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Palkar, Anjana, 2010, *To Study Menopause and its Effects in Middle Aged Women*, thesis PhD, Saurashtra University

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***TO STUDY MENOPAUSE AND
ITS EFFECTS IN
MIDDLE AGED WOMEN***

THESIS
SUBMITTED TO
SAURASHTRA UNIVERSITY
FOR THE DEGREE
OF
DOCTOR OF PHILOSOPHY
(HOME SCIENCE)

BY
ANJANA PALKAR

SMT. S. B. GARDI INSTITUTE OF HOME SCIENCE
SAURASHTRA UNIVERSITY
RAJKOT – 360 005
INDIA
2010

*To Study Menopause
and its Effects in
Middle Aged Women*

Thesis

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INDIA
2010**

STATEMENT UNDER UNIVERSITY PH.D RULES ORDI.PH 10

I hereby declare that,

- ❖ The research work presented in this thesis entitled “*A Study of Menopause and its Effect in Middle Aged Women*” has not been submitted for my other degree of this or any other university on any occasion.
- ❖ To the best of my knowledge no work of this type has been reported on the above subject.
- ❖ All the work presented in this thesis is original and wherever references have been made, it has been clearly indicated.

Counter sign by Guide

Date:

Sign of Research Scholar

Date:

CERTIFICATE OF APPROVAL

This thesis directed and supervised by the candidate's guide has been accepted by Smt. S. B. Gardi Institute of Home Science, Saurashtra University, Rajkot, in the fulfillment of the requirements for the degree of:

DOCTOR OF PHILOSOPHY
(HOME SCIENCE)

Title: "To Study Menopause and its Effects in Middle Aged Women"

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Acknowledgement

The researcher takes this opportunity to express her gratitude to Dr. Nilambari Dave, Head, Smt. S.B. Gardi Institute of Home Science, Saurashtra University, Rajkot for her guidance to under take and accomplish the present study. Sense of obligation is also felt for Dr. Chakrawal, Dr. Uchat and Dr. Modi for providing their expertise help.

Special thanks go to Dr. Sushma Bhupal and Ms. Surbhi Bhupal for their expertise, help and constant encouragement during the course of this work. Also thanks are due to those members of the researcher's family who have proved to be direct or indirect source of motivation.

I take the opportunity to express my thanks to all the respondents for kind co-operation in collection of data. And very special thanks to the friends who stood behind me in every odds and helped me out in every possible way.

It is beyond my access to acknowledge in words the moral support and love of my dear daughter Shailee and my husband Dr. Sushil Korgaokar. Thanks both of you.

Finally I wish to make devout supplication to Devine Spirit without whose blessings this task would not have been accomplished.

Date:

Anjana Palkar

Content

Detailed Table of Contents

CHAPTER 1 INTRODUCTION

1.1	1	Holistic Health
1.2	5	Health and Gender
1.3	8	Women's Health
1.4	16	Health Status of Women in India
1.5	23	Factors affecting women's health
1.6	27	Government efforts
1.7	30	Stages of women's health
1.8	31	Women and Menopause
1.9	40	Changes and Symptoms associated with the menopause
1.10	50	Hormone Treatment
1.11	54	Menopause and Nutrition
1.12	58	Statement of problem
1.13	59	Significance of the study
1.14	60	Objectives of the study
1.15	61	Hypothesis of the study
1.16	62	Justification

CHAPTER 2 REVIEW OF LITERATURE

2.1	65	Work and Health
2.2	68	Women and Health
2.3	73	Women and Nutrition
2.4	84	Menopause and Health

2.5	87	Problems during Menopause
2.6	89	Physical Symptoms during menopause
2.7	94	Psychological symptoms during menopause
2.8	95	Sexual symptoms during menopause
2.9	97	Treatment for Menopause
	107	Bibliography

CHAPTER 3

METHODOLOGY

3.1	117	Field Procedure
3.2	123	Awareness Scale
3.3	128	Data Analysis Procedure

CHAPTER 4

RESULTS AND DISCUSSION

4.1	131	Background information
4.2	157	Awareness
4.3	160	Problems
4.4	166	Hypothesis Testing

CHAPTER 5

SUMMARY AND CONCLUSION

5.1	180	Summary
5.2	189	Conclusions
5.3	189	Recommendations
		Bibliography

LIST OF TABLES

Table No.	Title
1	Highlights of various committees
2	Current Status of health infrastructure
3	Food Consumption pattern in different States of India (1960-69) (g/person/day)
4	Distribution of Sample According to Age
5	Distribution of Sample According To Education
6	Distribution of Sample According To Marital Status
7	Distribution of Sample According To Occupation
8	Distribution of Sample According To the Type of Organization
9	Distribution of Sample According To Income
10	Distribution of Sample According To Personal Income
11	Distribution of Sample According To the Type of Family
12	Distribution of Sample According To the Number of Family Members
13	Distribution of Sample According To the Number of Children
14	Distribution of Sample According To the Sex of Children
15	Distribution of Sample According To Age at Menarche
16	Distribution of Sample According To Number of Pregnancies
17	Distribution of Sample According To the Age at First Pregnancy
18	Distribution of Sample According to the Place of Delivery
19	Distribution of Sample According to the Person who assisted the Delivery
20	Distribution of Sample According to the Number of Abortions, Miscarriages and Still Births
21	Distribution of Sample According to Complications during Pregnancy
22	Distribution of Sample According to their Health Status

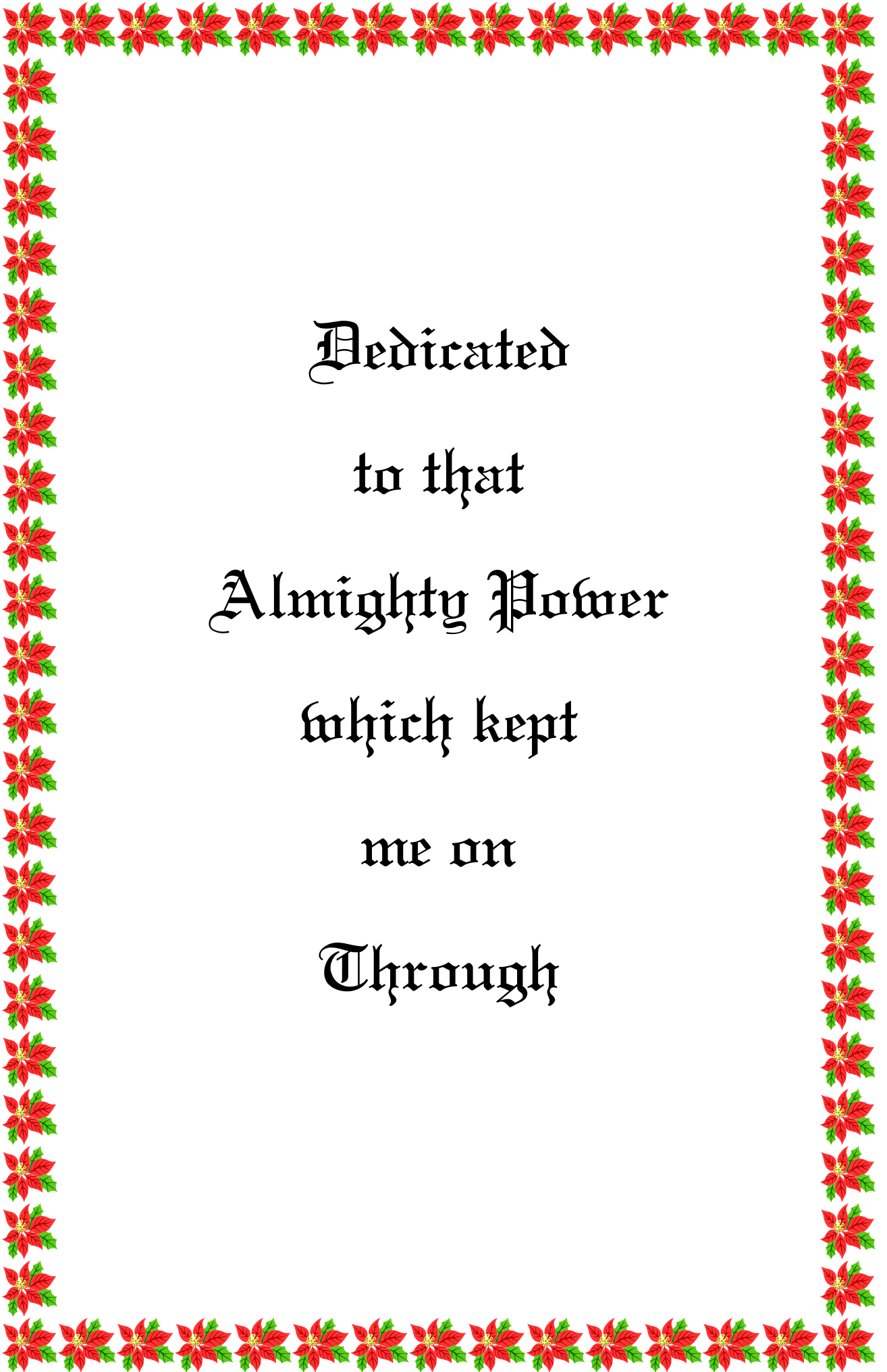
- 23 Distribution of Sample According to the Age at Menopause
- 24 Distribution of Sample According to the type of Menopause
- 25 Distribution of Sample According to the Weight Gain as Compared with the Ideal Weight
- 26 Distribution of Sample According to the Weight Difference
- 27 Distribution of Sample According to the Daily Liquid Intake
- 28 Distribution of Sample According to the Food Score
- 29 Distribution of Sample According to the Track of Weight gain or loss
- 30 Distribution of Sample According to the Appetite
- 31 Distribution of Sample According to the Change in Personality
- 32 Distribution of Sample According to the Feelings due to Menopause
- 33 Distribution of Sample According to the Effect of Menopause
- 34 Distribution of Sample According to the Medical Consultation
- 35 Distribution of Sample According to the Intensity Indicises of Awareness Scale
- 36 Distribution of Sample According to the Awareness Score
- 37 Distribution of Sample According to the Symptoms Related to Urinary Complains
- 38 Distribution of Sample According to the Symptoms Related to Central Nervous System (CNS)
- 39 Distribution of Sample According to the Symptoms Related to Menstruation
- 40 Distribution of Sample According to the Symptoms Related to Sexual Behavior
- 41 Distribution of Sample According to the Symptoms Related to Muskulo Skeletal System

- 42 Distribution of Sample According to the Symptoms Related to Mood Disorders
- 43 Distribution of Sample According to the Symptoms Related to Cardio Vascular System (CVS)
- 44 Distribution of Sample According to the General Symptoms
- 45 Analysis of the Awareness Score and the Age of the Respondents
- 46 Analysis of the Awareness Score and the Education of the Respondents
- 47 Analysis of the Awareness Score and the Marital Status of the Respondents
- 48 Analysis of the Awareness Score and the Occupation of the Respondents
- 49 Analysis of the Awareness Score and the Income of the Respondents
- 50 Analysis of the Awareness Score and the Age at Menarche of the Respondents
- 51 Analysis of the Awareness Score and the Age at Pregnancy of the Respondents
- 52 Analysis of the Awareness Score and the Number of Pregnancies of the Respondents
- 53 Analysis of the Problem Score and the Age of the Respondents
- 54 Analysis of the Problem Score and the Education of the Respondents
- 55 Analysis of the Problem Score and the Marital Status of the Respondents
- 56 Analysis of the Problem Score and the Occupation of the Respondents
- 57 Analysis of the Problem Score and the Income of the Respondents
- 58 Analysis of the Problem Score and the Age at Menarche of the Respondents

59	Analysis of the Problem Score and the Age at Pregnancy of the Respondents
60	Analysis of the Problem Score and the Number of Pregnancies of the Respondents

LIST OF FIGURES

Figure No.	Title
1	Intergenerational Perpetuation of Poor Health among Women and Girls
2	Women's Work and related health hazards
3	Factors affecting women's health
4	Typical distributions of days in three different lengths of menstrual cycle
5	Percentage incidences of premenstrual tension and menstrual pain as a function of age
6	Changes in heart rate during a hot flush
7	Incidences of Premenstrual Tension and Pain
8	Sample Distributions According To the Source of Contact
9	Age wise Sample Depiction
10	Education wise Sample Depiction
11	Marital Status wise Sample Depiction
12	Occupation wise Sample Depiction
13	Type of Organization wise Sample Depiction
14	Family Income wise Sample Depiction
15	Personal Income wise Sample Depiction
16	Type of Family wise Sample Depiction
17	Number of Family Members wise Sample Depiction
18	Number of Children wise Sample Depiction
19	Age at Menarche wise Sample Depiction
20	Number of Pregnancies wise Sample Depiction
21	Age at First Pregnancy wise Sample Depiction
22	Place of Delivery wise Sample Depiction
23	Delivery Assistance wise Sample Depiction



Dedicated
to that
Almighty Power
which kept
me on
Through



*Review of
Literature*

CHAPTER 2

REVIEW OF LITERATURE

The present research study was intended to study the effect of menopause on women. For this purpose researcher selected a sample of 300 women from Rajkot city. In order to obtain a detailed insight on the theme, researcher reviewed the existing literature from various sources. The sources were as follows:

- Saurashtra University (Central) Library
- Smt. S. B. Gardi Institute of Home Science (department) library
- Medical College Library, Saurashtra University, Rajkot.
- Menopause clinics, at Red Cross Community Health Center, Rajkot.
- Hansa Mehta Library, M.S.University of Baroda, Vadodara.
- Women's Studies Research Center [WSRC] Library, M.S. University of Baroda, Vadodara.
- Various websites on internet (see Bibliography)
- Doctors and Gynecologist.

The reviewed studies are reported in the following subcategories:

- 2.1 Work and Health
- 2.2 Women and Health
- 2.3 Women and Nutrition
- 2.4 Menopause and Health
- 2.5 Problems during Menopause
- 2.6 Physical symptoms during Menopause
- 2.7 Psychological symptoms and Menopause
- 2.8 Sexual symptoms and Menopause
- 2.9 Treatment for Menopause

2.1 Work and Health

Lakhe in 2003 conducted a study which aimed at providing some insight into level of emotional and social adjustment of the adolescents of

working and non-working mothers and to study the relationship between the adolescents' total level of adjustments of working and non-working mothers. A simple random sampling consisting of 500 adolescents from Nanded city were selected irrespective of their parents' occupation, number of siblings, age, sex, religion, urban or rural background. The sample of 500 adolescents was divided into two groups each. The groups were adolescents of working mothers and adolescents of non-working mothers. His well-known and widely used personality inventory is the Bell's Adjustment Inventory, which measures four areas of adjustment; home, health, social and emotional separately as well as composite scores for overall adjustment. It was found that the social adjustment factor is more among the adolescents of working mothers. The adolescents belonging to the working mother group clearly indicates greater level of emotional adjustments. The total level of adjustments of adolescents of working mother is higher. The researcher strongly recommends improvement in the areas of overall adjustments of the adolescents of non-working mothers group.

The study was conducted by Rathi and Kothari (2003) to investigate whether there exist a correlation between mother's occupation and the child's creativity. The effective sample comprised of 80 children of age range 10-14 years who were selected employing purposive sampling techniques. The four occupations identified for the mothers were doctors, teachers/lectures, clerks and housewives. The tool used was the verbal test of creative thinking by Baquer Mehdi. The data was treated with one-way ANOVA. Significant differences were obtained with respect to originality.

The study conducted by NIOH (1998) examined the work stresses of 107 women (20-60 years of age range), who were engaged in sewing machine operation in small garment manufacturing units employing three types of sewing machines (motor operated, full and half shuttle foot operated). About 74% of the machines were foot operated, where throttle action of the lower limb is required to move the shuttle of the machine. The short cycle sewing work involves repetitive action of hand and feet. The women had to maintain a constant seated position on a stool without backrest and the body inclined forward. Long term sewing work had a cumulative load on the muscle-skeletal structures, including the vertebral column and reflected in the

form of high prevalence of discomfort and pain in different body parts. About 68% of the women complained of back pain among which 35% reported a persistent low back pain. Common sewing work accident is piercing of the needle through the fingers, particularly the right four fingers. Unsatisfactory man-machine incompatibility, work posture and fatigue, improper coordination of eye, leg and hand, less illumination and the thermal stress are the major problems of the operators. The design miss-match of the work place may be significantly improved by talking women's anthropometrics dimensions in modifying the work place, i.e. the seat surface, seat height, work height, backrest etc.

Beedi, pulverized tobacco leaves rolled in a tendu leaf, is an age old form of indigenous smoking in India. About 2 million people both men and women are engaged in this, one of the oldest cottage or household industries. The majority of the people belong to low socio-economic group. An occupational health survey in 1998 by NIOH of 178 women engaged in the making of beedi is reported. A worker makes approximately 750 to 1000 beedes during 9 to 10 hours workday. About 860 kcal energy is spent for the workday, which is about 4% of the whole day energy expenditure. About 40% of the women had poor nutritional status as estimated from the Davenport Index. Due to handling of tobacco, nicotine is absorbed in the body, mainly through skin, as evidenced from the excretion of nicotine and cotinine in the urine. Clinical complaints such as backache, headache, giddiness, etc. are common among the women and these are presumably related to their occupation. Sustained sitting posture leads to preponderance of low back pain among these workers. An ongoing study by Shah (1998) of women workers in the informal sector of Vadodara revealed occupational health problems of women workers. The women of the study were largely employed in the informal sector and housework. Around 70% of women reported health problems due to their work. Around 80% home based workers; casual workers and women in personal service are suffering from occupational health problems. Majority of home based workers were involved in papad rolling for wholesale merchants and various kinds of packaging works for factories. While more than 90.5% of women in personal service were domestic workers engaged in cleaning utensils and clothes in middle-class homes. The nature

of complaints was similar in both the cases. Severe body aches, lower back pain, swelling in hands and in legs, chest pain, were common in both categories; the nature of the health problem is different. Papad rolling women have to work under sunlight to maintain quality and they work for 4 to 7 hrs on an average in the sun. This affects their skin adversely. Domestic workers work constantly in water with detergents having strong and hazardous chemicals. Skin problems on hands and legs are common. If they work continuously for more than four-five years, it becomes a permanent problem. Women often express that these problems are part of their lives as women. The problem is much more serious for domestic workers because the workload and time spent in this situation is much more compared to those who work for their homes.

2.2 Women and Health

The study was conducted by Bhatnagar and Jain (2004) in Ajmer to predict cardiovascular diseases among young adult males and females (20-40 years) on the basis of prevalence of risk factors among both the sexes and also to formulate low, moderate and high risk categories of the subjects. Detailed information about the history of disease, diet and general health was obtained through a questionnaire, and general awareness of the subjects was judged by an awareness schedule. Anthropometric parameters and lipid profile of the subjects were also studied. The results of the study revealed that 90 per cent of the subjects belonged to the age group 30- 40 years. Females were found to be more aware than males about their diet, general health and medicines. Out of the 10 risk factors of cardiovascular disease taken this study, six risk factors were found to be prevalent in the majority of males. These risk factors included sex, obesity, non-vegetarianism, alcoholism, smoking and ghee intake. Females had three risk factors domination in them, viz.: stress, physical inactivity and coffee or tea intake. The risk factor of family history of the disease prevailed equally in both the sexes. Thus due to the presence of maximum number of risk factors in males, they had increased chances of developing serious cardiovascular illnesses.

To assess the prenatal outcome of hypertensive pregnant women, a study was conducted by Mathur et.al. in 2004 on 60 pregnant women (30 Normotensive and 30 Hypertensive pregnant women) attending the antenatal clinic of Mahila Chikitsalya, J.L.N. Medical College Ajmer. Pregnant women having blood pressure between 140/90 – 160/110 mm Hg were labeled mild hypertensive and those having blood pressure more than 160/110mm Hg were labeled severe hypertensive. An inclusion criterion used was singleton pregnancy with hypertension. Hypertensive disorders are clinically important because they are associated with significant maternal and **perinatal** morbidity and mortality worldwide. Mothers eating inadequate diet during pregnancy period give birth to low birth weight babies, weighing < 2500g. A large number of such babies are premature (<37 weeks of gestation) and rest suffer from IUGR (intrauterine growth retardation). Past history of hypertension was seen in 16.6 percent hypertensive group. Family history of hypertension was seen in 10 percent normotensive women as compared to 20 percent in hypertensive group. The mean blood sugar, blood urea and serum creatinine levels of hypertensive pregnant women were high as compared to normotensive pregnant women. Still births in normotensive group were 3.4 percent as compared to 26.6 percent in hypertensive group. Low birth weight was seen in 43.4 percent neonates of normotensive mothers and 73.4 percent in neonates of hypertensive mothers. Premature neonates were 26.6 percent in normotensive group as compared to 50 percent in hypertensive group. IUGR was seen in 3.3 percent in normotensive group as compared to 23.3 percent in hypertensive group.

According to Parikh (2002), the transition from childhood to adulthood has tended to be sudden. The biological onset of adolescence is advancing in India, whereas age of marriage is rising due to expansion of educational opportunities. As a consequence, now young people have a longer interval between the onset of sexual maturity and marriage. Today, family life is changing from traditional to modern; hence educationists need to plan, to develop new abilities and creativity among the present adolescents. Every modern society believes in education as a potent instrument of social change. Education in human sexuality is highly influenced by social, economic, ethical, spiritual, and cultural and more factors. Schools need to take proactive

responsibility and play leadership role in correcting the common misconception that provision of information on sexuality in schools lead to increased sexual activities; by enriching school curriculum in the areas of reproductive health education for adolescents. There are still many other important facets of the issues that have not been incorporated. Contemporary period demands for a comprehensive package of information on sexuality of adolescents, which can really help to generate the necessary knowledge and information for adolescents through active students and teachers diagnoses on the subject.

As stated in the paper presented by Sharma et. al. In 2003 the development of a state can not only be measured through the technological and materialistic advances but also through the quality of life of the people. As in the case of status of women, the factors influencing the quality of life are not easy to list. Quality of life has political, economic, social, cultural, environmental and psychological dimensions in addition to the dimension of health. Education and health are two important parameters of quality of life. The Himachal Pradesh State Government taking steps for elevating the level of quality of life of women. The paper analyses the decade changes and in their two developmental parameters, observes uphill trend and introduction of many welfare schemes. The literacy rate has increased form 52.36 in 1991 to 68.68 in 2001. The availability of allopathic medical institutions has increased from 265 in 1991 to 457 in 2001.

The study by Sidhu and Bargoti (2003) aimed to assess the mental health and adjustment of the aged, also the relationship between mental health and adjustment of the old age was ascertained. Out of 100 aged people selected randomly, 50 were males and the remaining 50 were females. The adjustment pf the aged was assessed by using Samshad-Jasbir old age adjustment inventory by Hussain and Kaur (1991), this inventory measures health, home, social, marital, emotional and financial adjustment in old age. Mental Health was assessed by a self-made questionnaire prepared by the investigation. This tool studies six constituents of mental health, which are emotional stability, overall adjustment, autonomy, security-insecurity, self-concept and intelligence. Results indicate that males have scored significantly higher on the four constituents of mental health that is emotional stability,

overall adjustment, autonomy and self-concept. This indicates better mental health of the males than females. Males have scored higher than females on health, social, home, emotional and financial adjustment. However, on marital adjustment, females have obtained higher scores than males. Mental health is significantly related to health, home, social; emotional and financial adjustment among aged males. Mental health is also significantly related to home, emotional and financial adjustment among aged females. All obtained were co relational values are positive indicating a unidirectional impact of adjustment on mental health.

The family is undergoing changes, particularly towards women's emancipation. Women were provided education and employment opportunities and the number of working wives has gradually increased. Stress, which is as modern-day malady, afflicts workingwomen who have to play dual role of being a productive employee at work place and a caring wife-mother-daughter-in-law at home. The aim of the study by Vijayanthimala was to measure the level of stress and its relationship to anxiety and marital quality stress, anxiety and marital satisfaction. Analysis revealed that women expressed more stress, anxiety and marital dissatisfaction than men. There was a relationship between stress, anxiety and marital dissatisfaction in case of women.

The practice of prenatal sex selection, higher rates of mortality among very young girls, and lower rates of school enrolment for girls as compared with boys suggest that "son preference" is curtailing the access of girl children to food, education and health care [and even life itself]. An attempt was made by Sharma (2002) to assess to resolutions perceived by the girls for resolving their personal, social and academic problems in the late childhood period. The total sample consisted of 50 girls of employed mothers and 50 girls of non-employed mothers, in the age range of 9 to 12 years from non-coeducational government schools of Udaipur city. Analysis of the data revealed that the major areas of resolutions as perceived by the sample group were more in academic area, that is, other associated factors in their life like teachers, school could be more beneficially looked on to overcome their problems in personal, social and academic area. Moreover, they were self- critical,

introspective and open to accept criticism. Girls of today are the women of tomorrow.

Several physical symptoms have been described in menopause that is related to decrease in levels of estrogen. These are mainly in the form of flushing, bone pains and vasomotor symptoms. Though it is well known that physical symptoms occur frequently in the peri-menopause period, the status of the psychological syndrome of menopause is far from clear. Chandra in 1998 reported the following psychological symptoms in the climacteric: depression (20-30 percent), anxiety (15-20 percent), sexual dysfunction (10 percent) and difficulties in concentration (5-8 percent). Most of the data is from menopause clinics, though general population studies contradict assertions that menopause has a negative effect on mental health. Menopause does not directly influence the well being of an individual. Mental health of women in the climacteric appears to be related to more social factors, pre-morbid functioning and physical health, than to the menopausal status. Several factors might contribute to increased psychiatric morbidity at menopause including life events such as death, poor physical health, altered roles, retirement or a poor marital relationship. Though in most cases, menopause may not directly cause psychological problems, small minorities do have the problems, which were described earlier. Surgical menopause has been linked to a higher incidence of psychiatric morbidity compared to natural menopause.

Joshi in 1997 studied women's marital sexual experience conducted in villages in Padra and Baroda taluka. It was found that some were married at the onset of teen age and so never ever had any information about what are marriage, sexual relationship as well as menstruation. Parents of respondents were very strict during those days and never allowed girls to go out unescorted. Talking regarding menstruation even with their mother was never entertained.

Kotecha (1997) conducted a study of the patients with PID coming to the Obstetric and Gynecology Department of SSG hospital. The study included the perception of both the patient as well as the treating doctor's. It was found that though the patient's concept was biomedical, it was governed by socio-cultural concepts. Low self esteem and socially deprived position of

women was evident from their perception. Lack of rest, excessive work, and weakness were expressed as causes. They were partly non-medical as they make the body more vulnerable to the infection and inflammation. Husband's behavior like excessive sexual desire, tendency to indulge in extramarital sex, ignoring hygiene and ignoring the disease condition of the woman were amply documented in the study and women have been interpreting them as causative for their illness. The doctor's concept included infection, multiple partners, poor menstrual hygiene and multiple births.

2.3 Women and Nutrition

A study was conducted by Ambardekar and Husain (2004) in Mumbai to understand the correlation between diet therapy, lifestyle modification and reversal of heart disease. 30 subjects (18 males and 12 females) from the Santacruz Yoga Centre were selected for the study. Their anthropometric, biochemical and nutritional assessments were done using food frequency questionnaire and detailed oral interview. The subjects followed stick diet therapy and practiced yoga, pranayam and walking daily for one hour for 6 months. Results of the study indicated all the subjects suffered from CHD and hyperlipidemia. They belonged to the age group of 40 to 70 years; 60% had a family history of cardiovascular diseases; 66% were overweight; 40% led completely sedentary lifestyle; and 40% were non-vegetarians. After 6 months of intervention, there was a mean reduction of 5.2 kgs weight; decrease in energy intake by 300 kcals; reduction in fat and carbohydrate intakes by 30g and 200g respectively; while fiber consumption increased three-fold. In lipid profile test, a marked reduction in cholesterol from 249mg% to 173mg% was observed with a similar reduction in other lipid parameters. The standardized recipes were found to be widely acceptable, palatable and suitable as cardioprotective foods. Reversal of heart disease may thus be possible by the golden combination of a prudent diet and regular exercise regimen.

The fact that adolescents gain up to 50% of their adult weight, more than 20% of their adult height and 50% of their adult skeletal mass during this period. Stress on increased nutritional needs should be laid at this juncture. As stated by Bachlaus (2004), the adolescent girls in particular remains not

only largely neglected but often ignored, their needs difficult-to-measure, as also they are a hard-to-reach population because of social and cultural reasons which include traditional beliefs and customs. The adolescent girl population consequently faces a succession of grave nutritional challenges affecting not only their growth and development, their livelihood as adults but also safe motherhood. Therefore human and national development can be reinforced and accelerated only by promoting sustainable health and nutritional well-being of adolescent girls. Inadequate consumption of fruits and vegetables is common among adolescent. Fruits and vegetables are source of key vitamins, such as folate, which is linked to the prevention of neuro-tube defects in offspring, and heart disease and cancer in later life. The antioxidant and photochemical content of fruits and vegetables also have a role in preventing heart disease and cancer. Maximizing peak bone mass during the first two to three decades of by intake of milk and milk products -- the best source of calcium help to prevent osteoporosis at a later age. Amongst the adolescent girls malnutrition is an exceptionally large complex problem. Emphasis on nutritional adequacy for adolescent girls with the sustained strengthening of household food security needs to be developed by based approaches.

In the study conducted by Bambawale (2004), children from different schools in Mumbai were chosen. The age group of the children was between 6 to 9 years. Dietary scores assessed the macronutrient and micronutrient intake. The knowledge, attitudes and practices of the mothers were scored. The functional assessment of the children, in terms of academic achievements and physical performance was also scored. Clinical assessment and haemoglobin levels were correlated with the above parameters. A sub-sample was for assessment of the IQ levels. A strong positive correlation was found between the haemoglobin levels and cognition, indicating decreased functional capacity in anemic children. For intervention, a message book was formulated, for a 'child mother' approach and the impact of these messages on the knowledge, attitudes and practices of the mothers was observed. The post-intervention period showed a positive impact on the dietary scores as the functional scores of the children. Hence, it could be concluded that, 'child to mother' approach is beneficial as a nutrition

education strategy for dietary diversification to combat micronutrient malnutrition. The welfare of mother and child is intimately interwoven.

Breast cancer is the second major cause of death among women following lung cancer. It is not only a single entity but a family of conditions developed due to an interaction of genetic and environmental factors. Keeping all these in mind a study was conducted by Date et.al. in 2004 with 90 subjects at Tata Memorial Cancer Hospital, Mumbai. The data was obtained by a 24 hour diet recall validated by an exhaustive food frequency questionnaire. The objectives of the study were a) to compare the dietary intake of subjects with the Recommended Daily Allowances; b) to relate specifically the diet pattern in terms of macro and micro nutrient status, lifestyle, anthropometric and gynecological patterns for the incidence of breast cancer. The results showed that lifestyle, anthropometric and gynecological factors did not play a major role in incidence of breast cancer. Therefore it was found that diet played a significant role. It was also observed that the macronutrients varied a great range from the Recommended Dietary Allowances. The variables like energy ($p < 0.05$), protein and fat intake ($p < 0.01$) showed significant relation with the incidence of breast cancer. The intake of carbohydrates, saturated and unsaturated fat and fiber did not reveal any significant difference. The micronutrients did not indicate any statistical difference. It can be concluded that there was significant difference in the macronutrients that is in energy, protein and total fat intake whereas the difference between micronutrients was non significant and hence the percentage contribution of macronutrient contribution to total energy intake may play a significant role in etiology of breast cancer, which may be complicated with low micronutrient intake.

Menopause is a special stage in the life of women but several irritable symptoms and diseases attributed to menopause are often encountered during third period. Thus a comparative study was undertaken in 2004 by Kuvera et.al. on 200 pre and post menopausal women of Bikaner City falling in the range of 40-45 years (having regular menstrual cycle) and 50-55 years (having no menstrual cycle from 6 consecutive months) respectively. To elucidate the effect of menopause, biochemical assessment was done of both

the groups in terms of Haemoglobin, serum blood glucose, serum cholesterol and triglycerides and serum calcium levels. Compared to pre group in post group majority of the patients were suffering from moderate degree of anemia. A significant difference ($P < 0.01$) was noted in blood glucose levels between both the groups and mean level was higher in post menopausal subjects (98.60 mg/dl). Also the post group was at borderline risk of diabetes mellitus. The results taken by serum cholesterol and triglycerides depicted that post group was at higher risk of CVD. The mean serum calcium level was significantly higher in post group (12.5 mg/dl), even when compared with the normal values (9-11 mg/dl). Thus the post menopausal group was at higher risk of diabetes, CVD and osteoporosis and this may be due to the fall in level of female hormone estrogen after menopause which is responsible to maintain normal levels of glucose and cholesterol in blood.

Sixty non-insulin dependent diabetes mellitus (NIDDM) females of 40-60 years were selected from Punjab Agricultural University Hospital, Ludhiana by Aggrawal and Nagi (2003) for the study. Nutrition Education (NE) was imparted to all subjects at an interval of 15 days for a period of 3 months to study the impact of NE on the nutritional profile. The result of the investigation revealed that diet consumed by NIDDM females before and after NE were inadequate in most of the stuff (pulses, green leafy vegetables, other vegetables and fruits) and ultimately led to dietary inadequacy of nutrients (protein, fiber and zinc which have a protective role for diabetes. However, the consumption of cereals and fats was leading to more increased risk of diabetic complications. The BMI reduced significantly after NE but was seen above the standard. The mean fasting and post-prandial blood glucose levels reduced significantly. The value for TC, TG and VLDL-C decreased significantly, indicating the positive effect of NE. Hence it can be inferred that NE is an effective measure to bring about favorable and significant changes in the diabetic state.

In 2003, a study was carried out by Chhabra and Verma on two hundred and fifty schoolgirls (10-15 years) belonging to high socio economic group of Ludhiana city to assess the change in their dietary pattern over the last twenty years. The dietary survey was conducted by 24-hour recall method for three consecutive days. The average daily intake of cereals, pulses and

vegetables was lower whereas the intake of fat, milk, milk products and fruits was higher than the suggested intakes. The mean consumption of energy, fat, thiamine, calcium was higher while that of niacin, vitamin A, vitamin C and iron was lower than the RDAs. The respondents were having five meals a day. Snack intake has increased over the last two decades. Burger, Manchurian and pizza were the favorite snacks. The snacks contributed 19.2 and 18.0 percent of the daily energy and protein intake respectively, whereas in 1983 the corresponding values were 5.5 and 4.8 percent. The intake of cereals has decreased while intake of pulses has increased significantly ($P < 0.05$) in group I. However in group II intake of cereals, milk and milk products has increased and that of pulses has decreased significantly. In all the respondents, the intake of fruits, sugars and fats increased. The intake of vegetables decreased significantly.

In the study by Dave and Trivedi measured food and nutrient intake of 96 boys and 93 girls aging between 13 to 17 years, studying in 8th to 11th standards in three different schools of Rajkot city of Gujarat state is measured. Subjects were selected randomly from high schools based on their income groups i.e. Lower Income Group (LIG), Middle Income Group (MIG) and Higher Income Group (HIG) for each standard. A questionnaire was designed to collect information viz. (i) To derive the percentage of children with different educational levels of parents; and (ii) To know the food patterns and nutritional intakes of children with different educational levels of parents. 24 hour dietary intakes for three days, in which one was a holiday, were obtained. Nutritive value calculations were made using food tables. Results showed that, consumption of fruit was remarkably higher in children of educated parents. Consumption of milk and milk products was higher in girls of educated parents and in boys of uneducated parents. Mean nutrition intake was higher in subjects of well-educated parents, compared to subjects of less educated parents. This shows that, if the parents are educated, they can play role in providing better nutrient dense foods to their children. Frequent parents' meet and training programs should be held by school management to impart nutrition information.

In the study by Mathur and Sharma (2003) the sample consisted of both boys and girls in the age group of 13-15 years, studying in 9th class of

various government schools of Agra city. The sampling procedure was of a multistage random technique. The study was conducted to assess the perceived parenting patterns. A standardized tool developed by Bharadwaj, Sharma and Garg (1998) was used. The name of the tool is 'Parenting Scale'. It also assessed the emotional competencies. A standardized tool developed by Bharadwaj and Sharma (1995) was used which was named as 'Scale of Emotional Competencies'. A correlation matrix was prepared for the correlation values of the perceived parenting patterns and emotional competencies. Acceptance vs. rejection pattern of parenting revealed positive relationships with adequate expression and control of emotions and encouragement of positive emotions; while a negative relationship was obtained with ability to cope with problem emotions. Neglect vs. indulgence pattern of parenting showed a positive relationship with adequate expression and control of emotions, a negative relationship with adequate expression and control of emotion, a negative relationship with ability to cope with problem emotions. Freedom vs. discipline pattern of parenting showed a positive relationship with adequate expression and control of emotions and encouragement of positive emotions. Faulty role expectation vs. realistic role expectation revealed a positive relationship with adequate expression and control of emotions and encouragement of positive emotions, while a negative relationship with ability to cope with ability to cope with problem emotions. Results indicate that perceived parenting patterns affects emotional competencies in adolescents.

Malnutrition during adolescence can lead to retarded growth, reduced physical stamina, lower work output, poor cognitive development, and impaired learning abilities. The present survey was carried out among the school children of an urban area of Sambalpur by Mishra and Panda (2003). The main objective of the study was assessing the nutritional status and level of educational attainment, and to observe the influence socio-economic factors and malnutrition on the educational attainment among the IX and X standard school children. 75 boys and 75 girls selected from a school by random sampling method were personally interviewed by the help of a schedule designed and pre-tested for the collecting the information on family, its socio-economic condition. Nutritional anthropometry method was adopted

for the assessment of nutritional status and information on the educational attainment was obtained from the school records. Around 87-88 percent of children suffered from different grades of malnutrition according to weight for age and the percentage were still more on the basis of height for age. Boys showed poor academic attainment than girls. The later born children, children belonging to high per capita income level and children of educated mothers showed better educational attainment. The malnourished children showed poor educational attainment. Thus improved nutrition of children remains priority to achieve the full potentials of the investment made in children's education.

The diet of pregnant women is considered to be of paramount importance. The study was conducted by Mishra (2003) to assess the nutritional status of pregnant women in Varanasi city by reporting daily nutritional needs. Data was collected randomly from 50 urban mothers (20-30 years) from different areas in Varanasi city to find out the dietary intake and requirement and to know daily nutritional needs, as well as to assess the nutritional requirement and to suggest them a balanced diet. A pre-tested interview and questionnaire method was used to collect the information; it was found that almost all the expectant mothers were literate. They were taking calcium, iron supplement tablets daily. The data showed that the average weight and height for expectant mothers were 60.11 kg. and 155.5 cm. The average calorie intake by pregnant women was 90% of the recommended dietary allowances (R.D.A.). The intake of cereal was 75% of R.D.A., intake of dal was 91% of R.D.A. and milk, green leaf and other vegetables were satisfactory. It can be concluded that there was not much difference seen in the nutritional status of pregnant women in Varanasi city. All the women were registered in the government hospital or primary health centers (PHC) and had medical guidance and was aware of their nutritional needs during pregnancy.

Ageing is a physiological process that begins at conception and results in progressive changes (WHO). The danger in this stage is isolation and detachment, which will deprive one from life, of its sense of meaning and reality. A study was conducted by Patwardhan and Godse (2003) with the objectives to find out the nutritional status of old people in Marathwada region;

to find out their meal patterns and diet intake and to know the effect of SES, their health problems and thus help to develop the Nutrition Education Programme (NEP); and evaluation of NEP. Present study was a combination of survey, interview, NEP and its action research as well as evaluation. Purposive random and specific purpose random sampling were used to select a sample of 500 people of the age group 60+, residing in rural and urban areas. Out of 30 people belonging to specific sample, ten each suffered from hypertension, diabetes and heart trouble. Data was collected through questionnaire, interview etc. SPSS package was used for statistical analysis.

The major objectives of the study conducted by Sahoo and Pal (2003) were to observe the demographic and socio-economic profile of the sample respondents and to find out the existing dietary pattern in relation to the respondent's demographic and economic factors and to compare the same with available RDA. 150 tribal girls of 7 to 14 years age were randomly selected from Sambalpur town. Information regarding respondents' demographic, socio-economic, dietary intake (24 hour recall method) was collected with the help of structured interview schedule. Height and mid-arm circumference were measured by anthropometric rod and measuring tape respectively. Body weight was measured by food weighing machine. The result analysis revealed that dietary intake of the respondents was found to be very poor and much below RDA. Socio-economic variables have profound influence on dietary intake of tribal girls. Therefore, there is an urgent need for nutrition education to parents, especially to mothers as well as to children. Parents should be made aware of the various developmental programmes implemented by the government especially for female children and should be helped by social and health workers to make use of these facilities.

Sports performance is not entirely dependent on nutrition, yet nutrition can definitely make a difference in performance. Thomas and Chandrasekhar (2003) aimed at supplementation of iron rich food formulation and studied its impact on performance of adolescent sports students in Kerala. A sample of 100 available mild anemic female sports students of Government vocational higher secondary school, Kannur was selected. Fifty were supplemented for a period of six months with iron rich food formulation. The remaining 50 were in the control group. The initial blood pressure of the selected female sports

students who were given iron rich supplements was 118.86 mm Hg (Systolic) and 78.80 mm Hg (Diastolic). There was a significant ($P < 0.01$) decrease in both these measurements due to supplementation. Cardiac efficiency score (CES) also showed significant ($P < 0.01$) improvement from 68.02 to 81.75 after supplementation for six months. Tread mill test shows significant ($P < 0.01$) improvement from 30.58 to 33.34 minutes. As for vital capacity, there was significant ($P < 0.01$) increment (2685 to 3030 ml) in the supplemented group. These observations on the cardio vascular parameters and performance in the supplemented anemic female sports students is reflective of the improvements in their iron nutrients, thus indicating the need to raise the iron nutritional status of sports students to optimum levels in order to maximize training and rearing out the potentials of peak performance among our sports personnel.

Energy expenditure is considered as a continuous function and a variable, dependent on the nature and the intensity of body activity, environmental conditions, previous exercise and time after meals. In view of the paucity of data on the nutritional status, energy intake and expenditure pattern of adolescents, the study was undertaken by Usha Devi and Nath in 2003. A sample of 400 adolescent girls belonging to 13 to 18 years was selected from urban and rural areas of Bangalore. Nutritional status including energy balance was assessed. Energy balance was calculated by 24 hours activity pattern. Seventy eight percent of the urban respondents were found to be in positive energy balance with a mean energy intake of 1959 Kcals. Negative energy balance was observed among 35% of the rural respondents with a mean energy intake of 1834 Kcals. This could be attributed to low energy intake and increased activity pattern among rural respondents. Mean weight of the rural respondents being 41.4 Kg. was found to be lower when compared to NCHS standard. The fact that 35 % rural girls having negative energy balance is a matter of concern as these girls enter into their reproductive journey with lower body weight and negative energy balances which would influence the outcome of pregnancy. Hence intervention is essential as these girls are future mothers.

The reproductive cycle of a woman makes a huge demand on the nutrient requirement of mother and affects her nutritional status considerably.

Tight from conception, growth requires greater dietary essentials than maintenance. The study was conducted by Vaish et. al. in 2003 on rural pregnant women (16+1 week gestation) belonging to low socio-economic status of Kalyanpur block of Kanpur district of Uttar Pradesh. Sixty women from three villages were selected for supplementation studies. 20 women of Hridayapur village were of experimental group, 20 of Chakarpur village were of ICDS group and rest 20 of Singhpur Kachhar villages was control (without supplementation). The feeding trial was continued for six months. The ICDS group was fed "panjiri". The experimental group was fed with four newly developed recipes viz. Chikki, Nutritious, Panjiri, groundnut rice and sprouted Bengal gram. Control group was not given any supplement. Observations were recorded from fourth month of pregnancy to full term for individual woman on weight gain and haemoglobin level. Significantly higher weight gain (9.2 kg) was observed in experimental group followed by ICDS group (8.1 kg) over control group (5.5 kg). Likewise the haemoglobin level was highest (0.70 g/100 ml blood) in experimental group followed by ICDS group (0.50 g/100 ml) as compared to control group (0.12g). Values for experimental and ICDS groups were highly significant.

The study was conducted by Verma et al. (2003) on 320 female subjects representing rural and urban population of selected areas of district Shimla of Himachal Pradesh. Food consumption survey was carried out to assess the nutritional status of the subjects of both the domains. In rural area, it was found that wheat and maize were the main cereals consumed by the respondents. Among pulses, black gram dal was most commonly consumed. Desi ghee was consumed in good amounts with almost every food preparation. Wheat and rice were both consumed in urban area. The calorie intake in both the groups was below and protein intake was above the recommended levels but this difference was not statistically significant. The iron consumption was below the recommended levels in both the groups. The intake of calcium, vitamin C and vitamin A was lower in rural population and higher in urban population when compared with recommended levels. The BMI calculations suggested that majority of subjects in rural as well as urban population were of normal nutritional status.

Swaminathan studied the pattern of diets consumed in different states of India in 1999. It was noted that consumption of milk and pulses was higher in the states of Gujarat, Punjab, Rajasthan, Madhya Pradesh and Uttar Pradesh, while it is moderate in Andhra Pradesh, Bihar, and Maharashtra, Karnataka and West Bengal and low in Jammu and Kashmir, Kerala and Tamil Nadu. The diets, in general, consisted predominantly of cereals and millets. Consumption of green leafy vegetables, fats and oils was also low. Consumption of fish and meat is high in the states of Kerala, West Bengal and Maharashtra.

Table 3
FOOD CONSUMPTION PATTERN IN DIFFERENT STATES OF INDIA
(1960-69) (G/PERSON/DAY)

Food Item	Area	
	Gujarat	All India
Rice	073	241
Wheat	013	084
Millets & other cereals	349	109
Total cereals & millets	425	434
Pulses	043	034
Leafy vegetables	026	021
Other vegetables	049	071
Fruits	--	010
Fats and oils	005	012
Milk & milk products	097	069
Meat, Fish and Egg	006	014
Sugar & Jaggery	006	019
Condiments	005	018

Since the surveys were limited to a small number of families, it may not truly reflect the pattern of food consumption by low-income groups who constitute a greater part of the population.

2.4 Menopause and Health

Earlier, women were considered asexual after menopause. Today, the stress is on the greater potential for sexual enjoyment, since menstrual problems and the fear of pregnancy no longer impede women's sexuality. However, if physical problems like vaginal dryness lead to dyspareunia, women will cease to enjoy sex, in spite of a change in attitude. In their own experience, the authors (Krishna & Shah) in 2004 found that menopausal women suffering from vaginal dryness or dyspareunia willingly discuss this topic only if the physician initiates it. Estrogens with progestine supplement are the therapy of choice for menopausal dyspareunia. The addition of a vaginal estrogen cream and a caring attitude on the part of the physician are both excellent adjuvants.

As stated by Mohile (2003), menopause is a physiological endocrinopathy occurring due to cessation of ovarian function. Clinically, menopause is a retrospective diagnosis. When a woman has not menstruated for twelve months, then she is said to have reached menopause. Perimenopause is the period of five years before and one year after menopause. The first two years of menopause are sometimes designated as early postmenopause. Menopause can be natural or surgical. Worldwide the age of natural menopause is between 45 and 55 years, the mean age being 50. In Indian women, it is 43.5 to 48.5 years. Life expectancy at birth has more than doubled in the last fifty years. It has increased from around 30 years at the time of independence to 61 years in 1992-96. Hence large number of women will reach the age of menopause and many will have more than 20 years of post-menopausal life. The number of women in the post-menopausal age of 50-59 years is projected to increase from 36 million in 2000 to 63 million in 2020. As ovarian function stops, a variety of physiological changes take place. Many of them are due to estrogen deficiency and some are due to ageing process. No two women react to menopausal changes in the same way. The social, cultural background, emotional and physical health and her beliefs about menopause play an important role on her acceptance of this change in her life. That she is now no longer likely to have a conception could be a relief to some and a nightmare leading to depression to some. The stoppage of

monthly bleeding that interferes with her work may be a welcome event to some, while to others this may mean a loss of femininity. As stated further the estrogen deficiency symptoms may cause some short term as well as long-term problems. The short-term problems may be related to peri and post-menopausal uterine bleeding abnormalities, genital symptoms, vasomotor symptoms, urinary symptoms and psychological symptoms. The long-term problems may be related to genital problems, neurological symptoms, osteoporosis, sarcopenia, cardio-vascular effect, ophthalmic effects, dentition effects, skin and hair effects and thromboembolic phenomena and varicose veins. Nagar (1997) aimed at finding out the perception of middle-aged women regarding menopause and its impact. A sample consisted of 30 married women in the age range of 39 to 52 years residing in Baroda city. A positive correlation was found between the physiological and socio-psychological problems associated with menopause. The results of the study indicated that women reported problems like backache, increased headache, hot flushes and sleep disturbances, sadness, impatience, lack of concentration, decrease in memory and nervousness. Most of the women perceived their spouses, friends and mother-in-law as supports during stressful situations due to menopause. Majority of the women sought professional help for physiological problems associated with menopause.

According to a handbook of endocrine disorders the term indicates cessation of menstruation and involution of reproductive life. The menopausal age is usually between 45 and 50 years; in most women, menstruation occurs at irregular intervals, becomes prolonged and the flow gradually ceases. Many women have no symptoms or just mild symptoms at the time of menopause. The climacteric symptoms may not manifest for several years after the stoppage of menstruation. Artificial menopause may result from ionic irradiations or after bilateral ovariectomy. The symptoms are nervous and autonomic, psychological and miscellaneous and are, hot flushes, sweating, headaches, palpitation, paroxysmal tachycardia, anginal pains, dizziness or fainting spells, tingling sensations, mental depression, lethargy, lack of energy, lack of concentration, generalized vague aches and pains and symptoms of arthritis. The individual may also suffer from pruritus, ulcerative stomatitis, atrophic vaginitis, kraurosis vulvae, leucoplakia vulvae, etc.

Obesity, mild to moderate hypertension and hirsutism may probably occur. Mild symptoms of thyrotoxicosis or myxoedema also represent disturbed thyroid function. No specific treatment is required for mild cases except reassurance, readjustment and administration of estrogen in small doses.

Kahann, Kiyak and Liang in 1980 reviewed (& provided evidences) that in response to various kinds of survey women considered menopause as requiring little readjustment when compared with other life events. From the study by Kahann et. al., it appeared that the menopause was not viewed with trepidation by younger women, nor remembered as a stressful period of change by the elderly.

Flint (1979) suggested that there is a little evidence that menopausal symptoms bear at least some relation to work attitudes and indeed to the wider social framework in which the menopausal changes are experienced.

According to Varley et.al., in 1976 the term, menopause refers to absence of menstruation for three months following some menstrual cycles in the preceding year. The post-menopausal female has had no periods for twelve months. Before this stage many cycles may be anovular and Doring in 1969 recorded an incidence of 12% in women aged 41 to 45 years.

McKinlay and Jefferys in 1974 explicitly studied the positive aspects of menopause. The survey aimed at eliciting information on aspects of the 'menopausal syndrome', two questions on attitude were included in a questionnaire. The majority of pre-menopausal respondents (77%) did not anticipate any difficulties. Only about 13% of pre-menopausal and 9% of post-menopausal women expressed regret at the cessation of menses.

Van Keep in 1970 conducted a survey for an International Health Foundation of attitudes to the menopause in several European countries included the statement 'the menopause marks the beginning of old age'. Seventy four percentages of women in Britain disagreed with this. In other countries the amount of disagreement was less, but overall the majority did not concur.

2.5 Problems during Menopause

The study was conducted by Bansal and Thaker (2005) to determine age and perception of menopause as well as prevalence of various menopausal symptoms amongst underprivileged women of Ahmedabad. A questionnaire was used as a tool for data collection from 100 menopausal underprivileged women in Sheth V.S. General Hospital. The results showed that 29.5% suffered from joint pain, poor memory and fatigue, 25% had irritability, 22.7% had urinary symptoms, 18.18 % had hot flushes, 6.81% dyspareunia, 4.54% leucorrhoea and anxiety and 2.27% had post menopausal bleeding. For the respondents background 62.2% were illiterate and mean age for menopause was 41-45 years. 93.18% women had not taken any treatment and none knew about pap's test and self-breast examination. The researcher concluded that uneducated and under privileged women are unaware of their right to health care and protection, as some did not realize the need to consult doctor for their menopausal problems. They also realized the need for educating females for cancer prevention tests.

Sen (2005) conducted a study in Kolkatta, where a group of urban educated upper middle class women aged 40 years and above were given a questionnaire. The aim of the study was to look into the specific health needs of socially settled urban women at a crucial period of their lives, which is often ignored and overlooked otherwise. The results showed that the most prevalent symptom was joint pain, mostly of knee joint. Few other symptoms in order of decreasing frequency were memory impairment, anxiety and weight gain. Hot flush was complained by only one fourth of the women studied. The researcher concluded that the findings were at variance with western literature, where vasomotor symptoms are sited as most prevalent in this age group and so intended to develop a wide database in near future.

Zutsi (2005) in Delhi studied prevalence of urinary symptoms in peri-menopausal age group. 500 women in the age group of 42 to 55 were given questionnaire and results showed – 334 patients were P₂ and P₃, 4% had urge incontinences, 10.4% complained of stress incontinence, 42 patients had both, 9.4 % complained dysuria, 2.4% hesitancy, 6.4% frequency and 6% nocturia. Prevalence of urinary symptoms was not very high. Amongst those

facing symptoms only 30 had taken any treatment – 18 allopathic, 5 homeopathic, 4 ayurvedic and 4 were operated. 13 patients reported recurrence of symptoms after taking any mode of treatment. The prevalence rate has not been found so high. The results do not match with the western figures; probably our women do not give much importance to these symptoms.

As stated by Krishna and Shah (2004) according to Prof. Won-Whe Kim, Pusan National University, Korea, peri-menopausal symptoms vary considerably region wise. In South-east Asian countries dominant symptoms in this group are: shoulder stiffness (Japan), hand joint pain (Korea), backache and tiredness (Taiwan) and headache (Philippines).

A study by McKinlay and Jefferys (1974), of over 600 women also included a group of regularly menstruating women but the age range was 45-64. Hot flushes ranged from about 18% among normally menstruating women through a maximum of 75% during the climacteric to about 29% among women who were at least nine years post-menopausal. Percentages of some other symptoms in the menopausal transition group, are reported as headaches 38.3% (compared with the 45% of women before menopause); sleeplessness 45% (compared with 20.9% before menopause); depression 55% (compared with 38.8% before menopause).

In 1969, 2000 women aged 46-55 were surveyed by the International Health Foundation in several European countries (Van Keep, 1970). In the survey many symptoms were included which may well be experienced at other times of life. Although 22% of the sample was reported to be still experiencing normal regular menstrual cycles, it is doubtful whether this whole group can be considered as clearly outside the climacteric years and hence a valid comparison group. Since 20% of those still experiencing regular cycles reported hot flushes, it seems likely that many of them were already in the peri-menopausal phase where various climacteric changes are already taking place. Also, since the regularly menstruating groups were over 45 they are probably not typical of menstruating women in general. The survey gives percentages of symptoms most frequently experienced in their age group (46-55), as: hot flushes 55%, tiredness 43%, nervousness 41%, headaches 38%, insomnia 32%, depression 30%, irritability 29%, joint and muscle pain 25%.

A rather large incidence survey by Jaszmann, Van Lith and Zaat (1969) was carried out in Netherlands, of women at various stages of menopausal transition, as well as a normally menstruating group, defined as having had normal menses during the year preceding the survey, precise age range not given but mean 45.3 years. Hot flushes rose to a maximum of 65% one to two years after cessation of menses and decline thereafter. Muscle and joint aches were reported in 30% of women who were regularly menstruating and this rose to 50% three years after menopause. Depression was not a feature of the menopausal years. The same is true of irritability though it increases slightly in the menopausal transition, from 28% in normally menstruating women to 37% during the climacteric. The authors believe that only hot flushes, sweating and muscle and joint aches can be seen as typical climacteric complaints.

Neugraten and Kraines in 1965 compared women of all ages on a large number of physical and psychological symptoms. In spite of the fact that currently menopausal women scored higher on physical symptoms, it was the adolescent group (age 13-18), which scored highest on psychological symptoms and the lowest scorers, were in the post-menopausal (age 55-64) group. The authors suggested that although physical symptoms are high at the two times of great hormonal change (adolescence and menopause) the older women because of their experience and maturity have learned to cope more effectively, at the psychological level, with biological changes and stress. This bonus that comes with experience and maturity obviously manifests itself fully when the menopause is over.

An early study, in 1933, of 1000 women by the Council of Medical Women's Federation of England which reported that 15.8% were free of symptoms at the menopause, 62.3% had no symptoms other than hot flushes, for an average duration of two years and that 89.7% carried on their daily activities without any interruption.

2.6 Physical Symptoms during menopause

Erluk, Meldrum and Judd in 1982 in their study found that women with severer flushes had significantly lower levels of oestrogen than women who

had never had flushes. The women with the symptom also had significantly lower ideal body weights, leading the authors to suggest that the known effects of body weight on estrogen levels in post-menopausal women may be an important factor in hot flushes.

Bungay, Vessey and McPherson (1980) studied various symptoms and found a similar decrease in headaches from age 40, in women and in men.

Bungay, Vessey and McPherson (1980) included reports on frequency and urgency in both women and men in their study on symptoms. Though these symptoms did not increase through the menopausal and post-menopausal years in women there was a steep rise in the same age groups in men, presumably reflecting a prostatic problem.

Wood in 1979 conducted an extensive survey of 20 symptoms in five year age groups of women from 20 to over 65 years revealed that headaches actually decrease from 45 years. Palpitations remained stable from age 40 to after 55, when there was a slight increase, not statistically significant.

Campbell in 1976, Kopera in 1979 and Vaughn and Hammond in 1981 conducted a similar kind of studies. They found that of women who attended a clinic report an increased incidence of frequency, urgency, infections of various kinds and incontinence with menopause. The rise in the incidence of these symptoms in clinic patients was assumed to be due to the urethra and the bladder, which in turn are thought to be the reasons for estrogen deficiency. The symptoms all responded well to estrogen treatment.

Thompson, Hart and Durno (1973) reported on the incidence of hot flushes. 74% of post-menopausal women in a general practice in Scotland reported hot flushes. Of these 17% had been having them for over one year, 50% for two to five years and 19% for more than five years.

The International Health Foundation Survey of 2000 European women aged 46 to 55, conducted by Van Keep, found reports of palpitations in 24% of the women. Since younger women were not asked to report, there is no way of assessing the possible role of the menopause in this aspect.

Jaszmann, Van Lith and Zaat (1969) studied and reported that aches in joints, bones and muscles were observed in 30% of women who were menstruating normally. There was a rise to a maximum of about 46% through

the menopause, with a subsequent decline to 33% at five to ten years after the menopause.

Chaudary (2005) conducted a study in Ahmedabad on post-menopausal women for evaluation of osteoporosis. Average age of menopause was 46.7 years and subjects were +4 years (those who passed menopause 4 years back). Results showed severe osteoporosis were found in women from age 60 and above, most of them with moderate osteoporosis and majority required surgical treatment with added risk of surgery and anesthesia.

According to Jog (2005) decreased Bone Mineral Density (BMD) of women in post-menopausal age is a matter of concern. Early detection of osteopenia and osteoporosis and its' appropriate management was dealt in a study conducted in Pune city. Measurement of BMD was done in post-menopausal women (min. 2 years). Appropriate advice regarding diet, exercises and medication was given depending upon T-score and Z-score. Follow up BMD was done every year for 3 years. It was found that osteopenia responds better and early. Osteoporosis shows slow improvement. Regular exercise gives early results.

Kuriyan et.al in 2005 studied BMR and various anthropometrics characteristics of the male and female subjects of Bangalore city. The age and height of the subjects of different BMI groups in both male and female subjects did not show any significant differences. The body weight, percent body fat and fat free mass of the underweight and normal BMI subjects in the male and female groups were significantly lower than the overweight group. BMR was measured for underweight, normal and overweight male and female subjects and was compared to the FAO/WHO/UNU prediction. When the BMR of the entire group of male and female subjects was compared to the FAO/WHO/UNU prediction, the difference was found to be 8.3 % and 7.6 % respectively. These results substantiate the findings of the earlier studies, which showed that Indians had a BMR about 10% lower than Europeans. The result of this study has confirmed the need for population specific BMR prediction equations and has generated gender specific equations for different body sizes, but this needs to be extended into larger datasets.

According to Shah and Shah (2005) uro-genital problems are distressing symptoms in menopausal life. 10% of women complain of symptoms due to genital atrophy within three years of menopause due to normal and probably all women experience at least one significant problem from lower uro-genital atrophy 40 years after menopause. They divided symptoms into six categories – 1. Urethral syndrome, 2. Urinary incontinence, 3. Uro-genital prolapsed, 4. Recurrent urinary tract infections, 5. Atrophic vaginitis and 6. Sexual dysfunction. It was found that uro-genital prolapsed was in around 40% which was attributed due to frequent child birth and child birth related injury to genital tract. Incidence of prolapsed increased as a result of diminished estrogen level and loss of adequate collagen support. For urinary incontinence it was found that 25% had stressed incontinence, 30% had mild incontinence whereas urge incontinence was found in 45% of post-menopausal women. A recurrent urinary tract infection was commonest post-menopausal problem. Symptoms like vaginal dryness, itching, irritation; dyspareunia and recurrent bacterial infection are quite common. Cumulative effect of hormone deficiency leads to loss of self-esteem, poor self-image and eventually loss of sexual desire. Uro-genital problems can be managed by – 1. Non-hormonal therapy – reassurance, good diet and antioxidant drugs or by 2. Hormone replacement therapy – may be systematic and local HRT as vaginal tablets and cream, 1-2 week's treatment or a symptomatic long term HRT.

As stated by Johnson et.al. in 2003, the prevalence of osteoporosis, which is a debilitating bone disease, increases with age. Also, a higher proportion of women are affected by this condition. It is a silent condition and in many cases, the condition is diagnosed only after an individual suffers a fracture. Osteoporosis is preventable. Guidelines in Canada and U.S. suggest that 1200 milligrams of calcium per day is recommended for individuals over 50 years of age. Studies have shown that dietary calcium intake from pre-adolescence through late adolescence is critical for building high bone density. Among those over 50 years of age, adequate levels of calcium intake prevent the rapid age and gender related decline in bone density. Sources high in calcium include certain cereals grains and products (e.g. Ragi), pulses, legumes (e.g. Whole Bengal gram, black gram dhal, rajma and green gram),

green leafy vegetables (e.g. Amaranth, agathi, drumstick leaves), milk and milk products and fish with small bones. In term of exercises, weight bearing exercises such as walking, cycling, running, stair climbing has been shown to be beneficial in promoting bone health. Also physical activities increase muscle strength and flexibility, increasing independence and decreasing risk of falls and related fractures. An added benefit to the optimal nutrient intake, exercise and not smoking is improved health and decreased incidence of cancer. In addition with the advancement of science, options such as drug therapy (HRT) along with calcium and vitamin D supplementation and exercise are available.

According to Mishra, Henery and Kapoor (2003) the menopausal condition is not only related with dyslipidemia and cardio-vascular problems but also with bone health problems, especially osteoporosis. Postmenopausal osteoporosis is the result of low peak bone mass and/ or increased pre-and post-menopausal bone loss. The latter is primarily caused by estrogen deficiency. The reduction in bone mass eventually leads to deterioration of micro-architecture of bone tissue and thus to reduce bone quality. The HRT is not only beneficial in the treatment of post-menopausal dyslipidemia but also in the treatment of post-menopausal osteoporosis. This is a cross-sectional study between pre-menopausal and postmenopausal ladies. Women of control group (pre-menopausal) ladies are selected randomly and the women of experimental group (post-menopausal) are taken from contacts in hospitals, various clinics of Bilaspur city, Raipur city and Bhilal Nagar randomly. They were given different types of therapy and the effect was assessed. The HRT was found most significant for the correction of the very condition. So, we can conclude that age related and premature surgical menopause, both are related to high serum levels of Ca and hypercalciuria, thus reduced bone through various mechanisms. The resultant osteoporosis is resistant of supplementation with Ca and Vit. D, only after treatment with hormone replacement therapy [HRT], a significant improvement in osteoporotic condition was noted in the study group.

2.7 Psychological symptoms during menopause

In a British survey by Bungay, Vessey and McPherson (1980) irritability significantly declined in women at about age 48, whereas it did not decline in menopause.

Greene and Cooke in 1980 conducted a survey using a multivariate analysis technique, where life stress in general was shown to have more influence than did the menopause on psychological and somatic symptoms. There was no significant increase in total life stress at the time of the menopause and the highest levels of both psychological and somatic symptoms were found in the 35-44 years old group, after which age there was a steady decline.

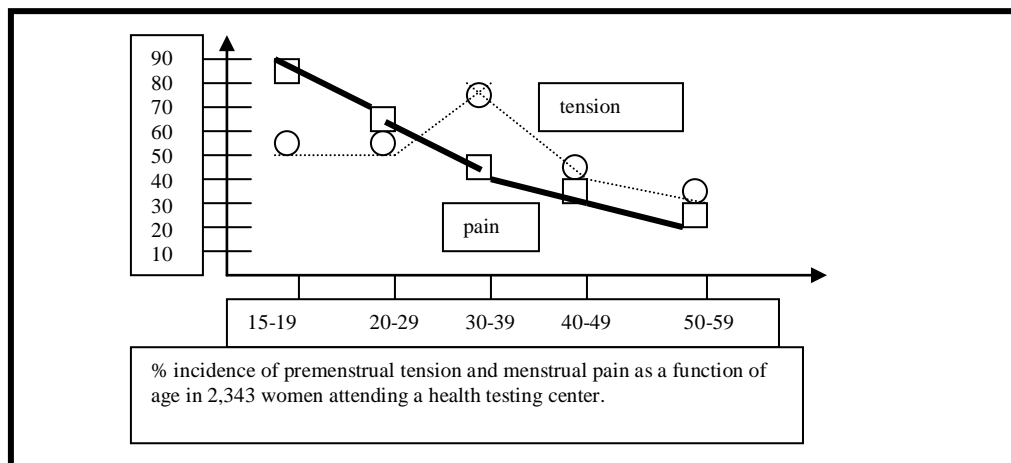
Wiessman in 1979 reported a study of a group of women diagnosed as suffering from major non-bipolar depression. There was no increase in depressive symptoms in the menopausal years, compared with the pre and post-menopausal years.

Wood (1979) in a comprehensive survey in Australia of women of all ages found no increase with age (including the menopausal transition) of the psychological symptoms investigated and indeed found a decline with age in headaches and irritability. He also found that women with psychological problems frequently seek help at gynecological clinic, at any age. This overlap between gynecological and psychiatric problems partly explains why clinicians often assume a casual relationship between ovarian failure, hot flushes and psychological problems. Wood the author of an Australian survey, in 1979 suggested ways in which psychological symptoms may become associated with the menopausal phase. Firstly, psychological symptoms may have preceded the climacteric, may be occurring secondarily to hot flushes or may be a result of new stresses, which may occur at any age. Secondly, the propensity to link many psychological symptoms with the menopause may provoke new anxiety; or it may turn the menopause in to a scapegoat for patients with chronic anxiety or depressive states. Finally, the author rightly suggests that more information about the general effects of ageing, favorable and unfavorable, would put the menopause in a better perspective.

Wood, Larsen and William (1979) in their study found that when negative states are investigated, they are found to be low in the older groups. A large study of women of all ages found that tension decreased steadily from about age 35 to a minimum at ages 50-59. Menstrual pain continued a steady decrease with age throughout the menopausal transition.

Figure 7

INCIDENCES OF PREMENSTRUAL TENSION AND PAIN



Source: Doreen, Asso (1983). The real menstrual cycle.

A study by Ballinger (1977) compared women, aged 40-55, referred to a gynecological clinic with a non-clinic group found a higher proportion of psychiatric morbidity in the clinic group. Also their psychiatric disorder was more severe and more depressive in nature.

Hangneel (1966) in his ten-year prospective study in Sweden found no evidence of an increase in mental disorders during the climacteric. In fact the peak of mental disorders was age 35 to 44 years, after which there was a decrease.

2.8 Sexual symptoms during menopause

According to Krishna and Shah (2004) earlier, women were considered asexual after menopause. Today, the stress is on the greater potential for sexual enjoyment, since menstrual problems and the fear of pregnancy no longer impede women's sexuality. However, if physical problems like vaginal

dryness lead to dyspareunia, women cease to enjoy sex, in spite of a change in attitude. As authors found that menopausal women suffering from vaginal dryness or dyspareunia, were willing to discuss this topic only if the physician initiates it. The author also suggested that estrogens with progestin supplement were the therapy of choice for menopausal dyspareunia. The addition of vaginal estrogen cream and a caring attitude on the part of the physician were both excellent adjuvant.

As regards sexual feelings or interest, a survey by Bungay, Vessey and McPherson (1980) in Britain of men and women aged 30-64 years, taken from a selection of general practitioners' lists, showed that at all ages women have less interest than men in sexual relations. From their respective baseline, though, whereas in men there is a decline from about 48 years, in women at that age there is a slight, probably not significant, reversal of a previous trend towards loss of interest. In a survey by Hallstrom (1977) of peri-menopausal women in Sweden the data confirm a decline of sexual activity in women from 38 years to 54 years. It also found that the majority of women report moderate sexual interest beyond age 50, and many well beyond that.

A study by Hallstrom (1977) of 800 women gave percentages of pre-climacteric as well as menopausal women. Percentages of women expressing moderate sexual interest at different ages are 38 years, 72%; 46 years, 70%; 50 years, 62% and 54 years, 48%. As regards sexual behavior the figures for women reporting no change in capacity for orgasm are: 38 years, 70%; 46 years, 62%; 50 years, 66% and 54 years, 50%.

Pfeiffer and Davis (1972) in their study of middle and upper socio-economic groups found that women and men experience a significant decline in sexual intercourse with increasing age. Men had more frequent intercourse at all ages but the rate of decline in both groups reached the same significant level.

A study of the determinants of sexual behavior in men and women from 46 years to 71 years of age by Pfeiffer and Davis (1972), found that a much larger number of variables influenced sexual behavior in men than in women. The sexual functioning of the men through middle life to old age was influenced independently by factors of: age (negative), health (positive), social

class (positive), treatment for hypertension (negative), life satisfaction (positive), physical functioning (positive and excessive concern over physical function findings (negative). Only a small number of factors made independent contributions to sexual functioning in women. They were mainly marital status (intact marriages were positively correlated) and age (negatively correlated). Only small contributions were made by educational level (positive), being employed (positive) and being post-menopausal (negative). A highly salient feature emerged from a separate analysis of the relationship between past sexual experience and present sexual functioning. In women and in men past sexual experience is an extremely important feature of present sexual enjoyment and interest. This showed that continued sexual activity in older age groups is positively related to previous enjoyment of sexual behavior and experience. This means that with changing social attitude a different pattern can be expected in women's sexual behavior with age.

With regards to the incidence of change in sexual interest and behavior during the menopause on study by Pfeiffer, Verwoerd, and Davis (1972) showed that by age 50, 58% of women and 49% of men reported some decline in their sexual interest and activity; 79% of women and 72% of men reported a decline by the age of 60. In terms of actual interest (as opposed to decline from former level) the percentage of men reporting absence of sexual interest was zero at age 50, rising to 11% by 65; 7% of women reported absence of interest at age 50 rising to 51% by age 65.

An American survey of middle and upper socio-economic groups by Pfeiffer, Verwoerd and Davis (1972) showed a significant decline in interest with age in both men and women. Again from their respective baseline, the amount of decline in interest from age 46 years in men and in women is at the same level of significance.

2.9 Treatment for Menopause

Agrawal (2005) in Vadodara conducted a study to see the effect of Menotab' as an alternative branch medicine in post- menopausal syndrome. For the purpose 105 women with post-menopausal syndrome were selected and were divided into two groups of which group-I was given 'Menotab-A' and

group II was given 'Menotab-B'. 70 women, 35 from each group who completed the study were evaluated. The results showed that in both the groups the improvement in psychological symptoms was better than the physical ones. Subjective symptomatic relief and fall in serum FSH and serum LH was more in group I. No major side effects were noted in either of the group. It can be concluded that for a series of physical and psychological symptoms, grouped under a common heading of post-menopausal syndrome, menotab is an option worth trying for the treatment in the women hesitant in accepting the conventional HRT.

According to Dott (2005) lifestyle changes can have an enormous impact on health. Without a doubt, the most powerful lifestyle habit affecting health is cigarette smoking. In addition to increasing the risk of heart disease and osteoporosis, smoking brings on menopause up to three years earlier -- which also increases risk of heart disease and osteoporosis. Physical inactivity is a lifestyle risk factor for many serious diseases. For example, not exercising is almost as great a risk factor for developing heart disease as smoking.

- 1) Adequate exercise is the crucial ingredient missing in most women's lives. Activities such as brisk walking, running, aerobics, cross-country skiing, dancing, and tennis not only help the heart, but also the bones, the muscles, balance, and weight management. Some women report fewer hot flashes when they exercise regularly. In addition, exercise promoted better, more restorative sleep and stimulates "feel-good" brain chemistry that turns aside negative thoughts and depressed feelings. It is, without a doubt, the best remedy for a whole host of menopause complaints. For the greatest benefit, every day get at least 30 minutes of moderate aerobic exercise --such as brisk walking for two miles. Women who are just beginning an exercise program should first check with their health care provider to determine if this level of exercise is appropriate initially. Diet and health are intimately linked -- and women who are approaching menopause have special dietary concerns. With declining estrogen levels, midlife women are at increased risk of developing heart disease and osteoporosis, two serious conditions that are greatly affected by diet.

- 2) Diet is another "lifestyle" factor that can be considered "menopause treatment". Heart disease can be lowered by eating little or no cholesterol and fat, plus limiting salt and alcohol intake. Instead, select a proper diet high in fruits, vegetables, and grains. Osteoporosis prevention requires adequate calcium intake --starting as early as in the teen years to build bone strength to its peak so that when bone loss normally begins at about age 30, there is a "bone bank account" from which to draw. Most adults should consume 1,000 mg per day of total calcium, or 1,500 mg per day for postmenopausal women who do not have adequate estrogen levels. **(a)** If not enough calcium can be obtained from the diet (dairy products, leafy green vegetables), reach the recommended intake by taking a calcium supplement (not containing iron or fiber) in 250 to 500 mg doses. **(b)** Another nutrient plays a major role in helping the body absorb calcium: vitamin D. getting at least 15 minutes of sun exposure daily will help the body form its supply; certain foods (fortified milk, liver, and tuna) or a supplement may be needed to reach the recommended level of 400 IU daily, especially for women in northern climes. **(c)** Hot flashes can also be helped by watching the diet. Cut down or avoid the known "flash-inducers" such as spicy foods, hot drinks, caffeine, and alcohol. **(d)** Yes, controlling weight is very important. In fact, if a woman is more than 30% overweight, she's at risk for heart disease --even if she has no other risk factor. In reaching an ideal weight, pay particular attention to keeping fat off the waistline and tummy, the most dangerous fat locations for heart health.
- 3) Yes, prolonged stress can severely impact health. As women enter midlife, they may encounter increased stress or different stressors than in their younger years. Changes in the family structure and/or the workplace, illness or death of loved ones, and financial difficulties are only a few of the many possible causes of tension. Many women can benefit from stress-reduction strategies such as exercise or meditation. Some women also report fewer hot flashes when they engage in meditation, yoga, massage, or even just a leisurely bath.

- 4) There are also many "natural treatments for both menopause and menopausal symptoms. These include certain ethnic diets, herbs, natural hormones, and combinations of vitamins and minerals. One of the very hot topics in the last year has been the use of natural progesterone. There are many sources of progesterone cream currently on the market. Another hot topic is the use of DHEA, an adrenal hormone, for energy and to prevent aging. While many of these therapies have not been subjected to rigorous scientific study, there may be some validity in certain of these approaches. Other methods are pure quackery and when these approaches are looked at closely, it is apparent that the same benefits would be obtained by the principles of general sound health management outlined above. Many of these methods are very costly. Excessive expenditures on these untested and homeopathic remedies may actually do harm since the resources of the family are diverted from more cost efficient approaches to sound health. Just because someone labels something with the contemporary "buzz words" for something good, such as "natural" or "holistic" does not necessarily mean it is better than your common sense or what well meaning people have worked hard on for many years to understand.

Menopause is a transitional change in a women's life. She faces severe problems during this time. The episode of mood changes and outbursts of anger not only affects the females but upsets the family members as well. The subsequent events may lead to depression. According to Gharekhan (2005) yoga can be of help to the women by virtue of its asanas and pranayams (breathing techniques). Yoga modifies the endocrine systems from within and helps the patients to cope up with the changing hormonal patterns. As an exponent and teacher of Yoga the author has managed to treat few menopausal ladies only with yoga and has found it to be remarkably useful.

According to Jackson (2005), stress urinary incontinence is the most prevalent form of urinary incontinence. In spite of its significant negative impact in quality of life less than one-third of patients in the UK present with symptoms to their GP (general practitioner). The current mainstay treatment is

pelvic floor exercises. Previously, the only option available to patients for whom conservative treatments were not effective has been surgical intervention. However, recent developments have led to the first selective serotonin and noradrenaline reuptake inhibitor that has proved effective in the treatment of stress urinary incontinence.

Patni (2005) conducted a study in Jaipur to see the effect of treatment of induced menopause in patients who had completed treatment of different female genital cancers. 50 females in the age group of 45 and 55 years were given the indicated treatments and followed up for one year. The change in estrogen deficiency symptom score was noted at six month and one year, and change in BMD values at end of one year. The results showed that 66.66% patients showed 75-100% improvement in symptoms in both CEE as well as combination treatment. BMD showed 4-11% improvement in patients and there was higher rise in BMD with combination treatment as compare to women taking single treatment. The researcher concluded that it is mandatory to maintain the quality of life of treated cancer patients taking into consideration various parameters.

Shah (2005) studied 100 patients in peri-menopausal age group of 40 years and above in Ahmedabad city. For dysfunctional uterine bleeding (DUB) complains otherwise healthy women do not accept surgery at mid forties and hormonal therapy have side effects as well is not beneficial for long-term. So lesser invasive method, of thermal balloon ablation proved to be effective and popular. The overall success rate was found to be about 95%.

According to Weiss and Weiss (2005) at some point in every woman's life, her hormone production drops below the level required to continue her periods. Some women welcome the end to monthly bleeding, bloating, and inconvenience. But others find that menopause affects: their sex life triggers mood swings, causes debilitating hot flashes, or even takes them down the road to bone and heart problems. There are different kinds of menopause. If you have breast cancer, it is important to understand which kind of menopause you may be experiencing: natural menopause, a normal part of the aging process medical or surgical menopause that is the result of chemotherapy or ovary removal "cold turkey" menopause that is the result of being taken off menopausal hormone therapy after you were diagnosed with

breast cancer. But the good news is that there are ways to manage symptoms and live more comfortably with menopause. You can do many things to help ease your way through menopause. Lifestyle modifications (diet, exercise, smoking cessation, and attitude) may be just as important and effective as medications in helping you feel better and live longer.

According to Krishna and Shah (2004), estrogen deficiency affects the physical and mental health of the woman at menopause. From the earliest vasomotor symptoms to the psychological effects, the drying of the vagina and the skin and to the subsequent sexual and urinary problems, estrogen deprivation follows a pattern of well-defined chronological symptoms. Prompt hormone replacement therapy of early climacteric symptoms will lead to better patient compliance for the long-term therapy necessary for the prevention of complications later in life.

In 2004 Mishra et. al. conducted a study, to determine the effect of calcium supplementation on blood pressure and on serum lipid profile. The serum lipids are the precipitating factors of cardiac problem. Recently several Ca^{++} ionospheres have been studied in this concern. These X-537-A or 231187 increase the permeability of cell membranes to Ca^{++} ions, at the same times the Na^{++} leaves the cell in the same quantity. Thus, this 'leaving' of Na^{++} at cellular level greatly helps in the management of 'hypertension', which is supported by the serum Ca^{++} levels. In this way management of hypertension only with Na^{++} ions fails or doesn't show much effect. So, these new findings discredit the sodium theory, because sodium reduction doesn't work for every one. Even traditionalists realize that only about 80% of those with high blood pressure can control it through Na restriction alone otherwise in maximum cases maintenance of serum calcium level simultaneously is also essential. Calcium also exerts positive effect on serum lipid profile and in the present study it is found to reduce the 'lardy' cholesterol-LDL significantly. The blood pressure, serum calcium level total lipid profile – HDL, LDL, Triglyceride and Cholesterol were measured in the study groups. After Calcium supplementation significant change was observed in blood pressure and lipid profile.

The results of the million women study were published in the August 9, 2003 issue of The Lancet. Cancer research UK, epidemiology unit in Oxford,

England, reviewed medical data from over one million women ages 50 to 64 years, who enrolled in the study between 1996 and 2001. Approximately 50% of the women were using or had used HRT. The million women study included 9,364 cases of invasive breast cancer and 637 breast cancer deaths over the follow-up periods 2.6 years and 4.1 year respectively.

As stated by Chandra (1998), the role of HRT in relieving symptoms of the menopause has been fairly well-established. For the problems related to menopause, HRT is beneficial in the relief from vasomotor symptoms, prevention of osteoporosis and prevention of cardiovascular disease. However, similar conclusions cannot be drawn regarding the beneficial effects of HRT on psychological symptoms. The only situation in which HRT has a definite role in ameliorating psychological symptoms is in surgical menopause (i.e. following a hysterectomy with bilateral oophorectomy or in primary ovarian failure). In surgical menopause, HRT appears to have a two pronged approach. First, it causes a 'domino effect', i.e., it improves well-being by ameliorating physical distress. More importantly, however, it improves sleep, cognitive and sexual functioning and has a definite beneficial effect on mood.

Coulam (1981) stated that whatever psychological problems existed during the menopause, arising from the physiological ageing process and environmental factors, may be exacerbated in some women by estrogen deficiency and its effects. Since the nature and extent of the possible role of estrogen decline has not been demonstrated, hormonal therapy is likely to be effective only when other possible origins of psychological symptoms have been excluded.

In addition to the clinical studies, there have been investigations of the possible mechanisms of the protective effect of progestogens. A study by Natrajan et.al. in 1981 found that a group having estrogen unopposed by progestogen had changes in cytoplasmic oestradiol and progesterone receptors, whereas a progestogen – opposed group were no different from controls.

Vaughn and Hammond (1981) stated that estrogen appears to be the most specific therapy and is thought to be more effective than other treatments. It was not certain whether estrogen therapy also significantly decreases the incidence of fractures in estrogen deficient women. Since the

urethra and the vagina have a common origin in the uro-genital sinus, they are very similar with regard to the squamous epithelium and the effects of estrogen on both can be assessed by cytological investigation. It can be shown that estrogens have a proliferative effect on the vaginal and the urethral epithelium and on elastic and connective tissues. Hence the mechanisms of the therapeutic effect of estrogens on the symptoms of uro-genital atrophy seems.

Hammond et.al. in 1979 studied younger women (mean age about mid 40s) who received estrogen replacement after loss of endogenous estrogen production for various reasons, including menopause; this gives some evidence that both osteoporosis and fractures were decreased.

As stated by Hammond et.al. in 1979 there is good evidence that with the periodic addition of progestogens and with careful dosage of 'natural' estrogens the increased risk of cancer of the uterus is reduced or abolished.

Jacobs in 1979 stated that natural progesterone limits the impact of estrogen on the endometrium by two different actions. It increases the rate of conversion of estradiol to estrone which, being a weaker estrogen, does not give rise to proliferation and hence to hyperplasia in the endometrium. Progesterone also directly inhibits the synthesis of estrogen receptor proteins.

According to Thom et.al. in 1979 there is good evidence that with the periodic addition of progestogens and with careful dosage of 'natural' estrogens the increased risk of cancer of the uterus is reduced or abolished.

Nachtigall et.al. in 1979 conducted a prospective 10-year study of post-menopausal women, and found that estrogen therapy had a significantly preventive effect on the fracture rate.

Lindsay et.al. in 1978 found that there is a great disadvantage in the use of estrogens for prevention of bone loss if the treatment, no matter how prolonged, is ended there follows an alarming decline in bone mass. The figure shows the extent of this effect and makes it clear that, in the present state of knowledge, estrogen therapy for bone loss must be continued indefinitely. Whitehead, McQueen, Minardi and Campbell (1978) pointed out that the term hormone replacement therapy (HRT) is imprecise since the doses of estrogen which are required for effective relief of symptoms are higher than natural levels; also estrone rather than estradiol becomes the

predominant estrogen compound. The levels of FSH and LH are not decreased to pre-menopausal values and prolactin is not increased to those levels. The treatment therefore does not reinstate the hormonal milieu, which existed before the menopause.

Campbell and Whitehead (1977) stated that vaginal dryness, dyspareunia and in certain cases, presumably where it is secondary to vaginal changes, loss of libido, are improved by estrogen therapy. Observed decreases in blood pressure, and pulse rate with estrogen therapy seem to be secondary to a reduction of anxiety, since they are also obtained with placebo. There is no firm evidence that estrogen therapy has a direct beneficial effect on most psychological symptoms, though these may improve in the wake of a reduction in distressing physical symptoms and a general increase in well being with the therapy.

According to Studd, Chakravarti and Oram (1977) vasomotor symptoms, particularly hot flushes and night sweating, are relieved by the administration of estrogen. Symptoms, which are probably secondary to these symptoms, such as insomnia and poor concentration, are also helped. Vaginal dryness, dyspareunia and in certain cases, presumably where it is secondary to vaginal changes, loss of libido, are improved by estrogen therapy. There are no firm evidences that estrogen therapy has a direct beneficial effect on most psychological symptoms, though these may improve in the wake of a reduction in distressing physical symptoms and a general increase in well being with the therapy.

Thus, various studies done within our country and outside showed how important is it to take care during this stage of females' life. The female body is undergoing various physiological as well as psychological changes during this stage and the extent of changes and type of changes differ with every individual. The various studies cited in this chapter showed that there is still a vast gap in the information regarding this aspect of female life, as with varying physiological makeup, psycho-social environment, and so on, the degree, intensity and type of problems faced by an individual differs to a great extent. And so, it becomes all the more important to conduct this kind of study which takes into consideration the awareness of females regarding this aspect of

their present life and the problems faced by them, which they might not be knowing, are caused due to menopause.

The review of literature helped the researcher to understand the subject more clearly and scientifically. It also threw light on various researches conducted in the area, their methodology and findings. The studies reviewed pointed out an interesting feature of menopause which could be quoted as follows:

M	--	Menses Case
E	--	Estrogen Falls
N	--	Neurology Disables
O	--	Ovaries Fail
P	--	Palpitations Disturb
A	--	Amenorrhoea Ensues
U	--	Uro-urgency Manifests
S	--	Sleep Lacks
E	--	Eyesight deteriorates

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Methodology

CHAPTER 3

METHODOLOGY

The discussion in the previous chapters dealt with presentation of the research problem and the objectives underlying the problem, together with related researches in the area. It is evident that this 'change of life' period is an important phase in any women's life for it is a milestone in the life cycle. To understand it properly and search for some vital basic facts, the present study was undertaken. The research design and the procedure adopted to study the problem are discussed in the present chapter, which has been reported in systematic steps as follows.

- 3.1 Field procedure
- 3.2 Data collection procedure
- 3.3 Data analysis procedure

3.1 Field Procedure

Here the procedure followed by the researcher for this study is described in detail.

3.1.1 Research Design

The research design used for the present study was exploratory cum diagnostic research. It was exploratory in the sense that very few studies have been done on menopause from the sociological point of view. Whatever relevant data obtained was mainly from the medical field. Therefore, researcher wanted to collect primary data for exploring the problem in detail.

Diagnostic approach is used to determine the frequency of the problems faced by the females during her menopausal period. Thus, on a representative sample, a survey was carried out to find out the extent of awareness and problems faced by women during this period.

3.1.2 Empirical Setting of the Research

The study was conducted in Rajkot city. The data for the study was collected during the year 2004-2005.

3.1.3 Sampling Procedure and Techniques

For selecting sample Purposive Sampling Techniques was used. Purposefully few units were identified where females in this age group could be found. These units consisted of –

- Menopause clinic
- Health clinics
- Educational institutes
- Government organizations
- Informal women groups (clubs etc)

Menopause clinics: Presently there are only two menopause clinics running in the Rajkot city. One is attached to the Red Cross Community Health Centre and the other is with a trust operated general hospital. These places are visited by the females from all the classes in the society. Both the places were visited and the list of patients was obtained with their names and addresses. The contact was made with them and another list was prepared for those who were ready to co-operate in the study.

Health Clinics: Health clinics included all the health service providers may they be a government or a non government, public or trust operated centers or private clinics those providing health services to the female population, whether it be some gynecological or general health problem. From these various centers the females from all the social classes could be reached. From them the list of female patients were obtained and contacted. For those patients who did not fall in the required age group were also contacted as for other female member in the family who might be willing to share her opinion. Also the staff of the clinic in the required age group was requested to fill the questionnaire, whether doctor, nurse, aaiya, AMN or just a helper. A list of eager respondents was prepared.

Educational Institutes: The schools, colleges and university were visited and those staff-members in the age group of 40 to 55 years were contacted. The list was prepared for the willing respondents, may they be in teaching or non teaching, either professor or a peon or a clerk or laboratory assistant or a helper.

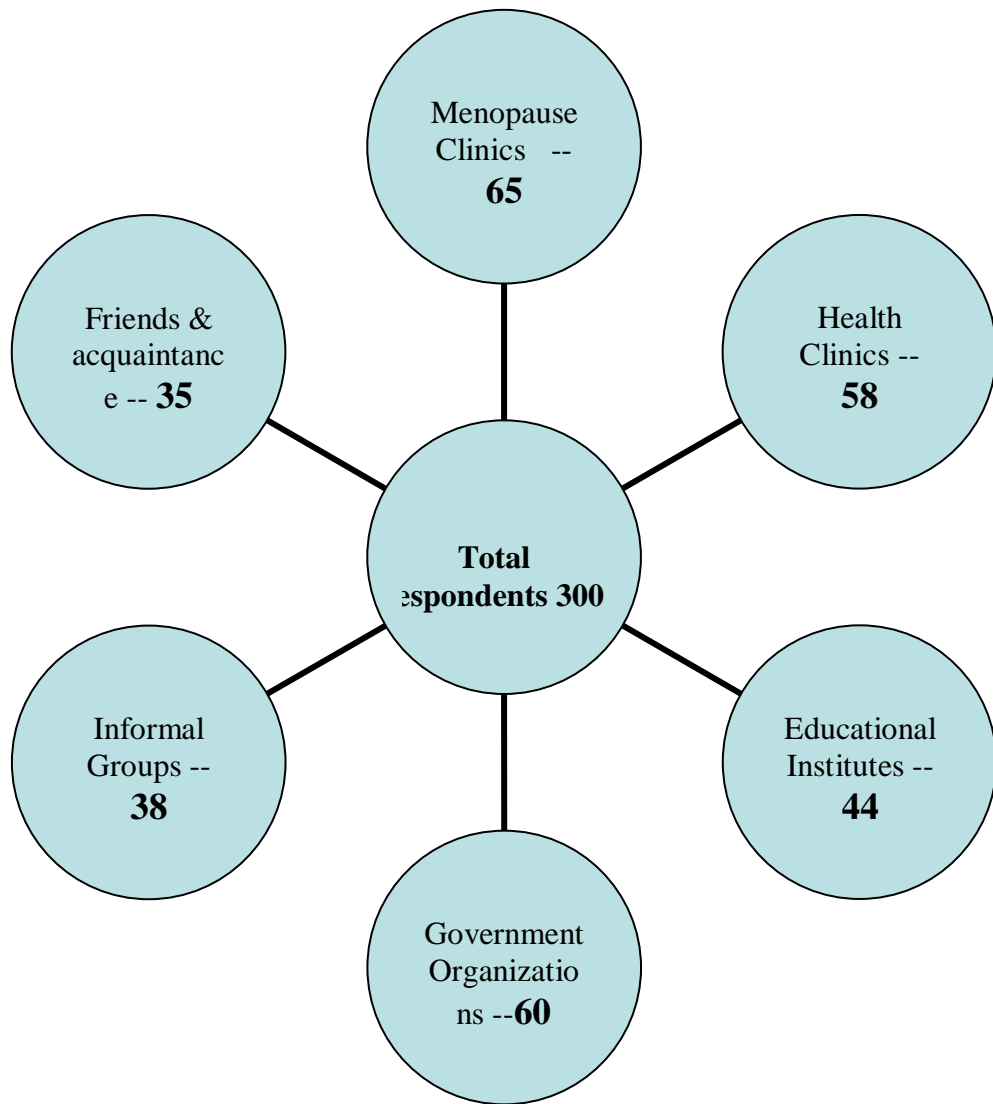
Government Organizations: Various departments of the government offices, where there were lots of female staff, were visited. Also the organization like Indian Railway was also visited. Each member was contacted and the purpose and importance of the study was explained. Then the list of willing respondents was prepared.

Informal Women Groups (clubs etc.): Females in these types of clubs and circles the high society females were present. Firstly the list of members was obtained and each one was contacted. Those willing to co-operate were listed separately and visited latter.

Apart from these the neighbors, friends and their relatives were also requested. List was also made for those willing acquaintances and visited. Finally from all the sources the list of willing respondents was prepared. According to this list the researcher got the names and addresses of around four hundred respondents.

At the time of contact some addresses were changed due to unknown reasons and the list dropped down to three hundred and eighty-five. Contact could be made with only three hundred and fifty-two females due to circumstances. Interviews of three hundred and twenty-six respondents were taken, of which three hundred were finally selected for their inclusion in the study as they were completely filled to the mark.

FIGURE 8
SAMPLE DISTRIBUTION ACCORDING TO THE SOURCE OF CONTACT



The sample was selected at random from among the females residing in the urban area of Rajkot city. The research was limited to only those females in the age group of 40 years to 55 years. Thus, 300 female respondents residing in various geographical areas of Rajkot city were contacted for the purpose of the study.

3.1.4 Research tool

A data collection method was used for the purpose of data collection. The semi-structured interview schedule was an appropriate tool for data collection. Though the structured interview schedule consume more time it was selected by the researcher for the following reasons:

- To built a rapport with the respondent.
- To explain the relevance and importance of such a personalized revelation.
- To avoid the problem of non-return or partial answering of questions.
- To stimulate thinking and to elicit proper answers.

An interview schedule was used to collect the data for the research. This schedule comprised of background information, awareness scale, symptomatic problem list and other open as well as close ended questions. The awareness scale was constructed and standardized for the purpose by the researcher.

3.1.5 Construction of Tool

An interview schedule was constructed after reviewing the literature extensively. Primarily free listing method was used to identify local terminology which further helped to frame a semi-structured interview schedule that actually gathered the data. The questions included in the schedule were both close and open ended to allow maximum flexibility and versatility in recording individual responses.

The interview schedule was not divided into various sections purposefully. The researcher thought it better otherwise, for a respondent can follow the flow of thoughts.

The first part consisted of some general background information of the respondent, which was then followed by some personal information which researcher thought might have some influence of the problems faced by the respondent today. The background information included the age of the

respondent, her educational qualification, and marital status, occupation along with her designation, family income as well as personal income for those working and the type of the family to which they belong to. Personal information, was included in this section, which although a past incidences might have some effect on her present condition, These consisted of age at menarche, age at first delivery, number of deliveries, abortions, miscarriage, still birth etc. Place of delivery and by whom it was conducted and whether there were any complications or not. Further history for any prior diseases or operations and medicines taken for the same was asked.

Further the schedule included the information regarding the diet intake. This was asked in the form of a table where food groups were mentioned and respondents had to tick mark the frequency of intake. There were few questions regarding habits and attitude after that.

Next the scale was framed to see the awareness of the respondents regarding menopause. For the purpose, thirty six statements were listed. The positive and negative statements were mixed.

Further, the symptoms regarding the problems faced by the women during menopause were inquired. For the purpose five point scale was used. This list consisted of some sixty one items which were to be ticked by the respondents for the frequency of its occurrence. For the purpose five point scale was provided---

A	Always	R	Rarely
F	Frequently	N	Never
S	Sometimes		

The symptoms were identified from the literature and with the meetings with gynecologists. Mainly eight major areas were identified—

- Urinary Complaints
- Central Nervous System (CNS)
- Menstruation
- Sexual Behavior
- Muskulo Skeletal System
- Mood Disorders
- Cardio Vascular System (CVS)
- General Symptoms

Each of the above area was further specifically termed. Each problem was separately listed. These items were translated into local language with the help of a literature student and doctors who were general practitioners. This list was then taken to OPD doctor of civil hospital, Gynecologist, females in this age group and beyond, nursing staff and health workers, for their approval for inclusion of all the aspects as well as for vocabulary used locally by the patients.

The intensity was also asked for the symptomatic problems, but than it was found that once in a while certain symptom is severe where as it is present mildly throughout the month.

And finally, few open ended as well as multiple choice questions were included to enquire more about what the respondent know on the subject, how much other members in the family know about it and their behavior with the respondent.

The multiple choice questions included the questions on various ways to overcome the problems, the alternate treatment and the treatment seeking behavior.

3.2 Awareness Scale

The content of the scale comprised of statements/items which would assess the awareness. At first the aspects to be covered in the awareness scale were identified to facilitate the collection of statements.

- **Collection of Statements/Items**

Statements or items were collected from the literature reviewed and from the information gathered through discussion. Caution was taken to include relevant information related to the menopause. Theoretically empirical data as well as general beliefs were included. The selection of items was done keeping in mind the fact that it should differentiate a well aware or informed respondent from the poorly informed and should have certain difficulty value and that it would promote thinking of the respondent.

- **Preliminary Selection of Items**

All the items collected for developing the awareness scale were framed in the objective form to provide an objective, impersonal and unbiased assessment. The statements thus framed were translated into local vernacular language. The tool thus constructed was handed over to the experts from Home Science, Education, Sociology, Psychology, Statistics, Gynecologists, other medical practitioners, Nurses and other health workers. These people were asked to judge the content, correctness, relevance and language of the items in the scale. The items on which more than seventy percent of judges agreed were considered for the inclusion in the final awareness scale.

- **Item Analysis**

The typical item analysis was used to facilitate two kinds of information such as index of item difficulty and index of validity. Index of discrimination tells us the degree of difficulty of an item, while Index of validity indicates how well an item measures or discriminates in agreement with the rest of the test. The extent to which an item discriminates the well informed from the poorly informed respondent was judged from the index of discrimination.

To pretest and standardize the awareness scale, the scale was administered to 30 respondents. The total score earned by the respondents were entered in descending order. Then they were divided into three groups' namely high scorer, moderate scorers, and low scorers for working out the item difficulty index and discrimination index.

- **Item Difficulty Index**

For item difficulty index, percentage of respondents, responding to an item correctly was found out. The logic behind this was that, if an item is too difficult, the percentage of the respondents getting it correct would be too low and vice versa. The items with particular percentage value ranging from 40% to 60% were considered for inclusion in the final awareness scale.

- **Index of Discrimination**

Discrimination index was the second criteria for item selection. If the number of person passing each item in the upper or lower criterion group were expressed as proportion. It would provide an index of item validity which can be interpreted independently of the size of the sample in which it was obtained. The discrimination index ranging from 0.28 to 0.78 was accepted.

- **Representative ness of the scale**

The care was taken for test items selected finally should cover all the aspects of menopause as decided at the outset of the study. The final scale comprised of 36 items.

The respondents were asked to answer the statements in dichotomous categories like 'true' or 'false'. They were even asked not to attempt the item if they have no idea whether the concern statement is right or wrong. All the correct answers were given a score of two and incorrect answers one. Those left blank were scored as zero. The total of correct answers made up the awareness score of the respondent.

- **Reliability of Awareness Scale**

The reliability of awareness scale thus constructed was tested by *test retest method or split half* technique and the reliability coefficient was computed. It was found to be 0.78.

- **Validity**

The tool thus constructed was validated from various experts in the field.

Subject expert: - Doctors were given the questionnaire to see whether the content and terminology used is proper and whether all the possible options were included.

Name	Designation
Dr. A. R. Bhupal ,	General Practitioner, Rajkot.
Dr. Ajit Shah,	Ex. Professor, Medical College, Ahmedabad.
Dr. Nila Mohile,	Gynecologist, Rajkot.

Dr. Jyoti Shah,	Gynecologist, Rajkot.
Dr. Niranjan Parikh,	Gynecologist, Rajkot.
Dr. Kamal Goswami,	OPD, Janana Hospital, Rajkot.
Dr. Sheela Doshi,	OPD, Janana Hospital, Rajkot.

Research Expert: - Experts from Home Science, Education and Statistics were given the questionnaire to see whether research procedure is correct or not, order of questions, scoring pattern, instructions and statistical analysis.

Name	Designation
Dr. Nilambari Dave,	Prof. & Head, Smt. S.B.Gardi Institute of Home Science, Saurashtra Univ., Rajkot.
Dr. D. A. Uchat,	Prof. & Ex. Head, Department of Education, Saurashtra Univ., Rajkot.
Dr. D. K. Ghosh,	Prof. & Head, Department of Statistics, Saurashtra Univ., Rajkot.

Sample Expert: - To see whether the understandability and clarity of the content the questionnaire was given to the experts.

Name	Designation
Dr. Himaxi Rao,	Prof. & Head, Department of Sociology, Saurashtra Univ., Rajkot.
Dr. Minaxi Patel	Prof., Department of Psychology, Saurashtra Univ., Rajkot.
Thapaliya Sister	Head Nurse, OPD, Janana Hospital, Rajkot.
Sister Vanita	ANM, Red Cross Society Clinic, Rajkot.
Ms. Sangeeta	Receptionist, Gyne.hospital, Rajkot.

Language expert: - Help of a language expert was taken to first check the English language and then its translation into Gujarati was seen.

Name	Designation
Ms. Surbhi Bhopal	M. Phil. English, Chief Officer, Dhrol Nagar Palika, Jamnagar.

The results of all the validations were analyzed and the changes were incorporated according to the suggestions.

- **Pre-testing of tool**

With the above frame work of the tool, it was administered for pre testing. The interview schedule thus prepared was administered on 30 respondents in the age group of 40 years to 54 years. The pilot study was conducted for the purpose of finding out whether any alteration was necessary to be made in the tool, to make it more clear and precise.

- **Procedure for Data Collection**

Thus prepared interview schedule was then personally administered for the purpose of data collection. To identify the respondents various units were first identified as stated earlier. These units were primarily visited and information was sought for what the number of females in is required age groups are their members or visit them. Then further from among each unit the numbers of respondents were selected randomly. If thus selected female was not ready to reveal the information or participate in the study the next consecutive willing female was selected.

To achieve the target number further snowball method was used. Those willing females were asked to find more friends and neighbors or relatives in this age group who might be willing to be a part of the study. This method proved to be very effective and thus the target of 300 respondents was achieved.

3.3 Data Analysis Procedure

3.3.1 Method of Analysis

To summarize the data collected and to present in a meaningful manner the same was coded and tabulated. The data was then subjected to statistical analysis. The categories required for analysis and presentation of the data were made arbitrarily to enable the investigator to analyze further.

3.3.2 Categorization

- i) **Age:** For further easier analysis the age-group of 40 years to 54 years was divided into three groups.
 1. Group I young-middle age 40 to 44 years
 2. Group II middle-middle age 45 to 49 years
 3. Group III old-middle age 50 to 54 years
- ii) **Education:** Education was clubbed into three groups:
 1. Less educated -- 12th and below
 2. Moderately educated-- graduate and below
 3. Highly educated-- post graduates and professionals
- iii) **Marital Status:** The married status had 3 sub groups, where the third group of 'others' included single, divorcee or separated.
 1. Married
 2. Unmarried
 3. Others
- iv) **Occupation:** The respondents were categorized as--
 1. working
 2. non-working
- v) **Income:** The respondents were categorized with respect to the family income. They were stated as --
 1. Lower Income Group - LIG <= 7,500/- Rs.
 2. Middle Income Group – MIG Rs. 7,501/- to Rs.15, 000/-
 3. Higher Income Group – HIG Rs. 15,001/- and above

- vi) Type of the family:** The type of family the respondent belonged to was sought. Whether
1. Nuclear family
 2. Joint family
- vii) Age at menstruation:** The respondents were asked to state whether at what age did they attended the menstruation.
1. ≤ 13 years
 2. 14years to 16 years
 3. ≥ 17 years
- viii) Age at first Pregnancy:** The respondents were asked to state that at what age did they had their first pregnancy. It was then put as -
1. ≤ 20 years
 2. 20 years to 25 years
 3. ≥ 25 years
- ix) Number of pregnancies:** The total number of pregnancies that each respondent had undergone was sought. It was put as--
1. No pregnancies
 2. 1 to 2 pregnancies
 3. 3 or more pregnancies
- x) History of any prior diseases:** Each respondent was asked whether or not she had a history or any prior diseases like, cancer, TB, Asthma, etc...
1. Yes
 2. No
- xi) Awareness Score:** The awareness scale was administered to see how aware the respondents were of the subject. For the purpose pre-tested awareness scale was used. The scores obtained were made by using the mean and standard deviation as follows---
1. $x - o$ or less low scorers
 2. $x - o$ to $x + o$ moderate scorers
 3. $x + o$ or more high scorers

Here the mean was found out to be $x = 47.0967$ and the standard deviation was found out to be $\sigma = 18.6757$.

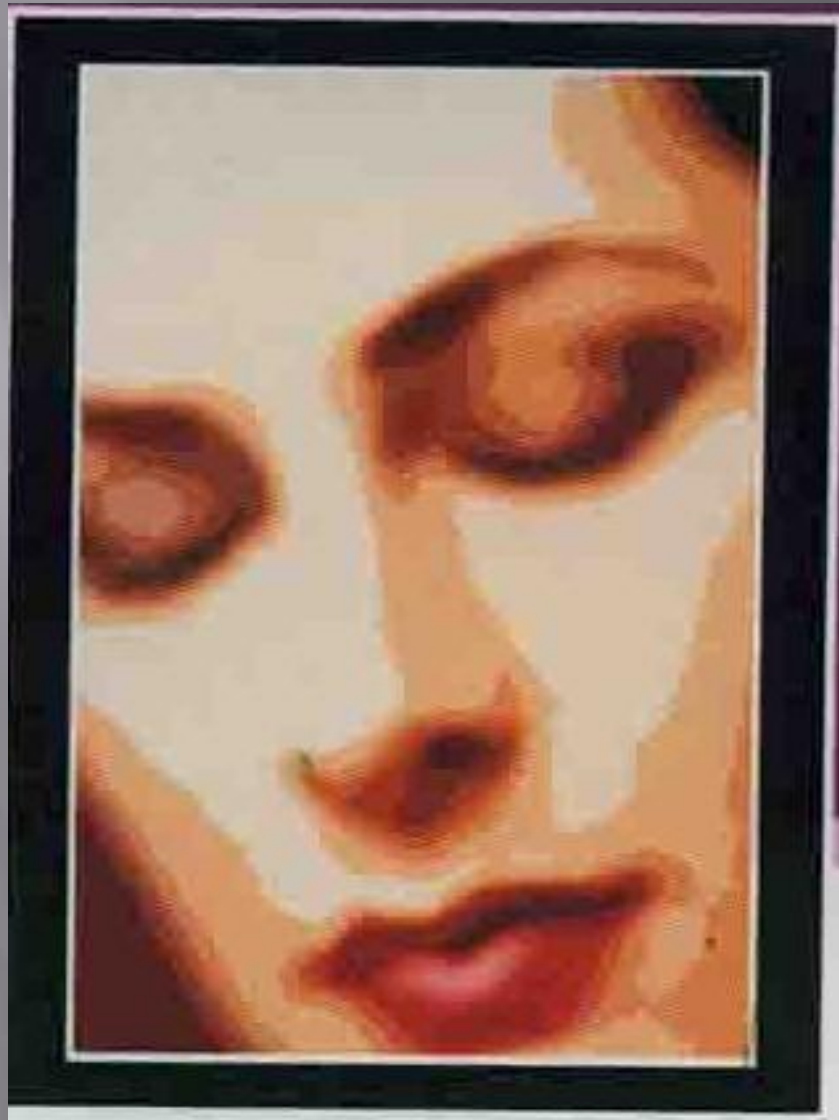
So those scoring below 28 (round figure) were low scorers, those scoring between 29 and 65 were moderate scorers and those scoring 66 and more were high scorers.

3.3.2 Statistical Analysis

The data thus tabulated was further analyzed in terms of simple frequencies, percentage distribution, mean and standard deviation. Discriminate functional analysis was also applied to study the relationship between the awareness score and problems faced by the respondents and various dependent variables.

From among the data collected from 300 respondents from around the city, the data was sorted out to see the number of respondents who actually were in the menopausal age. For the purpose of deriving the results, the researcher thought it best to take into consideration the data related to those respondents only. This limited the number of respondents to 135 out of 300. Further statistical analysis was done for the data of these respondents. As the present study involved multiple sample cases the technique of analysis of variance (ANOVA) was utilized for testing of hypothesis.

The following chapter gives the detailed data derived from the study in a precise tabular form.



*Results
and
Discussion*

CHAPTER 4

RESULTS AND DISCUSSION

The present study was an attempt to know about the awareness of women regarding the health issues with regards to menopause and problems faced during this stage. As stated in the previous chapter, the researcher selected a sample of 300 respondents residing in Rajkot city. On this representative sample, a survey was carried out to find out the extent of awareness and problems faced by women during this period of transition. An interview schedule was used to collect data for the study. This schedule comprised of background information, awareness scale, symptomatic problem list and other open as well as close ended questions. The results obtained were put through statistical analysis and are presented in this present chapter. For the better understanding the results were divided and presented under following four heads.

- 4.1 Background information
- 4.2 Awareness
- 4.3 Problems
- 4.4 Hypothesis Testing

4.1 Background Information

The first section, in the interview schedule, dealt with the personal information related to the background of the respondents. The information collected in this section was further put to a statistical analysis. The results obtained are presented here in this chapter.

4.1.1 Age-wise distribution

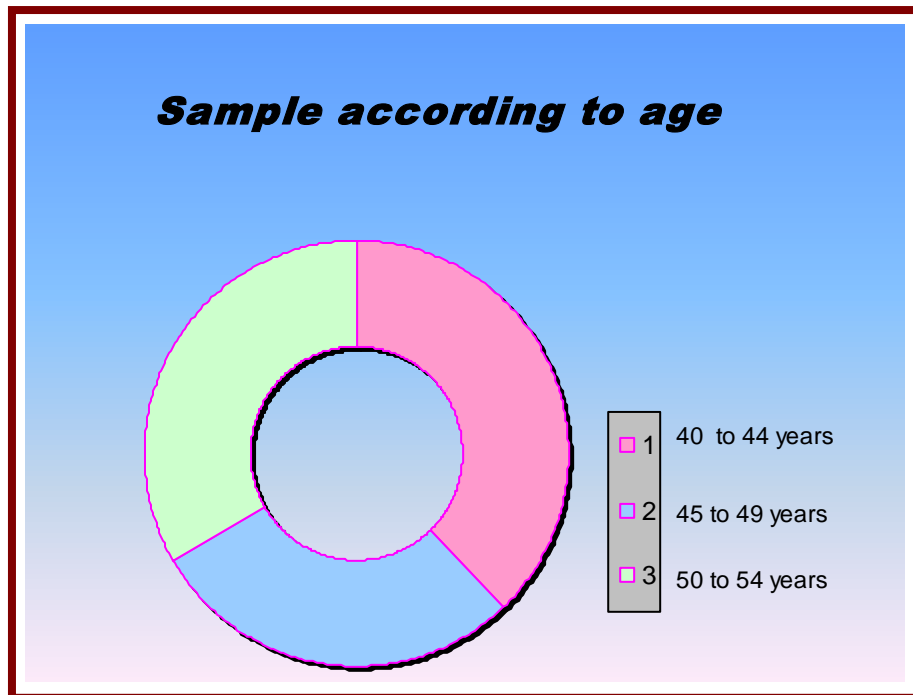
The sample for the study was divided into three categories according to their age. Table - 4 shows the percentage distribution for the same. It was

found that somewhat equal numbers of respondents were from all the three categories.

Table 4
DISTRIBUTION OF SAMPLE ACCORDING TO AGE

Sr. No.	Age	N	Percentage
1	40 years to 44 years	113	33%
2	45 years to 49 years	087	29%
3	50 years to 54 years	100	33%

Figure 9
AGE WISE SAMPLE DEPICTION



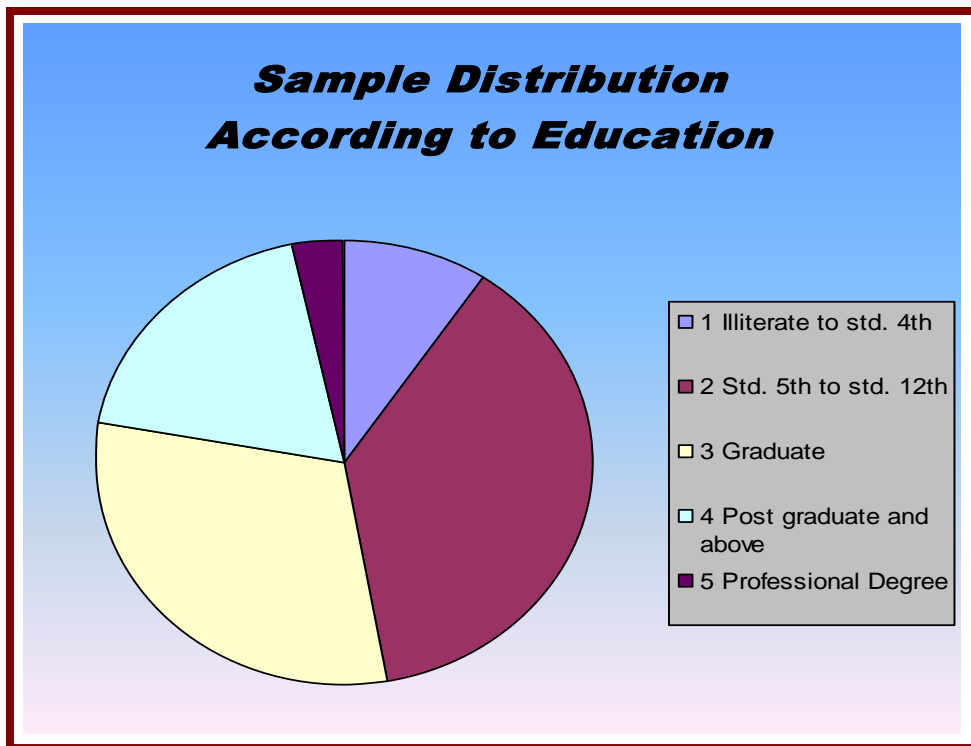
4.1.2 Education-wise distribution

The Table - 5 below shows the percentage distribution of the sample according to their education. It could be seen that thirty eight percent of respondents had education till 12th std. only.

Table 5
DISTRIBUTION OF SAMPLE ACCORDING TO EDUCATION

Sr. No.	Education	N	Percentage
1	Illiterate to std. 4 th	028	09%
2	Std. 5 th to std. 12 th	114	38%
3	Graduate	091	30%
4	Post graduate and above	057	19%
5	Professional Degree	010	03%

Figure 10
EDUCATION WISE SAMPLE DEPICTION



4.1.3 Marital Status-wise distribution

Table 6

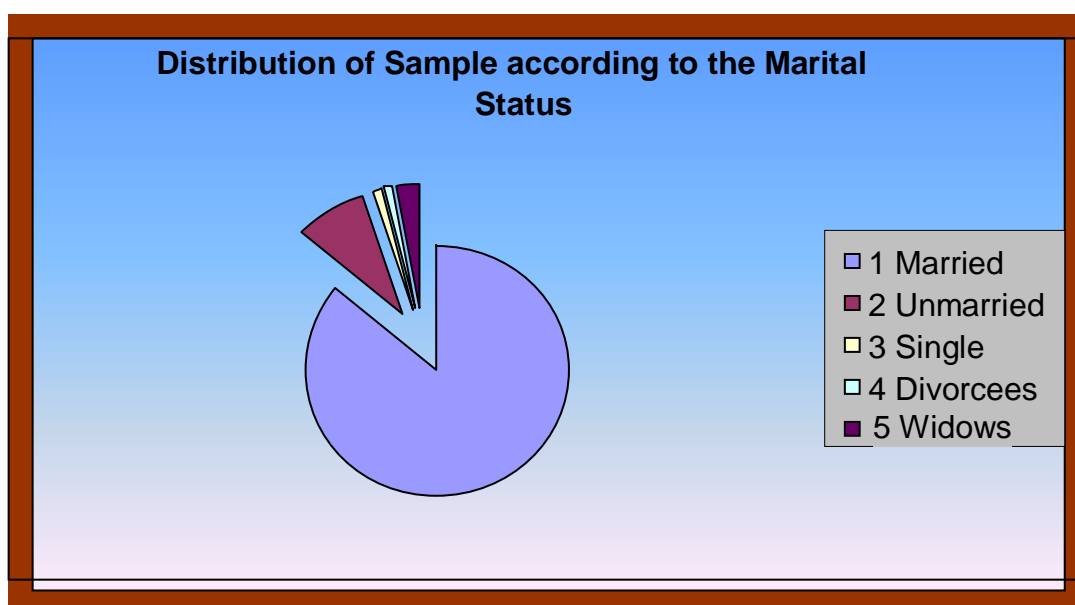
DISTRIBUTION OF SAMPLE ACCORDING TO MARITAL STATUS

Sr. No.	Marital Status	N	Percentage
1	Married	258	86%
2	Unmarried	027	09%
3	Single	004	01%
4	Divorcee	003	01%
5	Widow	008	03%

The respondents for the study were mostly married. The researcher also came across few who were either divorcee or single. It was thought to be right to study whether there might be any difference in the problems suffered by those who never had a pregnancy. That is why this aspect was considered as one of the variable.

Figure 11

MARITAL STATUS WISE SAMPLE DEPCION



4.1.4 Occupation-wise distribution

Table 7

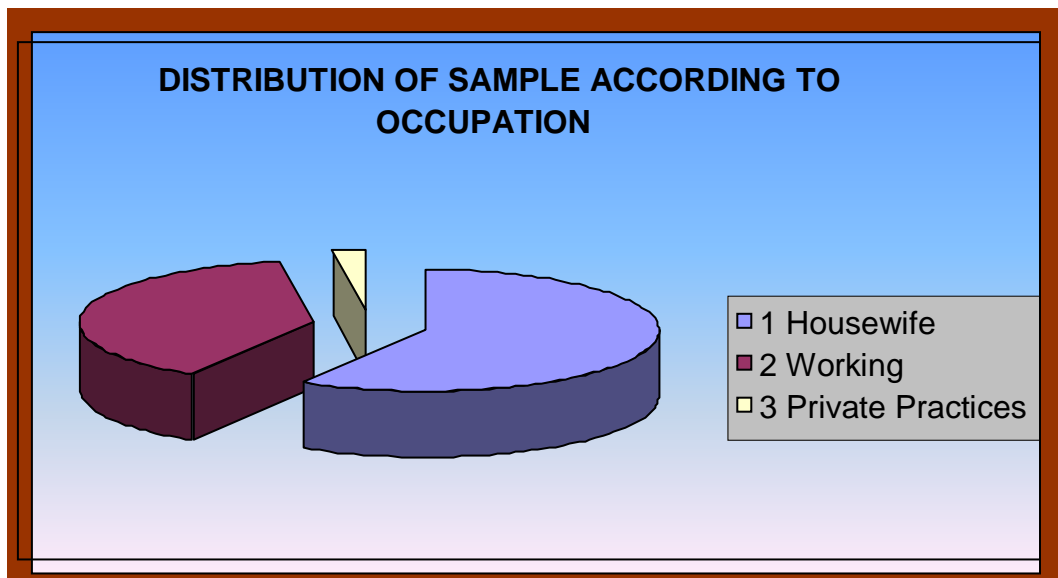
DISTRIBUTION OF SAMPLE ACCORDING TO OCCUPATION

Sr. No.	Occupation	N	Percentage
1	Housewives	176	59%
2	Working	117	39%
3	Private Practice	007	02%

It may be that the awareness of the women regarding any aspect might depend on how large her circle is. The researcher thought it best to consider this aspect as an independent variable and so nearly fifty percent of the respondents included were working outside their homes. Also the workload on the female may affect her physiological problems due to menopause and was studied further.

Figure 12

OCCUPATION WISE SAMPLE DEPICTION



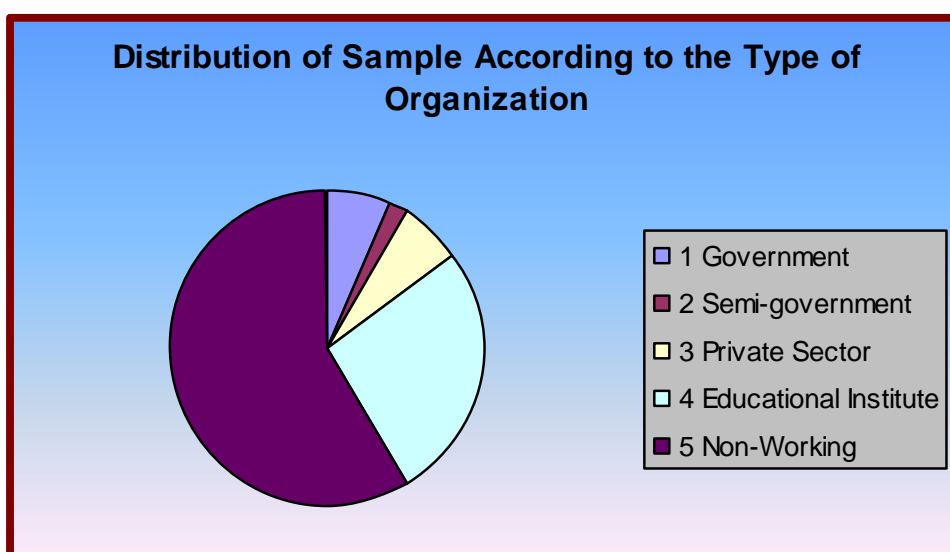
4.1.5 Type of Organization-wise distribution

Table 8
DISTRIBUTION OF SAMPLE ACCORDING TO
THE TYPE OF ORGANIZATION

Sr. No.	Type of Organization	N	Percentage
1	Government	020	07%
2	Semi-government	006	02%
3	Private Sector	019	06%
4	Educational Institute	079	20%
5	Non-Working	176	59%

When distributed according to the type of organization for those gainfully employed outside their homes, it was found that majority were in the educational institutes. This might be because Rajkot is still a city with traditional mindset and where working of females outside the home was not accepted easily. Teaching was the only profession which was considered preferable career for females. And so when working women of +40 were traced most of them happened to be in educational institutes.

Figure 13
TYPE OF ORGANIZATION WISE SAMPLE DEPICTION



4.1.6 Family Income-wise distribution

Table 9

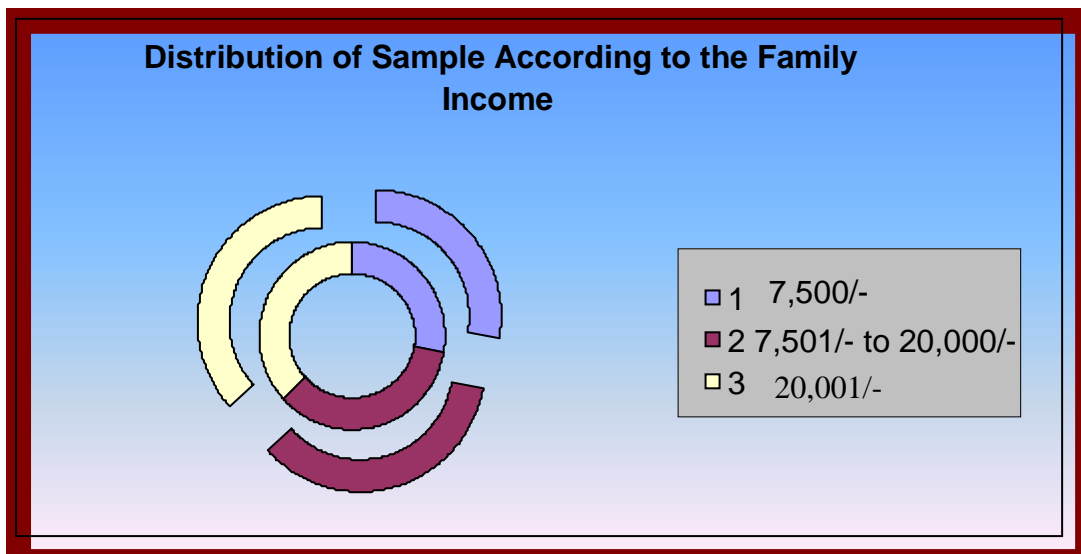
DISTRIBUTION OF SAMPLE ACCORDING TO INCOME

Sr. No.	Family Income	N	Percentage
1	≤7,500/-	084	28%
2	7,501/- to 20,000/-	107	36%
3	≥ 20,001/-	110	37%

The sample was further divided into various categories according to their family's income. The three categories of low, middle and high were formed and accordingly the sample distributed. It could be seen from the table that somewhat equal numbers are there in all the three groups.

Figure 14

FAMILY INCOME WISE SAMPLE DEPICTION



4.1.7 Personal Income-wise distribution

Table 10

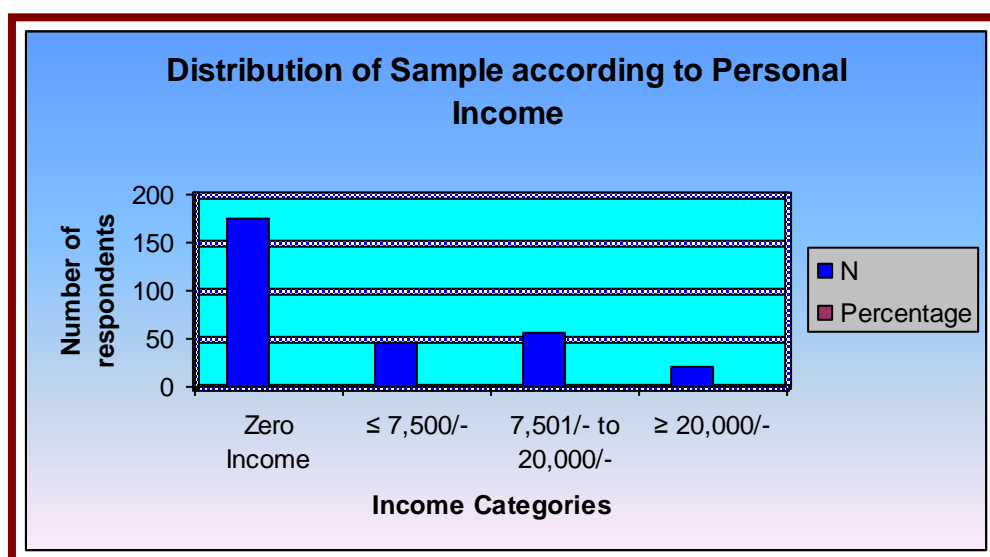
DISTRIBUTION OF SAMPLE ACCORDING TO PERSONAL INCOME

Sr. No.	Personal Income	N	Percentage
1	Zero Income	176	59%
2	≤ 7,500/-	046	15%
3	7,501/- to 20,000/-	057	19%
4	≥ 20,000/-	021	07%

As done for the family's income the respondents were also bifurcated according to their own personal income. Here the number of respondents earning zero income was for those housewives who were not gainfully employed outside their house. About fifty percent of the respondents were employed and few were themselves earning very high income.

Figure 15

PERSONAL INCOME WISE SAMPLE DEPICTION



4.1.8 Type of Family-wise distribution

Table 11

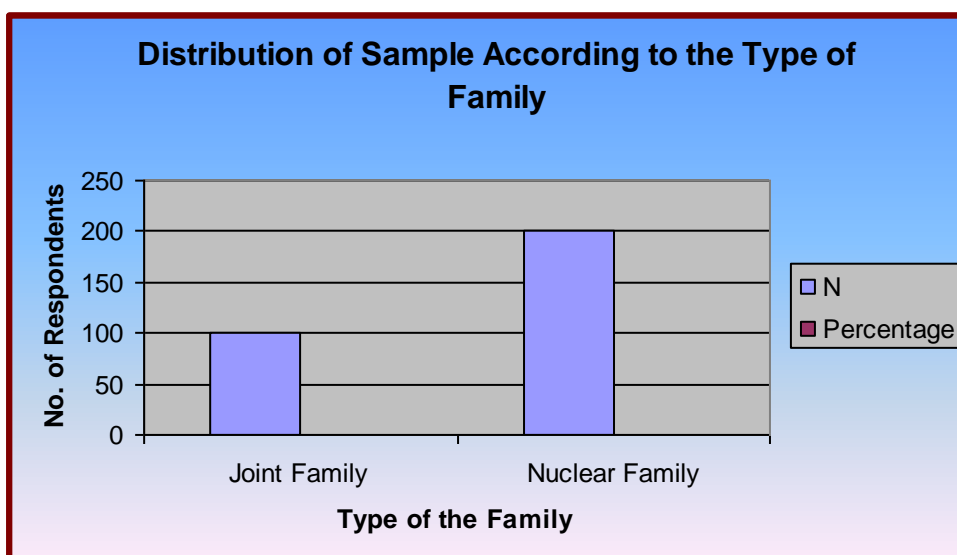
DISTRIBUTION OF SAMPLE ACCORDING TO THE TYPE OF FAMILY

Sr. No.	Type of Family	N	Percentage
1	Joint Family	100	33%
2	Nuclear Family	200	67%

Now with the lifestyle changing and new concept of small family being accepted by all, most of the respondents happened to be from nuclear family. The type of family was also considered as one of the variables as with the number of members in the house the workload and responsibilities of the homemaker obviously increase. But it was noticed that the type of family did not affect much with reference to the awareness of the respondents or the problems faced by them.

Figure 16

TYPE OF FAMILY WISE SAMPLE DEPICTION



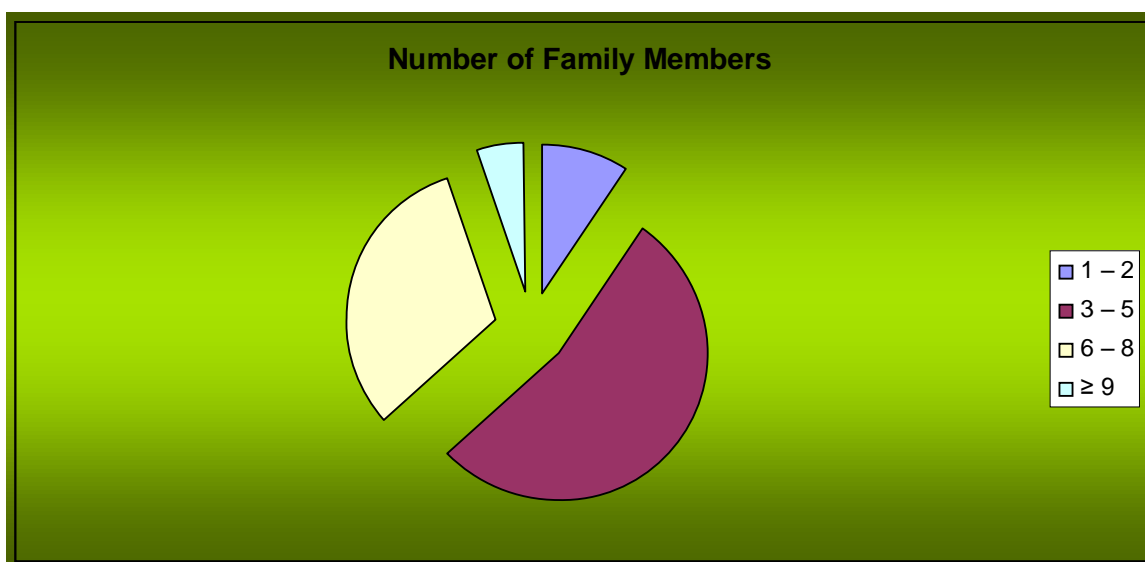
4.1.9 Number of Family Members-wise distribution

Table 12
DISTRIBUTION OF SAMPLE ACCORDING TO
THE NUMBER OF FAMILY MEMBERS

Sr. No.	Number Of Family Members	N	Percentage
1	1 – 2	28	9%
2	3 – 5	162	54%
3	6 – 8	94	32%
4	≥ 9	16	5%

The table showing the distribution of the respondents according to the number of family members is presented here. It can be clearly seen that majority of the respondents (54%) belonged to the family having 3 to 5 members. There were few respondents (5%) who had a large family, consisting more than 9 members.

Figure 17
NUMBER OF FAMILY MEMBERS WISE DEPICTION



4.1.10 Number of Children-wise distribution

Table 13

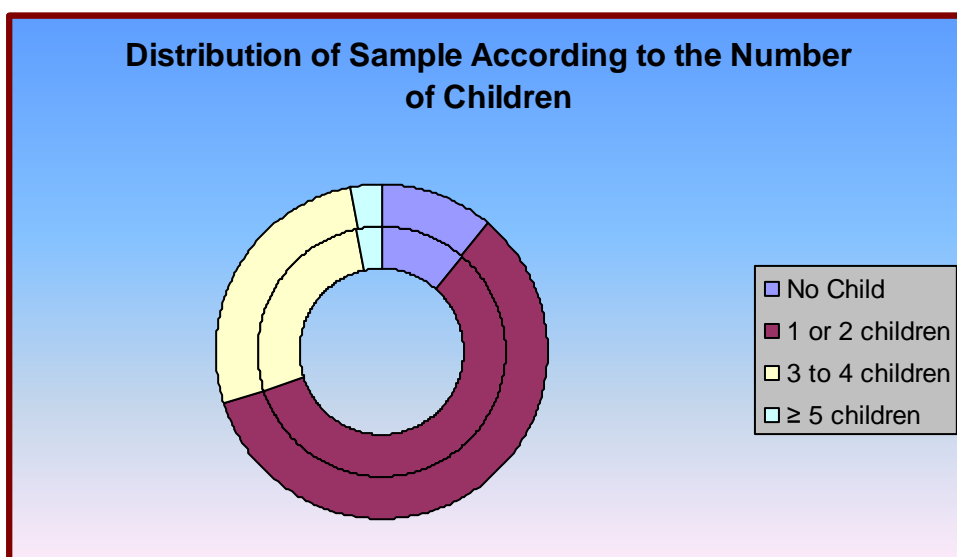
DISTRIBUTION OF SAMPLE ACCORDING TO THE NUMBER OF CHILDREN

Sr. No.	The Number Of Children	N	Percentage
1	No Child	034	11%
2	1 or 2 children	176	59%
3	3 to 4 children	080	27%
4	≥ 5 children	010	03%

Majority of the respondents had one or two children. Very few respondents were found to have more than five surviving children. It was found that though the number of pregnancies and the child birth was more for few respondents but here the researcher only considered the surviving children so far.

Figure 18


NUMBER OF CHILDREN WISE SAMPLE DEPICTION



4.1.11 Sex of Children-wise distribution

Table 14

DISTRIBUTION OF SAMPLE ACCORDING TO THE SEX OF CHILDREN

Sr. No.	The Sex Of Children 	Male		Female	
		N	%	N	%
1	No Child	044	15	082	27
2	1 child	114	38	102	34
3	2 children	088	29	054	18
4	3 children	006	02	018	06
5	4 children	--	--	009	03
6	5 children	--	--	002	01

When the respondents were distributed according to the sex of their children it was found that the number of female children was more as compared to male child. When there were more children, then it was mainly in course of male-child preference that they kept on giving birth to female children. Though the respondents felt that female children were more of an emotional support as well as a working hand, they do prefer male child.

4.1.12 Age at Menarche-wise distribution

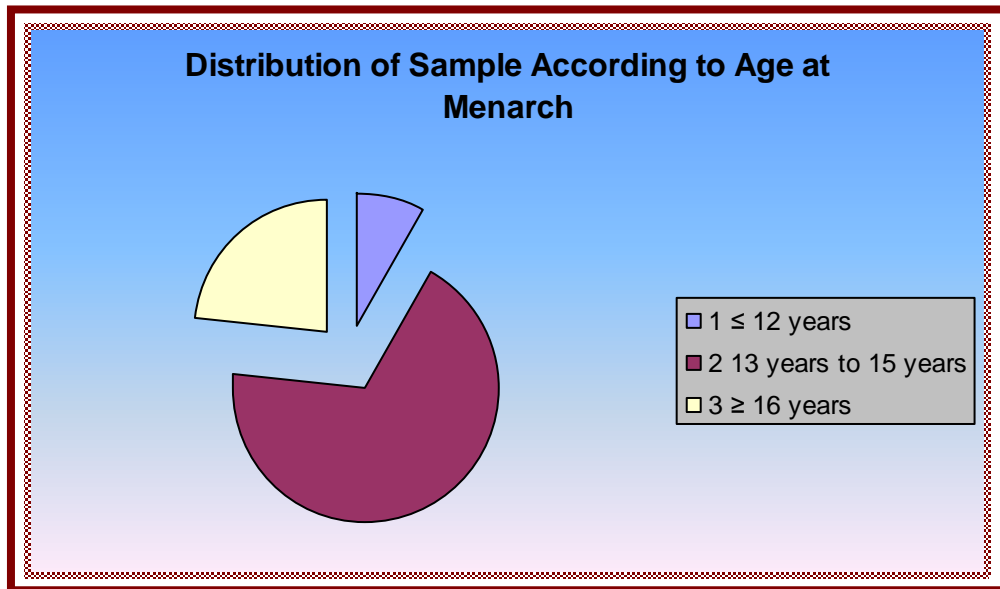
Table 15

DISTRIBUTION OF SAMPLE ACCORDING TO AGE AT MENARCHE

Sr. No.	Age At Menarche	N	Percentage
1	≤ 12 years	025	08%
2	13 years to 15 years	205	68%
3	≥ 16 years	070	24%

When it was asked that at what age they started menstruating, the reply was ranging form 12 years to 19 years. For the sake of proper presentation the respondents were distributed according to their age at menarche. Most of the respondents had their menstruation at the age of 13 to 15 years.

Figure 19
AGE AT MENARCHE WISE SAMPLE DEPICTION



4.1.13 Number of Pregnancies-wise distribution

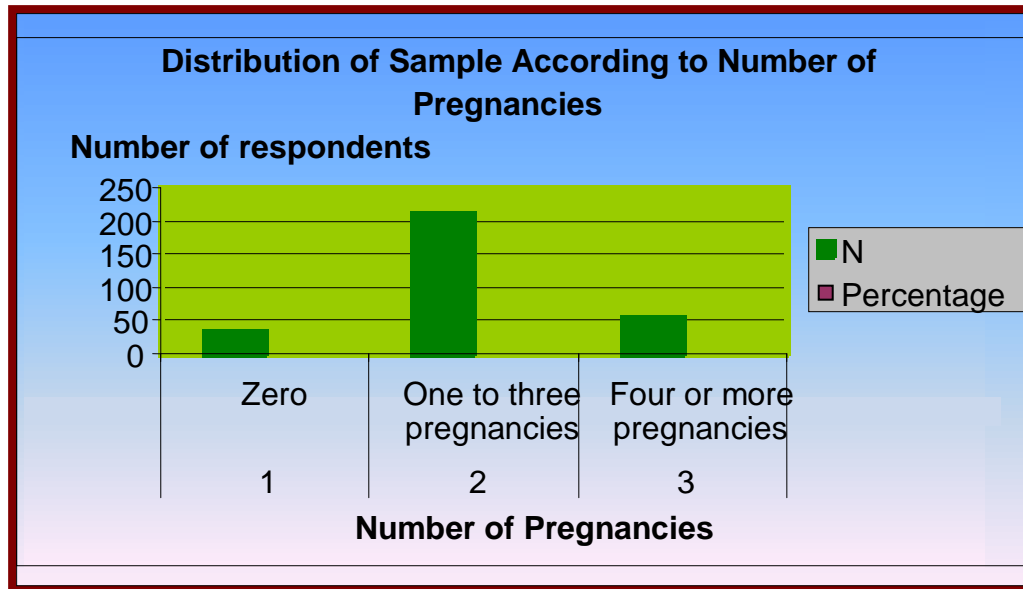
Table 16
DISTRIBUTION OF SAMPLE ACCORDING TO NUMBER OF PREGNANCIES

Sr. No.	Number Of Pregnancies	N	Percentage
1	Zero	034	11%
2	One to three pregnancies	211	70%
3	Four or more pregnancies	055	19%

The table 16 shows the distribution of sample according to the number of pregnancies they had. About eleven percent was those who never had any pregnancy. Only six percent of the respondents were found to have undergone five to six pregnancies. Majority were with one or two pregnancies. When the female body has to undergo more number of pregnancies, she might have to face more problems during menopause and so this aspect was also considered as one of the variable.

Figure 20

NUMBER OF PREGNANCIES WISE SAMPLE DEPICTION



4.1.14 Age at First Pregnancy-wise distribution

Table 17

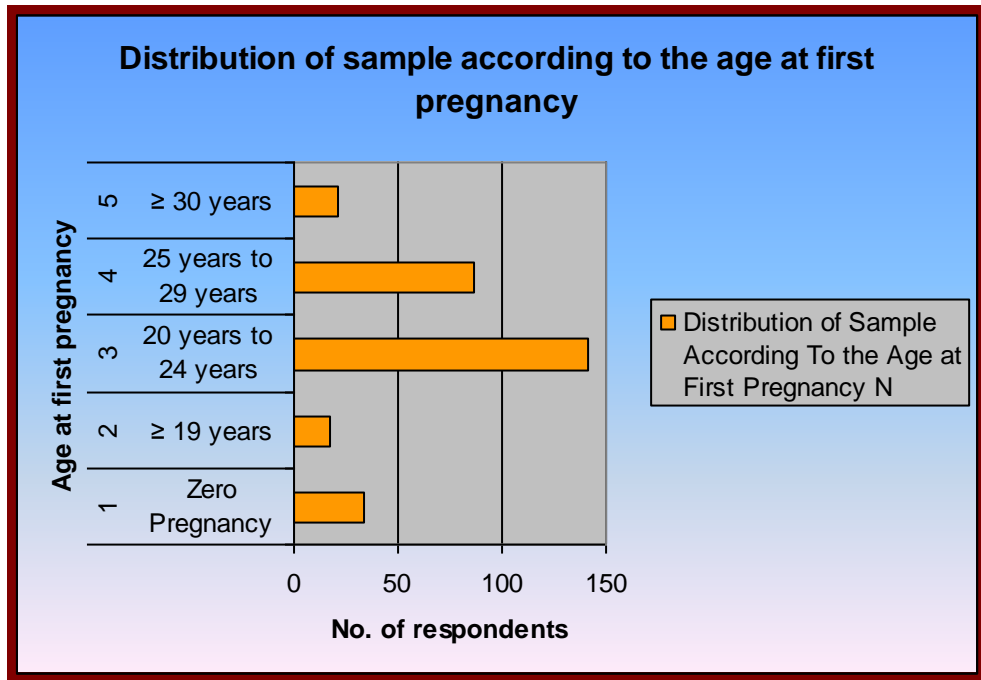
DISTRIBUTION OF SAMPLE ACCORDING TO THE AGE AT FIRST PREGNANCY

Sr. No.	Age at First Pregnancy	N	Percentage
1	Zero Pregnancy	034	11%
2	≥ 19 years	017	06%
3	20 years to 24 years	141	47%
4	25 years to 29 years	087	29%
5	≥ 30 years	021	07%

The table 17 shows the distribution of the respondents according to their age at first pregnancy. It is said that if the pregnancy is at proper age then there are fewer problems at the latter age. It was found that nearly fifty percent of the respondents had their first pregnancy at the age of 20 years to 24 years. There were few respondents who had their first pregnancy as early as before 19 years of age and few had it as late as after 30 years of age. This might also affect the problems faced during menopause and so this aspect was also considered as on of the variable.

Figure 21

AGE AT FIRST PREGNANCY WISE SAMPLE DEPICTION



4.1.15 Place of Delivery-wise distribution

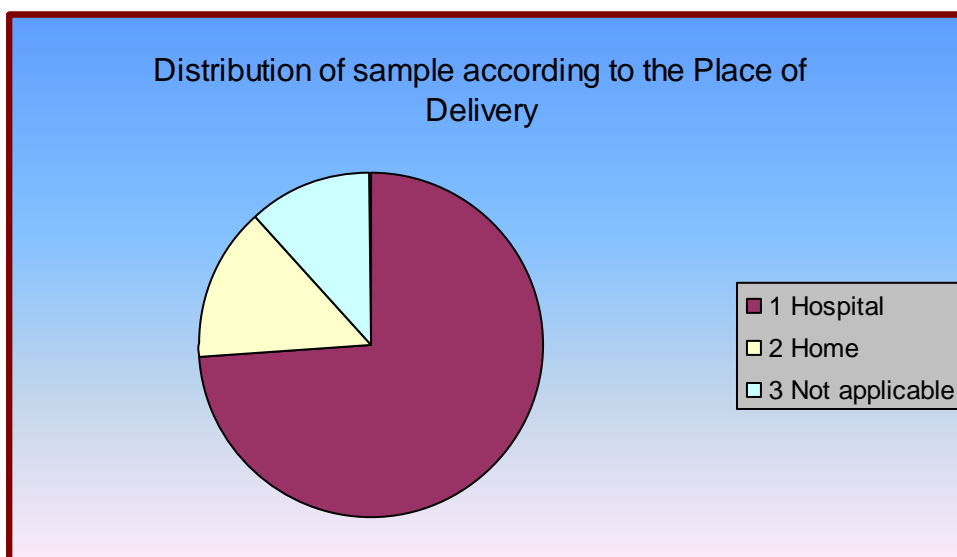
Table 18

DISTRIBUTION OF SAMPLE ACCORDING TO THE PLACE OF DELIVERY

Sr. No.	Place of Delivery	N	Percentage
1	Hospital	221	73%
2	Home	044	15%
3	Not applicable	035	12%

Most of the deliveries were conducted at the hospital under proper medical observation. But still few respondents had their deliveries at the villages, where no hospitals were around. And in such cases ANM's or Dais had assisted the delivery procedure. The cases were also found where no such help was taken and delivery was assisted by the untrained ladies from the family.

Figure 22
PLACE OF DELIVERY WISE SAMPLE DEPICTION



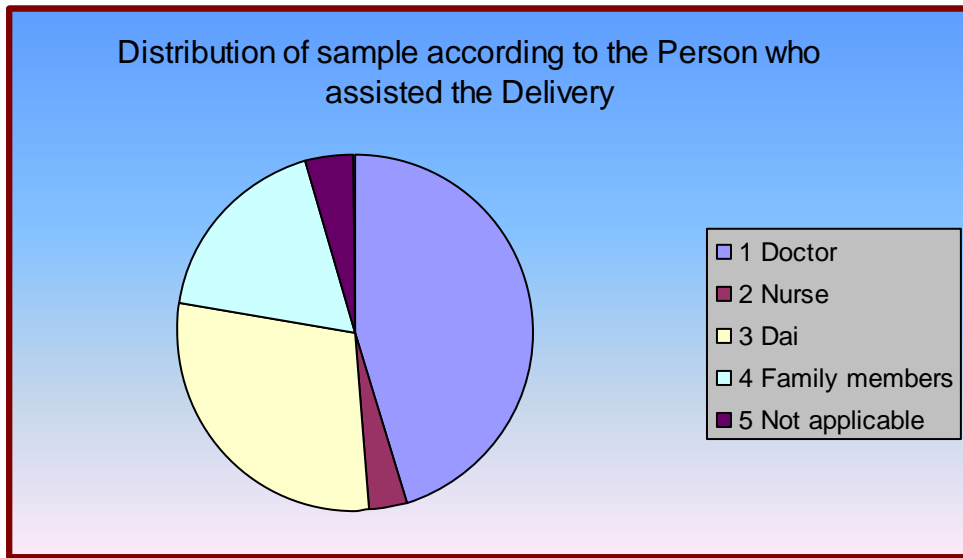
4.1.16 Assistance during delivery-wise distribution

Table 19
DISTRIBUTION OF SAMPLE ACCORDING TO THE PERSON WHO ASSISTED THE DELIVERY

Sr. No.	Person who assisted the Delivery	N	Percentage
1	Doctor	219	73%
2	Nurse	017	06%
3	Dai	141	47%
4	Family members	087	29%
5	Not applicable	021	07%

Most of the deliveries were conducted at the hospital under proper medical observations. But still few respondents had their deliveries at the villages, where no hospitals are around. And in such cases ANM's or Dais had assisted the delivery procedure. The cases were also found where no such help was taken and delivery was assisted by the untrained ladies from the family.

Figure 23
DELIVERY ASSISTANCE WISE SAMPLE DEPICTION



4.1.17 Mishaps during delivery-wise distribution

Table 20
DISTRIBUTION OF SAMPLE ACCORDING TO THE NUMBER OF
ABORTIONS, MISCARRIAGES AND STILL BIRTHS

Sr. No.	Frequency	Abortions		Miscarriages		Still Births	
		N	%	N	%	N	%
1	Once	031	10%	042	14%	011	04%
2	Twice	014	05%	008	03%	--	--
3	Thrice	003	01%	003	01%	--	--

The respondents were asked about the mishaps with regards to the child birth. It was found that around one tenth of them had undergone abortion once and around fourteen percent had miscarriage. The researcher also came across some females who had either undergone abortions or had miscarriage thrice during their reproductive period. About four percent of the respondents were found to have passed the agony of still births. In all, thirty seven percent of the respondents had some kind of mishap during pregnancy or delivery.

4.1.18 Complications during Pregnancy-wise distribution

Table 21

DISTRIBUTION OF SAMPLE ACCORDING TO COMPLICATIONS DURING PREGNANCY

Sr. No.	Complications during Pregnancy	N	%
1	Complications to some extent	060	20%
2	No Complications	204	68%
3	Not Applicable	036	12%

Majority of the respondents had no complications during pregnancy or during delivery. But few had complained of excess bleeding and so they were advised to take complete bed rest during pregnancy. Some of them had some complications at the time of delivery and so they had to undergo caesarian. The researcher found that complications during pregnancy or during the reproductive age results in the increase in the degree and the intensity of the problems faced during the menopause or post menopause.

4.1.19 Health Status-wise distribution

Table 22

DISTRIBUTION OF SAMPLE ACCORDING TO THEIR HEALTH STATUS

Sr. No.	Health Status	N	%
1	Good	234	78%
2	Average	054	18%
3	Poor	012	04%

When the respondents were asked how they rated their own health status, majority of them stated that they have good health status since childhood. Few had some problems which started after deliveries and they rated their own health as average. Some respondents were such who had problems since childhood and had continued even after child birth or rather increased recently during menopause. They rated themselves as to having poor health status.

4.1.20 Age at Menopause-wise distribution

Table 23

DISTRIBUTION OF SAMPLE ACCORDING TO THE AGE AT MENOPAUSE

Sr. No.	Age at Menopause	N	Percentage
1	≤ 39 years	019	06%
2	40 years to 44 years	059	20%
3	45 years to 49 years	069	23%
4	≥ 50 years	018	06%
5	Not applicable	135	45%

When the respondents were asked about the age at which they had their menopause, few had it either very late or very early. But majority of the respondents had it between age forty and forty-nine. From among the respondents, fifty percent still had their regular menstrual periods. The age of menopause, depends on many factors which include age at menarche, health status of the women, work load etc. Also few other like smoking, alcohol intake etc. do affect, but they are not significant in Indian culture, especially in the city of Rajkot.

4.1.21 Type of Menopause-wise distribution

Table 24

DISTRIBUTION OF SAMPLE ACCORDING TO THE TYPE OF MENOPAUSE

Sr. No.	Type of Menopause	N	%
1	Natural Menopause	139	46%
2	Surgical Menopause	026	09%
3	Not Applicable	135	45%

The respondents were distributed according to the type of menopause, whether it was natural or surgical. The menopause occurring naturally was found to be in most of the respondents. There were very few respondents who had some problem or the other, because of which they had to remove their

uterus and ovaries. This instantly made their body to enter menopause. But they rated the problems due to menopause to be less agonizing than those which they were already suffering from.

4.1.22 Weight Gain

Table 25

DISTRIBUTION OF SAMPLE ACCORDING TO THE WEIGHT GAIN AS COMPARED WITH THE IDEAL WEIGHT

Age Range in years	Height Range in cms.	Ideal Weight in kgs.	Mean Weight in kgs.	Weight Difference
38 to 42	125 – 140	42	43.3	+ 01.3
	141 – 155	47.3	55.1	+ 06.8
	156 – 170	55.7	63.7	+ 08.0
	171 – 185	69.4	73.8	+ 04.4
43 to 47	125 – 140	43.8	49.2	+ 05.4
	141 – 155	50.0	61.3	+ 11.3
	156 – 170	57.9	66.8	+ 08.9
	171 – 185	72.3	77.1	+ 04.8
48 to 52	125 – 140	43.9	45.0	+ 01.1
	141 – 155	51.2	64.0	+ 12.8
	156 – 170	58.0	65.7	+ 07.7
	171 – 185	72.5	80.1	+ 07.6
53 to 58	125 – 140	45.2	45.9	+ 00.7
	141 – 155	53.1	59.2	+ 06.1
	156 – 170	61.5	70.7	+ 09.2
	171 – 185	74.2	77.9	+ 03.7

The table 25 shows the height-weight relation in correspondence with age. For the purpose the respondents were asked to state their height and weight. The obtained figures were listed. For the reference the standard height for weight according to various age groups was referred. The obtained height and corresponding weights were put in the standard category

according to the age. The resultant figures were stated and the mean was calculated which was put in the tabular form.

After 40 years of age one cannot think of slim and trim figure. Advancing age does deposit some amount of fat at various points. The work and food habits add to the problem. Here in this study, one can see that majority of the respondents had put on some amount of weight. The mean weight was more as compared to the ideal weight table.

The difference between the ideal weights according to the height range was calculated in correspondence with the age. The results showed that in late 40's and early 50's those with the average height of 148 cms had put on more weight. The ideal-mean difference showed that there was an addition of 11 to 13 kgs of weight when compared with the standard table. Whereas for the respondents in early 40's and late 50's the difference gain of 8 to 9 kgs was seen.

Therefore, it was seen that with the increasing age no particular trend in weight gain was seen as such.

4.1.23 Weight Difference

Table 26

DISTRIBUTION OF SAMPLE ACCORDING TO THE WEIGHT DIFFERENCE

Sr. No.	Difference of Weight [present weight and weight before five years]	N	Percentage
1	Zero Difference	056	19%
2	(+)1 to (+)5 Kgs.	127	42%
3	(+)6 to (+)10 Kgs.	060	20%
4	(+) 11 to (+) 15 kgs.	022	07%
5	(-)1 to (-) 5 Kgs	028	09%
6	(-) 6 to (-) 10 Kgs.	007	02%

The respondents were asked to mention their present weight as well as the weight they possessed five years back. And the resultant difference between the two is presented in the table 26. Those who lost weight were considered as negative gain and those who put on were positively denoted.

The difference showed that only eleven percent of the respondents had a weight loss, where as nearly seventy percent had a weight gain. Only one fifth of the total number of females was found to have a steady weight with no increased weight to look after. They were those who took pains and care to look after it.

4.1.24 Liquid Intake

Table 27
DISTRIBUTION OF SAMPLE ACCORDING TO
THE DAILY LIQUID INTAKE

Sr. No.	Liquid intake	N	Percentage
1	05 to 09 glasses	110	37%
2	10 to 14 glasses	140	46%
3	15 to 20 glasses	050	17%

During the menopausal period it is very important to take ample quantity of water or liquid for that matter, as majority of urinary problems can be tackled with it. For that matter the question was included in the questionnaire for the same. When the respondents were asked about the amount of liquid intake, they have during the day in terms of number of glasses approximately, majority of the respondents used to take around 10 to 14 glasses of liquid.

4.1.25 Food Score

Table 28
DISTRIBUTION OF SAMPLE ACCORDING TO THE FOOD SCORE

Sr. No.	Food Score	N	%
1	≤ 19	036	12%
2	20 to 29	231	77%
3	30 to 39	033	11%
4	≥ 40	--	--

For the purpose of food score, various categories of food were stated and the respondents were asked to tick mark in the corresponding column of frequency of the intake of the particular food stuff. The five point scale was used to get the food intake score. Those food stuff frequently taken were scored more (i.e. 5) and those taken very rarely were scored less (i.e. 1). The obtained food score for all the respondents was tabulated in the form of table 28. It was seen that the majority of the respondents fall in the category of 20 to 29 score. Where as not a single respondent was found in the category of > 40 score.

4.1.26 Track of Weight

Table 29

**DISTRIBUTION OF SAMPLE ACCORDING TO THE TRACK OF WEIGHT
GAIN OR LOSS**

Sr. No.	Keeping track of weight (gain or loss)	N	%
1	Yes	068	23%
2	No	232	77%

The above table shows that majority of the respondents did not keep any track of their weight gain or loss, where as few respondents said that they do observe the gain or loss in their weight regularly; as they feel that they are already overweight.

4.1.27 Appetite

Table 30

DISTRIBUTION OF SAMPLE ACCORDING TO THE APPETITE

Sr. No	Statement	Positive Response (%)
1	Is there any change in your appetite lately?	212 (70.67)
2	Do you have breakfast in the morning?	069 (33.10)

Majority of the respondents do experience change in their appetite. They reported that it does happen now-a-days that they feel full without

having eaten anything, where as for others it was opposite i.e. they felt hungry even after having full meal. This could be due to the advancing age and the transitional period which they are now in. One fourth of the respondents used to have breakfast since years and they have continued doing the same.

4.1.28 Change in Personality

Table 31
DISTRIBUTION OF SAMPLE ACCORDING TO THE CHANGE IN
PERSONALITY

Sr. No	Statement	Positive Response (%)
1	Have you noticed any change in your own personality?	093 (31.00)
2	Has anyone in the family or outside pinpointed any changes in your personality?	171 (57.00)
3	Is there any change in relationship with your husband?	202 (67.33)
4	Do you experience any different feeling towards your sex life?	209 (69.67)

More than fifty percent of the respondent had some change in their personality but only half of them experienced it themselves. When asked about the relationship with the husband, nearly seventy percent of respondents said that they do feel the change in the relationship. This might be due to the biological changes like hot flush or vaginal dryness.

4.1.29 Feelings due to Menopause

Although at this age when so many bodily changes are occurring it might happen that one gets tired quite often but still more than fifty percent of the respondents reported that they do not feel any change in their capacity to work. This might be because of the emotional ties and the pressures of

responsibilities on the homemaker, that compile her to neglect her own pain and make here family at ease. They do realize that now they are getting old and that is one of the reasons to overlook their own pain. Emotional security is very important security is very important for any person, at any stage of the life. But these women in the transitional period of change, nearly three fourth of them did feel insecure at this stage of their life. This might be as children are growing up and have indulged in their own lifestyle with their own separate identities. Mother at this stage is becoming an indulging factor instead of a world as it used to be for the small kids.

TABLE 32
DISTRIBUTION OF SAMPLE ACCORDING TO THE FEELINGS DUE TO
MENOPAUSE

Sr. No	Statement	Positive Response (%)
1	Do you feel emotionally insecure?	224 (74.67)
2	Do you feel that your capacity to work has reduced?	131 (43.67)
3	Do you feel that you are getting old?	194 (64.67)

4.1.30 Effect of Menopause on life

TABLE 33
DISTRIBUTION OF SAMPLE ACCORDING TO THE EFFECT OF
MENOPAUSE

Sr. No	Do you experience any change in	Positive Response (%)
1	Your personal life	180 (60.00)
2	Your familial life	199 (66.34)
3	Your social life	209 (69.67)
4	Your professional life	219 (73.00)

As the table 33 shows, it was found that most of the respondents experienced some kind of change in all the aspect of their life. May it be

personal or familial, social or professional respondents felt that their life have changed due to menopause. This might be due to the physiological symptoms like spotting, excessive bleeding or irritation of genitals or might be as simple as disturbed bowel or continued abdominal pain or backache. Due to such reasons they might not be able to concentrate on their work and this was more acute for those who were working outside homes.

4.1.31 Medical consultation

Table 34
DISTRIBUTION OF SAMPLE ACCORDING TO THE MEDICAL
CONSULTATION

Sr. No	Did you consult doctor when there as	Positive Response
1	Abnormal vaginal discharge	218 (72.67)
2	Spotting between the periods	230 (76.67)
3	Periods that last too long	235 (78.33)
4	Excessive or too frequent periods	101 (33.67)
5	Unusual irritation or ulceration of the genitals and urinary disturb	215 (71.66)
6	Bowel disturbance	237 (79.00)
7	Abdominal pain	218 (72.67)
8	Distention or swelling	207 (69.00)
9	Continued backache	163 (54.33)

The table 34 shows that for excessive or too frequent periods, three fourth of the respondents said they do not consult doctor. But for all the other symptoms majority of the respondent do consult a doctor. This might be because such symptoms were proving to be obstacles in fulfilling their daily responsibilities. The respondents were more worried about the inconvenience that their family members might face rather than thinking about their own physical or mental health.

4.2 Awareness

The awareness of the respondents with regards to the aspects related to menopause was tested with the help of specially framed, pre-tested awareness scale. The result obtained is presented here.

4.2.1 Intensity Indicises of Awareness Scale

Table 35

DISTRIBUTION OF SAMPLE ACCORDING TO THE INTENSITY INDICISES OF AWARENESS SCALE

Sr. No	Statement of awareness scale	Not aware		Aware		Misconception	
		N	%	N	%	N	%
1	Menopause is a natural and unavoidable truth of life.	009	03.00	007	02.33	284	94.67
2	Menopause is certified only when you don't have menses for 12 consecutive months.	042	14.00	062	20.67	196	65.33
3	Menopause means end of your monthly period (menses).	030	10.00	051	17.00	219	73.00
4	At menopause ovaries begin to fail and the production of estrogen falls.	118	39.33	063	21.00	119	39.67
5	You can have menopausal symptoms even while menstruating regularly.	069	23.00	106	35.00	125	41.67
6	Menopause generally occurs at the age of late 40's or early 50's	031	10.33	015	05.00	254	84.67
7	Menopause can occur early or late due to various reasons	035	11.67	021	07.00	244	81.33
8	Some women may not experience any of the menopausal symptoms	053	17.67	031	10.33	216	72.00
9	After hysterectomy (removal of uterus and ovaries both) body right away enters menopause	116	38.67	048	16.00	136	45.33
10	Women may not have menopause early if only uterus is removed	114	48.00	107	35.67	049	16.33
11	Early or late menopause may depend on hereditary factor	049	16.33	035	11.67	216	72.00

Table contd...

Table contd...

12	Most of the menopause symptoms are caused due to estrogen deficiency	113	37.67	51	7.00	136	45.33
13	Kidney produce estrogen	142	47.33	062	20.67	096	32.00
14	In many women at the time of menopause menstruation occurs at irregular intervals becomes prolonged and the flow gradually ceases.	023	07.67	011	03.67	266	88.67
15	Obesity mild to moderate hypertension and hirsutism may occur during this period	056	19.33	020	06.67	222	74.00
16	Many women have no symptoms or just mild symptoms at the time of menopause	043	14.33	021	07.00	236	78.67
17	Hormone therapy adds to the problems during such time	121	40.33	099	33.00	080	26.67
18	Menopause causes hormonal changes	083	27.67	011	03.67	206	68.67
19	Menopause is the consequence of stoppage of estrogen production by ovaries	113	37.67	039	13.00	148	49.33
20	Menopause means permanent stoppage of menstrual bleeding	043	14.33	026	08.67	231	77.00
21	After age 35 the ovarian function begins to increase gradually	126	42.00	049	16.33	125	41.67
22	Estrogens weakens the body contours and deteriorate the skeleton	133	44.33	058	19.33	109	36.34
23	When ovaries decline in functioning the bone minerals start depleting and risk of osteoporosis increases	103	34.33	064	21.33	133	44.34
24	The risk of heart attack decreases after menopause	123	41.00	059	19.67	118	39.33
25	After menopause heart diseases is the major reason for female mortality	114	38.00	087	29.00	099	33.00
26	Osteoporosis occurs due to calcium deficiency and lack of exercise	085	28.34	031	10.33	184	61.33
27	Change in lifestyle is one of the best remedies to overcome the symptoms	041	13.67	026	08.66	233	77.67
28	Some women have bladder control problem after they stop having their periods	067	22.33	061	20.33	172	57.34

Table Contd...

Table Contd...

29	I worry about what will happen when I reach menopause	076	25.33	103	34.33	121	40.33
30	I look forward to the life after menopause	072	24.00	029	09.67	199	66.33
31	I have heard about hormone replacement therapy(HRT)	119	39.67	093	31.00	088	29.33
32	No side effect are caused by the HR therapy	157	52.33	044	14.67	099	33.00
33	Very few risks are associated with the HR therapy	144	48.00	065	21.67	091	30.33
34	Tight and synthetic clothes are good during such period	102	34.00	100	33.33	098	32.67
35	Menopause is a collective experience	081	27.00	134	44.67	085	28.33
36	There is no chance of having a child after menopause	053	17.67	016	05.33	231	77.00

There were in all 36 statements in the Awareness Scale. The respondents were asked to state whether they were aware of the fact or not. The responses obtained were tabulated in table 35. It was also found that the respondents had few misconceptions with regards to the practices followed and the concept of menopause itself. In case of only one statement i.e. - 'Women may not have menopause early if only uterus is removed', it was found that only one sixth of the respondents had any misconception. For majority of the statements more than fifty percent of the respondents had some misconception. Nearly 90% of women had some misconception regarding the age of menopause and the changes that occur in the female body. About 95% of respondents were not aware that the menopause is a natural and unavoidable process in female body.

This table also shows that nearly fifty percent of the respondents were unaware about the HRT. Most of the respondents had misconception about the after effects of menopause. The researcher found that the respondents attributed all such problems in later life to the advancing age. They said it was because they were growing old and never knew that any treatment was done for the menopausal problems. This might happen in their life latter. Osteoporosis and bladder control were few which carry misconception. Also

the problems during menopause such as obesity and hypertension were attributed to the changing lifestyle and increasing responsibilities.

4.2.2 Awareness Score

Majority of the respondent scored moderately on the Awareness Scale. Very few respondents could score high on the awareness scale. This might be due to their higher education or profession. But it was found that those scoring high had either them or some one in their family had undergone surgical menopause. The low scores were the house wives with low level of education. It was generally found that this was the aspects of women's life which they do not discuss openly. The doubts in their minds are not cleared until and unless some one nearer have even symptoms and consulted doctor only in course of understanding & undergoing the treatment their misconceptions and doubts are cleared.

Table 36

DISTRIBUTION OF SAMPLE ACCORDING TO THE AWARENESS SCORE

Sr. No	Score categories	Score	
		No	%
1	Low scores	039	13.00
2	Moderate scores	254	84.67
3	High scores	007	02.33

4.3 Problems

The problems were categorized under eight headings. The respondents were asked to state the intensity for the problems faced by them under various categories. The categories were:

Problem No.-	Complain
1	Urinary Complains
2	Central Nervous System (CNS)
3	Menstruation
4	Sexual behavior

- 5 Muskulo Skeletal System
- 6 Mood disorders
- 7 Cardio Vascular System (CVS)
- 8 General Symptoms

Each respondent was scored for each category of the problems faced. Thus, obtained score was tabulated and presented here.

The scores presented in the tables here for each problem category denoted various levels. They were:

Levels	Scores
1.	faced no problem
2.	faced few problems
3.	faced problems to a moderate extent
4.	faced many of the problems
5.	faced majority of the problems

4.3.1 Symptoms related to urinary complains

One of every three women in world does experience incontinence at some point of their life. When the respondents were associated on five point scale with regard to the problems regarding urinary complains it was found that nearly fifty percent of the respondents were suffering from few symptoms. Only five percent of the respondents were having many problems listed under this category. No respondent was found to score high in this category. It could be said that few female do suffer from urinary complains due to menopause but no one was found with sever symptoms. It might be that the respondents might be suffering but are not ready to share their problems.

Table 37
DISTRIBUTION OF SAMPLE ACCORDING TO THE SYMPTOMS RELATED
TO URINARY COMPLAINS

Levels	Symptom Scores	No	%
1	8	90	30
2	9-14	151	50.33
3	15-20	42	14
4	21-25	17	5.67
5	26-40	00	0.0

4.3.2 Symptoms related to Central Nervous System [CNS]

Table 38
DISTRIBUTION OF SAMPLE ACCORDING TO THE SYMPTOMS RELATED
TO CENTRAL NERVOUS SYSTEM [CNS]

Levels	Symptom Scores	No	%
1	8	35	11.67
2	9-16	148	49.33
3	17-24	97	32.33
4	25-32	17	05.67
5	33-40	3	01.00

Table 38 shows the score of symptoms related to the Central Nervous System nearly fifty percent of the respondents were found to suffer few problems listed under this category. Only one percent of the respondents were found to face majority of these problems. From among the problems in this category headache, insomnia and forgetfulness were listed high.

4.3.3 Symptoms related to Menstruation

Table 39

DISTRIBUTION OF SAMPLE ACCORDING TO THE SYMPTOMS RELATED TO MENSTRUATION

Levels	Symptom Scores	No	%
1	5	96	32.00
2	6-10	104	34.67
3	11-15	80	26.67
4	16-25	14	04.67
5	21-25	6	02.00

The trend for all the problems symptoms score was same in all the eight categories. About sixty eight percent of the respondents did face the problems with regards to menstruation but among them around two percent suffered most of the symptoms. Majority of the respondents faced few problems, especially due to heavy bleeding they felt tired very early & were always less alert.

4.3.4 Symptoms related to Sexual Behavior

Table 40

DISTRIBUTION OF SAMPLE ACCORDING TO THE SYMPTOMS RELATED TO SEXUAL BEHAVIOR

Levels	Symptom Scores	No	%
1	5	981	32.6
2	6-10	110	36.67
3	11-15	44	14.67
4	16-20	00	00.00
5	21-25	06	03.80

For the problems related to sexual behavior half of few problems were because of change in libido and dryness in vagina. This caused discomfort while intercourse also in all the respondents. The respondents did feel that

there is a change in their sexual behavior recently. The other half was such who had either no problem at all or were not ready to reveal.

4.3.5 Symptoms related to Muskulo Skeletal System

Table 41

DISTRIBUTION OF SAMPLE ACCORDING TO THE SYMPTOMS RELATED TO MUSKULO SKELETAL SYSTEM

Levels	Symptom Scores	No	%
1	8	43	14.33
2	9-16	141	47.00
3	17-24	88	29.33
4	25-32	23	07.67
5	33-40	05	01.67

Regarding the symptoms related to Muskulo Skeletal System were asked, about half of the respondents were facing few problems from among those listed under this category. Backache and joint pains were the two suffered by majority of the respondents to some extent. Weight gain and brittle nails were the next in the frequency ranking.

4.3.6 Symptoms related to Mood Disorders

Mood disorders included symptoms like anxiety, depression, mood swing, lethargy etc. which were more disturbing according to the majority of the respondents. Only few respondents were such who did not suffer from any kind of mood disorders.

Table 42
DISTRIBUTION OF SAMPLE ACCORDING TO THE SYMPTOMS RELATED
TO MOOD DISORDERS

Levels	Symptom Score	N	%
1	8	35	11.67
2	9-16	145	48.33
3	17-24	83	27.67
4	25-32	27	9.00
5	32-40	10	3.33

4.3.7 Symptoms related to Cardio Vascular System [CVS]

Table 43
DISTRIBUTION OF SAMPLE ACCORDING TO THE SYMPTOMS RELATED
TO CARDIO VASCULAR SYSTEM [CVS]

Levels	Symptom Score	N	%
1	6	075	25.00
2	7-12	174	58.00
3	13-18	032	10.67
4	19-24	014	04.67
5	25-30	000	00.00

As we know that there is more percentage of female heart attack incidences as compared to the males. For male the reason might be the work pressures but menopause was considered to be as the major reason for the same. Hypertension and bouts of rapid heart beats topped the list of the symptoms related to the cardio-vascular system.

4.3.8 General Symptoms

The general symptoms like weakness, fatigue, stress, dizziness, allergy, constipation etc. were listed in this section. Fifty percent of the respondents had faced some or other problems in this category. No respondent was found to experience any of these symptoms to the severe extent.

Table 44
DISTRIBUTION OF SAMPLE ACCORDING TO THE GENERAL SYMPTOMS

Levels	Symptom score	N	%
1	13	26	8.67
2	14-26	161	53.67
3	27-39	99	33.00
4	40-52	14	4.67
5	53-65	00	0.00

4.4 Hypothesis Testing

As the title of this study suggest that the researcher aimed at gathering the data related to the awareness and the problems faced by women with regards to the menopause, here for further statistical analysis only those respondents were included who were in their menopausal stage. These 135 respondents out of 300 respondents with ongoing menopause were separated out and included for hypothesis testing. The hypothesis framed during the initial stage of the study, were tested by putting them to the statistical tests. As the study comprised of many variables as well as many groups among each variable, the ANOVA technique was used. The results obtained are presented further.

4.4.1 Age and Awareness Score

Table 45
ANALYSIS OF THE AWARENESS SCORE AND THE AGE OF THE RESPONDENTS

	Sum of Squares	df	Mean Square	F _{Cal}	Sig.	F _{tab}
Between Groups	1407.86	11	127.99	3.07	0.001	2.45
Within Groups	5131.08	123	41.72			
Total	6538.93	134				

When the hypothesis stating the relationship between the awareness score and the age of respondent was tested, it was found that the calculated F value was 3.07. As $F_{cal} > F_{tab}$, null hypothesis was rejected at 5 % level of significance.

4.4.2 Education and Awareness Score

Table 46

ANALYSIS OF THE AWARENESS SCORE AND THE EDUCATION OF THE RESPONDENTS

	Sum of Squares	df	Mean Square	F_{cal}	Sig.	F_{tab}
Between Groups	1022.67	4	255.67	6.03	0.000	5.66
Within Groups	5516.27	130	42.43			
Total	6538.93	134				

When the hypothesis stating the relationship between the awareness score and the education of respondent was tested, it was found that the calculated F value was 6.03. As, $F_{cal} > F_{tab}$, null hypothesis was rejected at 5 % level of significance.

4.4.3 Marital Status and Awareness Score

Table 47

ANALYSIS OF THE AWARENESS SCORE AND THE MARITAL STATUS OF THE RESPONDENTS

	Sum of Squares	df	Mean Square	F_{cal}	Sig.	F_{tab}
Between Groups	525.55	2	262.77	5.77	0.004	19.49
Within Groups	6013.39	132	45.56			
Total	6538.93	134				

When the hypothesis stating the relationship between the awareness score and the marital status of respondent was tested, it was found that the calculated F value was 5.77. So, $F_{cal} < F_{tab}$, null hypothesis was accepted at 5% level of significance.

4.4.4 Occupation and Awareness Score

Table 48

ANALYSIS OF THE AWARENESS SCORE AND THE OCCUPATION OF THE RESPONDENTS

	Sum of Squares	df	Mean Square	F _{cal}	Sig.	F _{tab}
Between Groups	600.14	2	300.07	6.67	0.002	19.49
Within Groups	5938.79	132	44.99			
Total	6538.93	134				

When the hypothesis stating the relationship between the awareness score and the occupation of respondent was tested, it was found that the calculated F value was 6.67. So, $F_{cal} < F_{tab}$, then this hypothesis by F test is accepted at 5 % level of significance.

4.4.5 Income and Awareness Score

Table 49

ANALYSIS OF THE AWARENESS SCORE AND THE INCOME OF THE RESPONDENTS

	Sum of Squares	df	Mean Square	F _{cal}	Sig.	F _{tab}
Between Groups	730.21	5	146.04	3.24	0.009	4.40
Within Groups	5808.73	129	45.03			
Total	6538.93	134				

When the hypothesis stating the relationship between the awareness score and the income of respondent was tested, it was found that the calculated F value was 3.24. As, $F_{cal} < F_{tab}$, null hypothesis was accepted at 5 % level of significance.

4.4.6 Age at Menarche and Awareness Score

Table 50

ANALYSIS OF THE AWARENESS SCORE AND THE AGE AT MENARCHE OF THE RESPONDENTS

	Sum of Squares	df	Mean Square	F _{cal}	Sig.	F _{tab}
Between Groups	831.88	7	118.84	2.65	0.014	3.28
Within Groups	5707.06	127	44.94			
Total	6538.93	134				

When the hypothesis stating the relationship between the awareness score and the age at menarche of respondent was tested, it was found that the calculated F value was 2.65. As, $F_{cal} < F_{tab}$, null hypothesis was accepted at 5% level of significance.

4.4.7 Age at First Pregnancy and Awareness Score

Table 51

ANALYSIS OF THE AWARENESS SCORE AND THE AGE AT FIRST PREGNANCY OF THE RESPONDENTS

	Sum of Squares	df	Mean Square	F _{cal}	Sig.	F _{tab}
Between Groups	2684.31	17	157.90	4.75	0.000	2.02
Within Groups	3854.29	116	33.23			
Total	6538.60	133				

When the hypothesis stating the relationship between the awareness score and the age at first pregnancy of respondent was tested, it was found that the calculated F value was 4.75. As, $F_{cal} > F_{tab}$, null hypothesis was rejected at 5 % level of significance.

4.4.8 Number of Pregnancies and Awareness Score

Table 52

ANALYSIS OF THE AWARENESS SCORE AND THE NUMBER OF PREGNANCIES OF THE RESPONDENTS

	Sum of Squares	df	Mean Square	F _{cal}	Sig.	F _{tab}
Between Groups	1446.22	5	289.24	7.33	0.000	4.40
Within Groups	5092.79	129	39.48			
Total	6538.93	134				

When the hypothesis stating the relationship between the awareness score and the number of pregnancies of respondent was tested, it was found that the calculated F value was 7.33. As, $F_{cal} > F_{tab}$, null hypothesis was accepted at 5 % level of significance.

4.4.9 Age and Problem Score

Table 53

ANALYSIS OF THE PROBLEM SCORE AND THE AGE OF THE RESPONDENTS

		Sum of Squares	df	Mean Square	F _{cal}	Sig.	F _{tab}
prob1	Between Groups	542.70	11	49.34	3.71	0.000	2.45
	Within Groups	1634.63	123	13.29			
	Total	2177.33	134				
prob2	Between Groups	1142.35	11	103.85	5.54	0.000	2.45
	Within Groups	2305.40	123	18.74			
	Total	3447.75	134				
prob3	Between Groups	504.13	11	45.83	4.85	0.000	2.45
	Within Groups	1161.76	123	9.45			
	Total	1665.88	134				
prob4	Between Groups	567.34	11	51.58	4.08	0.000	2.45
	Within Groups	1555.07	123	12.64			
	Total	2122.40	134				
prob5	Between Groups	1623.51	11	147.59	8.18	0.000	2.45
	Within Groups	2219.82	123	18.05			
	Total	3843.33	134				

Table contd...

Table contd...

prob6	Between Groups	1042.81	11	94.80	2.34*	0.012	2.45
	Within Groups	4984.94	123	40.53			
	Total	6027.75	134				
prob7	Between Groups	216.53	11	19.69	1.92*	0.043	2.45
	Within Groups	1260.40	123	10.25			
	Total	1476.93	134				
prob8	Between Groups	1568.69	11	142.61	2.53	0.007	2.45
	Within Groups	6943.46	123	56.45			
	Total	8512.15	134				
probscore	Between Groups	35644.97	11	3240.45	4.14	0.000	2.45
	Within Groups	96348.56	123	783.32			
	Total	131993.5	134				

When the hypothesis stating the relationship between the problem score and age of the respondent was tested, it was found that the calculated F value was 4.14. As, $F_{cal} > F_{tab}$, the null hypothesis was rejected at 5 % level of significance. Here it was also found that the calculated value of F for the problems like mood disorder and cardio vascular system was less than tabular value. But it did not affect much on the overall problem score.

4.4.10 Education and Problem Score

Table 54

ANALYSIS OF THE PROBLEM SCORE AND THE EDUCATION OF THE RESPONDENTS

		Sum of Squares	df	Mean Square	F_{cal}	Sig.	F_{tab}
prob1	Between Groups	69.05	4	17.26	1.06	0.377	5.66
	Within Groups	2108.28	130	16.22			
	Total	2177.33	134				
prob2	Between Groups	230.84	4	57.71	2.33	0.059	5.66
	Within Groups	3216.91	130	24.75			
	Total	3447.75	134				
prob3	Between Groups	69.28	4	17.32	1.41	0.234	5.66
	Within Groups	1596.61	130	12.28			
	Total	1665.88	134				

Table contd...

Table contd...

prob4	Between Groups	18.50	4	4.63	0.29	0.887	5.66
	Within Groups	2103.90	130	16.18			
	Total	2122.40	134				
prob5	Between Groups	404.02	4	101.00	3.82	0.006	5.66
	Within Groups	3439.32	130	26.46			
	Total	3843.33	134				
prob6	Between Groups	344.37	4	86.09	1.97	0.103	5.66
	Within Groups	5683.38	130	43.72			
	Total	6027.75	134				
prob7	Between Groups	40.95	4	10.24	0.93	0.451	5.66
	Within Groups	1435.99	130	11.05			
	Total	1476.93	134				
prob8	Between Groups	929.15	4	232.29	3.98	0.004	5.66
	Within Groups	7583.00	130	58.33			
	Total	8512.15	134				
probscore	Between Groups	7182.11	4	1795.53	1.87	0.119	5.66
	Within Groups	124811.41	130	960.09			
	Total	131993.53	134				

When the hypothesis stating the relationship between the problem score and education of the respondent was tested, it was found that the calculated F value was 1.87. As, $F_{cal} < F_{tab}$, the null hypothesis was accepted at 5 % level of significance. Here no category of problem was found differing from the final score.

4.4.11 Marital Status and Problem Score

Table 55

ANALYSIS OF THE PROBLEM SCORE AND THE MARITAL STATUS OF THE RESPONDENTS

		Sum of Squares	df	Mean Square	F_{cal}	Sig.	F_{tab}
prob1	Between Groups	22.59	2	11.30	0.69	0.502	19.49
	Within Groups	2154.74	132	16.32			
	Total	2177.33	134				
prob2	Between Groups	114.88	2	57.44	2.28	0.107	19.49
	Within Groups	3332.87	132	25.25			
	Total	3447.75	134				

Table contd...

Table contd...

prob3	Between Groups	3.91	2	1.96	0.16	0.856	19.49
	Within Groups	1661.97	132	12.59			
	Total	1665.88	134				
prob4	Between Groups	124.56	2	62.28	4.12	0.018	19.49
	Within Groups	1997.84	132	15.14			
	Total	2122.40	134				
prob5	Between Groups	34.60	2	17.30	0.60	0.551	19.49
	Within Groups	3808.73	132	28.85			
	Total	3843.33	134				
prob6	Between Groups	111.08	2	55.54	1.24	0.293	19.49
	Within Groups	5916.67	132	44.82			
	Total	6027.75	134				
prob7	Between Groups	73.22	2	36.61	3.44	0.035	19.49
	Within Groups	1403.71	132	10.63			
	Total	1476.93	134				
prob8	Between Groups	156.21	2	78.11	1.23	0.295	19.49
	Within Groups	8355.94	132	63.30			
	Total	8512.15	134				
probscore	Between Groups	866.33	2	433.17	0.44	0.648	19.49
	Within Groups	131127.19	132	993.39			
	Total	131993.526	134				

When the hypothesis stating the relationship between problem score and marital status of the respondent was tested, it was found that the calculated F value was 0.44. As, $F_{cal} < F_{tab}$, the null hypothesis was accepted at 5 % level of significance. Here also all the problem categories had a F values far below the tabulated value.

4.4.12 Occupation and Problem Score

Table 56

ANALYSIS OF THE PROBLEM SCORE AND THE OCCUPATION OF THE RESPONDENTS

		Sum of Squares	df	Mean Square	F_{cal}	Sig.	F_{tab}
prob1	Between Groups	106.71	2	53.35	3.40	0.036	19.45
	Within Groups	2070.62	132	15.69			
	Total	2177.33	134				
prob2	Between Groups	178.90	2	89.45	3.61	0.030	19.45
	Within Groups	3268.85	132	24.76			
	Total	3447.75	134				

Table contd...

Table contd...

prob3	Between Groups	38.70	2	19.35	1.57	0.212	19.45
	Within Groups	1627.18	132	12.33			
	Total	1665.88	134				
prob4	Between Groups	135.74	2	67.87	4.51	0.013	19.45
	Within Groups	1986.66	132	15.05			
	Total	2122.40	134				
prob5	Between Groups	546.78	2	273.39	10.95	0.000	19.45
	Within Groups	3296.55	132	24.97			
	Total	3843.33	134				
prob6	Between Groups	510.09	2	255.05	6.10	0.003	19.45
	Within Groups	5517.66	132	41.80			
	Total	6027.75	134				
prob7	Between Groups	32.77	2	16.39	1.50	0.227	19.45
	Within Groups	1444.16	132	10.94			
	Total	1476.93	134				
prob8	Between Groups	1324.84	2	662.42	12.17	0.000	19.45
	Within Groups	7187.31	132	54.45			
	Total	8512.15	134				
probscore	Between Groups	16176.55	2	8088.27	9.22	0.000	19.45
	Within Groups	115816.98	132	877.40			
	Total	131993.53	134				

When the hypothesis stating the relationship between problem score and occupation of the respondent, it was found that the calculated F value was 9.22. As, $F_{cal} < F_{tab}$, the null hypothesis was accepted at 5 % level of significance. All the problem category wise scores showed that the hypothesis should be accepted.

4.4.13 Income and Problem Score

Table 57
ANALYSIS OF THE PROBLEM SCORE AND THE INCOME OF THE RESPONDENTS

		Sum of Squares	df	Mean Square	F _{cal}	Sig.	F _{tab}
prob1	Between Groups	253.89	5	50.78	3.41	0.006	4.40
	Within Groups	1923.44	129	14.91			
	Total	2177.33	134				
prob2	Between Groups	323.23	5	64.65	2.67	0.025	4.40
	Within Groups	3124.51	129	24.22			
	Total	3447.75	134				
prob3	Between Groups	133.37	5	26.67	2.25	0.054	4.40
	Within Groups	1532.51	129	11.88			
	Total	1665.88	134				
prob4	Between Groups	244.94	5	48.99	3.37	0.007	4.40
	Within Groups	1877.46	129	14.55			
	Total	2122.40	134				
prob5	Between Groups	302.00	5	60.40	2.20	0.058	4.40
	Within Groups	3541.34	129	27.45			
	Total	3843.33	134				
prob6	Between Groups	626.54	5	125.31	2.99	0.014	4.40
	Within Groups	5401.20	129	41.87			
	Total	6027.75	134				
prob7	Between Groups	150.49	5	30.10	2.93	0.015	4.40
	Within Groups	1326.44	129	10.28			
	Total	1476.93	134				
prob8	Between Groups	1198.61	5	239.72	4.23	0.001	4.40
	Within Groups	7313.54	129	56.69			
	Total	8512.15	134				
prob score	Between Groups	12560.65	5	2512.13	2.71	0.023	4.40
	Within Groups	119432.88	129	925.84			
	Total	131993.53	134				

When the hypothesis stating the relationship between the problem score and the income of the respondent, it was found that the calculated value of F was 2.71. As, $F_{cal} < F_{tab}$, the null hypothesis was accepted at 5 % level of significance.

4.4.14 Age at Menarche and Problem Score

Table 58
ANALYSIS OF THE PROBLEM SCORE AND
THE AGE AT MENARCHE OF THE RESPONDENTS

		Sum of Squares	df	Mean Square	F _{cal}	Sig.	F _{tab}
prob1	Between Groups	180.06	7	25.72	1.64	0.131	3.28
	Within Groups	1997.28	127	15.73			
	Total	2177.33	134				
prob2	Between Groups	361.17	7	51.60	2.12	0.046	3.28
	Within Groups	3086.58	127	24.30			
	Total	3447.75	134				
prob3	Between Groups	234.63	7	33.52	2.97	0.006	3.28
	Within Groups	1431.25	127	11.27			
	Total	1665.88	134				
prob4	Between Groups	258.57	7	36.94	2.52	0.019	3.28
	Within Groups	1863.84	127	14.68			
	Total	2122.40	134				
prob5	Between Groups	422.70	7	60.39	2.24	0.035	3.28
	Within Groups	3420.64	127	26.93			
	Total	3843.33	134				
prob6	Between Groups	1005.41	7	143.63	3.63*	0.001	3.28
	Within Groups	5022.34	127	39.55			
	Total	6027.75	134				
prob7	Between Groups	75.92	7	10.85	0.98	0.447	3.28
	Within Groups	1401.02	127	11.03			
	Total	1476.93	134				
prob8	Between Groups	662.04	7	94.58	1.53	0.163	3.28
	Within Groups	7850.11	127	61.81			
	Total	8512.15	134				
probs core	Between Groups	12666.22	7	1809.46	1.93	0.071	3.28
	Within Groups	119327.31	127	939.59			
	Total	131993.53	134				

When the null hypothesis stating the relationship between the problem score and age at menarche of the respondent, it was found that the calculated value of F was 1.93. As, $F_{cal} < F_{tab}$, the null hypothesis was accepted at 5 % level of significance. The Calculated F value of only one category i.e. mood disorder was found to be greater than the tabulated value.

4.4.15 Age at First Pregnancy and Problem Score

Table 59

ANALYSIS OF THE PROBLEM SCORE AND THE AGE AT FIRST PREGNANCY OF THE RESPONDENTS

		Sum of Squares	df	Mean Square	F _{cal}	Sig.	F _{tab}
prob1	Between Groups	417.46	17	24.56	1.62	0.070	2.02
	Within Groups	1758.37	116	15.16			
	Total	2175.83	133				
prob2	Between Groups	714.36	17	42.02	1.78	0.038	2.02
	Within Groups	2733.14	116	23.56			
	Total	3447.49	133				
prob3	Between Groups	309.30	17	18.19	1.56	0.086	2.02
	Within Groups	1352.44	116	11.66			
	Total	1661.73	133				
prob4	Between Groups	1077.99	17	63.41	7.04*	0.000	2.02
	Within Groups	1044.25	116	9.00			
	Total	2122.24	133				
prob5	Between Groups	526.38	17	30.96	1.08	0.379	2.02
	Within Groups	3316.94	116	28.59			
	Total	3843.32	133				
prob6	Between Groups	2039.06	17	119.95	3.50*	0.000	2.02
	Within Groups	3973.34	116	34.25			
	Total	6012.40	133				
prob7	Between Groups	623.03	17	36.65	5.02*	0.000	2.02
	Within Groups	846.25	116	7.30			
	Total	1469.28	133				
prob8	Between Groups	1998.63	17	117.57	2.12*	0.010	2.02
	Within Groups	6444.18	116	55.55			
	Total	8442.81	133				
prob score	Between Groups	25431.39	17	1495.96	1.63	0.067	2.02
	Within Groups	106337.24	116	916.70			
	Total	131768.63	133				

When the hypothesis stating the relationship between the total problem score and the age of the respondent at the first pregnancy was tested, it was found that the calculated value of F was 1.63. As, $F_{cal} < F_{tab}$, the null hypothesis was accepted at 5 % level of significance. But here the problem

categories stating the problems related to sexual behavior, mood disorder, cardio vascular symptoms and the general symptoms, the result showed was other way round.

4.4.16 Number of Pregnancies and Problem Score

Table 60

ANALYSIS OF THE PROBLEM SCORE AND THE NUMBER OF PREGNANCIES OF THE RESPONDENTS

		Sum of Squares	df	Mean Square	F _{cal}	Sig.	F _{tab}
prob1	Between Groups	55.97	5	11.19	0.68	0.639	4.40
	Within Groups	2121.37	129	16.45			
	Total	2177.33	134				
prob2	Between Groups	338.43	5	67.69	2.81	0.019	4.40
	Within Groups	3109.32	129	24.10			
	Total	3447.75	134				
prob3	Between Groups	101.10	5	20.22	1.67	0.147	4.40
	Within Groups	1564.78	129	12.13			
	Total	1665.88	134				
prob4	Between Groups	331.88	5	66.38	4.78*	0.000	4.40
	Within Groups	1790.52	129	13.88			
	Total	2122.40	134				
prob5	Between Groups	419.07	5	83.81	3.16	0.010	4.40
	Within Groups	3424.27	129	26.55			
	Total	3843.33	134				
prob6	Between Groups	593.14	5	118.63	2.82	0.019	4.40
	Within Groups	5434.61	129	42.13			
	Total	6027.75	134				
prob7	Between Groups	159.16	5	31.83	3.12	0.011	4.40
	Within Groups	1317.78	129	10.22			
	Total	1476.93	134				
prob8	Between Groups	1682.49	5	336.50	6.36*	0.000	4.40
	Within Groups	6829.66	129	52.94			
	Total	8512.15	134				
probscore	Between Groups	14356.15	5	2871.23	3.15	0.010	4.40
	Within Groups	117637.38	129	911.92			
	Total	131993.53	134				

When the hypothesis stating the relationship between the total problem score and the number of pregnancies the respondent had was tested, it was found that the calculated value of F was 3.15. As, $F_{cal} < F_{tab}$, the null hypothesis was accepted at 5 % level of significance. Here, the problems related to sexual behavior and general symptoms had higher values of calculated F.

Thus, all the hypotheses were tested and the results clearly stated here. Further, next chapter gives the precise findings along with the conclusion derived by the researcher.



*Summary &
Conclusion*

CHAPTER 5

SUMMARY AND CONCLUSION

5.1 Summary

The previous chapter showed how the dependent variables like the awareness scores and the problem scores are affected to various extent by different independent variables. So far the chapters have explained the problem and the steps followed by the researcher while proceeding along with the related studies in the field. The data collected was tabulated and put to various statistical tests for the purpose of deriving to the final conclusion. Now, it is time to summarize the whole study.

Health in human beings is the extent of an individual's continuing physical, emotional, mental, and social ability to cope with his environment. The conception of good health must involve some allowance for change in the environment. Bad health can be defined as the presence of disease, good health as its absence--particularly the absence of continuing disease, because the person afflicted with a sudden attack of seasickness, for example, may not be thought of as having lost his good health as a result of such a mishap.

To define health, good or bad, in terms that can be measured, can be interpreted with respect to the ability of the individual at the time of measurement to function in a normal manner and with respect to the likelihood of imminent disease. These measurements can be found in tables of "reference values" printed in textbooks of clinical medicine, diagnosis, and other references of this type.

The promotion and protection of the health of the people is essential to sustain economic and social development. According to preamble of the constitution of the WHO, Health is defined as a state of complete physical, mental and social well-being and not merely an absence of disease or infirmity. The definition was considered as comprehensive enough to explain the concept of health regardless of an individual's sex, age, class, caste and other such particulars. Health is a base or yardstick on which a country's

progress or deterioration can be measured.

5.1.1 Health and Gender

Gender is the social construction of roles, responsibilities and the notions of femininity and masculinity. The 'typical' women is more likely to be described in terms of an 'expressive' cluster of traits – hence, as more emotional, home oriented, considerate, understanding, excitable and devoted to others and the competency characteristics of self confidence, independence and assertiveness are more likely to be attributed to men. In other words an asymmetrical cultural evaluation of what is female and what is male. Cultural barriers, especially among urban, upper castes and middle classes do not permit family members to talk of sexual and reproductive health. Biologically as men and women both are responsible for reproduction there is an age limit for both.

Women's health issues, including sexual reproductive health matters need to be given special attention in Indian society. Generally women's health is somewhat catered to during her pregnancy, i.e., her role as a reproducer is valued. Women have some special needs due to their biological functions of child-bearing. Poor health of women is primarily a result of gender injustice. Even women in relatively 'well-to-do' families suffer from different kinds of physical, emotional and mental problems due to gender injustice. Applying the concept of gender to women's health would mean deconstruction of femininity and masculinity so that men are willing to give up some of their power in sexual relationships.

Applying the concept of gender to women's health would also require an examination of data on health in a disaggregated manner – identifying 'men's' and 'women's' health needs, health perceptions, health seeking behavior, utilization of health services, money spent in households on treatment and other similar aspects. Gender analysis of health data is likely to show up differences between males and females, and would influence the male factor in women's health in terms of determining their involvement / responsibility. Gender analysis influences women's health and the male factor in it also because of the following reasons:

- Family and cultural context of health – Women’s health cannot be viewed in isolation. The family context assumes significance in all health related issues pertaining to women.
- Women’s powerlessness and lack of decision-making – Women’s powerlessness permeates all areas of their lives, especially in matters related to their own health care. Decisions related to seeking health care for women are often determined by men. If we really wish to change the health of women, men’s involvement – sympathetic, genuine, considerate, and accommodative – is essential.
- Difficulties in accessing services – Women’s physical movement outside the home is often restricted. This coupled with low levels of literacy means that women are unaware and unable to access the available health services. Women have to wait for permission from their men-folk before they can seek health care services. Thus, not only is men’s help required from the point of view of physical access of services, but also from the point of view of social access.
- Inter-relatedness of men’s and women’s health – Involvement of men in work related to women’s health is important because the health of men and women is inter-related. One affects the other. Many of women’s health problems are a direct consequence of their physical and sexual relationships. Unless men become conscious of the fact that they can be channels of sexually transmitted diseases and therefore become more responsible in their behavior, women’s health will continue to suffer.
- Need for sensitization of men in their various roles -- From a biological perspective, human reproduction involves both men and women. It is important to draw in men to correct the imbalance. Culturally women are the care givers. In fulfilling this role, very often, they neglect their own health. Women are conditioned to tolerate ill health and its resultant suffering, and therefore do not seek medical assistance until they are literally incapacitated. Men’s involvement is likely to facilitate better communication between couples regarding health issues.

5.1.2 Women's Health

Traditional definitions of women's health need to be broadened to reach beyond the reproductive and the maternal health, incorporating mental and physical health across the life cycle. The following is a definition encompassing the varied dimensions of women's health – "A women's health is her total well-being, not determined solely by biological factors and reproduction, but also by the effects of workload, nutrition, stress, war, and migration among others."

In recent years, there has been a growing concern about taking a 'holistic view of women's health' which alludes that a distorted view does prevail in some sections of the society. Unfortunately, it is true that in most developing countries women's health issues have invariably been perceived as synonymous with problems related to pregnancy and child birth, the period when women in the third world are most vulnerable to an acute crisis. Thus a large number of adult women who are neither pregnant nor mothers of very young children (covered under MCH services) as also the adolescent girls who have special health needs get grossly neglected by the public health services due to a limited perspective of women's role in the society viz. that of reproducers and not as producers.. Unfortunately women's health has invariably been considered within the context of "maternal and child health", reflecting a view that women are first and foremost, child bearers and rearers. Young girls and women of advanced age also have special health needs which are not encompassed by this limited perspective on women's health. Holistic approach to women's health is more than the absence of disease but encompasses physical, mental and social wellbeing. Women share many health problems in common with men and hence seek guidance from similar health professionals. However, we recognize that there are biological, psychological, social and economic, lifestyle, legal and ethical issues that affect women and for which they require specialized knowledge and care.

Holistic health approach means different things to different people. It could mean utilizing all types of health care i.e. allopathic, homeopathic, ayurvedic etc. or it could also mean all levels of health care i.e. primary,

secondary, tertiary; or the entire gamut of services from early childhood to old age for providing health care of all kinds from the simplest to the most complex, involving various systems of the body. Women's health advocates have recommended a holistic approach to women's health. A holistic approach strives to address all aspects of women's health and all sources of ill-health: physical and mental, occupational and environmental, sexual and reproductive, across the entire life cycle.

The holistic health approach recognizes that women and men are human beings with full and equal human rights. The human right to health is recognized in the Convention on Economic and Social Rights and in the Convention on the Elimination of All Forms of Discrimination against Women. A holistic approach does not distinguish between women on the basis of marital status. It also recognizes that women in their roles as carers have accumulated a great deal of knowledge about traditional and also modern ways of promoting good health and this knowledge has to be recognized, respected and utilized.

Studies have shown that typical rural or urban poor women in India eats the last and eats the least because she invariably perceives herself at the bottom rung of the priority order when it comes to intra family food distribution. Quite interestingly, these women also consider themselves as 'healthy' or feel satisfied that they are getting 'adequate nutrition' if they are able to work on the farm and take care of domestic chores. At the household level, the significant others fail to recognize the malnutrition and other forms of morbidity. Neither the women, nor the family members take any positive action to upgrade her health. Speaking of neglect to women's health by the household, the practice of infant girl breastfed is shorter in duration than their male counterparts can be cited in the context of a Life Cycle View.

Besides, the self effacing, sacrificing image of woman is encouraged and lauded both at the household and local community level and this perpetuates traditional practices affecting health. At the state level, the public health services are designed to suit the providers' convenience more than that of clients – both men and women. Also, problems of women who are neither pregnant nor young mothers do not receive any priority in the existing service delivery system.

Women in India have a low health profile. Amongst a host of reasons the foremost is women's low status in the Indian society. The rest include (1) too many and too closely spaced pregnancies in early years, (2) high levels of malnutrition and undernourishment, and (3) over burdening work. Women in India have remained in a poor health because until recently the major focus in understanding and conceptualizing women's health has been maternal and child health, thereby, neglecting other health needs of women. Today, the life expectancy is increasing day-by-day. Which means more people will survive and see the old age. This growing population of elderly has more number of females in their menopausal age.

Menopause is defined by WHO as the "final menstrual period" (retrospectively defined as one year without flow). With the increasing life expectancy a women spends almost a third of her life in menopause. This is an endocrine deficit state that appears with ageing. So, it is all the more necessary during the advancing age that females stay and feel happy, gay and energetic.

Menopause is a process which unfolds over many years. This is the stage which continues till death and so it is all the more necessary that a woman take timely counseling in her mid forties, so that she reach menopause and pass through this critical period with grace, dignity and independence. And with this revelation, every woman is needed to unfurl the positivism and creativity, and take this so called unfriendly event as a challenge, and commit to oneself. As Swami Vivekananda stated : "Change is the Law of Life. Challenge is the Aim of Life. You have to Challenge the Change, not Change the Challenge." It is a challenge to fight against one's own negative thought process through which one commit to rediscover oneself and to live the life with broader vision and more wisdom.

With this view in mind the researcher thought it better to study this aspect of female life, the knowledge they have regarding this change and the problems faced during this stage of their life cycle. And so the study was commenced with the title:

"To Study Menopause and Its Effects in Middle-Aged Women"

For the purpose an exploratory-cum-diagnostic research design was employed. This was done keeping in mind the two major objectives of this study. They were:

1. To know about the awareness of women regarding the health issues with regards to menopause.
2. To gather and document valuable grass-root information on women's health issues of middle aged females.

Various other specific objectives were framed to give the direction and to gather some concrete data. The tools like score sheet, intensity indices etc. were considered.

For the data collection an interview schedule which consisted of the open as well as close ended questions was constructed. This interview schedule consisted of the section for collecting background information and various food habits and lifestyle habits of the respondents. A pre-tested and thoroughly validated awareness scale was utilized to obtain the awareness scores of the respondents with reference to their knowledge about the menopause.

An extensive list of problems occurring during menopause was prepared with the help of health practitioners and the females in their post menopausal stage. This list was bifurcated by putting the specific problems under various heads. For each problem, five point frequency scale and three point intensity scale was put in the interview schedule.

The data thus gathered was put to various statistical tests. For the analysis of the data, descriptive and inferential statistical methods were employed. Simple frequency and percentage distribution was carried out for all the questions included in the schedule. The analysis of variance was done for the testing of the relationship between the independent and dependent variables.

Major Findings

It was found that the sample was somewhat equally distributed among all the three groups. About 65% of the respondents were moderately educated with their schooling completed. More than 80% of the respondents

were married. As in the city of Rajkot, women employment was not considered positively some two decade ago, nearly 60% of the respondents were housewives. Among the working women, 20% were employed with educational institutes. Though 70% of the respondents belonged to the middle or higher income group families, the personal income of the respondents were not much except for few.

The trend of nuclear family is very prominent in the urban localities. The same scenario was witnessed here with about 70% respondents belonging to the nuclear families. As the trend was for nuclear families, the number of members in the family was restricted to 3 – 5 members for about 50% and 1 – 2 children per family for about 60% of the respondents. It was also found that wherever there was more number of children the number of female children were more. This was because of the male child preference; the females have to go through number of pregnancies. But still this was only for about 20% of the respondents where number of children was more than four.

The age at menarche was found to be 13 to 15 years for nearly one third of the respondents. When inquired about the age at first pregnancy, nearly same number of respondents had their first pregnancy during the third decade of their life. More than 70% of the respondents had their deliveries in hospital assisted by qualified doctors. Very few respondents had complications during pregnancies and as for the health status, most of them rated themselves as having good health.

When the age at menopause was inquired, equal number of respondents (nearly 20%) had their menopause either at the age of 40 to 44 years or 45 to 49 years. And it was natural menopause without any result of surgery.

When the respondents were inquired about their weight, around 40% of the respondents had a gain of about 1 to 5 kgs of increased weight. 19% of the respondents were found to be having no change positive or negative in their weight. They were the one who were conscious about their physical well being. The food score showed the consistency in the intake of food items. The intake of water was more than 10 glasses per day for about 70% of the respondents.

When the awareness scores of the respondents were measured with the help of thoroughly validated awareness scale, it was found that more than 80% of the respondents were moderately aware. Only 7 respondents were found to be scoring very high on the awareness scale. The study also found around 40 respondents with very low score. It was not that the low scorers belonged to lowly educated group but even the moderately and highly educated respondents were found here.

The respondents were when asked to put the frequency and intensity of their problems faced on five point and three point scale, no respondent was found to put their scores for the intensity of the occurrence of the problem. This was because they said that certain problems that occur regularly have different intensities at different times. So, finally every respondent had utilized the five point frequency scale for specifying the occurrence of the problem in question. The results showed that the most of the respondents vote for the few or moderate occurrence of the problem.

For the problems related to the urinary complains it was found that the respondents were not very much disturbed by them. In the category of Central Nervous Systems, headache, insomnia and forgetfulness were listed high. With regards to the menstrual problems it was found that the irregularity of the periods proved to be somewhat disturbing. Many respondents were of the opinion that the heavy bleeding makes them tired and less alert. The respondents felt that there was some change in their sexual behavior recently. The backache and joint pain was felt by many of the respondents, but they attributed it to the growing old age. This problem was found with the respondents with over weight. Anxiety, depression, mood swings and lethargy were the problems listed under mood disorders, which the respondent did confirm. Hypertension and bouts of rapid heart beats topped the list of the cardio vascular system. The general symptoms were not experienced to the severe extent but there were few like fatigue, constipation, allergy and dizziness which were accepted as the part and parcel of the daily life.

5.2 Conclusion

With these findings the researcher may like to conclude that whether it is educate female or illiterate female, one belonging to the higher social strata or the lower strata, the awareness depends on the peer group or the people around them. Those who were more aware either belonged to the working class, with their workplace connected to some health related activity or those who themselves or some family member had some severe menopausal problem and they had to consult the doctor. The researcher could very confidently conclude that there is a need to propagate general awareness regarding the problems associated with the menopause. This should not only be for those approaching their menopause but even the females at the younger age as well as the people around them. The researcher strongly believes that if the young girls are made aware of the term menopause and the biology associated with it, not only they can prepare for their own menopause but help their mothers and other senior females in the family to cope with their problems at present. This will also help to overcome the problems faced by the females during menopause and help them to look for the proper timely medical help wherever required.

The present study gives a grass root data necessary for the health planners as well as the educational groups who work directly with the people in the field. It is one of its kinds carried out from the non-medical point of view. As the researcher had found the dearth of knowledge and data in this field from the social science point of view, this study will initiate the steps towards such studies more in the field of Home Science, Sociology, and Psychology.

5.3 Recommendations

1. More studies of this kind might be taken up by the social scientists for gathering the grass-root level data.
2. A study can be undertaken for assessing such data in different social settings or in rural areas.
3. This study can be of great help to the health planners and executors; and more awareness regarding the health issues during

menopause can be propagated to check the problems occurring during the old age.

4. A study can be taken up for the same issues with different respondent population, like the husbands or the children of the females in their menopausal age.

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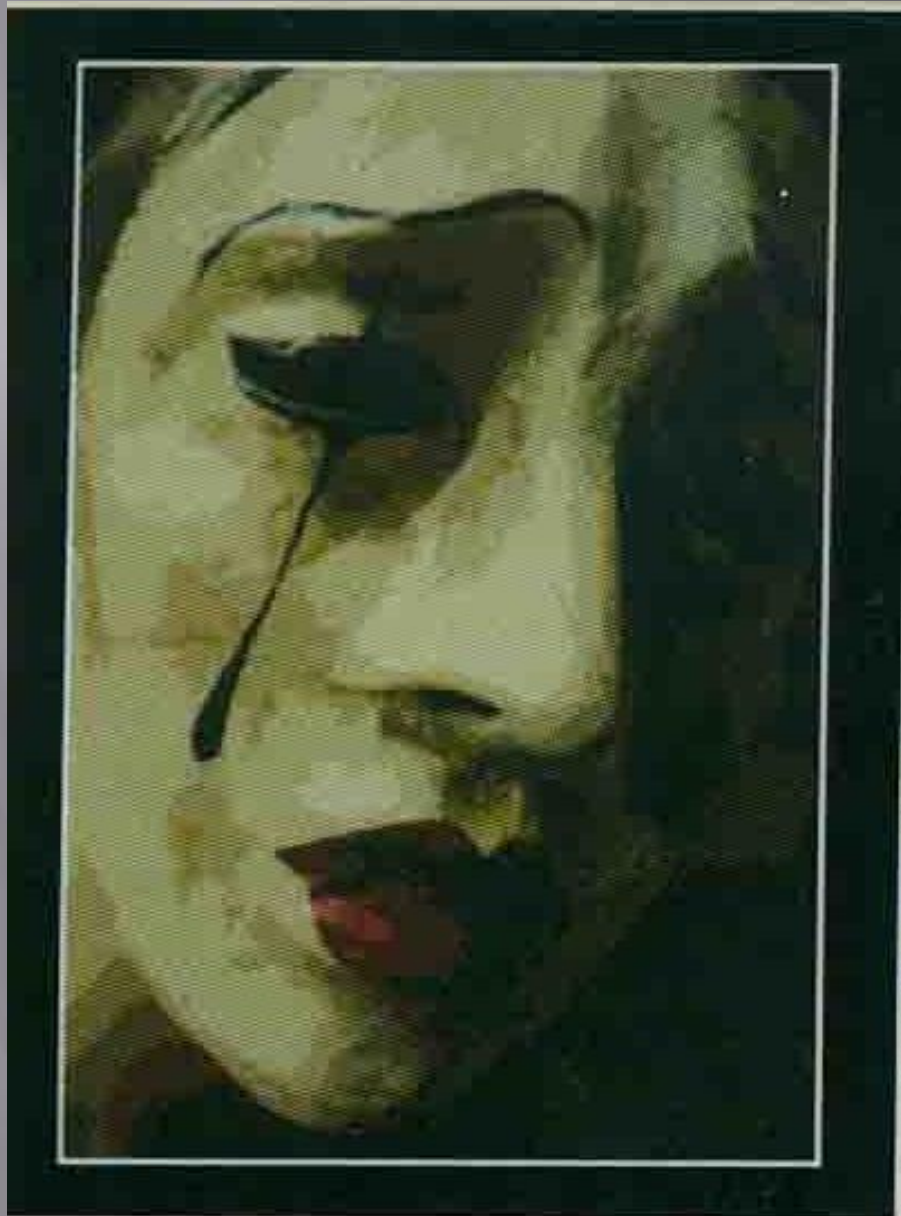
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13. <http://www.menopause.org/edumaterials/>
14. <http://www.nccam.nih.gov/health/alerts/menopause>
15. ICE.study
16. OBGYN.net



Appendix

MENOPAUSE AND WOMEN

Guide

Dr. Nilambari Dave
Professor and Head

Researcher

Anjana Palkar

**Smt S. B. Gardi Institute of Home Science, Saurashtra University Campus,
Rajkot**

Dear Respondent,

I am a Ph. D. scholar in the department of Home Science, Saurashtra University. As a part of the course we are supposed to take up a research study on a related topic. I have elected "Menopause and its effect on women" as my field of research. For the purpose I am suppose to gather some information from the ladies, in the age group of 40 to 54 years. Being in the required age group, hope you will be kind enough to fill the questionnaire herewith.

The information gathered will be used for the educational purpose, only. True and complete information from your side will make my research more valid and authentic.

I will be obliged with your cooperation. Thank you.

Sincerely,

Anjana Palkar

Your name please: _____

Address: _____

Phone No.: _____

Questionnaire

* Information

About Self

.....

- ..
- I Age (in years) = _____ IV Occupation = _____
- II Education = _____
- 1. Illiterate to std 4th If working.....
 - 2. Std 5th pass to STD 12th 1. Designation
 - 3. Graduate 2. Organization
 - 4. Post Graduate and above
 - 5. Professional Degree
- V Average Monthly Income (in Rs.)
- 1. Family Rs.
 - 2. Personal Rs.....
- III Marital Status = _____
- 1. Married
 - 2. Unmarried
 - 3. Single
 - 4. Divorcee
 - 5. Widow
- VI Type of the family =
- 1. joint
 - 2. Nuclear
-

About Family

Sr.No	Relation with the Respondent	Marital Status	Sex	Age	Education	Occupation	Income

Please answer the following

- Age (at menarche) at first period _____
- Age at first pregnancy _____
- No. of pregnancies _____
- No. of still births _____
- No. of Abortions _____
- No. of Miscarriages _____
- Had delivery in _____
- Had delivery by _____
- Complications - Before pregnancy _____
- _____
- During pregnancy _____
- _____
- After pregnancy _____
- _____
- Age (at menopause) last period _____
- Age at surgical menopause _____
- Duration of premenopausal symptoms _____

* Please state your health status according to you -

- Before menarche _____
- _____
- After menarche but before marriage _____
- _____
- During early married life _____
- _____

* Any major operation if undergone (please specify) _____

Age at the time of operation _____

* Use of traditional medicines if any _____
For _____

* **Do as directed :**

* Please state your

Height in inches	Weight in kilograms	Your weight before 5 years in kilograms

1. How many glass of liquid do you drink during the day? _____
(i.e. water, milk, buttermilk, soft drinks etc.)

2. Do you include the following in your daily meal?

Food	Once a day	Twice a day	Thrice a day	Once a week	Sometimes in 2-3 days
Cereals					
Pulses & Legumes					
Nuts & Oilseeds (like groundnuts)					
Fruits					
Regular Vegetables					
Green Leafy Vegetables					
Roots					
Milk & milk products					
Eggs					
Fish & meat					

3. What food items do you think include calcium in your daily meals?

4. Say yes or no for the following:

1. Do you keep track of your weight gain or loss? Yes/No
2. Is there any change in your food habits lately i.e. do you feel like you have lost appetite or feel very hungry even after taking meal? Yes/No
3. Do you have breakfast in the morning? Yes/No
4. Have you noticed any change in your own personality? Yes/No
5. Has anyone in the family or outside pinpointed any changes in your personality? Yes/No
6. Do you experience any different feeling towards your sex life? Yes/No
7. Is there any change in the relationship with your husband? Yes/No
8. Do you feel emotionally insecure? Yes/No
9. Do you feel that you're capacity to work has reduced? Yes/No
10. Do you feel that you are getting old? Yes/No
11. Do you experience any change in your
 - () Personal life Yes/No
 - () Familial life Yes/No
 - () Social life Yes/No
 - () Professional life Yes/No
12. Did you/do you consult doctor when there is
 - () Abnormal vaginal discharge Yes/No
 - () Spotting between the periods Yes/No
 - () Excessive or too frequent periods Yes/No
 - () Periods that last too long Yea/No
 - () Unusual irritation or ulceration of the genitals Yes/No
 - () Urinary disturb Yes/No
 - () Bowel disturbances Yes/No
 - () Abdominal pain Yes/No
 - () Distention or swelling Yes/No
 - () Continued backache Yes/No

State (✓) or (x) if you know, otherwise leave it blank.

1. Menopause is a natural and unavoidable truth of life.
2. Menopause is confirmed only when you don't have menses for 12 consecutive months.
3. Menopause means end of your monthly periods (menses).
4. At menopause, ovaries begin to fail and the production of estrogen falls.
5. You can have menopausal symptoms even while menstruating regularly.
6. Menopause generally occurs at the age of late 40's or early 50's.
7. Menopause can occur early or late due to various reasons.
8. Some women may not experience any of the menopausal symptoms.
9. After hysterectomy (removal of uterus and ovaries both) body right away enter menopause.
10. Women may not have menopause early if only uterus is removed.
11. Early or late menopause may depend on hereditary factor.
12. Most of the menopausal symptoms are caused due to estrogen deficiency.
13. Kidney produces estrogens.
14. In many women at the time of menopause, menstruation occurs at irregular intervals, becomes prolonged and the flow gradually ceases.
15. Obesity, mild to moderate hypertension and hirsutism may occur during this period.
16. Many women have no symptoms or just mild symptoms at the time of menopause.
17. Hormone therapy adds to the problems during such time.
18. Menopause causes hormonal changes.
19. Menopause is the consequence of stoppage of estrogen production by ovaries.
20. Menopause means permanent stoppage of menstrual bleeding.
21. After age 35 the ovarian function begins to increase gradually.
22. Estrogens, weakens the body contours and deteriorates the skeleton.
23. When ovaries decline in function the bone minerals start depleting and risk of osteoporosis increases.
24. The risk of heart attack decrease after menopause.
25. After menopause heart diseases is the major reason for female mortality.
26. Osteoporosis occurs due to calcium deficiency and lack of exercise.
27. Change in lifestyle is one of the best remedies to overcome the symptoms.
28. Some women have bladder control problem after they stop having their periods.
29. I worry about what will happen when I reach menopause.
30. I look forward to the life after menopause.
31. I have heard about Hormone Replacement Therapy (HRT).
32. No side effects are caused by the HR therapy.
33. Very few risks are associated with the HR therapy.
34. Tight and synthetic clothes are good during such period.
35. Menopause is a collective experience.
36. There is no chance of having a child after menopause.

Problem Categories with Symptoms	A	F	S	R	N	1	2	3
6. Weight gain								
7. Gum problems								
8. Britoil nails								
VI. Mood disorder								
1. Depression								
2. Anxiety								
3. Irritability								
4. Mood swing								
5. Lethargy								
6. Sudden tears								
7. Feeling of dread apprehension								
8. Other.....								
VII. Cardio Vascular System (CVS)								
1. Hypertension								
2. Breathlessness								
3. Chest pain								
4. Bouts of rapid heartbeats								
5. Exacerbation of existing condition								
6. Other.....								
VIII. General symptoms								
1. Weakness								
2. Fatigue								
3. Domestic stress								
4. Social stress								
5. Dizziness								
6. Increase in allergies								
7. Disturbed bowl habits								
8. Change in skin — thinner, drier, wrinkled								
9. Change on hair — thinner, excessive fall								
10. Change in body odor								
11. ‘Electric shock’ sensation under skin.								
12. Burning tongue								
13. Other... ..								

Key:

Frequency

- A = Always
- F = Frequent
- S = Sometimes
- R = Rarely
- N = Never

Intensity

- 1 = Mild
- 2 = Moderate
- 3 = Severe

*** Give reply for the queries below :**

1. Since how long you are experiencing these symptoms? _____
2. Are the symptoms frustrating? _____
3. Do you know all these are only due to menopausal phase of your life?

4. Now that you know the reason for your discomfort would you see your doctor for the same? _____
5. Do you talk to your husband about your problems? _____
6. Does he offer any help or solution for the same? _____
If yes what? _____
7. Is your daughter aware of the problems you are facing? _____
8. Does she know the reason? _____
9. Do you discuss your menopausal state with you daughter?

10. Have you consulted any one of the following for your problems?
 - General practitioner (G.P.)
 - Gynecologist
 - Elder female in your family — specify the relation
 - Elder female in neighborhood
 - Friend
 - Internet
 - Magazine
 - Any other
11. Are you aware that menopausal symptoms if neglected can lead to the following problems in future?
 - Osteoporosis
 - Danger of frequent fractures
 - Cardio vascular diseases
 - Risk of heart attack
 - Cataracts Dry eye syndrome
 - Thin and wrinkled skin
 - Hyperkerotatic skin disorders
 - Loss of teeth
 - Sarcopenia - Muscular weakness
12. Do you go for any other therapy or medication for your problems _____
 - Aurvedic
 - Homeopathic
 - Rekki
 - Acupressure
 - Yoga
 - Home remedies
 - Any other _____

13. Are you aware that your problems can be eliminated to some extent by one or more of the following?

- Change in lifestyle
- Involvement in creative activities
- Positive attitude towards life
- Regular exercises
- Change in your diet
- Increased intake of water
- Calcium intake
- Control weight
- Yoga
- Meditation
- Regular checkups
- Inclusion of high fibers in your diet

Answer the following in short:

- 1) What is the nature of your job? _____
- 2) Do you think that menopause has affected your work in general? Why?

- 3) Has this affected your work input or output? How?

- 4) Do the family members perceive your health (menopausal) problems? How?

- 5) Are the family members able to understand the physical and psychological connection of your problems, particularly menopause?

- 6) Whom do you feel comfortable in sharing your problems? Why?

- 7) Who among your family members generally insist you to go to the doctor?

- 8) Who accompanies you to the doctor? _____
- 9) Who are the people to whom you are very close outside the family?

- 10) From whom do you get emotional support? What type?

- 11) Did this questionnaire help you to gain insight into your own existing problems?
Yes/No s
If yes how? _____

Thank you for your cooperation

રજોનિવૃત્તિ અને સ્ત્રીઓ

માર્ગદર્શક
ડૉ. નિલામ્બરી દવે
પ્રાધ્યાપક અને અધ્યક્ષ

પ્રયોજક
અંજના પાલકર

હોમ સાયન્સ ભવન, સૌરાષ્ટ્ર યુનિવર્સિટી કેમ્પસ,
રાજકોટ-૩૬૦૦૦૫

બહેનશ્રી,

હું અહીં સૌરાષ્ટ્ર યુનિવર્સિટી, હોમસાયન્સ વિભાગમાં પીએચ.ડી.નો અભ્યાસ કરું છું. આ અભ્યાસના ભાગરૂપે અમારે કોઈ એક વિષય પર સંશોધન કરવાનું હોય છે. મેં આ હેતુસર 'રજોનિવૃત્તિ અને સ્ત્રીઓની તકલીફો' એ વિષય પર સંશોધન હાથ ધર્યું છે. જેના અનુસંધાનમાં મારે ઉંમર વર્ષ ૪૦થી ૫૪ સુધીની મહીલાઓ પાસેથી આ વિષય પર થોડીક માહિતી એકત્રિત કરવાની છે. આપશ્રી આ વયમર્યાદામાં હોઈ, મારા અભ્યાસમાં જરૂર મદદરૂપ થશો એવી અપેક્ષા રાખું છું. તમે આપેલ માહિતી ફક્ત અભ્યાસના હેતુમાં જ ઉપયોગમાં લેવામાં આવશે, તે સિવાય આ માહિતી અન્ય કોઈને આપવામાં આવશે નહીં એવી ખાતરી આપું છું. આ પ્રશ્નાવલિના જવાબ સાચા કે ખોટા ઠરશે નહીં, પરંતુ આપના સાચા જવાબો મારા અભ્યાસને વધુ કારગત, મજબૂત તથા સાર્થક બનાવશે.

આપના સહયોગ તથા સહકાર બદલ હું આપની આભારી છું, ધન્યવાદ...

લી.

અંજના પાલકર

આપનું નામ :

સરનામું :

.

ફોન નંબર :

પ્રશ્નાવલિ

● વ્યક્તિગત માહિતી :

(૧) ઉંમર વર્ષ :

૪. વ્યવસાય :

(૨) અભ્યાસ : (નોંકરી કરતા હો તો)

૧. અભણ અથવા ચોથા ધોરણ સુધી ૧. હોદ્દો :

૨. ૫ થી ૧૨ માં ધોરણ સુધી ૨. સંસ્થા :

૩. સ્નાતક : ૫. માસિક આવક રૂા.

૪. અનુસ્નાતક કે તેથી વધુ ૧. કુટુંબની રૂા.

૫. પ્રોફેશનલ ડીગ્રી ૨. તમારી પોતાની :

(૩) હાલનો દરજ્જો : ૬. કુટુંબનો પ્રકાર : ૧. પરિણીત :

. ૧. સંયુક્ત કુટુંબ : ૨. અપરિણીત :

૨. વિભક્ત કુટુંબ : ૩. એકલા / ત્યક્તા :

૪. છૂટાછેડા લીધેલ :

૫. વિધવા :

● પરિવારની માહિતી :

ક્રમ	માહિતી આપનાર સાથેનો સંબંધ	લીગ	હાલનો દરજ્જો	ઉંમર વર્ષ	અભ્યાસ	વ્યવસાય	આવક

● નીચે આપેલ વિગતોમાંથી લાગે પડતું હોય તેના જવાબ આપો :

- ✓ પહેલું માસિક આવ્યું ત્યારે તમારી ઉંમર :
- ✓ પહેલી સુવાવડ વખતે તમારી ઉંમર :
- ✓ કેટલી સુવાવડ થઈ :
- ✓ જન્મ લેતા પહેલાં મરેલા બાળકોની સંખ્યા :
- ✓ ગર્ભપાત કરાવ્યો હોય તો કેટલી વખત :
- ✓ કસુવાવડ થઈ હોય તો કેટલી વખત :
- ✓ સુવાવડ કોના દ્વારા કરાવવામાં આવી હતી :
- ✓ કોઈ કોમ્પ્લીકેશન / તકલિફ સુવાવડ પહેલાં :
સુવાવડ સમયે :
સંવાવડ પછી :

- ✓ છેલ્લુ માસિક આવ્યું ત્યારે તમારી ઉંમર :
- ✓ કોથળીનું ઓપરેશન કરાવ્યુ ત્યારે તમારી ઉંમર :
- ✓ રજોવૃત્તિને લગતી તકલિફો કેટલો વખત રહી :

● તમારા મતે તમારું આરોગ્ય કેવું હતું :

૧. પહેલું માસિક આવતાં પહેલાં :

૨. પહેલુ માસિક આવ્યા પછી :

૩. લગ્નના પ્રારંભિક વર્ષો દરમ્યાન :

● જો કોઈ મેજર ઓપરેશન કરાવ્યું હોય તો તેની માહિતી વિગતે દર્શાવો :

૧. કયા પ્રકારનું ઓપરેશન :

૨. ઓપરેશન સમયે તમારી ઉંમર વર્ષ :
૩. જો કોઈ પ્રકારની ઘરેલું દવા લેતા હોય તો :

૪. શા માટે લો છો :

● કૃપા કરીને નીચે પૂછવામાં આવેલ માહિતી આપવા વિનંતી :

તમારી ઊંચાઈ	તમારું વજન (કીલોમાં)	૫ વર્ષ પહેલાનું તમારું વજન (કીલોમાં)

૧. તમે દિવસમાં કેટલા ગ્લાસ પ્રવાહી પીઓ છો ? :
 (દા.ત. પાણી, દૂધ, છાશ, શરબત વગેરે)

૨. નીચે દર્શાવેલ પદાર્થોનો તમે ખોરાકમાં સમાવેશ કરો છો ?

પદાર્થ	દિવસમાં એક વખત	દિવસમાં બે વખત	દિવસમાં ત્રણ વખત	અઠવાડિયે એકવખત	બે-ત્રણ દિવસે એક વખત
અનાજ અને ધાન્ય					

કઠોળ અને દાળ					
તેલીબીયાં (શીગદાણાં) અને સૂકો મેવો					
ફળ					
શાકભાજી (અન્ય શાક)					
લીલા પાનવાળી ભાજી					
કંદમૂળ					
દૂધ તથા દૂધની બનાવટના પદાર્થો					
ઈંડા					
માંસ-મચ્છી					

૩. તમારા રોજના ખોરાકમાં તમે એવી કઈ કઈ ચીજો ખાઓ છો કે જેમાં કેલ્શિયમ હોય છે :

● નીચે આપેલા પ્રશ્નોના 'હા' કે 'ના'માં જવાબ આપો :

૧. શું આપ આપના વજન વધવા અથવા ઘટવા બાબત નોંધ લો છો ? [હા / ના]

૨. તમને તમારી ભૂખમાં કોઈ ફેરફાર જણાય છે - એટલે કે તમારી

ભૂખ મરી ગઈ હોય એવું લાગે છે કે પછી ખાધા પછી પણ ભૂખ્યા [હા / ના]

હો એવું લાગે છે.

૩. શું તમે સવારે નાસ્તો કરો છો ? [હા / ના]

૪. શું તમે તમારા વ્યક્તિત્વમાં કોઈપણ જાતનું પરિવર્તન નોંધ્યું છે ? [હા / ના]

૫. શું ઘરની અથવા બહારની કોઈ વ્યક્તિને આપના વ્યક્તિત્વમાં [હા / ના]

થયેલા ફેરફારથી આપને અવગત કરાવ્યા છે ?

૬. શું તમે શારીરિક સંબંધમાં કોઈ અલગ પ્રકારની લાગણી અનુભવો છો ? [હા / ના]

૭. શું તમારા પતિ સાથેના સંબંધમાં પરિવર્તન આવ્યું છે ? [હા / ના]

૮. શું તમે માનસિક અસલામતી અનુભવો છો ? [હા / ના]

૯. શું તમને લાગે છે કે તમારી કામ કરવાની ક્ષમતા ઘટી ગઈ છે ? [હા / ના]

૧૦. શું તમે ઘરડાં થયા હો એવું અનુભવો છો ? [હા / ના]

૧૧. શું તમે તમારા જીવનમાં નીચે જણાવેલ પાસાંઓને લગતા [હા / ના]

કોઈ પણ જાતનું પરિવર્તન અનુભવો છો ?

- (૧) વ્યક્તિગત જીવન : [હા / ના]
- (૨) પારિવારિક જીવન : [હા / ના]
- (૩) સામાજિક જીવન : [હા / ના]
- (૪) વ્યાવસાયિક જીવન : [હા / ના]

૧૨. શું તમે દાકતરની સલાહ લીધેલી / લ્યો છો ? જ્યારે.

- (૧) ખૂબ સફેદ પાણી જાય : [હા / ના]
- (૨) બે માસિક વચ્ચે રક્તસ્ત્રાવ આવે : [હા / ના]
- (૩) જ્યારે માસિક લાંબા સમય સુધી ચાલે છે : [હા / ના]
- (૪) યોનિમાં ચાંદા અને ખંજવાળ આવે : [હા / ના]
- (૫) પેશાબમાં તકલીફ થાય : [હા / ના]
- (૬) કબજાયાત રહે : [હા / ના]
- (૭) પેટનો દુઃખાવો થાય : [હા / ના]
- (૮) સોજા આવે : [હા / ના]
- (૯) લાંબા સમય સુધી કમરનો દુઃખાવો થાય : [હા / ના]

- જો તમે નીચે આપેલા કથનો બાબત જણાતા હો તો ‘#’ અથવા ‘x’ની નિશાની કરો અને ન જાણતા હો તો ખાલી રાખો :

૧.	રજોનિવૃત્તિ એ જીવનનું એક પ્રાકૃતિક અને અનિવાર્ય સત્ય છે.	
૨.	રજો નિવૃત્તિ ત્યારે જ કહેવાય કે જ્યારે તમને સર્ગભર (૧૨) મહીના સુધી માસિક ન આવે.	
૩.	રજો નિવૃત્તિ એટલે દર મહિને માસિકથી છૂટકારો.	
૪.	રજો નિવૃત્તિ વખતે અંડકોશ નબળા પડે છે અને તેના લીધે ઈસ્ટ્રોજનનું ઉત્પાદન ઘટી જાય છે.	
૫.	તમને નિયમિત માસિક આવતું હોય તોય રજો નિવૃત્તિની તકલીફો પડી શકે છે.	
૬.	રજો નિવૃત્તિ સાધારણપણે ચાલીસીના પાંચલા પચાસીના આગલા વર્ષો દરમ્યાન આવી શકે છે.	
૭.	રજો નિવૃત્તિ ઘણાં કારણોસર જલ્દી અથવા મોડી આવી શકે છે.	
૮.	કેટલીક સ્ત્રીઓને રજો નિવૃત્તિ વખતે કોઈ પ્રકારની તકલીફ પડતી નથી.	
૯.	હીસ્ટ્રોક્ટોમી પછી (જો ગર્ભાશય અને અંડાશય બેય કાઢી નાખ્યા હોય તો) શરીર તરત જ રજો નિવૃત્તિકાળમાં જાય છે.	

૧૦.	જો ખાલી ગભાશય દૂર કરવામાં આવ્યું હોય તો સ્ત્રીનેરજો નિવૃત્તિ વહેલી નથી આવતી.	
૧૧.	રજો નિવૃત્તિ વહેલી કે મોડી આવવામાં વારસાગત કારણો હોઈ શકે.	
૧૨.	રજો નિવૃત્તિમાં થતી તકલીફોનું મુખ્ય કારણ ઈસ્ટ્રોજન્સની ઊણપ છે.	
૧૩.	મૂત્રાશયમાં ઈસ્ટ્રોજન્સનું ઉત્પાદન થાય છે.	
૧૪.	ઘણી સ્ત્રીઓમાં રજો નિવૃત્તિ વેળાએ માસિક અનિયમિતપણે આવે, લાંબા સમય સુધી આવે અને ધીમે ધીમે ઓછું થાય.	
૧૫.	આ સમય દરમ્યાન મોટાપો અને થોડુંક હાયપરટેન્શન થવાની સંભાવના હોય છે.	
૧૬.	ઘણી સ્ત્રીઓનેરજો નિવૃત્તિ વેળાએ કોઈ તકલીફ પડતી નથી અથવા નજીવી તકલીફ પડે છે.	
૧૭.	હોર્મોન્સ થેરાપિથી આવા સમયે મુશ્કેલીઓ વધે છે.	
૧૮.	રજો નિવૃત્તિ વેળાએ શરીરમાં રહેલા હોર્મોન્સ (અંતઃસ્ત્રાવ)માં બદલાવ આવે છે.	
૧૯.	અંડાશયમાંથી ઈસ્ટ્રોજન્સનું ઉત્પાદન બંધ થવાથી રજો નિવૃત્તિ આવે છે.	
૨૦.	રજો નિવૃત્તિ એટલે માસિક આવતું સદંતર બંધ થવું.	
૨૧.	પાંત્રીસ (૩૫) વર્ષની વય પછી અંડાશયની ક્ષમતા વધી જાય છે.	
૨૨.	ઈસ્ટ્રોજન્સ શરીર તથા હાડપિજરને નબળા પાડવાનું કામ કરે છે.	
૨૩.	જ્યારે અંડાશયની કામ કરવાની ક્ષમતા ઘટે છે, હાડકામાં રહેલા ક્ષારો ઓછા થઈ જાય છે અને ઍસ્ટ્રિઓપોરોસિસ થવાની શક્યતા ઘટી જાય છે.	
૨૪.	હૃદય રોગના હુમલાનું પ્રમાણ રજો નિવૃત્તિ પછી ઘટી જાય છે.	
૨૫.	રજો નિવૃત્તિ પછી હૃદયને લગતા રોગો એ સ્ત્રીઓની મૃત્યુનું મુખ્ય કારણ જોવા મળ્યું છે.	
૨૬.	ઍસ્ટ્રિઓપોરોસિસ થવાના મુખ્ય કારણો કૉલિશયમની ઊણપ અને શારરિક વ્યાયામની કમી હોય છે.	
૨૭.	તકલીફો દૂર કરવાનો એક સરળ ઉપાય એટલે જીવનશૈલીમાં પરિવર્તન લાવવું.	
૨૮.	ઘણી સ્ત્રીઓને માસિક બંધ થયા પછી મૂત્ર પ્રક્રિયા પર કાબૂ રહેતો નથી.	
૨૯.	રજો નિવૃત્તિ પછી શું ? એવી ચિંતા મનને હંમેશા સતાવે છે.	
૩૦.	હું રજો નિવૃત્તિ પછીના જીવન માટે આશાસ્પદ છું.	
૩૧.	મેં હોર્મોન્સ રીપ્લેસમેન્ટ થેરેપિ (HRT) વિશે સાંભળ્યું છે.	
૩૨.	એચ.આર. થેરેપિની કોઈ આડઅસર નથી હોતી.	
૩૩.	એચ.આર. થેરેપિ સાથે ઘણું ઓછું જોખમ સંકળાયેલું છે.	

	૪. સમાગમની ઈચ્છામાં બદલાવ.								
	૫. બેચેની લાગે.								
		૧.	૨.	૩.	૪.	૫.	૧.	૨.	૩.
૫.	માંસપેશીઓ તથા હાડકાઓને લગતી તકલીફો :								
	૧. પીઠનો દુઃખાવો								
	૨. સાંધાનો દુઃખાવો								
	૩. સાંધામાં સોજા આવે								
	૪. માંસપેશીઓમાં તાણ જણાય.								
	૫. સ્તન ઢીલા પડવા.								
	૬. વજન વધવું.								
	૭. પેઢાનો દુઃખાવો								
	૮. નખ ટૂટી જવા.								
૬.	મૂડને લગતા કારણો :								
	૧. હતાશા.								
	૨. મન મૂઝવણ અનુભવે								
	૩. ખીજ ચઢવી.								
	૪. મિજાજમાં ચડ-ઉતર થાય.								
	૫. કંટાળો આવે.								
	૬. એકાએક ખૂબ રડવાનું મન થાય.								
	૭. ખૂબ નકારાત્મક વિચાર આવે.								
	૮. આ સિવાય કોઈ.								
૭.	હૃદયને લગતી તકલીફો :								
	૧. હાયપર ટેન્શન.								
	૨. શ્વાસ ચઢી જાય.								
	૩. છાતીમાં દુઃખાવો થાય.								
	૪. છાતીમાં ધડક-ધડક થાય.								
	૫. નકારાત્મક વિચાર આવે.								
	૬. આ સિવાય કોઈ.								
૮.	સામાન્ય તકલીફો :								
	૧. અશક્તિ આવવી.								
	૨. થાક લાગવો.								
	૩. ઘરેલું તાણ.								
	૪. સામાજિક તાણ.								
	૫. ધેન આવવું.								
	૬. એલર્જી થવી.								
	૭. કબજિયાત રહે.								
	૮. ચામડી પાતળી, સૂકી કરચલીવાળી થાય.								
	૯. વાળ પાતળા થવા, વધુ ખરવા.								
	૧૦. શરીરની ગંધમાં પરિવર્તન								
	૧૧. ચામડી નીચે શોક લાગ્યાનો અહેસાસ થાય.								
	૧૨. જીભમાં બળતરા								
	૧૩. આ સિવાય કોઈ.....								

- નીચે આપેલા પ્રશ્નોના જવાબો આપો :

૧. કેટલા સમયથી તમે આ તકલીફો અનુભવો છો ?
૨. શું આ તકલીફો હતાશા ભરેલી છે ?
૩. શું તમે જાણો છો કે આ બધા લક્ષણો તમારા જીવનના રજોનિવૃત્તિકાળને લીધે છે ?
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૪. હવે જ્યારે તમે આ સ્વસ્થતાના કારણો જાણો છો, તો શું તમે તમારા દાકતરને બતાવશો ?
૫. શું તમે તમારા પતિ જોડે આ વિષય અંગે ચર્ચા કરો છો ?
૬. તો શું તમને આ વિશે કોઈ મદદ કે નિરાકરણ સૂચવે છે ? જો હા તો શું ?
૭. શું તમારી પુત્રી, તમે જે તકલીફોનો સામનો કરો છો એ વિશે જાણે છે ?
૮. શું એને કારણો ખબર છે ?
૯. શું આ રજોનિવૃત્તિકાળ વિશે તમારી પુત્રી સાથે ચર્ચા કરો છો ?
૧૦. શું તમે તમારા પ્રશ્નો માટે નીચે દર્શાવેલ કોઈનો સંપર્ક સાધ્યો છે :
 - દાકતર
 - સ્ત્રી રોગ નિષ્ણાત
 - તમારા કુટુંબના વડીલ મહિલા (સંબંધ દર્શાવો)
 - તમારા પાડોશની કોઈ વડીલ મહિલા
 - મિત્ર
 - ઈન્ટરનેટ
 - મૉંગેઝીન
 - અન્ય
- શું તમે જાણો છો કે રજોનિવૃત્તિના લક્ષણો પ્રત્યે બેદરકારી દાખવવાથી ભવિષ્યમાં નીચે દર્શાવેલ તકલીફો પડી શકે છે :
 - ઓસ્ટ્રોપોરોસીસ
 - વારંવાર હાડકામાં તીરાડ પડવી.
 - હૃદયને લગતા રોગો
 - હૃદય રોગનો હુમલો
 - આંખે મોતીયો આવે
 - આંખનું પાણી સૂકાઈ જાય.
 - પાતળી અને કરચલીવાળી ચામડી થઈ જાય.
 - ચામડીના રોગો થાય.

- દાંત પડી જાય.
- માંસપેશીઓ નબળી પડી જાય.
- શું તમે તમારી તકલીફો માટે કોઈ સારવાર કે દવા લ્યો છો ? જેમ કે -
 - એલોપેથિક
 - આયુર્વેદિક
 - હોમિયોપેથિક
 - રેકી
 - એક્યુપ્રેશર
 - યોગ
 - બીજી કોઈ સારવાર - કઈ.
- તમારા પ્રશ્નોનું નિરાકરણ (કઈક અંશે) નીચે દર્શાવેલ એક અથવા તેથી વધારે બાબતોથી થઈ શકે તેમ માનતા હો તો તેમાં ટીક માર્ક કરો :
 - જીવનશૈલીમાં પરિવર્તન
 - રચનાત્મક પ્રવૃત્તિમાં ભાગ લેવો.
 - હકારાત્મક અભિગમ
 - નિયમિત વ્યાયામ (કસરત)
 - ખોરાકમાં પરિવર્તન
 - પુષ્કળ પ્રમાણમાં પાણી પીવું.
 - કૉલ્ડચીમ લેવું.
 - વજન પર કાબૂ રાખવો.
 - યોગ
 - ધ્યાન
 - નિયમિત દાકતરી તપાસ
- ટૂંકમાં જવાબ આપો :
 ૧. તમારા કામની પ્રવૃત્તિનો પ્રકાર જણાવો.
 ૨. શું તમને લાગે છે કે રજોનિવૃત્તિની તમારા કામ પર કોઈ અસર થઈ છે ? શા માટે ?

 ૩. શું તેથી તમારી કામ કરવાની ક્ષમતા પર કે પછી તેના પરિણામ પર કોઈ અસર થઈ છે ? કેવી રીતે
 ૪. શું તમારા પરિવારના અન્ય સભ્યોને તમારા સ્વાસ્થ્ય (રજોનિવૃત્તિ)ને લગતી તકલીફોનો અણસાર છે ? કેવી રીતે ?



 ૫. શું તમારા પરિવારના સભ્યોને તમારી તકલીફો વચ્ચેનો શારીરિક તથા માનસિક સંબંધનો ખ્યાલ છે ખરો ? ખાસ કરીને રજોનિવૃત્તિને લગતી ?

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૬. કોની સાથે તમે તમારી તકલીફો વિશે ખૂબ જ સરળતાથી વાતચીત કરી શકો છો ? શા માટે ?
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૭. તમારા પરિવારમાં કોણ સૌથી વધુ આગ્રહ રાખે કે તમે દાકતરને મળો ?
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૮. તમારી સાથે દાકતર પાસે કોણ આવે ?
૯. તમારા પરિવારના સભ્યો સિવાય તમે કોની સાથે વધુ નીકટતા અનુભવો છો ?
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૧૦. કોની પાસેથી તમને ભાવનાત્મક ટેકો મળી રહે છે ? કયા પ્રકારનો ?
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૧૧. શું તમને તમારી તકલીફો વિશે વધુ માહિતી મેળવવામાં આ પ્રશ્નાવલિ કોઈ રીતે મદદરૂપ થઈ છે ખરી ? હા / ના જો હા, તો કેવી રીતે ?
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આભાર...

STANDARD WEIGHT

WITH CORRESPONDING AGE AND HEIGHT

Age in years 	38 - 42	43 - 47	48 - 52	53 - 58
Ht. in cms 				
148	48.8	49.1	49.3	49.5
150	49.8	50.1	50.3	50.5
152	50.8	51.1	51.3	51.5
153	51.9	52.2	52.4	52.6
156	53.9	53.5	53.5	53.7
158	54.1	54.4	54.7	54.9
160	55.3	55.7	56.0	56.3
162	56.6	57.0	57.4	57.7
164	58.0	58.5	58.9	59.2
166	59.5	60.0	60.4	60.8
168	61.1	61.1	62.0	62.4
170	62.8	63.3	63.7	64.1
172	64.5	65.0	65.5	65.9
174	66.2	66.7	67.3	67.7
176	67.9	68.4	69.1	69.5
178	69.6	70.2	70.9	71.3
180	71.3	72.0	72.7	73.2
182	73.0	73.8	74.5	75.1
184	74.8	75.6	76.3	77.0
186	76.6	77.4	78.1	78.9
188	78.4	79.2	79.9	80.8
190	80.2	81.0	81.7	82.7

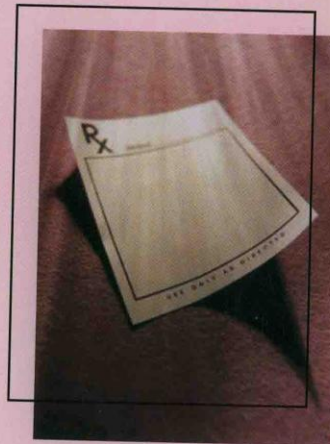
Source: Information supplied through courtesy of Foods and Nutrition Department,
Saurashtra University, Rajkot.



How can you prevent or reduce symptoms and other long-term effects?

You can prevent and treat symptoms of menopause by taking

- Hormone replacement therapy (HRT)
- Isoflavones
- Vitamin D, Calcium, Bisphosphonates are used to prevent and treat osteoporosis due to menopause.

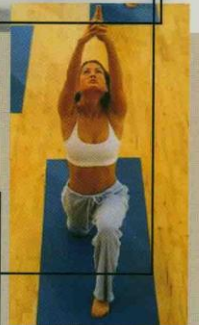
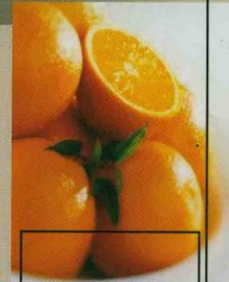


 **Prima**
Helps her enjoy life



How to stay healthy after menopause ?

- Limit Osteoporosis with calcium intake of 1,500 mg/day
- Combat Heart disease
- Control tissue changes
 - Control bladder problems by Kegel exercise
 - Use of water based lubricants for the control of vaginal dryness.
- Eat well-balanced diet with plenty of fresh fruits and vegetables
- Exercise reguly



REGESTRONE
Norethindrone Acetate 5mg
The Reliable Progestogen



What is Menopause?

Menopause is the combination of two Greek words *meno* and *pause*, meaning month and terminate; it means the time when a woman stops having monthly menstrual period (menses). Women usually experience menopause between the age of 40-55 years.

What causes menopause?

Women's body produces hormone called estrogen. This hormone is required for normal menstrual cycle (periods). After 40 years, the production of estrogen from the ovary reduces gradually. This effect results in termination of menstrual cycle.


Helps her enjoy life



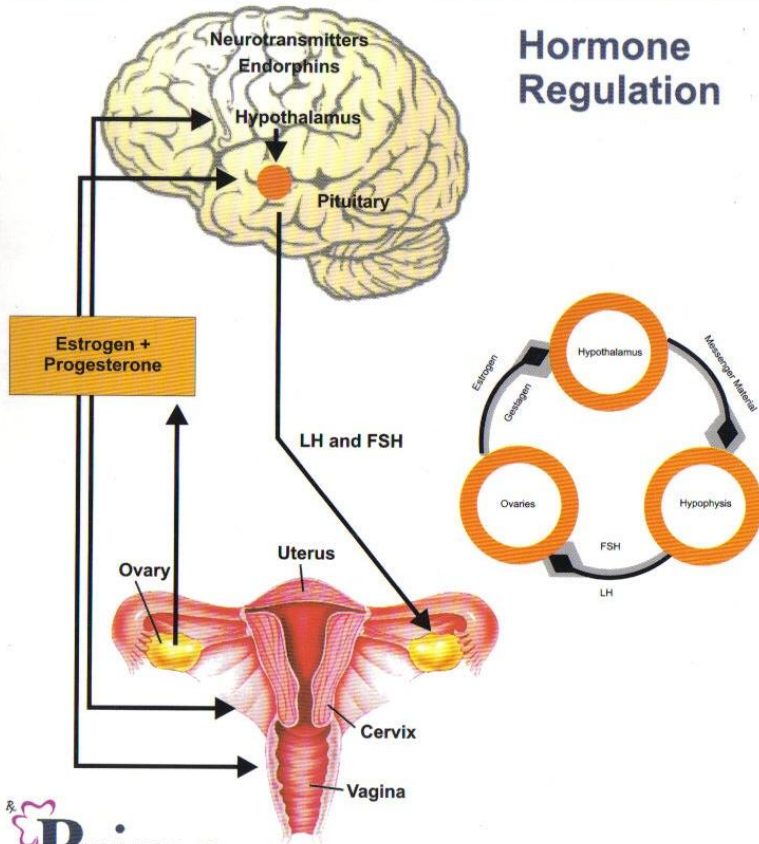
What are the symptoms of menopause?

- Irregular periods: Periods may get shorter or longer, bleeding might be heavy or light. Eventually you will stop getting periods completely.
- Hot flushes: You suddenly feel heat in the upper part or all of your body.
- Heavy sweating especially during night and cold shiver may follow.
- Fatigue: You may feel very tired.
- Sleep problems: You may have trouble sleeping
- Mood changes: Some people may become irritable, moody and depressed.
- You may feel dryness and itching
- You may gain weight in the waist area and may notice loss of muscle mass and, reduction in the breast size.
- You may observe thinning of hair on your head and less firmer skin.
- Sometimes you may experience headache, difficulty in concentrating, memory loss, nervousness, and loss of interest in sex.

The menopausal symptoms are due to decreased levels of estrogen in blood.

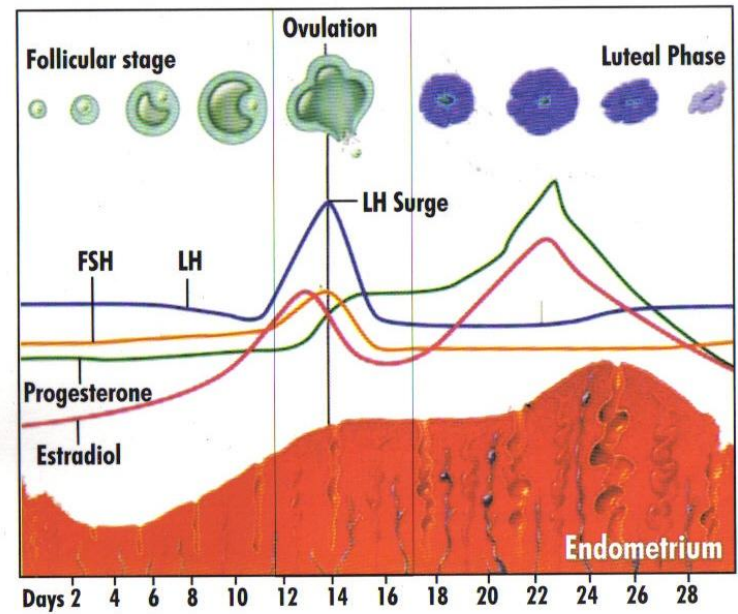

The Reliable Progestogen

Hormone Regulation



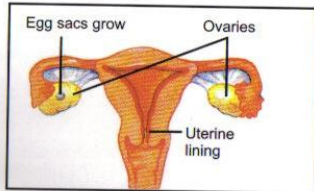
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MENSTRUAL CYCLE



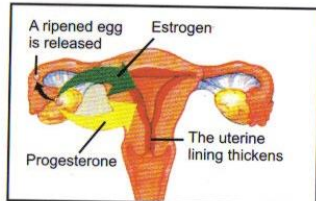
ONCE DAILY
REGO-EVA
Extending reliability in progesterone therapy...

Menarche to menopause



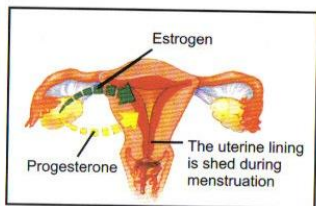
At the start of your cycle

- Tiny egg sacs (follicles) ripen and produce estrogen.
- You're likely to have few or no symptoms.



In the middle of your cycle

- Estrogen level increases.
- The uterine lining thickens.
- Ovulation occurs.
- Progesterone is released, further thickening the uterine lining.
- You may have symptoms. These can include vaginal mucus changes, breast tenderness, mild cramping or headaches.



Towards the end of your cycle

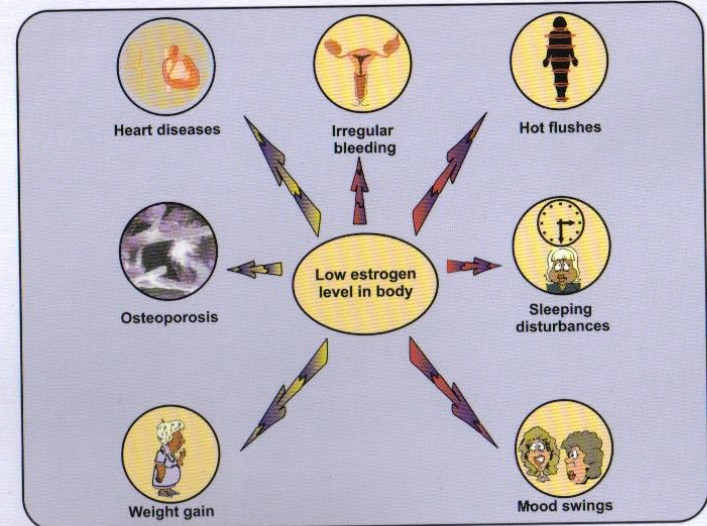
- Progesterone and estrogen levels decrease.
- If the egg is not fertilized, you do not become pregnant. The uterine lining is shed.
- You may have bleeding, bloating, tiredness, irritability, cramping or headaches.

REGESTRONE
The Reliable Progestogen



What are the long-term effects of menopause?

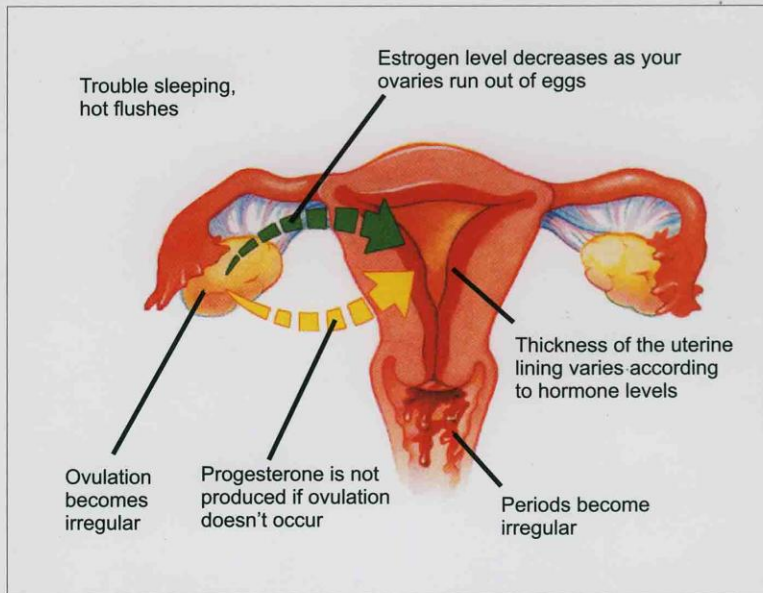
Menopause increases risk for osteoporosis (thinning of your bones) and heart diseases.



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Extending reliability in progestogen therapy.

Stages of menopause

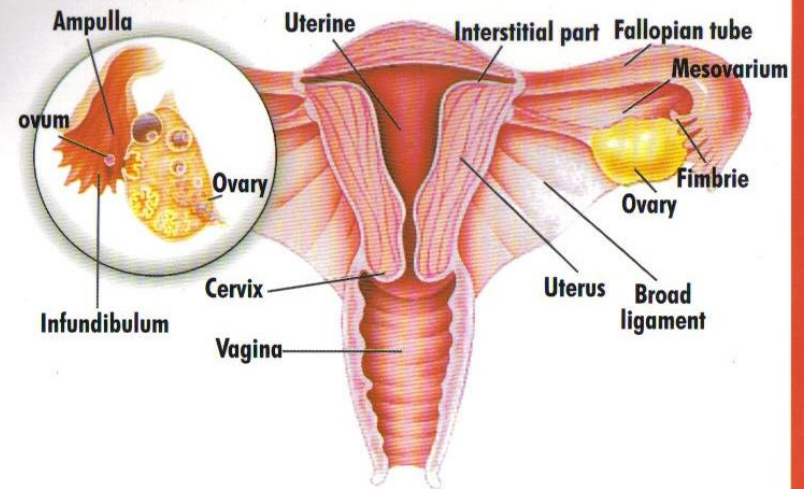
Perimenopausal changes



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Female genital tract

UTERUS



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**REGOEVA**
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