency and Percentage Distribution of Demographic Variables According to the Disease

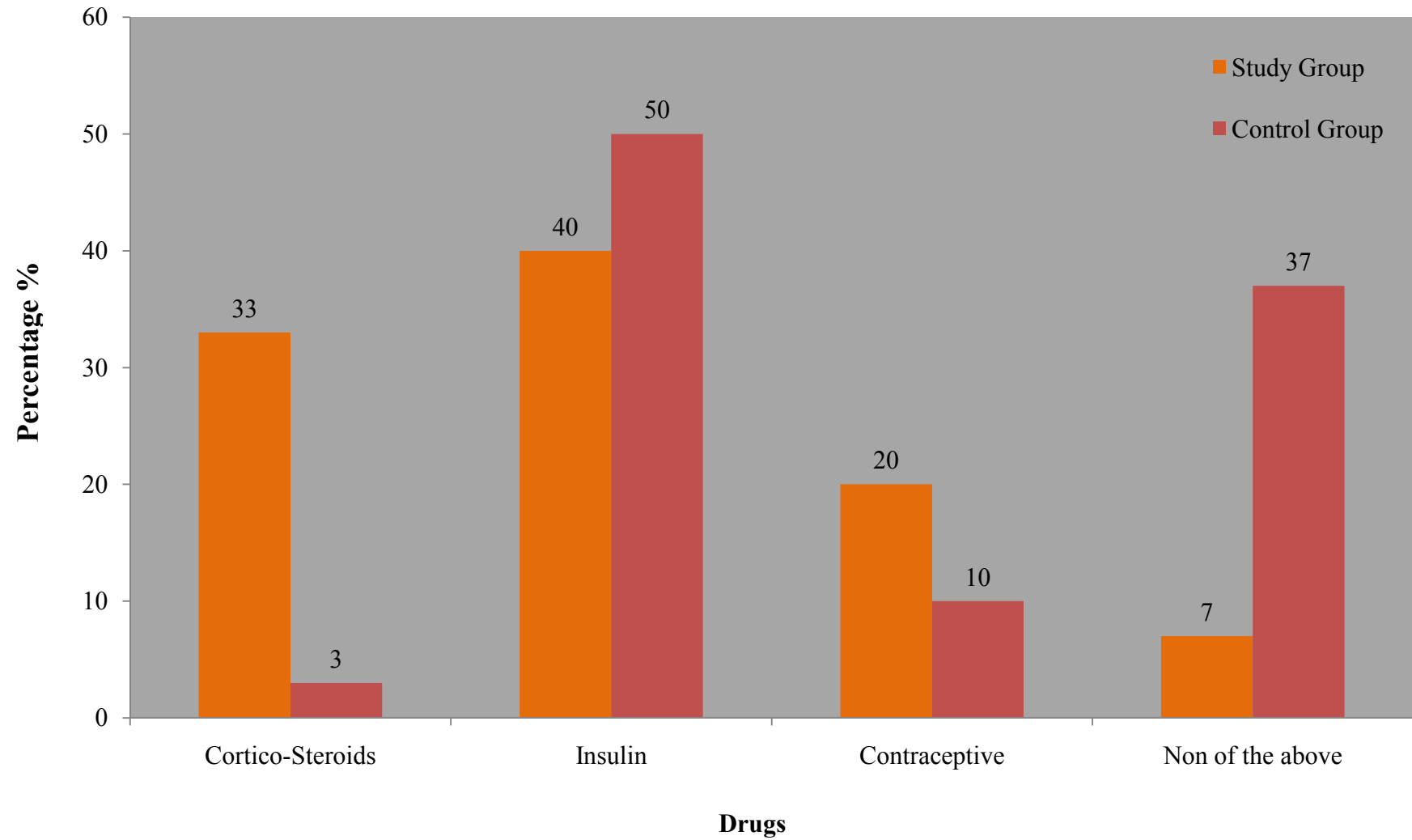


Fig.4.10 Frequency and Percentage Distribution of Demographic Variables According to the Drugs

SECTION B

II.DISTRIBUTION OF OBESE WOMEN IN INTERVENTIONAL GROUP AND ROUTINE CARE GROUP ACCORDING TO THE LEVEL OF WEIGHT BEFORE INTERVENTION.

Table 4.2: Frequency and percentage distribution of obese women in interventional group and routine care group according to the level weight before intervention.

n=60

S. No	Level of BMI	Interventional group (n=30)		Routine care group (n=30)	
		Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
1	Normal	0	0	0	0
2	Over Weight	0	0	0	0
3	High	0	0	0	0
4	Very High	8	27	9	30
5	Extreme High	22	73	21	70

Table 4.2 represents that during pre test, in interventional group none of them had normal, overweight and high obesity, 8(27%) had very high and 22(73%) had extreme high obesity. In routine care group none of them had normal, overweight, high obesity, 9(30%) had very high obesity and 21(70%) had extreme high obesity.

III.DISTRIBUTION OF OBESE WOMEN IN INTERVENTIONAL GROUP AND ROUTINE CARE GROUP ACCORDING TO THE LEVEL OF WEIGHT AFTER INTERVENTION.

Table 4.3: Frequency and percentage distribution of obese women in interventional group and routine care group according to the level of weight after intervention.

n=60

S. No	BMI	Interventional group (n=30)		routine care group (n=30)	
		Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
1	Normal	0	0	0	0
2	Over Weight	0	0	0	0
3	High	17	57	0	0
4	Very High	10	33	6	20
5	Extreme High	3	10	24	80

Table 4.3 represents that during post test, in interventional group none of them had normal and overweight, 17(57%) had high obesity, 10(33%) had very high obesity and 3(10) had extreme high obesity.

In routine care group during pre test, none of them had normal, overweight and high obesity, 6(20%) had very high obesity and 24(80) had extreme high obesity.

SECTION C

IV.COMPARISON OF PRE TEST AND POST TEST LEVEL OF WEIGHT AMONG OBESE WOMEN IN INTERVENTIONAL GROUP AND ROUTINE CARE GROUP.

Table 4.4: Comparison of mean, standard deviation and paired‘t’ value on pre and post test level of weight among obese women in interventional group and routine care group.

n=60

S.No	Variables Group	Mean	SD	Mean difference	df	Paired ‘t’ value
1	Level of weight Interventional group (n=30) Pre test Post test	43.9 36	7.9	19.83	29	11*
2	Routine care group (n=30) Pre test Post test	41.36 42	4.22 3.78	0.7	29	1

*** significant**

Table-4.4 represents, the mean score the level of weight in interventional group was 43.9 in pre test and 36 in post test. The estimated paired‘t’ value was 11* which is significant at $p<0.05$. It shows that green tea was effective in reducing the level of weight among obese women.

In routine care group the mean score the level of weight among obese women was 41.36 in pre test and in post test. The estimated paired ‘t’ value was 1 which is significant at $p<0.05$.

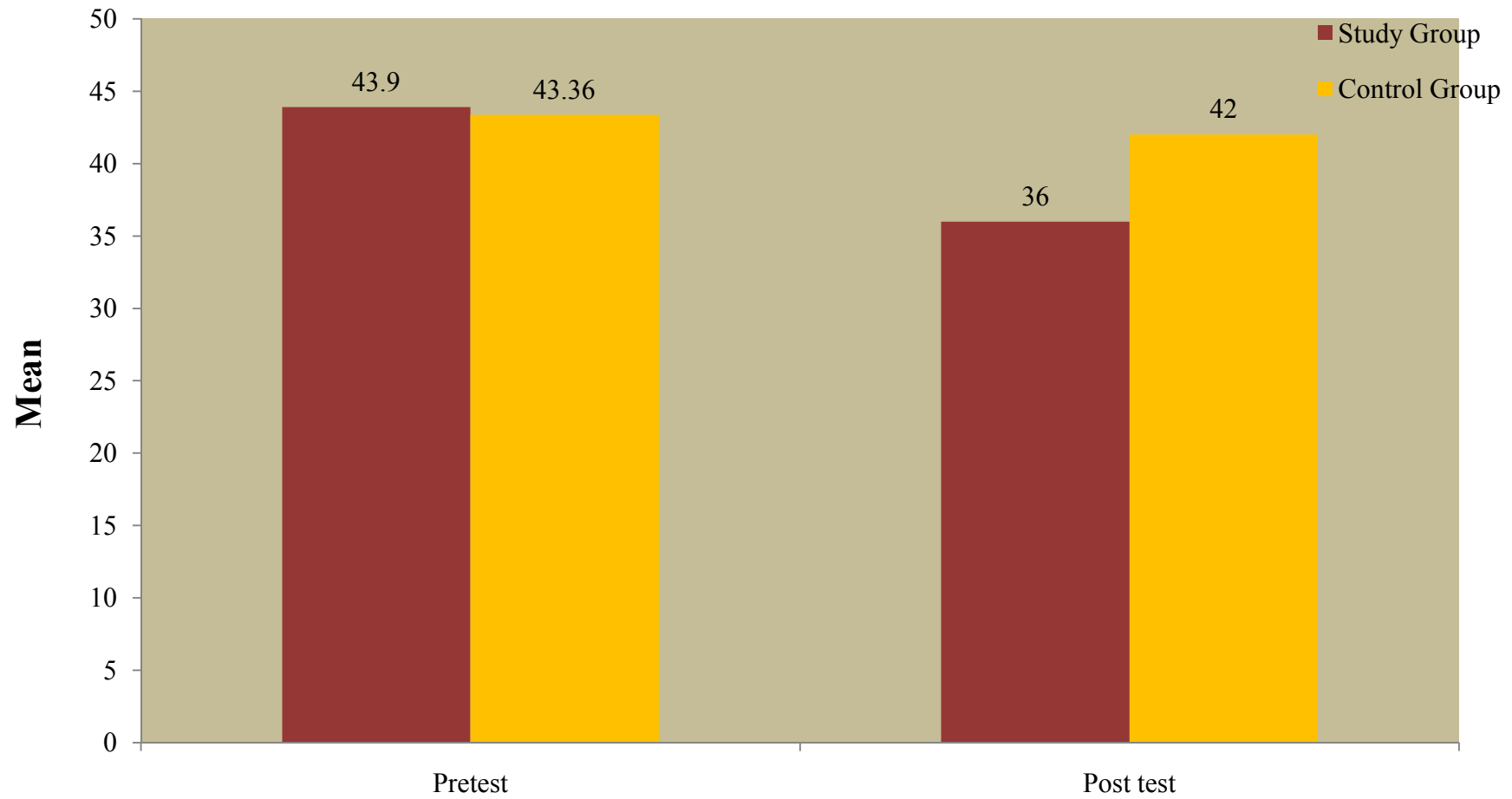


Fig.4.11 Comparison of mean, standard deviation and paired 't' value on pre and post test level of weight among obese women in study group and control group.

V.COMPARISON OF POST TEST LEVEL OF WEIGHT AMONG OBESE WOMEN IN INTERVENTIONAL GROUP AND ROUTINE CARE GROUP.

Table 4.5: Comparison of mean, standard deviation and unpaired ‘t’ value on post test level of weight among obese women in interventional group and routine care group.

n=60

S. No	Group	Mean	SD	Mean difference	Df	Unpaired ‘t’ value
1	Interventional group (n=30)	36	5.37	6	58	4*
2	Routine care group (n=30)	42	3.78			

*** significant**

Table-4.6 represents, the mean score on level of weight in interventional group was 36 ± 5.37 and in routine care group was 42 ± 3.78 . The estimated unpaired ‘t’ value was 4* which is significant at $p < 0.05$. It shows green tea supplement was effective in reducing the level of weight among obese women.

SECTION D

VI.ASSOCIATION BETWEEN THE POST TEST LEVEL OF WEIGHT AMONG OBESE WOMEN IN INTERVENTIONAL GROUP WITH SELECTED DEMOGRAPHIC VARIABLES.

Table 4.6: Association between the post test levels of weight among obese women in interventional group with selected demographic variables.

n=60

S. No	Demographic Variables	Interventional group (n=30)		
		df	χ^2	Table value
1	Age of the women	12	1.6202	21.026
2	Marital status	8	1.149	15.507
3	Education of the women	12	4.0093	21.026
4	Occupation of the women	12	4.4033	21.026
5	Life style of women	12	6.3638	21.026
6	Monthly Income	12	1.8813	21.026
7	Religion	8	1.1976	15.507
8	Dietary pattern of women	4	1.2425	9.488
9	Family type of women	4	0.2929	9.488
10	Do you have any previous knowledge regarding green tea through media	4	0.1269	9.488
11	Do you have any of the following disease	12	1.7379	21.026
12	Do you take any following drugs	12	2.9847	21.026

The table 4.6 shows that calculated value is less than table value, which indicates there is no significant association between age, marital status, education of the women, occupation of the women, life style of women, monthly income, religion, dietary pattern of women, family type of women, do you have any previous knowledge regarding green tea through media, do you have any of the following disease and do you take any following drugs.

VII.ASSOCIATION BETWEEN THE POST TEST LEVEL OF WEIGHT AMONG OBESE WOMEN IN ROUTINE CARE GROUP WITH SELECTED DEMOGRAPHIC VARIABLES

Table 4.7: Association between the post test levels of weight among obese women in routine care group with selected demographic and clinical variables

n=60

S. No	Demographic Variables	Routine care group (n=30)		
		df	χ^2	Table value
1	Age of the women	12	2.463	21.026
2	Marital status	8	5.3139	15.507
3	Education of the women	12	4.7977	21.026
4	Occupation of the women	12	4.2185	21.026
5	Life style of women	12	4.367	21.026
6	Monthly Income	12	1.9651	21.026
7	Religion	8	1.4457	15.507
8	Dietary pattern of women	4	2.3171	9.488
9	Family type of women	4	0.8569	9.488
10	Do you have any previous knowledge regarding green tea through media	4	0.4336	9.488
12	Do you have any of the following disease	12	1.359	21.026
13	Do you take any following drugs	12	3.6371	21.026

The table 4.7 shows that calculated value is less than table value, which indicates there is no significant association between age, marital status, education of the women, occupation of the women, life style of women, monthly income, religion, dietary pattern of women, family type of women, do you have any previous knowledge regarding green tea through media, do you have any of the following disease and do you take any following drugs.

CHAPTER - V

CHAPTER V

DISCUSSION

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

The statement of the problem was ‘A interventional to evaluate the effectiveness of green tea supplement on weight reduction among obese women in selected urban areas at Coimbatore.

DEMOGRAPHIC VARIABLES

According to age of the women in interventional group 6 (20%) of them belong to the age group between 41 – 45 years, 5(17%) of them belong to the age group between 46 – 50 years, 12 (40%) of them belong to the age group between 51 – 55 years and 7(23%) of them belong to the age group between 56 – 60 years. In routine care group 5 (17%) of them belong to the age group between 41 – 45 years, 10(33%) of them belong to the age group between 46 – 50 years, 12 (40%) of them belong to the age group between 51 – 55 years and 3(10%) of them belong to the age group between 56 – 60 years. Distribution of obese women according to marital status in interventional group 12(40%) were married, 14(47%) were unmarried and 4(13%) were others. In routine care group 5(17%) were married, 8(27%) were unmarried and 17(59%) were others.

Besides, the table also represents distribution of obese women according to education in interventional group 10(33%) were uneducated, 2(7%) were primary education, 8(27%) were secondary education and 10(33%) were professionals. In routine care group 2(7%) were uneducated, 18(60%) were primary education, 4(13%) were secondary education and 6(20%) were professionals. Moreover, it represents the distribution of level of knowledge among obese women according to occupation in interventional group 4(14%) were house wife, 6(26%) were Government, 10(33%) were private workers and 10(33%) were business. In routine care group interventional group 4(14%) were house wife, 6(26%) were government, 10(33%) were private workers and 10(33%) were business.

In the distribution of obese women, the table shows that according to their lifestyle changes income in interventional group 3(10%) were primary, 20(67%) were secondary, 4(13%) were moderate and 3(10%) severe worker. In routine care group 2(7%) were primary, 18(60%) were secondary, 4(13%) were moderate and 6(20%) were severe worker. In the distribution of obese women, according to their monthly income in interventional group 3(10%) had Rs. 10000 to Rs. 20000, 7(23%) had Rs.21000 to Rs.30000, 14(47%) had Rs.31000 to Rs.40000 and 6(20%) had more than Rs. 40000. In routine care group 15(50%) had Rs. 10000 to Rs. 20000, 11(37%) had Rs.21000 to Rs.30000, 3(10%) had Rs.31000 to Rs.40000 and 1(3%) had more than Rs. 40000. Regarding the women religion in interventional group 12(40%) were Hindu, 8(27%) were Christian and 10(33%) were Muslim. In routine care group 17(57%) were Hindu, 6(20%) were Christian and 7(23%) were Muslim. In the allocation of obese women according to their dietary pattern in interventional group 8(27%) were vegetarian and 22(73%) were non-vegetarian. In routine care group 7(23%) were vegetarian and 23(77%) were non-vegetarian.

In the distribution of obese women, according to their family type in interventional group 22(73%) were in nuclear family and 8(27%) were joint family. In routine care group 24(80%) were in nuclear family and 6(20%) were in joint family. Regarding any previous knowledge regarding green tea through media 10 (33%) were said yes and 20(67%) were said no. In routine care group 4(17%) were said yes and 26(87%) were said no. According to the diseases of obese women, 7(23%) had hypothyroidism, 12(40%) had PCOD, 5(17%) had psychiatric illness and 6(20%) had none of the above diseases. In routine care group, 6(20%) had hypothyroidism, 8(27%) had PCOD, 12(40%) had psychiatric illness and 4(13%) none of the above diseases. Distribution of obese women according to the drugs in interventional group 10(33%) had corticosteroids, 12(40%) had insulin, 6(20%) had contraception and 2(7%) none of the above drugs. In routine care group 1(3%) had corticosteroids, 15(50%) had insulin, 3(10%) had contraception and 11(37%) none of the above drugs.

The first objective was to find the pre test and post test level of weight on green tea supplement among obese women in interventional and routine care group.

In pre test, in interventional group none of them had normal, overweight and high obesity, 8(72%) had very high and 22(73%) had extreme high obesity. In routine care group

none of them had normal, overweight, high obesity, 9(30%) had very high obesity and 21(70%) had extreme high obesity.

During post test, in interventional group none of them had normal and overweight, 17(57%) had high obesity, 10(33%) had very high obesity and 3(10) had extreme high obesity.

In routine care group during pre test, none of them had normal, overweight and high obesity, 6(20%) had very high obesity and 24(80) had extreme high obesity.

The mean score the level of weight in interventional group was 43.9 in pre test and 36 in post test. The estimated paired 't' value was 11* which is significant at $p < 0.05$. It shows that green tea was effective in reducing the level of weight among obese women.

In routine care group the mean score the level of weight among obese women was 41.36 in pre test and in post test. The estimated paired 't' value was 1 which is significant at $p < 0.05$.

The second objective was to evaluate the effectiveness of green tea supplement on weight reduction among obese women in interventional group.

The mean score on level of weight in interventional group was 36 ± 5.37 and in routine care group was 42 ± 3.78 . The estimated unpaired 't' value was 4* which is significant at $p < 0.05$. It shows green tea supplement was effective in reducing the level of weight among obese women.

The finding of the interventional was consistent with the interventional conducted by khon (2018) to investigate the outcome of green tea on weight reduction in obese. This interventional was undertaken to investigate the effects of green tea on weight reduction in obese Thais. 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 interventional, respectively. At the 8 and 12 weeks of the interventional, 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 third objective was to find out the association between the post test level of weight on green tea supplement among obese women with their selected demographic variable in interventional and routine care group.

In interventional and routine care group calculated value is less than table value, which indicates there is no significant association between age, marital status, education of the women, occupation of the women, life style of women, monthly income, religion, dietary pattern of women, family type of women, do you have any previous knowledge regarding green tea through media, do you have any of the following disease and do you take any following drugs.

The interventional finding was found to be consistent with the interventional Carmen (2019) revealed that a interventional to evaluate the outcome of green tea catechins with or without caffeine have been studied in randomized clinical trials for their effect on anthropometric measures. The objective was to perform a systematic review and Meta –analysis of randomized clinical trials 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 was calculated by using a random – effect model. Result fifteen studies (n= 1243 patients) met the inclusion criteria. The administration of green tea catechins with caffeine is associated with statistically significant reduction in body mass index, body weight, and Waist Circumference.

In the present interventional, evaluates the outcome of green tea on obesity women. The investigator having analyzed the data and has come to the conclusion that Supplement green tea is very effective to reduce weight and easy to follow.

CHAPTER - VI

CHAPTER - VI

SUMMARY, CONCLUSION, LIMITATIONS, NURSING IMPLICATION AND RECOMMENDATIONS

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

SUMMARY

The interventional was conducted interventional to evaluate the effectiveness of green tea supplement on weight reduction among obese women in selected urban areas at Coimbatore.

MAJOR FINDINGS

In pre test, in interventional group none of them had normal, overweight and high obesity, 8(72%) had very high and 22(73%) had extreme high obesity. In routine care group none of them had normal, overweight, high obesity, 9(30%) had very high obesity and 21(70%) had extreme high obesity.

During post test, in interventional group none of them had normal and overweight, 17(57%) had high obesity, 10(33%) had very high obesity and 3(10) had extreme high obesity.

In routine care group during pre test, none of them had normal, overweight and high obesity, 6(20%) had very high obesity and 24(80) had extreme high obesity.

The mean score the level of weight in interventional group was 43.9 in pre test and 36 in post test. The estimated paired 't' value was 11* which is significant at $p < 0.05$. It shows that green tea was effective in reducing the level of weight among obese women.

In routine care group the mean score the level of weight among obese women was 41.36 in pre test and in post test. The estimated paired 't' value was 1 which is significant at $p < 0.05$.

The mean score on level of weight in interventional group was 36 ± 5.37 and in routine care group was 42 ± 3.78 . The estimated unpaired 't' value was 4* which is significant at $p < 0.05$. It shows green tea supplement was effective in reducing the level of weight among obese women.

CONCLUSION

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 interventional group (30) got green tea for 30 days and in the routine care group (30) no intervention was assessed with standardized weighing machine. The tool consisted of demographic variables. The conceptual framework adopted for the interventional was based on Pender's Health Promotion Model. The interventional was conducted at semmanichettipalayam village at Coimbatore.

NURSING IMPLICATIONS

The investigator has derived from the interventional 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

- Insist the obesity clients to take green tea in their daily diet.
- Teach the obesity clients and significant others about the benefits of taking green tea in reduction of weight.
- Training programme can be arranged for village women for the healthy life style.

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.
- The holistic care approach should be emphasized more during the training period of nursing students.
- 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.

NURSING ADMINISTRATION

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

NURSING RESEARCH

- Nurse researcher can conduct more research on dietary management of obesity in all Settings (hospital set up).
- Disseminate the findings of dietary management of obesity through conferences, seminars, publication in professional, national and international journal and World Wide Web.

RECOMMENDATION

- ✚ A similar interventional can be conducted on a large sample size.
- ✚ Comparative interventional may be conducted to evaluate the effectiveness of dietary management and in combination with other complementary therapies.
- ✚ A similar interventional can be conducted among urban and rural obesity women
- ✚ A similar interventional 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

REFERENCES

BOOKS

- *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*
- *Black, J. M and Jacobs, E. M. (1997). Medical surgical nursing. (5th edition). Philadelphia; WB. Saunders Company.*
- *Burns, N and Grove, S. K. (1999). Understanding nursing research. (2nd edition). Philadelphia; WB. Saunders Company.*
- *Davidson. (2002). Principles and practice of medicine. (19th edition). New York; Churchill Livingstone publishers.*
- *Golwalla, Bernardini, et.al., (2004). Medicine for students. (16th edition). India Printing house.*
- *Gupta, S. P, Anson. (2012). Statistical method. (32nd edition). New Delhi; Sulthanehand and sons Education publishers.*
- *Holloway. N. M. (2009). Medical surgical care planning. (3rd edition). Pennsylvania: springhouse publishers.*
- *Ignastsvicius, D. D and Linda, W. Srinivasa, et.al., (2011). Text book of Medical surgical nursing. (6th edition). Philadalphia; WB. Saunders Company.*
- *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*
- *Kasturi Sundar Rao. (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.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

APPENDICES



PPG COLLEGE OF NURSING

(A Unit of P. Perichi Gounder Memorial Charitable Trust)

An ISO 9001 : 2008 Certified Institution

Affiliated to The Tamilnadu Dr. MGR Medical University, Chennai

Recognised by Indian Nursing Council, New Delhi. (Cr. No. : 18-1183/2000, INC Resl. No.172) and
Tamilnadu Nursing Council, Chennai.

9/1, Keeranatham Road, Saravanampatty, Coimbatore - 641 035.Tamilnadu, India

☎ : 0422 - 2669000 Fax : 0422 - 2669333 E-mail : ppqcollege@gmail.com Website : www.ppq.edu.in



Permission Letter for Research Study

To

Mrs.Gracelin Sheeba A
M.Sc., Nursing IInd Year,
PPG College of Nursing,
Coimbatore -35

Through:

The Principal ,
PPG College of Nursing,
Coimbatore -35

Respected Sir / Madam.

Sub: Seeking Permission For Conducting Research Study.

I am student of II-year M.Sc Nursing, PPG College of Nursing, affiliated to the Tamilnadu Dr.M.G.R Medical University, Chennai. I have taken the specialization in Community Health Nursing. I am going to conduct the study on **“A STUDY TO EVALUATE THE EFFECTIVENESS OF GREEN TEA SUPPLEMENT ON WEIGHT REDUCTION AMONG OBESE WOMEN IN SELECTED URBAN AREAS AT COIMBATORE.”**

I request you to kindly permit me to conduct my study in hospital. Hope you will consider my requisition and do the needful.

Thanking you

Yours faithfully,



PPG COLLEGE OF NURSING

(A Unit of P. Perichi Gounder Memorial Charitable Trust)

An ISO 9001 : 2008 Certified Institution

Affiliated to The Tamilnadu Dr. MGR Medical University, Chennai

Recognised by Indian Nursing Council, New Delhi. (Cr. No. : 18-1183/2000, INC Resl. No.172) and
Tamilnadu Nursing Council, Chennai.

9/1, Keeranatham Road, Saravanampatty, Coimbatore - 641 035.Tamilnadu, India

☎ : 0422 - 2669000 Fax : 0422 - 2669333 E-mail : ppqcollege@gmail.com Website : www.ppq.edu.in



Requisition Letter for Content Validity

From

II-year M.sc nursing,
PPG college of nursing,
Coimbatore-35

To

**Through The Principal ,PPG college of Nursing,
Coimbatore – 35**

Respected Sir / Madam.

Sub: Requisition for expert opinion and suggestion for content validity of the tool.

I am student of II-year M.Sc Nursing, PPG college of Nursing, affiliated to the Tamilnadu Dr.M.G.R Medical University, Chennai . As a partial fulfillment of M.Sc Nursing Programme. I am conducting

TOPIC: “A STUDY TO EVALUATE THE EFFECTIVENESS OF GREEN TEA SUPPLEMENT ON WEIGHT REDUCTION AMONG OBESE WOMEN IN SELECTED URBAN AREAS AT COIMBATORE.”

Herewith I have enclosed the developed tool for content validity for your expert opinion and possible suggestion. I will be very kind of you to return the same to the undersigned at the earliest possible.

Thanking you

Yours Truly,

Date:

Place

CERTIFICATE FOR ENGLISH EDITING

This is to certify that the study conducted by **Mrs.Gracelin Sheeba** , M.Sc Nursing II year Student, PPG college of nursing, Coimbatore -35 on the topic **“A STUDY TO EVALUATE THE EFFECTIVENESS OF GREEN TEA SUPPLEMENT ON WEIGHT REDUCTION AMONG OBESE WOMEN IN SELECTED URBAN AREAS AT COIMBATORE.”** Has been edited by me for English language appropriateness.

SIGNATURE

NAME :

INSTITUTION :

PLACE :

CERTIFICATE FOR TAMIL EDITING

This is to certify that the study conducted by **Mrs.Gracelin Sheeba**, M.Sc Nursing II year Student, PPG college of nursing, Coimbatore -35 on the **“A STUDY TO EVALUATE THE EFFECTIVENESS OF GREEN TEA SUPPLEMENT ON WEIGHT REDUCTION AMONG OBESE WOMEN IN SELECTED URBAN AREAS AT COIMBATORE.”** Has been edited by me for Tamil language appropriateness.

SIGNATURE

NAME :

INSTITUTION :

PLACE :

PPG COLLEGE OF NURSING

Format For the Content Validity

Name of the Expert :

Address :

Total Content for the tool :

Kindly validate each tool and tick wherever applicable

S.No	No.of Tool/Section	Strongly Agree	Agree	O.K	Not applicable	Need modification	Remarks

Remarks

Signature of the Expert with Date

LIST OF EXPERTS

1.Dr.Joanna Grace Rajkumari. Msc (N),,

Principal.

Grace college of nursing

Padanthalumoodu

Kanyakumari

2.Prof Michael Jeba arasi Msc (N),,

Principal

Swami Vivekanand nursing college

Jagadhri.

3.Mrs VEDIAMMAL Msc (N),,

Associate professor

Sri Vijay vidyalaya college of nursing

Dharmapuri.

4.Mrs Salome Violet Msc (N),,

Associate professor

Kongunadu college of nursing.

Coimbatore.



Plagiarism

Checker X Originality Report

Similarity Found: 16%

Date: Saturday, September 25, 2021

Statistics: 1545 words Plagiarized / 8720 Total words

Remarks: Low Plagiarism Detected - Your Document needs Optional Improvement.

CHAPTER I INTRODUCTION To ensure good health: eat lightly, breathe deeply, live moderately, cultivate cheerfulness, and maintain an interest in life.”– William London

Background of the **Study Good nutrition**, physical activity, and a healthy body weight are essential parts of a **person’s overall health and well-being**. Nutrition is the biochemical and physiological process by which an organism used food to supports its life. It includes ingestion, absorption, assimilation, biosynthesis, catabolism and excretion.

Nutrition is a critical part of health and development. Better nutrition is related to improved infants, child and maternal health, **stronger immune** system, safer pregnancy, child birth and lower risk of non-communicable diseases.

Womanhood is the period in a human female's life after she has passed through childhood, puberty, and adolescence Different countries have different laws, but age 18 is frequently considered the age of majority. **Throughout human history**, traditional gender roles have often defined and limited women's activities and opportunities; many religious doctrines stipulate certain rules for women. **With restrictions** loosening during the 20th century in many societies, women have gained access to careers beyond the traditional homemaker, and the ability to pursue higher education.

Obesity considered as a medical problem in many under developing and developed countries across the world. **India is the third most obese country** in the world, just behind US and Chinna. In such scenario the rise in obesity and obesity related disorders focuses on the increasing

effect of lifestyle changes specifically eating habits i.e. misconception of junk foods. All the healthcare professionals especially in the field of community health nursing must take an extensive effort to educate the people to follow healthy lifestyle practices in reduction of weight and make efforts to reduce the obesity.

TOOLS

CONTENT VALIDITY

STATEMENT OF THE PROBLEM

A study to evaluate the effectiveness of green tea supplement on weight reduction among obese women in selected urban areas at Coimbatore.

OBJECTIVES

- ✓ To find the pre test and post test level of weight on green tea supplement among obese women in study and control group.
- ✓ To evaluate the effectiveness of green tea supplement on weight reduction among obese women in study group.
- ✓ To find out the association between the post test level of weight on green tea supplement among obese women with their selected demographic variable in study and control group.

HYPOTHESIS

H₁ . There will be significant difference between pre test and post test level of weight reduction among obese women in the study and control group.

H₂ -There will be a significant association between post test level of weight reduction among obese women in study and control group with their selected demographic variables.

I. DEMOGRAPHIC DATA

1. Age of the women
 - a) 41 – 45 years
 - b) 46 – 50 years
 - c) 51 – 55 years
 - d) 56 – 60 years

2. Marital status of women
 - a) Married
 - b) Unmarried
 - c) Others

3. Education of women
 - a) Uneducated
 - b) Primary Education
 - c) Secondary Education
 - d) Professionals

4. Occupation of women
 - a) House wife
 - b) Government
 - c) Private
 - d) Business women

5. Life style of women
 - a) Primary
 - b) Secondary
 - c) Moderate
 - d) Severe work

6. Monthly Income
- a) Rs.10000 – Rs.20000
- b) Rs.21000 – Rs.30000
- c) Rs.31000 – Rs.40000
- d) More than Rs.40000
7. Religion
- a) Hindu
- b) Christian
- c) Muslim
8. Dietary Pattern of women
- a) Vegetarian
- b) Non-Vegetarian
9. Family Type of women
- a) Nuclear Family
- b) Joint Family
10. Do you have any previous knowledge regarding green tea through media
- a) Yes
- b) No
11. Do you have any of the following disease
- a) Hypothyroidism
- b) PCOD
- c) Psychiatric illness
- d) None of the above

12. Do you take any following drugs
- a) Cortico – steroids
 - b) Insulin
 - c) Contraceptive
 - d) None of the above

II. ANTHREPOMETRIC MEASUREMENT

- a) Height -
- b) Weight-
- c) Waist circumference –

STANDADIZED TOOL FOR BMI (BODY MASS INDEX)

Category	BMI (Kg/M ²)	Obesity Class	Status
Underweight	<18.5	–	–
Normal	18.5-24.9	–	–
Overweight	25.0-29.9	–	–
Obese	30-34.9	Category 1	High
	35.0-39.9	Category 2	Very high
Extreme Obese	>40.00	Category 3	Extremely high

FACTORS CONTRIBUTING THE WEIGHT GAIN?

1. Do you take food at regular intervals (8 am, 1pm, 8 pm)?
 - a) Yes
 - b) No
2. Do you skip your breakfast?
 - a) Yes
 - b) No
3. Do you sleep at day time?
 - a) Yes
 - b) No
4. Do you prefer junk food/ fried foods?
 - a) Yes
 - b) No
5. Do you take adequate water in day?
 - a) Yes
 - b) No
6. Do you have the habits of watching TV or mobile phones during eating?
 - a) Yes
 - b) No
7. Do you eat more if your stressed out?
 - a) Yes
 - b) No
8. Do you preferred frequent snacking?
 - a) Yes
 - b) No
9. Do you preferred outside food or homemade food?
 - a) Yes
 - b) No
10. Do you chew your food?
 - a) Yes
 - b) No

பகுதி

1. தாய்மார்களின் வயது?

அ) 41 முதல் 45 வயது

ஆ) 46 முதல் 50 வயது

இ) 51 முதல் 55 வயது

ஈ) 56 முதல் 60 வயது

2. திருமண நிலை

அ) திருமணமானவர்

ஆ) திருமணமாகாதவர்

இ) மற்றவை

3. தாய்மார்களின் கல்வி

அ) படிப்பறிவில்லாதவர்

ஆ) தொடக்க நிலை கல்வி

இ) உயர்நிலை கல்வி

ஈ) முதுநிலை கல்வி

4. தாய்மார்களின் தொழில்

அ) இல்லத்தரசி

ஆ) அரசு வேலை

இ) தனியார் வேலை

ஈ) சுய தொழில்

5. தாய்மார்களின் வாழ்க்கை நிலை

அ) முதல் நிலை

ஆ) இரண்டாம் நிலை

இ) நடுநிலை

ஈ) கடின வேலை

6. மாதவருமானம்

அ) ரூ10000 - ரூ20000

ஆ) ரூ21000 - ரூ30000

இ) ரூ31000 - ரூ 40000

ஈ) ரூ 40000 மேல்

7. மதம்

அ) இந்து

ஆ முஸ்லீம்

இ) கிறிஸ்துவர்

8. தாய்மார்களின் உணவு பழக்கமுறை

அ) சைவ

ஆ) அசைவம்

9. தாய்மார்களின் குடும்ப நிலை

அ) தனி குடும்பம்

ஆ) கூட்டு குடும்பம்

10. இதற்கு முன் உங்களுக்கு கிரீன் டீ பற்றி தொலை தொடர்பு வழியாக ஏதேனும் அறிவுரை உள்ளதா?

அ) ஆம்

ஆ) இல்லை

11. கீழ்காணும் நோய்கள் ஏதேனும் உள்ளதா ?

அ) கை போதை ராடிசம்

ஆ) பி டி ஓ டி

இ) மன நோய்

ஈ) ஒன்றுமில்லை

12. கீழ்க்கண்ட மருந்துகள் ஏதேனும் உட்கொள்கீர்களா?

அ) கார்டிகோ ஸ்டிராய்டு

ஆ) இன்சலின்

இ) கருத்தடை மருந்துகள்

ஈ) மேற்கண்ட மருந்துகள் ஒன்றுமில்லை

**A STUDY TO EVALUATE THE EFFECTIVENESS OF GREEN TEA
SUPPLEMENT ON WEIGHT REDUCTION AMONG OBESE
WOMEN IN SELECTED URBAN AREAS
AT COIMBATORE.**

