

APPENDIX - I

ACOG Diagnostic Criteria for PMS

Patient reports at least one of each of the following affective and somatic symptoms during the 5 days before menses.

Symptoms must appear in three consecutive menstrual cycles:

Affective : Depression, angry outbursts, irritability, anxiety, confusion, social withdrawal

Somatic : Breast tenderness, abdominal bloating, headache, swelling of extremities

Symptoms must also meet the following criteria:

- Be relieved within 4 days of the onset of menses, without recurrence until at least cycle day 13
- Be present in the absence of any pharmacologic therapy, hormone ingestion, or drug or alcohol use
- Be causing identifiable dysfunction in social or economic Performance
- Occur reproducibly during two cycles of prospective recording

APPENDIX - II

Questionnaire for the Phase-II

Instruction to the respondent: The questionnaire is constructed to gather the general information on the family, dietary habits, medical history of the respondents related to my study. Kindly fill in the needed details accurately and put a tick in appropriate options.

Request: The investigator is thankful to the respondents for sparing their precious time for filling the questionnaire. Parts I,II,III, IV and V can be handed over immediately and part VI alone may need 2 months to fill. I assure you that the details furnished by you will be kept confidentially.

Part I - Demographic characteristics

1. Name :
2. Age :
3. Sex :
4. Address :
5. Area : rural/ urban/ semi urban / metro
6. Marital status : married/ unmarried / widow / separated
7. Family type : joint / nuclear / extended / broken
8. Family size : 2-3 / 4-5 / > 5 members
9. Education : primary / secondary / higher secondary / UG / PG / others
10. Occupation : government / private / student / business / unemployed
11. Nature of job : coolie / clerical / professional / scholarly / administrative
12. Father's education : primary / secondary / higher secondary / UG / PG / others
13. Mother's education : primary / secondary / higher secondary / UG / PG / others
14. Husband's education : primary / secondary / higher secondary / UG / PG / others
15. Occupation of father : government / private / business / unemployed
16. Occupation of mother : government / private / business / unemployed
17. Occupation of husband : government / private / business / unemployed
18. Total income of the family :
 - a. <10000
 - b.1001 – 20000
 - c.2001 – 30000
 - d.> 30000
19. Your income :
20. House : own / rented
21. No. of children : (if applicable) one / two / three / > 3 / none

Part II - Dietary habits

1. Dietary habits : vegan / lactovegetarian/nonvegetarian/ova vegetarian
2. Skipping meals : daily/ frequently / occasionally / not at all
3. Intake of fast food : daily/ frequently / occasionally / not at all
4. Intake of fried foods : daily/ frequently / occasionally / not at all
5. Intake of coffee/ tea : >5 / 5-4 /2-3 / 1-2/ none
6. Intake of milk& its products : 350 ml./ 200-350 ml. / 100-200 ml. / < 100 ml. / no
7. Intake of water / liquid : <1 l/ 1-1.5 l/ 1.5 – 2l / > 2l
8. Intake of fruits : < 100g / 100-200g/ no per day
9. Intake of green leafy vegetables : < 100g / 100-200g/ no per day
10. Intake of other vegetables : < 100g / 100-200g/ no per day
11. Frequency of intake of carbonated beverages: > 3 times a day/ once a day/ occasionally/
rarely
12. Monthly usage of cooking oil for total family : _____liters
13. Type of oil used for cooking (please specify even if it is more than one type:

14. Do you use saturated fat like dalda, ghee, vanaspathi? Yes/ no. If yes _____liters/ month.

Part –II A

Foods taken in special days

| Food item taken | Special days | Reason |
|-----------------|--------------|--------|
| | | |
| | | |
| | | |
| | | |

Part-II B

Foods taken and avoided during menarche

| Food item taken | Reason | Avoided | Reason |
|------------------------|---------------|----------------|---------------|
| | | | |
| | | | |
| | | | |
| | | | |

Part-II C

Foods taken and avoided during menstrual cycle

| Food item taken | Reason | Avoided | Reason |
|------------------------|---------------|----------------|---------------|
| | | | |
| | | | |

Part III - Medical history

1. Age at menarche:
2. Menstrual cycle : 26 days/ 28 days/ 30 days/ irregular
3. Irregularity in periods: yes / no
4. Duration of periods : 3 /5 /7 / > 7 days
5. Health problems related to related to menstrual cycle (specify):
6. Are you under medication?
7. If yes, how long? Why?
8. Do you know what pre menstrual syndrome is? yes/ no
9. What is the source of your knowledge on PMS?
 - a. Family members
 - b. Friends
 - c. Books/ magazine
 - d. Internet
 - e. Tv and mass media
 - f. Any others (please specify)

Part IV A - Anthropometric assessment

1. Height
2. Weight
3. Waist hip ratio
4. BMI

Part-IV B- clinical Assessment

HAEMOGLOBIN LEVEL:

PART – V

KNOWLEDGE ON PREMENSTRUAL SYNDROME

Kindly encircle the answer which you feel correct.

1. Premenstrual syndrome is a
 - a. Disease
 - b. Health problem
 - c. Mental disturbance
 - d. Group of symptoms
2. It is due to
 - a. Disease
 - b. Change in body temperature
 - c. Hormonal change
 - d. Depression
3. It occurs
 - a. Before menstruation
 - b. After menstruation
 - c. During menstruation
 - d. After menopause
4. It Occurs in the age group of
 - a. 18-25
 - b. 25-30
 - c. 35-45
 - d. Any time in reproductive age
5. Symptoms of PMS include _____ symptoms
 - a. Physical
 - b. Mental
 - c. Social
 - d. All the above
6. The PMS symptoms disappear by
 - a. Starting of menstruation
 - b. End of menstruation
 - c. Middle of menstruation
 - d. do not know
7. In severe condition it may
 - a. Affect regular activity
 - b. Irritating
 - c. Not affect activity
 - d. do not know
8. PMS is aggravated by
 - a. Stress
 - b. Smoking
 - c. Alcohol
 - d. All the above
9. There is a tendency to take more
 - a. Junk foods
 - b. Milk
 - c. Water
 - d. Fibrous fruits
10. Common measures to overcome PMS
 - a. Exercise
 - b. Calcium supplement
 - c. Vitamin E
 - d. All

Part-VI

STATE TRAIT INVENTORY-1

Instructions: A number of statements which people have used to describe themselves are given below. Read each statement and then tick the appropriate response to the right statement and then tick to indicate how you feel right now, that is how you feel at the moment. There are no right or wrong answers. This is just to find out how you feel **at present**.

| Sno | Statement | Not at all | Some what | Moderately | Very much |
|-----|---|------------|-----------|------------|-----------|
| 1. | I feel calm | | | | |
| 2. | I feel secure | | | | |
| 3. | I feel tense | | | | |
| 4. | I am regretful | | | | |
| 5. | I feel ease | | | | |
| 6. | I feel upset | | | | |
| 7. | I am presently worrying over possible misfortunes | | | | |
| 8. | I feel rested | | | | |
| 9. | I feel anxious | | | | |
| 10. | I feel comfortable | | | | |
| 11. | I feel self- confident | | | | |
| 12. | I feel nervous | | | | |
| 13. | I am jittery | | | | |
| 14. | I feel "high-strung" | | | | |
| 15. | I am relaxed | | | | |
| 16. | I feel content | | | | |
| 17. | I am worried | | | | |
| 18. | I feel over excited and rattled | | | | |
| 19. | I feel joyful | | | | |
| 20. | I feel pleasant | | | | |

STATE TRAIT INVENTORY-II

INSTRUCTIONS: Instructions: A number of statements which people have used to describe themselves are given below. Read each statement and then tick the appropriate response to the right statement and then tick to indicate how you feel right now, that is how you feel at the moment. There are no right or wrong answers. This is just to find out how you **feel at generally**.

| Sno | Statement | Not at all | Some what | Moderately | Very much |
|-----|--|------------|-----------|------------|-----------|
| 1. | I feel pleasant | | | | |
| 2. | I tire quickly | | | | |
| 3. | I feel like crying | | | | |
| 4. | I wish I could be as happy as others seem to be | | | | |
| 5. | I am losing out on things because I cannot make-up my mind soon enough | | | | |
| 6. | I feel rested | | | | |
| 7. | I feel calm, cool and collected | | | | |
| 8. | I feel that difficulties are piling up so that I cannot overcome them | | | | |
| 9. | I worry too much over something that really does not matter | | | | |
| 10. | I am happy | | | | |
| 11. | I am inclined to take things hard | | | | |
| 12. | I lack self- confidence | | | | |
| 13. | I feel secure | | | | |
| 14. | I try to avoid facing a crisis or difficulty | | | | |
| 15. | I feel blue | | | | |
| 16. | I am content | | | | |
| 17. | Some unimportant thoughts run through my mind and bothers me | | | | |
| 18. | I take disappointment so keenly that I cannot put them out of my mind | | | | |
| 19. | I am a steady person | | | | |
| 20. | I get into a state of tension or turmoil as I think over my recent concern and interests | | | | |

ROGENBERG'S INVENTORY

INSTRUCTIONS: The following statements describe how you feel about yourself. Please record the appropriate answer for each item depending on whether you strongly agree, agree, disagree or strongly disagree with the statements by making a tick mark on the appropriate box.

| S.No | Statements | Strongly disagree | Disagree | Agree | Strongly agree |
|------|---|-------------------|----------|-------|----------------|
| 1. | On the whole I am satisfied with myself | | | | |
| 2. | At times I think I am not good at all | | | | |
| 3. | I feel that I have a number of good qualities | | | | |
| 4. | I am able to do things as well as most other people | | | | |
| 5. | I feel I do not have much to be proud of | | | | |
| 6. | I certainly feel useless at times | | | | |
| 7. | I feel that I am a person of worth | | | | |
| 8. | I wish I could have more respect for myself | | | | |
| 9. | All in all, I am inclined to think I am a failure | | | | |
| 10. | I take a positive attitude towards myself | | | | |

(யாணவியருக்கு)

முதுகலை/அதற்குட்படி

1. தாயாண கலவா தகுதி : பள்ளி/கல்லூரி/பள்ளி உயர்நிலை/முதுகலை அதற்குட்படி
2. கணவியாண கலவா தகுதி (பொருநதணாணவியுட்படி) /கல்லூரி/பள்ளி உயர்நிலை/பள்ளி: முதுகலை/அதற்குட்படி
3. தகவணார வேலை வபரய : அரசு/பெற்றவர ஓயவடி பணா/தணாயார/வேலை ஜூலலல
4. தாயாரண வேலை வபரய: அரசு/பெற்றவர ஓயவடி பணா/தணாயார/வேலை ஜூலலல
5. கணவியாண வேலை வபரய : அரசு/பெற்றவர ஓயவடி பணா/தணாயார/வேலை ஜூலலல
6. குடியப வகுயாணவய _____ கு யாதய :
(அ) <10,000 (ஆ)10,001-20,000 (இ)20,001-30,000 (ஈ)>30,000
7. தவகவ வகுயாணவய _____ கு :
8. குழநலதகவ பற்றய வபரய : 0/ 1/ 2/<2
(பெழுதவடி பொருநதணாணவியுட்படி)
9. குழநலதகவாண வயது :
10. குழநலதகவாண கலவா தகுதி :
11. வகு : வசாநத வகு வகு வாலகை /

பகுதி -II(உணவடிபபழகய)

1. உணவடி பழகயமுலாற முடலாட+லாசவய/அலாசவய/லாசவய :
2. உணவடி லாகவாடுதல பழகய : தாண முய/பெபபா முதா வது/அடிதடி/பெபபா முதய ஜூலலல
3. துராத உணவடி உடகவாணகுதல/அடிதடிபெபபா முதா வது/தாண முய: பெபபா முதய ஜூலலல
4. காவபகுதல ,டி , :>5/ 3-4/ 1-2/ 0
5. பால யற்றய பால சாரநத பெபபாடுகவ உணலுதல :
>200ml100-200ml/<100ml/உணபதலலல

3. அது ஏற்படுவது?

முன் வால்சுதரகு மாத(அ) பண் யாத்வால்சுதரகு(ஆ)
பொது யாத்வால்சுதரகு(இ) நன்றப்பபண் வால்சுதரகு மாத (ஈ)
4. அது ஏற்படுவது? பெயர் _____
(அ)1-25 (ஆ)25-30 (இ)35-45 (ஈ)வெண்ணாயாணியு பப்பாயுது (ய)
5. அதன் அறகுறகு? கொளியு _____
யாயு இவை(ஈ) ரதயாண சமுத(இ)ரதயாண மன்(ஆ) ரதயாண உடல (அ)
6. ஐதன் அறகுறகு யறவது?
முதறதவுடண் யாத்வால்சுதரகு (ஆ) ஆரயபதறதவுடண் யாத்வால்சுதரகு(அ)
வதரயவால்சுதரகு (ஈ) நடுவால் யாத்வால்சுதரகு (இ)
7. யாத்வாடாய அறகுறகு தவாரயாக ஐருறதால்?
வசயயு வரரசலலடய (ஆ) பாதகுய வேலைய தின் (அ)
வதரயவால்சுதரகு (ஈ) ஐருதகாது பாதபு (இ)
8. அதன் அறகுறகு அதிரப்பது?
பழகுததால் புலக (ஆ) அமுததததால் மன் (அ)
வல்லவறறாயு இவை (ஈ) அருறதுவதால் யது (இ)
9. ஐதனால இதை அதிகமாக உண்ண ஆசை ஏற்படுய?
உணவு நாரசதுவா (ஈ) தண்ணி (இ) பால் (ஆ) உணவு துரத (அ)
10. யாத்வாடாயகுய முறறதய கொளியு ஐதனால அறகுறகு /
?சயாணகலாய
(அ) உடரயயறச (ஆ) காலசயய யாத்வால்சுதரகு (இ) வலலயாண (ஈ)
ஐவயாயு]

Appendix – II (Part-VI)

PREMENSTRUAL DAILY SYMPTOM DIARY

NAME: _____ MONTH _____

Write the date in the first row starting with today. Circle the days of menstrual periods.
 Each day rate the severity of your symptoms 1=no symptom; 2= mild ; 3=moderate and 4=severe

| Date | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | |
|--------------------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|
| Days of the month | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IRRITABILITY OR TENSION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ANGER /SHORT TEMPER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ANXIETY / NERVOUSNESS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DEPRESSION/SADNESS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CRYING / TEARFULNESS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RELATIONSHIP PROBLEM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TIERDNESS/LACK OF ENERGY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| INSOMNIA/SLEEPLESSNESS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHANGES IN SEXUAL INTEREST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FOOD CRAVING / OVER EATING | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DIFFICULTY IN ONCENTRATING | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FEELING OVERWELMED | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| HEADACHES | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BREAST TENDERNESS AND SWELLING | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BACK PAIN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ABDOMINAL PAIN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MUSCLE AND JOINT PAIN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| WEIGHT GAIN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NAUSEA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OTHERS (SPECIFY) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OTHERS (SPECIFY) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Appendix - III

QUESTIONNAIRE FOR PHASE-IV

OBJECTIVE: The objective of the questionnaire is to gather information on the height, weight, biochemical assessment and knowledge on Premenstrual Syndrome only. It is taken only for the PhD study purpose of the investigator. The details given by you will be kept confidential. Kindly go through the details and write the appropriate details for each question.

நோக்கம் : இந்த நோக்கம் தங்களைப் பற்றிய தகவலை மற்றும் மாதவிடாய் முற்பட்ட காலத்தில் ஏற்படும் பிரச்சனை பற்றி தங்கள் புரிதலை தெரிந்து கொள்வதே. உங்களுடைய தகவல்கள் யாவும் ரகசியமாக வைக்கப்படும். அத்துடன் அத்தகவல்கள் எனது படிப்பிற்கு மட்டுமே பயன்படுத்தப்படும் என தெரிவிக்கின்றேன்.

PART-1

1. NAME பெயர் :
2. Age வயது :
3. MARITAL STATUS திருமண விவரம் : மணமானவர்/ஆகாதவர்/விதவை/பிரிந்து வாழ்பவர்
4. NO OF CHILDREN (IF MARRIED) குழந்தைகள் (திருமணமானவராயின்):
5. EDUCATIONAL STATUS கல்வித்தகுதி:
6. பூப்பெய்திய வயது AGE AT MENARCHE :
7. DURATION OF MENSUS மாதவிடாய் நாட்கள்:
8. MENSTRUAL CYCLE DAYS மாதவிடாய் சுழற்சி நாட்கள்:
9. WORKING/NON-WORKING வேலை செய்பவர்/செய்யாதவர்

PART-II

HEIGHT

WEIGHT

BMI

WAIST/HIP RATIO

PART-III BIOCHEMICAL ASSESSMENT

1. SERUM CALCIUM
2. SERUM MAGNESIUM
3. SERUM FERRITIN
4. TIBC
5. SERUM IRON

PART-IV CLINICAL ASSESSMENT-Nutrition Assessment Schedule

Serial No. : _____ Date : _____
 Name : _____ Age : _____
 Address : _____ Sex : _____
 District : _____ Village : _____

CLINICAL :

- (1) General appearance : Normal built/Thin built/Sickly
- (2) Hair : Normal/lack of lustre/dyspigmented/thin and sparse/easily pluckable/flag sign
- (3) Face : Diffuse depigmentation/naso-labial dyssebacea/moon face
- (4) Eyes : Conjunctiva – normal/dry on exposure for ½ min/dry and wrinkled/bitot’s spots/
brown pigmentation/angular conjunctivitis/pale conjunctiva
Cornea – normal/dryness/hazy or opaque
- (5) Lips : Normal/angular stomatitis/cheilosis
- (6) Tongue : Normal.pale and flabby/red and raw/fissured/geographic
- (7) Teeth : Mottled enamel-caries/attrition
- (8) Gums : Normal/spongy/bleeding
- (9) Glands : Thyroid enlargement/parotid enlargement
- (10) Skin : Normal/dry and scaly/follicular hyperkeratosis/petechiae/pellagrous
dermatosis/flanky paint dermatosis/scrotal and vulval dermatosis
- (11) Nails : Koilonychia
- (12) Oedema : In dependent parts
- (13) Rachitic changes : Knock-knees or bow legs/epiphyseal enlargement/beading of the ribs/
pigeon chest
- (14) Internal systems : Hepatomegaly/psychomotor change/mental confusion/sensory loss/muscle
wasting/motor weakness/loss of position sense/loss of vibration sense/loss of
ankle and knee jerks/calf tenderness/cardiac enlargement/tachycardia.

PART-V DIET SURVEY

| DAY | BREAKFAST | | MID MORNING | | LUNCH | | MID LUNCH | | TEA | | DINNER | |
|-----|-----------|-----|-------------|-----|-------|-----|-----------|-----|------|-----|--------|-----|
| | ITEM | QTY | ITEM | QTY | ITEM | QTY | ITEM | QTY | ITEM | QTY | ITEM | QTY |
| I | | | | | | | | | | | | |
| II | | | | | | | | | | | | |
| III | | | | | | | | | | | | |

PART-VII

BDI

Below are given twenty one items, read them carefully and encircle any one of the four alternatives given below each item. There are no right or wrong answers. Your responses will be kept confidential and are strictly meant only for research purpose.

கீழேக் கொடுக்கப்பட்டுள்ள ஏதாவதொரு விவரங்களைக் கவனமாகப் படித்து அந்தந்த விவரங்களின் கீழ் கொடுக்கப்பட்டுள்ள பதில்களில், உங்களுக்குப் பொருத்தமான ஏதாவதொன்றை தேர்ந்தெடுத்து அந்தப் பதிலுக்கு நேர் எதிரேயுள்ள எண்ணை வட்டமிடவும். இந்தப் பதில்களில் சரியான பதில் என்றோ, தவறான பதில் என்றோ எதுவும் கிடையாது.

எந்தவிதத் தயக்கமுமின்றி, வெளிப்படையாகக் கேள்விகளுக்குப் பதில் அளிக்கவும், உங்களது பதில்கள் ரகசியமாக வைத்துக் கொள்ளப்படுவதுடன், ஆராய்ச்சி விவரங்களுக்கு மட்டும் தான் பயன்படுத்தப்படும்.

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| 1. | Sadness 0) I do not feel sad 1) I feel sad 2) I am sad all the time and I can't snap out of it 3) I am so sad or unhappy that I can't stand it | வருத்தம் 0) நான் வருத்தப்படுவதில்லை 1) நான் வருத்தமாக இருக்கிறேன் 2) அ. நான் எந்நேரமும் வருத்தமாயிருக்கிறேன். என்னால் அந்நிலையிலிருந்து விடுபட முடியவில்லை. ஆ. நான் மிகவும் வருத்தமாகவும், மகிழ்ச்சியின்றியும் இருக்கிறேன் அது மிகவும் துன்பத்தை அளிக்கிறது. 3) நான் மிக வருத்தமாகவும், மகிழ்ச்சியின்றியும் இருக்கிறேன், அதை என்னால் தாங்க முடியவில்லை. |
| 2. | Pessimism nothing to look forward to 0) I am no particularly discouraged about the future 1) I feel discouraged about the future 2) I feel I have | 2. தோல்வி மனப்பான்மை 0) எனக்குக் குறிப்பாக எதிர்காலத்தைப் பற்றித் தோல்வி மனப்பான்மையோ அல்லது நம்பிக்கையின்மையோ இல்லை 1) எதிர்காலத்தைப் பற்றி |
| | 3) I feel that the future is hopeless and that things cannot improve | எதுவும் இல்லை. தோல்வியிலிருந்து நான் என்றாவது மீள்வேன் என்று தோன்றவில்லை. 3) எனக்கு எதிர்காலம் பயனற்றதாகவும், எந்தக் காரியங்களிலும், முன்னேற்றமிருக்காது என்றும் கருதுகிறேன். |
| 3. | Sense of Failure 0) I do not feel like a failure 1) I feel I have failed more than the average person 2) As I look back on my life, all I can see is a lot of failure 3) I feel I am complete failure as a person. | தோல்வியற்ற மனநிலை 0) எனக்கு எதிலும் தோல்வியில்லை என்று நினைக்கிறேன். 1) பிறரின் சாதாரணத் தோல்விகளை விட நான் அதிகம் தோல்வி அடைந்ததாகக் கருதுகிறேன். 2) அ. நான் இதுவரை எதுவும் சொல்லக்கூடிய அளவுக்கு அல்லது குறிப்பிடத்தக்க அளவுக்கு எதையும் சாதிக்கவில்லை என்று கருதுகிறேன். ஆ. நான் என்பது வாழ்க்கையைத் திரும்பிப் பார்க்கும்போது எனக்குத் தோன்றுவனவெல்லாம் அதிகமாகத் தோல்விகள் தான் |

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| | | 3) இதுவரை எனது வாழ்க்கையில் அனைத்துமே தோல்விதான் என்று கருதுகிறேன். (ஒரு தாயாகவோ, தந்தையாகவோ, மனைவியாகவோ, கணவனாகவோ) |
| 4. | Dissatisfaction 0)U get as nycg satisfaction out of things as I used to 1) I don't enjoy things the way I used to 2) I don't get real satisfaction out of anything anymore 3) I am dissatisfied or bored with everything | திருப்தியின்மை 0) குறிப்பிடத்தக்க அளவுக்கு நான் திருப்தியில்லாமல் இல்லை 1) பெரும்பாலான வேளையில் நான் சலிப்பாக இருக்கிறேன். 2)அ. முன்பு அனுபவித்தது போன்று இப்போது என்னால் அனுபவிக்க முடியவில்லை ஆ. தற்போது எந்த விஷயத்திலும் என்னால் திருப்தியடைய முடியவில்லை. 3) எல்லாவற்றிலுமே எனக்கு அதிருப்திதான் |
| 5. | Guilt 0) I don't feel particularly guilty 1) I feel guilty a good part of the time 2) I feel quite guilty most of the time 3) I feel guilty all of the time | குற்ற உணர்வு 0) எதிலும் குறிப்பிடத்தக்க குற்ற உணர்வு இல்லை. 1) நான் பெரும்பாலான வேளையில் கெட்டவன், தகுதியற்றவன் என்று உள்கிறேன். 2) அ. நான் மிகவும் குற்றவுணர்வு உடையவனாக இருக்கிறேன். ஆ. எந்நேரமும் கெட்டவன் தகுதியற்றவன் என்ற உணர்வோடு இருக்கிறேன். 3) நான் மிகவும் கெட்டவன், ஒரு தகுதியும் அற்றவன் என்பதைப் போன்ற உணர்வு ஏற்படுகின்றது. |
| 6. | Expectation of punishment 0) I don't feel I am being punished 1) I feel I may be punished 2) I expect to be punished 3) I feel I am being punished | தண்டனையை எதிர்பார்த்திருத்தல் 0) நான் தண்டனை அடைவது போன்ற உணர்வு எனக்கு ஏற்படவில்லை. 1) ஏதோ ஒரு கெடுதல் ஏற்படப் போகின்றது என்ற உணர்வு ஏற்படுகின்றது. 2) ஏதோ ஒரு தண்டனையை அடைந்து கொண்டிருக்கிறேன் அல்லது அடையப்போகி என்ற உணர்வு ஏற்படுகின்றது 3) .. நான் தண்டனை அடைவதற்கு ஏற்றவன் தான் என்று உணர்கிறேன் ஆ. நான் தண்டனை அடைய வேண்டும். |
| 7. | Self-Dislike 0) I don't feel disappointed in myself 1) I am disappointed in myself 2) I am disgusted with myself 3) I hate myself | சுய வெறுப்பு 0) என்னைப் பற்றியே எனக்கு ஏமாற்றம் ஏதுமில்லை 1) அ. என்னைப் பற்றி நான் ஏமாற்றம் அடைகிறேன் ஆ. என்னையே நான் விரும்பவில்லை 2) என்னைப்பற்றி எண்ணங்கள் எனக்கு மனக்கஞ்சலத்தை ஏற்படுத்துகிறது. 3) என்னையே நான் வெறுக்கிறேன். |
| 8. | Self-Accusations 0) I don't feel I am ay worse than anybody else 1) I am critical of myself for my weakness or | சுய குற்றச்சாட்டு 0) மற்றவர்களைவிட எந்த அளவிலும் நான் மோசமானவன் என்று எண்ணுவதில்லை 1) என்னுடைய பலவீனங்களுக்கும், தவறுகளுக்கும் என்னையே குறை கூறுகின்றேன். 2) என் தவறுகளுக்கு என் மேலேயே பழியைச் |

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| | <p>mistakes</p> <p>2) I blame myself all the time for my faults</p> <p>3) I blame myself for everything bad that happens</p> | <p>சுமத்திக் கொள்கிறேன்.</p> <p>3) என்ன கெடுதல் நடந்தாலும் அது என்னால் தான் என்று என் மேலேயே பழியைச் சுமத்திக் கொள்கிறேன்</p> |
| 9. | <p>Suicidal Thoughts (Self harm)</p> <p>0) I don't have any thoughts of killing myself</p> <p>1) I have thoughts of killing myself, but I would not carry them out</p> <p>2) I would like to kill myself</p> <p>3) I would kill myself if I had the chance</p> | <p>தற்கொலை எண்ணங்கள்</p> <p>0) எனக்கே கெடுதல் செய்து கொள்ளும் எண்ணம் எனக்கில்லை</p> <p>1) எனக்கே கெடுதல் செய்து கொள்ளும் எண்ணங்கள் எனக்கிருந்தாலும் அதை நான் செயல்படுத்த மாட்டேன்</p> <p>2) அ. நான் இறந்து விட்டால் மேல் என்று தோன்றுகிறது</p> <p>ஆ. நான் இறந்து விட்டால் என் குடும்பம் இப்பொழுது இருப்பதை விட நன்றாக இருக்குமென்று நினைக்கிறேன்</p> <p>3) அ. எனக்குத் தற்கொலை செய்து கொள்ளத் திடமான எண்ணங்கள் இருக்கின்றன.</p> <p>ஆ. என்னால் முடிந்தால் என்னையே கொன்று கொள்வேன்.</p> |
| 10. | <p>Crying Spells</p> <p>0) I don't cry any more than usual</p> <p>1) I cry more now than I used to</p> <p>2) I cry all the time now</p> <p>3) I used to be able to cry, but now I can't cry even though I want to</p> | <p>அழுதல்</p> <p>0) நான் சாதாரணமாக அழுவதை விட அதிகமாக இப்போது அழுவதில்லை</p> <p>1) நான் சாதாரணமாக அழுவதை விட இப்போது சற்று அதிகமாக அழுகிறேன்.</p> <p>2) நான் தற்போது எந்நேரமும் அழுது கொண்டிருக்கிறேன். என்னால் அதை நிறுத்த முடியவில்லை</p> <p>3) முன்பெல்லாம் என்னால் அழ முடியும். ஆனால் தற்போது அழ நினைத்தாலும் அழ முடிவதில்லை.</p> |
| 11. | <p>Irritability</p> <p>0) I am more irritated now than I ever am</p> <p>1) I get annoyed or irritated more easily than I used to</p> <p>2) I feel irritated all the time now</p> <p>3) I don't get irritated at all by the things that used to irritate me</p> | <p>சிடுசிடுப்பு</p> <p>0) எனக்கு எப்போதும் ஏற்படும் சிடுசிடுப்பை விட இப்பொழுது அதிகமாக சிடு சிடுப்பு ஏற்படவில்லை</p> <p>1) அளவுக்கு அதிகமாக சிடுசிடுப்பும் எரிச்சலும் அடைகிறேன்.</p> <p>2) எந்நேரமும் எனக்குச் சிடு சிடுப்பாகவே இருக்கிறது.</p> <p>3) சிடுசிடுப்பு அடைய வேண்டிய விஷயங்களுக்குக் கூட இப்போது சிடுசிடுப்பு அடைவதில்லை.</p> |
| 12. | <p>Social Withdrawal</p> <p>0) I have not lost interest in other people.</p> <p>1) I am less interested in other people than I used to be</p> <p>2) I have lost most of my interest in other people</p> <p>3) I have lost all of my interest in other people</p> | <p>சமூகத் தொடர்பின்றி பின் வாங்குதல்</p> <p>0) பிறரிடமுள்ள அக்கறையை நான் இடக்கவில்லை.</p> <p>1) வழக்கத்திற்கு மாறாக நான் தற்போது பிறரின் மேல் குறைந்த அளவில் அக்கறை காட்டுகிறேன்.</p> <p>2) எனக்கு மற்றவர் மேலுள்ள அக்கறை பெரும்பாலும் குறைந்து விட்டது. அவர்கள் பால் கொண்ட உணர்வுகள் குறைந்துவிட்டன.</p> <p>3) மற்றவர்களைப் பற்றி அக்கறையே கொள்வதில்லை. மற்றவர்களைப் பற்றி</p> |

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| | | கவலைப்படுவதுமில்லை. |
| 13. | Indecisiveness 0) I make decision about as well as I ever could 1) I put off making decisions more than I used to 2) I have greater difficulty in making decisions than I used to | தீர்மானம் செய்ய இயலாமை 0) எப்பொழுதும் போலவே இப்பொழுதும் சுலபமாகத் தீர்மானம் செய்ய முடிகிறது. 1) தீர்மானங்கள் எடுப்பதை ஒத்திப் போட முயல்கிறேன் 2) தீர்மானங்கள் செய்ய எனக்கு மிகவும் சிரமமாக இருக்கிறது. 3) என்னால் இனிமேல் எந்த முடிவும் எடுக்க முடியாது. |
| 14. | Body Image Change 0) I don't feel I look any worse than I used to 1) I am worried that I am looking old or unattractive 2) I feel that there are permanent changes in my appearance that make me look unattractive 3) I believe that I look ugly. | உடல் தோற்றம் 0) என் உடல் தோற்றம் முன்னை விட மோசமாக இருப்பதாக எண்ணவில்லை 1) நான் வயதானவனாகவும், கவர்ச்சியற்றவனாகவும் இருப்பதாக நிகைத்துக் கவலைப்படுகிறேன். 2) எனது தோற்றத்தில் நிரந்தரமான மாற்றங்கள் இருப்பதாக உணர்கிறேன். 3) நான் விகாரமான அல்லது அருவருப்பான தோற்றத்தைக் கொண்டிருப்பதாக உணர்கிறேன். |
| 15. | Work Difficulty (work Retardation) 0) I can work about as well as before 1) It takes an extra effort to get started at doing something 2) I have to push myself very hard to do anything 3) I can't do any work at all | வேலையில் பின் தங்குதல் 0) முன்பு போல என்னால் வேலை செய்ய முடிகிறது. 1) அ. ஏதாவதொரு வேலை செய்யத் தோடங்க அதிக முயற்சி எடுக்க வேண்டியதாக இருக்கிறது. ஆ. முன்பு செய்ததைப் போல என்னால் இப்போது வேலை செய்ய முடியவில்லை. 2) எதையாவது ஒன்றை செய்ய நான் என்னை கட்டாயப்படுத்தி உந்த வேண்டியுள்ளது. 3) என்னால் எந்த வேலையும் செய்ய முடியவில்லை. |
| 16. | Sleep Disturbance) I can work about as well as before 1) It takes an extra effort to get started at doing something 2) I have to push myself very hard to do anything 3) I can't do any work at all | உற்சாகமின்மை 0) என்னால் எப்பொழுதும் போலத் தூங்க முடிகிறது. 1) காலையில் தூங்கி எழும்போது எப்போதையும் விட அசதியாக இருக்கிறது. 2) எப்பொழுதையும் விட 1, 2 மணி நேரம் முன்னதாகவே எழுந்து விடுகின்றேன். அதன் பின் மீண்டும் உறங்க முடியவில்லை. 3) நான் மிகவும் அதிகாலையில் எழுந்து விடுகின்றேன். என்னால் 5மணி நேரத்திற்கு மேல் தூங்க முடிவதில்லை. |
| 17. | Fatigability 0) I don't get more tired than usual 1) I get tired more easily than I used to | அசதியடைதல் 0) எப்பொழுதையும் விட இப்பொழுது அதிகமாக அசதி அடைவதில்லை 1) நான் எப்பொழுதையும் விட இப்பொழுது மிக எளிதில் அசதி அடைகிறேன் |

| | | |
|-----|---|---|
| | <p>2) I get tired from doing almost anything</p> <p>3) I am too tired to do anything</p> | <p>2) நான் எந்தச் செயலைச் செய்தாலும் அசதி அடைகிறேன்</p> <p>3) எதையும் செய்ய முடியாமல் மிகவும் அசதி அடைகிறேன்.</p> |
| 18. | <p>Anorexia</p> <p>0) My appetite is no worse than usual</p> <p>1) My appetite is not as good as it used to be</p> <p>2) My appetite is much worse now</p> <p>3) I have no appetite at all anymore</p> | <p>பசியின்மை</p> <p>0) பசி எப்பொழுதும் போலவே இப்பொழுதும் ஏற்படுகிறது</p> <p>1) முன்பு போல் பசி நன்றாக இருப்பதில்லை</p> <p>2) தற்போது பெரும்பாலும் பசி எடுப்பதில்லை</p> <p>3) இப்பொதெல்லாம் எனக்குப் பசியே எடுப்பதில்லை</p> |
| 19. | <p>Weight Loss</p> <p>0) I haven't lost much weight, if any, lately</p> <p>1) I have lost more than 5 kilos</p> <p>2) I have lost more than 10 kilos</p> <p>3) I have lost more than 15 kilos</p> | <p>எடை குறைதல்</p> <p>0) சமீபத்தில் என் எடை ஏதும் குறையவில்லை</p> <p>1) 5 கிலோ எடைக்குமேல் குறைந்திருக்கிறேன்</p> <p>2) 10 கிலோ எடைக்கு மேல் குறைந்திருக்கிறேன்</p> <p>3) 15 கிலோ எடைக்கு மேல் குறைந்திருக்கிறேன்</p> |
| 20. | <p>Somatic Preoccupation</p> <p>0) I am no more worried about my health than usual</p> <p>1) I am worried about physical problems such as aches and pains, or upset stomach or constipation</p> <p>2) I am very worried about physical problems and it is hard to think o much else</p> <p>3) I am so worried about my physical problems, that I cannot think about anything else.</p> | <p>உடல் நிலைப் பற்றிய எண்ணங்கள்</p> <p>0) நான் எப்பொழுதையும் விட என் உடல் நலத்தைப் பற்றி அதிகம் கவலைப்படுவதில்லை.</p> <p>1) நான் உடல்வலி, வயிற்றுக்கோளாறு, மலச்சிக்கல் ஆகியவை பற்றிக் கவலைப்படுகிறேன்.</p> <p>2) நான் உடல்நிலையைப் பற்றியே நினைத்துக் கொண்டிருப்பதால் மற்றவற்றைப் பற்றி நினைக்க முடிவதில்லை.</p> <p>3) நான் முழுமையாக உடல் நிலை பற்றியே எந்நேரமும் ஆழ்ந்த சிந்தனையில் இருக்கிறேன்.</p> |
| 21. | <p>Loss of Libido</p> <p>0) I have not noticed any recent change in my interest In sex</p> <p>1) I am less interested in sex than I used to be</p> <p>2) I am much less interested in sex now</p> <p>3) I have lost interest in sex completely</p> | <p>பால் உணர்ச்சி இழப்பு</p> <p>0) என்னுடைய பாலுணர்வு அக்கறையில் எனக்குச் சமீபத்தில் எந்த மாறுதலும் இல்லை</p> <p>1) முன்பை விட பாலுணர்வில் சிறிதளவு அக்கறை குறைந்து விட்டது.</p> <p>2) எனக்கு பாலுணர்வில் உள்ள அக்கறை பெரும்பாலும் குறைந்து விட்டது.</p> <p>3) எனக்குப் பாலுணர்வில் அக்கறை அறவே இல்லை.</p> |

PART VII - Questionnaire - Knowledge on Premenstrual syndrome

1. Have heard of the term PMS
 - a. Yes
 - b. No
2. PMS means symptom occurring
 - a. Before periods
 - b. After periods
 - c. During periods
 - d. Always
3. Symptoms of PMS include _____ disturbance.
 - a. Physical
 - b. Social
 - c. Emotional
 - d. All
4. The hormone linked to PMS is
 - a. oestrogen
 - b. Progesterone
 - c. Insulin
 - d. TSH
5. Common symptoms noted in PMS
 - a. fluid retention
 - b. Diaphoresis
 - c. Giddiness
 - d. Vomiting
6. Most of the women experience PMS between _____ days of menstrual cycle
 - a. 7-14
 - b. 9-10
 - c. 3-5
 - d. 20-25
7. Prevalence of PMS commonly reported is
 - a. 80%
 - b. 30%
 - c. 60%
 - d. 100%
8. Age group affected by PMS is
 - a. 15-20yrs
 - b. 20-40 yrs
 - c. 40-45 yrs
 - d. All age
9. PMS occurs in which stage of menstrual periods
 - a. Ovulation
 - b. Fertilization
 - c. Luteal
 - d. All stages
10. Very common physiological symptom of PMS is
 - a. Fatigue
 - b. Obesity
 - c. Weight loss
 - d. Over eating
11. Emotional symptoms of PMS like anger, anxiety, tension, irritability may be due to low levels of _____ in blood.
 - a. Serotonin
 - b. Calcium
 - c. Iron
 - d. Water
12. Food craving may lead to the intake of high
 - a. Carbohydrate
 - b. Protein
 - c. Both
 - d. None
13. In PMS food craving is commonly noted for
 - a. Sweet
 - b. Salt
 - c. Sour
 - d. Bitter
14. Mood swing, depression and isolation are due to low levels of serum
 - a. Magnesium
 - b. Calcium
 - c. Iron
 - d. Protein
15. Women with moderate to severe symptoms of PMS have lower levels of
 - a. Iron
 - b. Fibre
 - c. Protein
 - d. Vit A
16. Vitamin involved in the reduction of PMS symptoms is
 - a. B1
 - b. B6
 - c. B12
 - d. B2
17. Possible risk factor for PMS
 - a. Stress
 - b. Heredity
 - c. Life style
 - d. All
18. Diet change recommended to reduce PMS is increased intake of
 - a. Fruits & veg
 - b. Fried items
 - c. Chips and pastry
 - d. Sweets
19. In severe form PMS many
 - a. Affect eating
 - b. Affect regular activity
 - c. Make you lazy
 - d. None
20. Common supplementary treatment followed include
 - a. Calcium
 - b. Evening primrose oil
 - c. Magnesium
 - d. All

Appendix - IV

Score card for the sensory evaluation of the formulated health mix

| Characteristics | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|------------------------|--------------------|---------------------|-------------------|----------------------------|----------------|------------------|-----------------|
| Appearance | Disliked very much | Disliked moderately | Disliked slightly | Neither liked nor disliked | Liked Slightly | Liked Moderately | Liked very much |
| Colour | Disliked very much | Disliked moderately | Disliked slightly | Neither liked nor disliked | Liked Slightly | Liked Moderately | Liked very much |
| Texture | Disliked very much | Disliked moderately | Disliked slightly | Neither liked nor disliked | Liked Slightly | Liked Moderately | Liked very much |
| Taste | Disliked very much | Disliked moderately | Disliked slightly | Neither liked nor disliked | Liked Slightly | Liked Moderately | Liked very much |
| Flavour | Disliked very much | Disliked moderately | Disliked slightly | Neither liked nor disliked | Liked Slightly | Liked Moderately | Liked very much |
| Mouth feel | Disliked very much | Disliked moderately | Disliked slightly | Neither liked nor disliked | Liked Slightly | Liked Moderately | Liked very much |

Signature of the panel member

Appendix - V

**NUTRITION AND HEALTH EDUCATION MODULE FOR
PREMENSTRUAL SYNDROME**



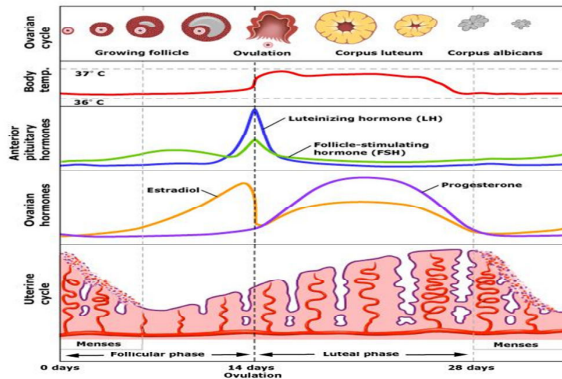
PMS is used to describe physical, cognitive, affective and behavioural symptoms that occur cyclically during the luteal phase of the menstrual cycle and resolve quickly at or within a few days of the onset of menstruation (Braverman, 2007).

Meaning of PMS: The term premenstrual syndrome refers to a cluster of mood, physical and cognitive symptoms that occur during the luteal phase of menstrual cycle and subside with the onset of menstruation.

Symptoms that indicate Premenstrual syndrome

- occur between ovulation and first day of menstrual bleeding
- stop after bleeding
- are not present for at least 7 days after your menstrual period.

What is luteal phase of menstrual cycle?



Changes happening in luteal phase:

1. increase in the body temperature
2. reduction on oestrogen level
3. increase in progesterone level
4. soft spongy uterus

The bodily changes due to hormonal change:

- In luteal phase, endomorphin level falls drastically in some women that causes pain, uneasiness and nausea.
- Increased progesterone levels hinders the usual relaxation pattern of your brain. This causes anxiousness, irritability, restlessness and tension.
- Imbalance in hormone levels affects kidneys leading to fluid retention and salt retention. This leads to weight gain and some negative self-perceptions emotionally.
- Reduction in appetite and craving to eat unhealthy foods. This leads to drop in vitamin B6 and vitamin A and E levels.
- Reduction in vitamins leads to tiredness physically and emotionally.

Prevalence:

Many studies state the prevalence rate between 60-90% fewer studies report lesser percentage also. According to ACOG as many as 80% of the women of reproductive age suffer premenstrual emotional and physical changes.

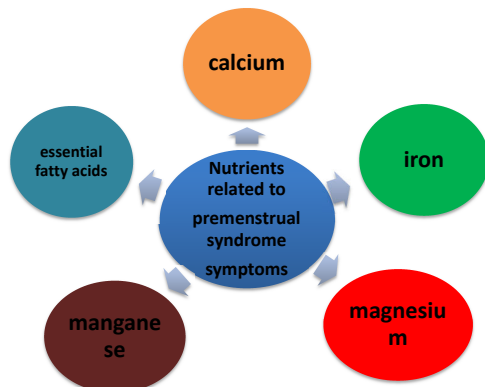
It affects all age group starting from menarche. But many studies report a higher prevalence in adult stage 25-40 years.

Causes:

- In luteal phase, endomorphin level falls drastically in some women that causes pain, uneasiness and nausea.
- Increased progesterone levels hinders the usual relaxation pattern of your brain. This causes anxiousness, irritability, restlessness and tension.
- Imbalance in hormone levels affect kidneys leading to fluid retention and salt retention. This leads to weight gain and some negative self-perceptions emotionally.
- Reduction in appetite and craving to eat unhealthy foods. This leads to drop in vitamin B6 and vitamin A and E levels.
- Reduction in vitamins leads to tiredness physically and emotionally.

Relationship between nutrients and Premenstrual syndrome:

- PMS may serve as a clinical marker of low calcium status perhaps reflecting an underlying abnormality in calcium metabolism and it may serve as an early warning sign to **young women of a possible risk to osteoporosis**. Low calcium levels were associated with low **back pain, abdominal cramping and aches and pains all over body**.
- Magnesium is involved in the activity serotonin and other neuro- transmitters. Lower levels of which lead to mental disturbances may **like irritation, anger**.
- It has been hypnotized that PMS is linked to a deficiency of serotonergic activity.
- Lower manganese levels are associated with increases **mood and pain symptoms**.
- Iron found in plant foods and supplements, non-heme iron reduced a woman's chance of developing PMS. Heme iron from animals like red meat and poultry did not have similar effect.
- Essential fatty acids also reduce the symptoms of PMS to a great extent.



PMS symptoms:

The symptoms can be categorised into four types as physical, emotional, behavioural and pain symptoms.

Physical changes include:

- Breast swelling and tenderness
- bloating,
- water retention (in extremities and abdomen)
- weight gain
- acne
- nipple discharge when nipples and breasts are pressed
- decreased sexual desire
- food cravings, especially for sweet and salty foods
- sleep pattern changes (sleeplessness)
- fatigue,
- lack of energy.

Emotional and cognitive symptoms:

- depression,
- sadness,
- hopelessness
- anger
- anxiety
- mood swings
- reduced alertness, inability to concentrate.

Behavioral changes

- aggression
- withdrawal from family and friends

Pain includes

- headaches or migraine
- breast tenderness
- aching muscles and joints
- cramps and low back pain
- prior to menstrual bleeding.

Treatment:

Common method of treatment used is

1. hormone therapy: supplementation of the oestrogen
2. supplementation of higher level of calcium (1200 mg)

3. supplementation of evening prim rose

Other remedial measures under research:

- supplementation of magnesium at a higher level
- supplementation of iron
- supplementation with vitamin E
- herbal remedies

Why non-pharmacological measures:

- The desire for safe and effective non-drug alternative has prompted many women to consider the use of dietary supplement for PMS.
- Women with mild to moderate symptoms may be reluctant to use medications that they consider unnatural in an effort to control symptoms associated with a natural biological function.

Non-pharmacological measures:

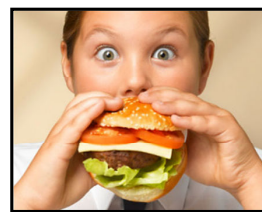
- adequate intake of water
- reducing intake of tea, coffee
- reducing intake of excess salt and sweetness
- reducing intake of non-heme iron like chicken
- adequate exercise
- adequate intake of balanced diet with green leafy vegetables and other vegetables

Role of exercise and yoga:

Regular physical exercise and yoga help in the secretion of serotonin which a natural anti-depressive chemical. Exercise even in mild form regularly helps us in having emotional harmony.

Conclusion: A healthy balanced diet with adequate level of serum iron, calcium, magnesium, vitamins and exercise can help us overcome the painful symptoms of PMS.

Things to be avoided



thing



Things to be followed



Foods to be avoided



Foods to be included liberally



Role of exercise:

Exercising regularly helps in the secretion of serotonin which is a natural anti-depressive chemical. Exercise even in mild form regularly helps us in having emotional harmony.



Conclusion: A healthy balanced diet with adequate level of serum iron, calcium, magnesium, vitamins and exercise can help us overcome the painful symptoms of PMS.



Appendix-VI a

BOOKLET ON PREMENSTRUAL SYNDROME

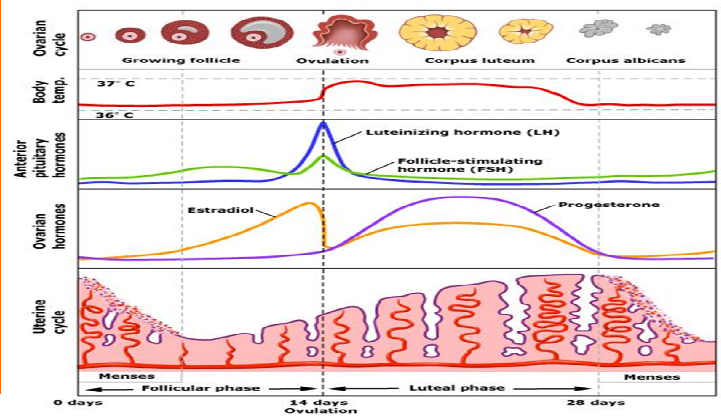
PMS is used to describe physical, cognitive, affective and behavioural symptoms that occur cyclically during the luteal phase of the menstrual cycle and resolve quickly at or within a few days of the onset of menstruation.



Meaning of PMS:

Premenstrual syndrome refers to a cluster of mood, physical and cognitive symptoms that occur during the luteal phase of menstrual cycle and subside with the onset of menstruation.

Luteal phase of menstrual cycle



Changes happening in luteal phase:

- increase in the body temperature
- reduction on oestrogen level
- increase in progesterone level
- soft spongy uterus

The bodily changes due to hormonal change:

- In luteal phase, endorphin level falls drastically in some women that causes pain, uneasiness and nausea.
- Increased progesterone levels hinders the usual relaxation pattern of your brain. This causes anxiousness, irritability, restlessness and tension.
- Imbalance in hormone levels affects kidneys leading to fluid retention and salt retention. This leads to weight gain and some negative self-perceptions emotionally.
- Reduction in appetite and craving to eat unhealthy foods. This leads to drop in vitamin B6 and vitamin A and E levels.
- Reduction in vitamins leads to tiredness physically and emotionally.

Symptoms that indicate Premenstrual syndrome:

- occur between ovulation and first day of menstrual bleeding
- stop after bleeding
- are not present for at least 7 days after your menstrual period.



Non-pharmacological measures:

- adequate intake of water
- reducing intake of tea, coffee
- reducing intake of excess salt and sweetness
- reducing intake of heme iron like chicken
- adequate exercise
- adequate intake of balanced diet with green leafy vegetables and other vegetables



Treatment are

Common method of treatment used is

- Hormone therapy: supplementation of the oestrogen
- Supplementation of higher level of calcium (1200 mg)
- Herbal-Supplementation of evening prim rose (a flower petal oil extract)



Emotional and cognitive symptoms:

- depression,
- sadness,
- hopelessness
- anger
- anxiety
- mood swings
- reduced alertness
- inability to concentrate.



Behavioral changes

- aggression
- withdrawal from family and friends



Pain includes

- head aches or migraine
 - breast tenderness
 - aching muscles and joints
 - cramps and
 - low back pain
- prior to menstrual bleeding.



Prevalence:

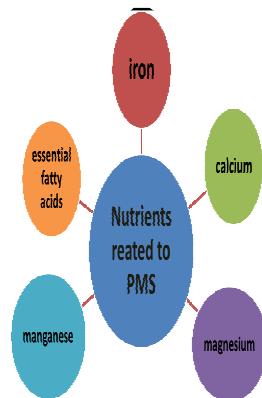
- Many studies state the prevalence rate between 60-90% fewer studies report lesser percentage also.
- According to ACOG as many as 80% of the women of reproductive age suffer premenstrual emotional and physical changes.
- It affects all age group starting from menarche. But many studies report a higher prevalence in adult stage 25-40 years.

Causes:

- In luteal phase, **endorphin level falls** drastically in some women that causes **pain, uneasiness and nausea**.
- Increased **progesterone level hinders** the usual relaxation pattern of our brain. This causes **anxiousness, irritability, restlessness and tension**.
- **Imbalance in hormone level** affects kidneys leading to **fluid retention and salt retention**. This leads to **weight gain** and some negative self-perceptions emotionally.
- **Reduction in appetite and craving** to eat unhealthy foods. This leads to drop in **vitamin B6 and vitamin A and E levels**.
- Reduction in vitamins leads to **tiredness physically and emotionally**.

Relationship between nutrients and Premenstrual syndrome:

PMS may serve as a clinical marker of low calcium status perhaps reflecting an underlying abnormality in calcium metabolism and it may serve as an early warning sign to **young women of a possible risk to osteoporosis**.



Low calcium levels were associated with low **back pain, abdominal cramping and aches and pains all over body**.

Magnesium is involved in the activity of serotonin and other neurotransmitters. Lower levels of which lead to mental disturbances may **like irritation and anger**.

It has been hypothesized that PMS is linked to a deficiency of serotonin activity.

Lower manganese levels are associated with increases **mood and pain symptoms**.

Iron found in plant foods and supplements, non-heme iron reduced a woman's chance of developing PMS. Heme iron from animals like red meat and poultry did not have similar effect.

Essential fatty acids also reduce the symptoms of PMS to a great extent.

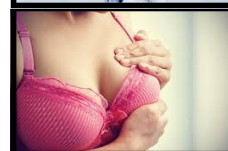


PMS symptoms:

The symptoms can be categorised into four types as physical, emotional, behavioural and pain symptoms.

Physical changes

- Breast swelling and tenderness
- bloating,
- water retention,
- weight gain
- acne
- nipple discharge when nipples and breasts are pressed
- decreased sexual desire
- food cravings, especially for sweet
- and salty foods
- sleep pattern changes
- fatigue,
- lack of energy.



தவிர்க்கப்பட வேண்டிய உணவுகள்



உணவுகள் தாராளமாக சேர்க்கப்பட வேண்டிய உணவுகள்



உடற்பயிற்சி பங்கு:

ஒரு இயற்கையான எதிர்ப்பு மன அழுத்தம் கொண்ட பிரேமாவின் உடற்பயிற்சி தொடர்ந்து உதவுகிறது. லேசான வடிவில் உடற்பயிற்சி இணக்கத்தைத் தொடர்ந்து நமக்கு உதவுகிறது.



(முடிவு: இரும்பு, கால்சியம், மெக்னீசியம், வைட்டமின்கள் மற்றும் உடற்பயிற்சி, போதுமான அளவில் ஆரோக்கியமான சீரான உணவு உட்கொள்ளல் நமக்கு மாதவிலக்குக்கு முந்தைய அறிவு உதவுகிறது லாம்.



Appendix-VIb

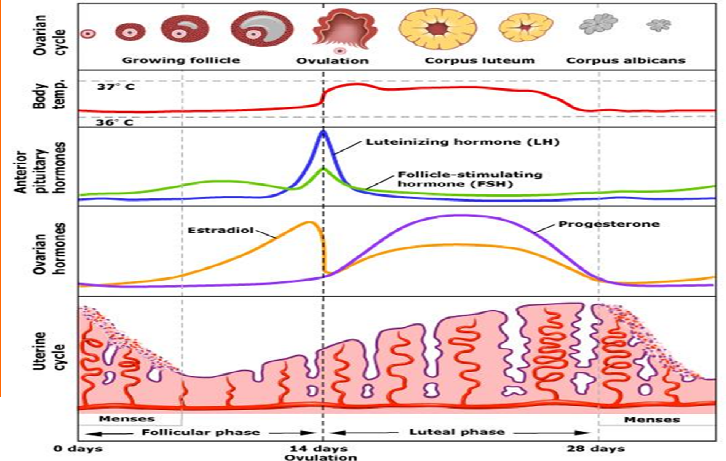
மாதவிலக்குக்கு முந்தைய அறிவு பற்றிய ஊட்டச்சத்து மற்றும் சுகாதார கல்வி

PMS மாதவிடாய் சுழற்சியின் முந்தைய கட்டத்தின் போது சுழற்சியை ஏற்படுத்துகின்ற உடல், அறிவாற்றல், செயல்திறன் மற்றும் நடத்தை அறிகுறிகளை மாதவிலக்குக்கு முந்தைய அறிவு என்று சொல்ல முடியும். இது மாதவிடாய் துவங்குவதற்கு ஒரு சில நாட்களுக்குள் விரைவில் மறைந்துவிடும்



PMS பொருள்: இது கொத்தன மனநிலையின் மாற்றங்கள், அறிவாற்றல் திறன் மற்றும் உடல் அறிகுறிகள் மாதவிலக்குக்கு முந்தைய அறிவு என்று சொல்ல முடியும். இது மாதவிடாய் துவங்குவதற்கு ஒரு சில நாட்களுக்குள் விரைவில் மறைந்துவிடும்.

மாதவிடாய் சுழற்சியின் முதுமை நிலை (luteal phase)



மாதவிடாய் சுழற்சியின் முதுமை நிலை ஏற்படும் மாற்றங்கள்:

- உடல் வெப்பநிலையில் அதிகரிக்கும்
- ஈஸ்ட்ரோஜன் அளவு குறைப்பு
- புரோஜெஸ்டீரோன் அளவு அதிகரிக்கும்

மருந்துகள் அல்லாத நடவடிக்கைகள்:

- போதுமான நீர் உட்கொள்ளல்
- தேநீர், காபி உட்கொள்ளும் குறைப்பு
- அதிகமாக உப்பு மற்றும் இனிப்பு உட்கொள்ளும் குறைப்பு
- கோழி போன்ற ஹீம் இரும்பு உட்கொள்ளல் குறைகிறது
- போதுமான உடற்பயிற்சி
- பச்சை இலை காய்கறிகள் மற்றும் பிற காய்கறிகளுடன் சீரான உணவு உட்கொள்ளும் போதுமான அளவு உட்கொள்ளல்



ஹார்மோன் மாற்றத்தின் காரணமாக உடல் மாற்றங்கள்:

- மாதவிடாய் சுழற்சியின் முதுமை நிலை எண்டோமோர்பின் நிலை அதிகரிக்கும், சில பெண்களில் வலி, கடுமையாக குமட்டலை ஏற்படுத்தும்
 - அதிகரித்த புரோஜெஸ்டீரோன் அளவு உங்கள் மூளையின் வழக்கமான தளர்வு முறையைத் தடுக்கிறது. இது கவலை, எரிச்சல், அமைதியின்மை மற்றும் பதற்றம் ஆகியவற்றை ஏற்படுத்துகிறது.
 - ஹார்மோன் அளவுகளில் சமநிலையின்மை திரவ பராமரிப்பு மற்றும் உப்பு தக்கவைக்கும் வழிவகுக்கும் சிறுநீரகங்களை பாதிக்கிறது. இது எடை அதிகரிப்பு மற்றும் சில எதிர்மறையான உணர்வுகளுக்கு வழிவகுக்கிறது.
 - பசி குறைப்பு மற்றும் ஆரோக்கியமற்ற உணவுகளை ஏங்கி சாப்பிட வழிவகுக்கிறது.
- இதனால்தான் வைட்டமின் B6 மற்றும் வைட்டமின் A மற்றும் E அளவுகளில் குறைபடும். வைட்டமின்களில் குறைபாடு காரணமாக உடல் மற்றும் உணர்வுபூர்வமாக சோர்வு ஏற்படுகிறது.

சிகிச்சை:

பொதுவாக பயன்படுத்தப்படும் சிகிச்சை முறை:

- ஹார்மோன் சிகிச்சை: ஈஸ்ட்ரோஜின் கூடுதல்
- அதிக அளவு கால்சியம் (1200 மி.கி.)
- மாலை ப்ரிமின்ஸ் எண்ணெய்

மாதவிடாய் சுழற்சியின் முதுமை நிலை குறிக்கும் அறிகுறிகள்

- அண்டவிடுப்பின் மற்றும் மாதவிடாய் இரத்தப்போக்கு முதல் நாள் இடையே ஏற்படும்.
- விரைவில் மறைந்துவிடும்



உணர்ச்சி மற்றும் அறிவாற்றல் அறிகுறிகள்:

- மன அழுத்தம்,
- சோகம்,
- நம்பிக்கையின்மை
- கோபம்
- பதட்டம்
- மனம் அலைபாய்கிறது,
- குறைந்த விழிப்புணர்வு,

கவனம் செலுத்த இயலாமை.

நடத்தை மாற்றங்கள்

- ஆக்கிரமிப்பு
- தனிமைப்படுத்தல்

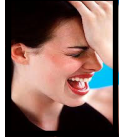
வலி

- தலை வலிகள் அல்லது தலைவலி
- மார்பக மென்மை
- வலிக்கிறது தசைகள் மற்றும் மூட்டுகள்
- பிடிப்புகள் மற்றும்
- முதுகுவலி.

- PMS விகிதம் : ACOG படி, 80% இனப்பெருக்க வயது பெண்களில் மாதவிடாய் சுழற்சியின் முதுமை நிலை குறிக்கும் அறிகுறிகள் (உணர்ச்சி மற்றும் உடல் ரீதியான) மாற்றங்கள் ஏற்படுகின்றன.
- இது பூப்பூ அடைந்ததிலிருந்து அனைத்து வயதினரையும் பாதிக்கிறது. ஆனால் பல ஆய்வுகள் 25-40 வயதுடைய வயதுடைய நிலையில் அதிக பாதிப்புகளை கொடுக்கிறது.

காரணங்கள்:

- ஹார்மோன் மாற்றம் .
- வைட்டமின் குறைபாடு
- கால்சியம் மற்றும் இரும்பு குறைபாடு
- மன அழுத்தம்
- ஆரோக்கியமற்ற வாழ்க்கை முறை
- மோசமான உணவு பழக்கம்
- போதுமான நீர் உட்கொள்ளல் இல்லாமை.
- அதிக கொழுப்பு உணவு

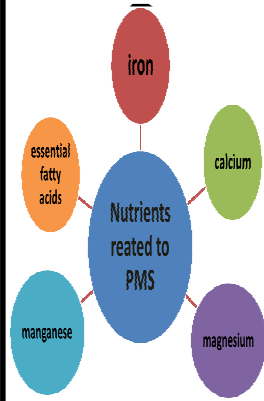


உட்கொள்ளும் மற்றும் மாதவிடாய் சுழற்சியின் முதுமை குறிக்கும் அறிகுறிகள் கால்சியம் வளர்சிதை மாற்றம் ஒரு அது ஒரு சாத்தியமான ஆபத்து

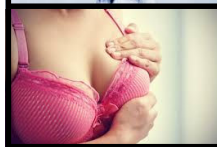
இளம் பெண்கள் ஒரு எச்சரிக்கை அறிகுறி பணியாற்ற கூடும்.

குறைந்த கால்சியம் நிலையை ஒரு மருத்துவ மார்க்கர் பணியாற்றும்

ஆஸ்டியோபோரோசிஸ்



- குறைந்த கால்சியம் அளவுகள் குறைந்த முதுகுவலியுடன், வயிற்றுப் பிளவு மற்றும் வலிகள் மற்றும் வலிகள் அனைத்திலும் தொடர்புடையது.
- மெக்னீசியம் செயல்திறன் செரோடோனின் மற்றும் பிற நரம்பு டிரான்ஸ்மிட்டர்களில் ஈடுபட்டுள்ளது. மனத் தொந்தரவுக்கு வழிவகுக்கும் இததனாலளிச்சல், கோபம் போன்றவை வரலாம்.
- PMS செரோடோனினேஜிக் செயல்பாடு குறைபாடுடன் தொடர்புடையது.
- குறைந்த மாங்கனீசு அளவு கோபம் அதிகரிக்கும் மனநிலை மற்றும் வலி அறிகுறிகளுடன் தொடர்புடையது.
- தாவர உணவு இரும்பு (ஹீம்அல்லாத இரும்பு) PMS கட்டுப்பாட்டிற்கு நல்லது,
- ஹீம் இரும்பு PMS அறிகுறிகளுடன் தொடர்புடையது..
- அத்தியாவசிய கொழுப்பு அமிலங்கள் PMS இன் அறிகுறிகளை பெரிய அளவில் குறைக்கின்றன.



PMS symptoms:

அறிகுறிகள் நான்கு வகைப்படுத்தலாம்

உடல், உணர்ச்சி, நடத்தை போன்ற வகைகள் மற்றும் வலி அறிகுறிகள்.

உடல் மாற்றங்கள் பின்வருமாறு:

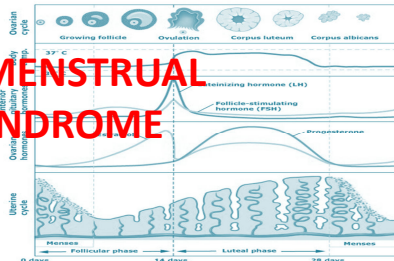
- மார்பக வீக்கம் மற்றும் மென்மை
- வீக்கம்,
- நீர் தேக்கம்,
- எடை அதிகரிப்பு
- முகப்பரு
- முலைக்காம்புகளும் மார்பகங்களும் அழுத்தும் போது முலைக்காம்பு வெளியேற்றும்
- பாலியல் விருப்பம் குறைந்துவிட
- உணவு ஏங்கி சாப்பிட - குறிப்பாக இனிப்புக்கு மற்றும் உப்பு உணவுகள்
- தூக்கம் இல்லாமை
- சோர்வு,
- ஓய்வின்மை

Appendix- VII a

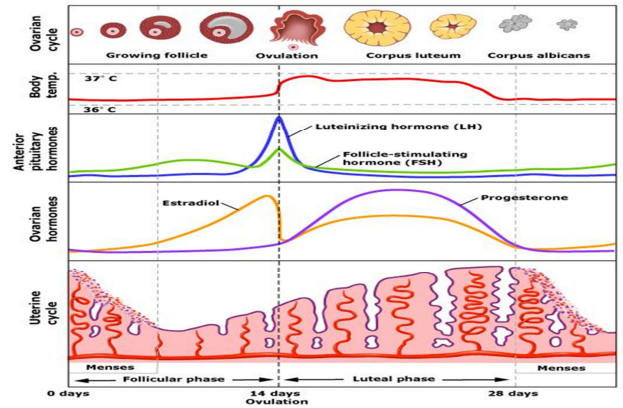


NUTRITION AND HEALTH EDUCATION ON

PREMENSTRUAL SYNDROME



MENSTRUAL CYCLE



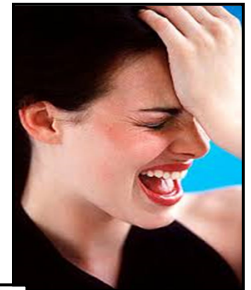
MEANING

Meaning of PMS:

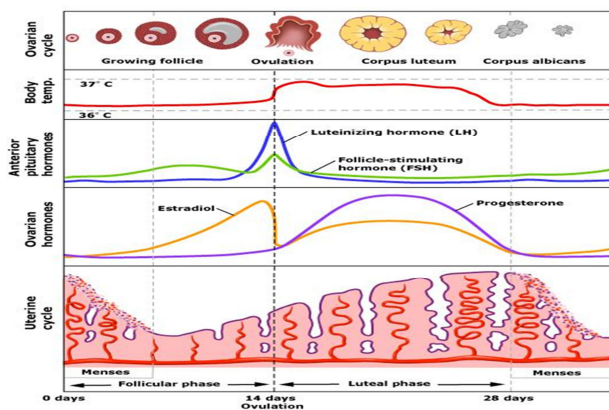
The term premenstrual syndrome refers to a cluster of mood, physical and cognitive symptoms that occur during the luteal phase of menstrual cycle and subside with the onset of menstruation.



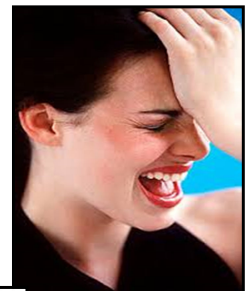
PROBLEM OF PMS



MENSTRUAL CYCLE

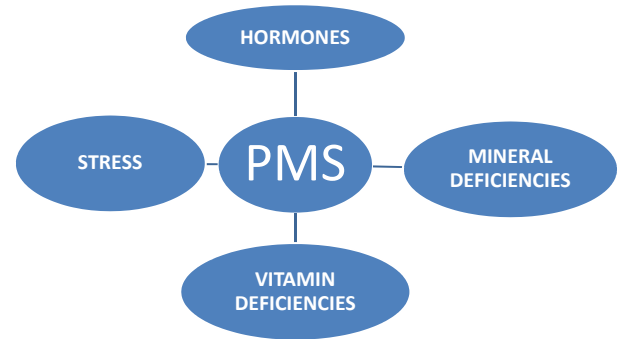


PROBLEM OF PMS





CAUSES OF PMS



SYMPTOMS OF PMS

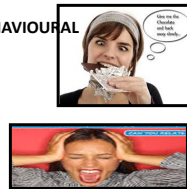
PHYSICAL



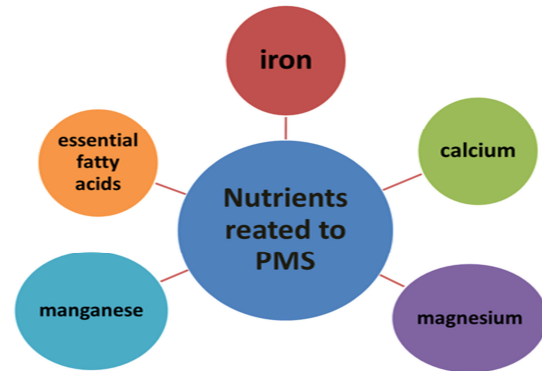
EMOTIONAL



BEHAVIOURAL



NUTRIENTS RELATED TO PMS



TREATMENT

Common method of treatment used is

- hormone therapy: supplementation of the oestrogen
- supplementation of higher level of calcium (1200 mg)
- supplementation of evening prim rose

MANAGEMENT



MANAGEMENT- YOGA



MANAGEMENT- EXERCISE



FOODS GOOD FOR PMS



FOODS AGGRAVATING PMS



Conclusion

A healthy balanced diet with adequate level of serum iron, calcium, magnesium, vitamins and exercise can help us overcome the painful symptoms of PMS.



Appendix-VIII

NUTRITION AND HEALTH EDUCATION ON PREMENSTRUAL SYNDROME



PMS is used to describe physical, cognitive, affective and behavioural symptoms that occur cyclically during the luteal phase of the menstrual cycle and resolve quickly at or within a few days of the onset of menstruation

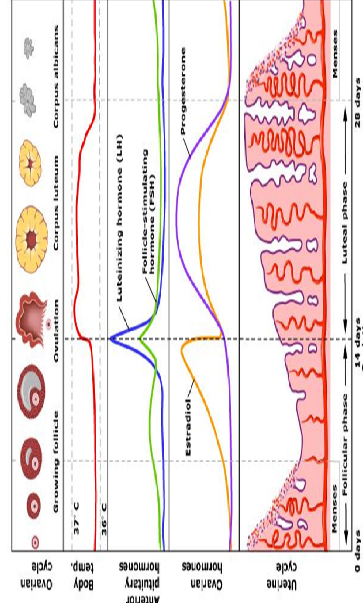
Meaning of PMS:

The term premenstrual syndrome refers to a cluster of mood, physical and cognitive symptoms that occur during the luteal phase of menstrual cycle and subside with the onset of menstruation.

What is luteal phase of menstrual cycle?

Changes happening in luteal phase:

increase in the body temperature
reduction on oestrogen level
increase in progesterone level
soft spongy uterus



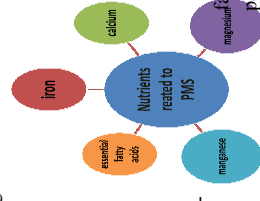
Prevalence:

Many studies state the prevalence rate between 60-90% fewer studies report lesser percentage also. According to ACOG as many as 80% of the women of reproductive age suffer premenstrual emotional and physical changes.

It affects all age group starting from menarche. But many studies report a higher prevalence in adult stage 25-40 years.

Symptoms that indicate Premenstrual syndrome:

- occur between ovulation and first day of menstrual bleeding
- stop after bleeding
- are not present for at least 7 days after your menstrual period.



Relationship between nutrients and Premenstrual syndrome: PMS may serve as a clinical marker of low calcium status perhaps reflecting an underlying abnormality in calcium metabolism and it may serve as an early warning sign to young women of a possible risk to osteoporosis. Low calcium levels were associated with low back pain, abdominal cramping and aches and pains all over body. Magnesium is involved in the activity of neurotransmitters. Lower levels of which lead to mental disturbances may like irritation, anger. It has been hypothesized that PMS is linked to a deficiency of serotonergic activity. Lower manganese levels are associated with increased mood and pain symptoms. Iron found in plant foods and supplements, non-heme iron reduced a woman's chance of developing PMS. Heme iron from animals like red meat and poultry did not have similar effect.

Causes: In luteal phase, endomorphin level falls drastically in some women that causes pain, uneasiness and nausea. Increased progesterone levels hinders the usual relaxation pattern of your brain. This causes anxiousness, irritability, restlessness and tension. Imbalance in hormone levels affect kidneys leading to fluid retention and salt retention. This leads to weight gain and some negative self-perceptions emotionally. Reduction in appetite and craving to eat unhealthy foods. This leads to drop in vitamin B6 and vitamin A and E levels.

Reduction in vitamins leads to tiredness physically and emotionally.

PMS symptoms:

The symptoms can be categorised into four types as physical, emotional, behavioural and pain symptoms.

Physical changes include:

Breast swelling and tenderness
bloating,
water retention,
weight gain
acne

nipple discharge when nipples and breasts are pressed
decreased sexual desire

food cravings, especially for sweet and salty foods
sleep pattern changes
fatigue,
lack of energy.

Emotional and cognitive symptoms:

depression,
sadness,
hopelessness
anger
anxiety
mood swings
reduced alertness, inability to concentrate.

Behavioral changes

aggression
withdrawal from family and friends

Pain includes

head aches or migraine
breast tenderness
aching muscles and joints
cramps and low back pain

Treatment:

Common method of treatment used is

hormone therapy: supplementation of the estrogen
supplementation of higher level of calcium (1200 mg)
supplementation of evening prim rose

Why non-pharmacological measures:

The desire for safe and effective non-drug alternative has prompted many women to consider the use of dietary supplement for PMS.

Other remedial measures under research:

supplementation of magnesium at higher level
supplementation of iron
supplementation with vitamin E

Non-pharmacological measures:

- adequate intake of water
- reducing intake of tea, coffee
- reducing intake of excess salt and sweetness
- reducing intake of non-heme iron like chicken
- adequate exercise
- adequate intake of balanced diet with green leafy vegetables and other vegetables

Foods to be avoided



Foods to be included liberally



Role of exercise: Exercising regularly helps in the secretion of serotonin which a natural anti-depressive chemical. Exercise even in mild form regularly helps us in having emotional harmony.



Conclusion: A healthy balanced diet with adequate level of serum iron, calcium, magnesium, vitamins and exercise can help us overcome the painful symptoms.

Essential fatty acids also reduce the symptoms of PMS to a great extent.

Appendix - IX

ANTHROPOMETRIC MEASUREMENTS OF THE SELECTED PARTICIPANTS

| SNo | HEIGHT | WEIGHT | BMI | W/H RATIO | SNo | HEIGHT | WEIGHT | BMI | W/H RATIO | SNo | HEIGHT | WEIGHT | BMI | W/H RATIO | SNo | HEIGHT | WEIGHT | BMI | W/H RATIO |
|-----|--------|--------|-----|-----------|-----|--------|--------|-----|-----------|-----|--------|--------|-----|-----------|-----|--------|--------|-----|-----------|
| 1 | 156 | 55 | 24 | 1.028 | 51 | 156 | 50 | 21 | 0.667 | 101 | 156 | 45 | 18 | 0.872 | 151 | 150 | 50 | 22 | 0.821 |
| 2 | 140 | 49 | 25 | 1.2 | 52 | 154 | 42 | 18 | 0.6 | 102 | 161 | 54 | 21 | 0.818 | 152 | 150 | 66 | 29 | 0.821 |
| 3 | 158 | 78 | 31 | 1.028 | 53 | 152 | 38 | 16 | 0.831 | 103 | 152 | 41 | 18 | 0.814 | 153 | 125 | 36 | 23 | 0.821 |
| 4 | 153 | 60 | 26 | 1.212 | 54 | 162 | 57 | 22 | 0.636 | 104 | 154 | 39 | 16 | 0.837 | 154 | 152 | 62 | 27 | 0.81 |
| 5 | 158 | 45 | 18 | 1.077 | 55 | 152 | 60 | 26 | 0.722 | 105 | 150 | 54 | 24 | 0.771 | 155 | 156 | 78 | 32 | 0.865 |
| 6 | 180 | 63 | 19 | 1.028 | 56 | 162 | 47 | 18 | 0.667 | 106 | 146 | 43 | 20 | 0.855 | 156 | 157 | 55 | 22 | 0.839 |
| 7 | 168 | 48 | 17 | 1.2 | 57 | 153 | 48 | 21 | 0.645 | 107 | 147 | 50 | 23 | 0.819 | 157 | 150 | 64 | 28 | 0.889 |
| 8 | 174 | 60 | 20 | 1.028 | 58 | 158 | 60 | 24 | 0.649 | 108 | 149 | 44 | 20 | 0.875 | 158 | 141 | 51 | 26 | 0.865 |
| 9 | 168 | 58 | 21 | 1.212 | 59 | 154 | 47 | 20 | 0.753 | 109 | 143 | 43 | 21 | 0.77 | 159 | 155 | 63 | 26 | 0.839 |
| 10 | 150 | 54 | 24 | 1.077 | 60 | 154 | 47 | 20 | 0.753 | 110 | 151 | 35 | 15 | 0.77 | 160 | 165 | 56 | 21 | 0.839 |
| 11 | 162 | 65 | 25 | 1.028 | 61 | 162 | 60 | 23 | 0.75 | 111 | 157 | 65 | 26 | 0.77 | 161 | 150 | 52 | 23 | 0.821 |
| 12 | 162 | 63 | 24 | 1.2 | 62 | 151 | 56 | 25 | 0.873 | 112 | 147 | 43 | 20 | 0.875 | 162 | 157 | 56 | 23 | 0.964 |
| 13 | 156 | 50 | 21 | 1.028 | 63 | 134 | 45 | 25 | 0.873 | 113 | 162 | 35 | 13 | 0.875 | 163 | 125 | 52 | 33 | 0.862 |
| 14 | 160 | 80 | 31 | 1.212 | 64 | 146 | 51 | 24 | 0.873 | 114 | 147 | 65 | 30 | 0.814 | 164 | 157 | 48 | 19 | 0.899 |
| 15 | 165 | 67 | 25 | 1.077 | 65 | 156 | 61 | 25 | 0.667 | 115 | 144 | 55 | 27 | 0.837 | 165 | 156 | 46 | 19 | 0.899 |
| 16 | 156 | 64 | 26 | 0.857 | 66 | 159 | 65 | 26 | 0.676 | 116 | 147 | 49 | 23 | 0.771 | 166 | 168 | 55 | 19 | 0.899 |
| 17 | 153 | 50 | 21 | 1.077 | 67 | 142 | 59 | 29 | 0.96 | 117 | 150 | 53 | 24 | 0.855 | 167 | 145 | 60 | 29 | 0.821 |
| 18 | 157 | 55 | 22 | 0.857 | 68 | 150 | 70 | 31 | 0.96 | 118 | 154 | 59 | 25 | 0.819 | 168 | 152 | 55 | 24 | 0.81 |
| 19 | 148 | 60 | 27 | 0.865 | 69 | 153 | 47 | 20 | 0.847 | 119 | 161 | 61 | 24 | 0.875 | 169 | 160 | 40 | 16 | 0.865 |
| 20 | 166 | 55 | 20 | 0.865 | 70 | 170 | 65 | 22 | 0.622 | 120 | 150 | 60 | 27 | 0.77 | 170 | 155 | 55 | 23 | 0.839 |
| 21 | 156 | 46 | 19 | 0.899 | 71 | 159 | 73 | 29 | 0.814 | 121 | 158 | 55 | 22 | 0.77 | 171 | 153 | 48 | 21 | 0.889 |
| 22 | 155 | 58 | 24 | 0.857 | 72 | 155 | 45 | 19 | 0.837 | 122 | 162 | 45 | 17 | 0.77 | 172 | 152 | 52 | 23 | 0.81 |
| 23 | 145 | 60 | 29 | 0.865 | 73 | 160 | 50 | 20 | 0.771 | 123 | 158 | 51 | 20 | 0.875 | 173 | 153 | 56 | 24 | 0.865 |
| 24 | 134 | 56 | 31 | 0.865 | 74 | 140 | 31 | 16 | 0.855 | 124 | 152 | 48 | 21 | 0.875 | 174 | 148 | 38 | 17 | 0.839 |
| 25 | 135 | 52 | 29 | 0.899 | 75 | 153 | 51 | 22 | 0.819 | 125 | 147 | 48 | 22 | 0.875 | 175 | 160 | 59 | 23 | 0.636 |
| 26 | 150 | 52 | 23 | 0.865 | 76 | 150 | 65 | 29 | 0.875 | 126 | 152 | 50 | 22 | 0.875 | 176 | 160 | 39 | 15 | 0.636 |
| 27 | 165 | 63 | 23 | 0.899 | 77 | 151 | 81 | 36 | 0.77 | 127 | 143 | 48 | 23 | 0.875 | 177 | 163 | 50 | 19 | 0.727 |
| 28 | 141 | 51 | 26 | 0.889 | 78 | 151 | 46 | 20 | 0.77 | 128 | 151 | 77 | 34 | 0.887 | 178 | 153 | 50 | 21 | 0.857 |
| 29 | 152 | 56 | 24 | 0.91 | 79 | 151 | 46 | 20 | 0.77 | 129 | 159 | 50 | 20 | 0.776 | 179 | 156 | 64 | 26 | 0.732 |
| 30 | 152 | 53 | 23 | 0.792 | 80 | 132 | 52 | 30 | 0.875 | 130 | 150 | 60 | 27 | 0.776 | 180 | 165 | 67 | 25 | 0.899 |
| 31 | 145 | 67 | 32 | 0.825 | 81 | 135 | 45 | 25 | 0.875 | 131 | 151 | 81 | 36 | 0.77 | 181 | 157 | 39 | 16 | 0.821 |
| 32 | 153 | 55 | 23 | 0.824 | 82 | 147 | 49 | 23 | 0.859 | 132 | 156 | 60 | 25 | 0.851 | 182 | 160 | 45 | 18 | 0.81 |
| 33 | 152 | 47 | 20 | 0.667 | 83 | 168 | 61 | 22 | 0.889 | 133 | 154 | 46 | 19 | 0.77 | 183 | 155 | 55 | 23 | 0.865 |
| 34 | 152 | 40 | 17 | 0.68 | 84 | 152 | 64 | 28 | 0.955 | 134 | 146 | 34 | 16 | 0.77 | 184 | 162 | 73 | 28 | 0.839 |
| 35 | 149 | 72 | 32 | 0.881 | 85 | 159 | 60 | 24 | 0.78 | 135 | 150 | 40 | 18 | 0.77 | 185 | 152 | 48 | 21 | 0.889 |
| 36 | 125 | 60 | 38 | 0.874 | 86 | 135 | 47 | 26 | 0.78 | 136 | 180 | 57 | 18 | 0.875 | 186 | 155 | 58 | 24 | 0.81 |
| 37 | 157 | 79 | 32 | 0.825 | 87 | 130 | 37 | 22 | 0.78 | 137 | 146 | 42 | 20 | 0.875 | 187 | 148 | 60 | 27 | 0.899 |
| 38 | 153 | 41 | 18 | 0.859 | 88 | 154 | 44 | 19 | 0.727 | 138 | 159 | 63 | 25 | 0.814 | 188 | 150 | 62 | 28 | 0.821 |
| 39 | 150 | 55 | 24 | 0.686 | 89 | 133 | 62 | 35 | 0.944 | 139 | 135 | 59 | 32 | 0.837 | 189 | 144 | 49 | 24 | 0.81 |
| 40 | 150 | 69 | 31 | 0.86 | 90 | 155 | 62 | 26 | 0.881 | 140 | 130 | 50 | 30 | 0.771 | 190 | 161 | 50 | 19 | 0.865 |
| 41 | 152 | 55 | 24 | 0.884 | 91 | 145 | 64 | 30 | 0.881 | 141 | 135 | 47 | 26 | 0.821 | 191 | 146 | 55 | 26 | 0.839 |
| 42 | 147 | 61 | 28 | 0.877 | 92 | 158 | 75 | 30 | 0.944 | 142 | 150 | 69 | 31 | 0.81 | 192 | 158 | 42 | 17 | 0.889 |
| 43 | 153 | 55 | 24 | 0.863 | 93 | 154 | 67 | 28 | 0.881 | 143 | 140 | 41 | 21 | 0.865 | 193 | 163 | 47 | 18 | 0.81 |
| 44 | 143 | 72 | 35 | 0.905 | 94 | 147 | 54 | 25 | 0.872 | 144 | 135 | 70 | 38 | 0.839 | 194 | 143 | 36 | 18 | 0.899 |
| 45 | 155 | 42 | 17 | 0.855 | 95 | 177 | 84 | 27 | 0.944 | 145 | 135 | 41 | 23 | 0.889 | 195 | 144 | 44 | 21 | 0.821 |
| 46 | 161 | 57 | 22 | 0.847 | 96 | 153 | 54 | 23 | 0.881 | 146 | 143 | 51 | 25 | 0.821 | 196 | 143 | 47 | 23 | 0.81 |
| 47 | 149 | 38 | 17 | 0.719 | 97 | 154 | 43 | 18 | 0.881 | 147 | 160 | 47 | 18 | 0.81 | 197 | 150 | 50 | 22 | 0.865 |
| 48 | 149 | 38 | 17 | 0.775 | 98 | 153 | 50 | 21 | 0.944 | 148 | 145 | 69 | 33 | 0.865 | 198 | 149 | 59 | 27 | 0.839 |
| 49 | 149 | 42 | 19 | 0.842 | 99 | 156 | 50 | 21 | 0.881 | 149 | 150 | 59 | 26 | 0.839 | 199 | 144 | 56 | 27 | 0.889 |
| 50 | 149 | 42 | 19 | 0.842 | 100 | 158 | 46 | 18 | 0.872 | 150 | 150 | 50 | 22 | 0.839 | 200 | 145 | 53 | 25 | 0.81 |

| SNo | HEIGHT | WEIGHT | BMI | W/H RATIO | SNo | HEIGHT | WEIGHT | BMI | W/H RATIO | SNo | HEIGHT | WEIGHT | BMI | W/H RATIO | SNo | HEIGHT | WEIGHT | BMI | W/H RATIO |
|-----|--------|--------|-----|-----------|-----|--------|--------|-----|-----------|-----|--------|--------|-----|-----------|-----|--------|--------|-----|-----------|
| 201 | 146 | 42 | 20 | 0.813 | 251 | 157 | 79 | 32 | 0.825 | 301 | 130 | 37 | 22 | 0.761 | 351 | 146 | 42 | 20 | 0.857 |
| 202 | 165 | 52 | 19 | 0.798 | 252 | 153 | 41 | 18 | 0.859 | 302 | 154 | 44 | 19 | 0.761 | 352 | 159 | 63 | 25 | 0.865 |
| 203 | 147 | 52 | 24 | 0.857 | 253 | 150 | 55 | 24 | 0.686 | 303 | 133 | 62 | 35 | 0.847 | 353 | 135 | 59 | 32 | 0.865 |
| 204 | 142 | 49 | 24 | 0.81 | 254 | 150 | 69 | 31 | 0.86 | 304 | 155 | 62 | 26 | 0.761 | 354 | 130 | 50 | 30 | 0.899 |
| 205 | 152 | 42 | 18 | 0.899 | 255 | 152 | 55 | 24 | 0.884 | 305 | 145 | 64 | 30 | 0.761 | 355 | 135 | 47 | 26 | 0.857 |
| 206 | 152 | 42 | 18 | 0.821 | 256 | 147 | 61 | 28 | 0.877 | 306 | 158 | 75 | 30 | 0.944 | 356 | 150 | 69 | 31 | 0.865 |
| 207 | 154 | 46 | 19 | 0.81 | 257 | 153 | 55 | 24 | 0.863 | 307 | 154 | 67 | 28 | 0.881 | 357 | 140 | 41 | 21 | 0.865 |
| 208 | 150 | 46 | 20 | 0.865 | 258 | 143 | 72 | 35 | 1.118 | 308 | 147 | 54 | 25 | 0.872 | 358 | 135 | 70 | 38 | 0.899 |
| 209 | 153 | 48 | 21 | 0.839 | 259 | 155 | 42 | 17 | 0.855 | 309 | 177 | 84 | 27 | 0.821 | 359 | 135 | 41 | 23 | 0.865 |
| 210 | 157 | 48 | 19 | 0.889 | 260 | 161 | 57 | 22 | 0.847 | 310 | 153 | 54 | 23 | 0.81 | 360 | 143 | 51 | 25 | 0.899 |
| 211 | 160 | 80 | 31 | 0.81 | 261 | 149 | 38 | 17 | 0.719 | 311 | 154 | 43 | 18 | 0.865 | 361 | 160 | 47 | 18 | 0.889 |
| 212 | 152 | 52 | 23 | 0.81 | 262 | 155 | 42 | 17 | 0.719 | 312 | 153 | 50 | 21 | 0.839 | 362 | 145 | 69 | 33 | 0.91 |
| 213 | 158 | 64 | 26 | 0.899 | 263 | 149 | 42 | 19 | 0.842 | 313 | 153 | 50 | 21 | 0.889 | 363 | 150 | 59 | 26 | 0.792 |
| 214 | 155 | 64 | 27 | 0.821 | 264 | 149 | 44 | 20 | 0.842 | 314 | 158 | 46 | 18 | 0.81 | 364 | 150 | 50 | 22 | 0.825 |
| 215 | 139 | 35 | 18 | 0.81 | 265 | 156 | 50 | 21 | 0.667 | 315 | 156 | 45 | 18 | 0.81 | 365 | 150 | 66 | 29 | 0.824 |
| 216 | 154 | 54 | 23 | 0.865 | 266 | 154 | 42 | 18 | 0.6 | 316 | 161 | 54 | 21 | 0.899 | 366 | 150 | 55 | 24 | 0.667 |
| 217 | 161 | 45 | 17 | 0.839 | 267 | 152 | 38 | 16 | 0.831 | 317 | 152 | 41 | 18 | 0.821 | 367 | 156 | 60 | 25 | 0.68 |
| 218 | 161 | 45 | 17 | 0.889 | 268 | 162 | 57 | 22 | 0.636 | 318 | 154 | 39 | 16 | 0.81 | 368 | 154 | 56 | 24 | 0.881 |
| 219 | 151 | 45 | 20 | 0.81 | 269 | 152 | 60 | 26 | 0.722 | 319 | 156 | 44 | 18 | 0.865 | 369 | 154 | 55 | 23 | 0.874 |
| 220 | 153 | 52 | 22 | 0.81 | 270 | 162 | 47 | 18 | 0.667 | 320 | 158 | 45 | 18 | 0.839 | 370 | 160 | 63 | 25 | 0.825 |
| 221 | 147 | 51 | 24 | 0.899 | 271 | 153 | 48 | 21 | 0.645 | 321 | 160 | 55 | 21 | 0.889 | 371 | 159 | 58 | 23 | 0.859 |
| 222 | 156 | 48 | 20 | 0.821 | 272 | 158 | 60 | 24 | 0.649 | 322 | 162 | 52 | 20 | 0.81 | 372 | 154 | 48 | 20 | 0.686 |
| 223 | 145 | 42 | 20 | 0.81 | 273 | 154 | 47 | 20 | 0.753 | 323 | 164 | 53 | 20 | 0.81 | 373 | 150 | 54 | 24 | 0.86 |
| 224 | 151 | 36 | 16 | 0.865 | 274 | 154 | 47 | 20 | 0.753 | 324 | 151 | 35 | 15 | 0.899 | 374 | 153 | 65 | 28 | 0.884 |
| 225 | 154 | 60 | 25 | 0.839 | 275 | 162 | 60 | 23 | 0.75 | 325 | 157 | 65 | 26 | 0.821 | 375 | 158 | 58 | 23 | 0.877 |
| 226 | 135 | 47 | 26 | 0.889 | 276 | 151 | 56 | 25 | 0.873 | 326 | 157 | 65 | 26 | 0.81 | 376 | 158 | 50 | 20 | 0.863 |
| 227 | 150 | 69 | 31 | 0.81 | 277 | 134 | 45 | 25 | 0.873 | 327 | 162 | 62 | 24 | 0.865 | 377 | 156 | 59 | 24 | 0.905 |
| 228 | 140 | 41 | 21 | 0.81 | 278 | 146 | 51 | 24 | 0.812 | 328 | 155 | 52 | 22 | 0.839 | 378 | 158 | 58 | 23 | 0.855 |
| 229 | 135 | 70 | 38 | 0.899 | 279 | 156 | 61 | 25 | 0.667 | 329 | 147 | 54 | 25 | 0.889 | 379 | 154 | 42 | 18 | 0.847 |
| 230 | 135 | 41 | 23 | 0.821 | 280 | 159 | 65 | 26 | 0.676 | 330 | 147 | 49 | 23 | 0.899 | 380 | 156 | 59 | 24 | 0.719 |
| 231 | 143 | 51 | 25 | 0.81 | 281 | 142 | 59 | 29 | 0.96 | 331 | 150 | 53 | 24 | 0.973 | 381 | 158 | 42 | 17 | 0.775 |
| 232 | 160 | 47 | 18 | 0.865 | 282 | 150 | 70 | 31 | 0.829 | 332 | 154 | 59 | 25 | 0.865 | 382 | 160 | 65 | 25 | 0.842 |
| 233 | 145 | 69 | 33 | 0.839 | 283 | 153 | 47 | 20 | 0.847 | 333 | 161 | 61 | 24 | 0.839 | 383 | 154 | 58 | 24 | 0.842 |
| 234 | 150 | 59 | 26 | 0.889 | 284 | 170 | 65 | 22 | 0.622 | 334 | 161 | 61 | 24 | 1.028 | 384 | 153 | 63 | 27 | 0.667 |
| 235 | 156 | 46 | 19 | 0.899 | 285 | 159 | 73 | 29 | 0.814 | 335 | 158 | 60 | 24 | 1.2 | 385 | 156 | 52 | 21 | 0.6 |
| 236 | 155 | 58 | 24 | 0.973 | 286 | 155 | 45 | 19 | 0.837 | 336 | 162 | 45 | 17 | 1.028 | 386 | 159 | 57 | 23 | 0.831 |
| 237 | 145 | 60 | 29 | 0.865 | 287 | 160 | 50 | 20 | 0.771 | 337 | 158 | 51 | 20 | 1.212 | 387 | 152 | 50 | 22 | 0.636 |
| 238 | 134 | 56 | 31 | 0.839 | 288 | 140 | 31 | 16 | 0.855 | 338 | 152 | 48 | 21 | 1.077 | 388 | 154 | 63 | 27 | 0.722 |
| 239 | 135 | 52 | 29 | 0.889 | 289 | 153 | 51 | 22 | 0.819 | 339 | 152 | 48 | 21 | 1.028 | 389 | 143 | 50 | 24 | 0.667 |
| 240 | 150 | 52 | 23 | 0.899 | 290 | 150 | 65 | 29 | 0.819 | 340 | 152 | 50 | 22 | 1.2 | 390 | 160 | 60 | 23 | 0.645 |
| 241 | 165 | 63 | 23 | 0.973 | 291 | 151 | 81 | 36 | 0.77 | 341 | 143 | 48 | 23 | 1.028 | 391 | 156 | 63 | 26 | 0.649 |
| 242 | 141 | 51 | 26 | 0.889 | 292 | 151 | 81 | 36 | 0.77 | 342 | 151 | 77 | 34 | 1.212 | 392 | 155 | 63 | 26 | 0.753 |
| 243 | 152 | 56 | 24 | 0.91 | 293 | 151 | 81 | 36 | 0.77 | 343 | 159 | 50 | 20 | 1.077 | 393 | 155 | 63 | 26 | 0.753 |
| 244 | 152 | 53 | 23 | 0.792 | 294 | 132 | 52 | 30 | 0.875 | 344 | 150 | 60 | 27 | 1.028 | 394 | 158 | 42 | 17 | 0.75 |
| 245 | 145 | 67 | 32 | 0.825 | 295 | 135 | 45 | 25 | 0.875 | 345 | 151 | 81 | 36 | 1.2 | 395 | 158 | 42 | 17 | 0.873 |
| 246 | 153 | 55 | 23 | 0.824 | 296 | 147 | 49 | 23 | 0.875 | 346 | 156 | 60 | 25 | 1.028 | 396 | 158 | 42 | 17 | 0.873 |
| 247 | 152 | 47 | 20 | 0.667 | 297 | 168 | 61 | 22 | 0.78 | 347 | 154 | 46 | 19 | 1.212 | 397 | 158 | 42 | 17 | 0.873 |
| 248 | 152 | 40 | 17 | 0.68 | 298 | 152 | 64 | 28 | 0.78 | 348 | 146 | 34 | 16 | 1.077 | 398 | 151 | 73 | 32 | 0.667 |
| 249 | 149 | 72 | 32 | 0.874 | 299 | 159 | 60 | 24 | 0.78 | 349 | 150 | 40 | 18 | 0.857 | 399 | 152 | 70 | 30 | 0.676 |
| 250 | 125 | 60 | 38 | 0.874 | 300 | 135 | 47 | 26 | 0.847 | 350 | 180 | 57 | 18 | 1.077 | 400 | 146 | 52 | 24 | 0.96 |

| SNo | HEIGHT | WEIGHT | BMI | W/H RATIO | SNo | HEIGHT | WEIGHT | BMI | SNo | HEIGHT | WEIGHT | BMI | W/H RATIO | SNo |
|-----|--------|--------|-----|-----------|-----|--------|--------|-----|-----|--------|--------|-----|-----------|-----|
| 401 | 160 | 60 | 23 | 0.96 | 451 | 158 | 78 | 31 | 46 | 501 | 180 | 57 | 18 | 40 |
| 402 | 152 | 67 | 29 | 0.85 | 452 | 153 | 60 | 26 | 41 | 502 | 146 | 42 | 20 | 45 |
| 403 | 150 | 66 | 29 | 0.62 | 453 | 154 | 44 | 19 | 30 | 503 | 159 | 63 | 25 | 50 |
| 404 | 154 | 50 | 21 | 0.81 | 454 | 133 | 62 | 35 | 25 | 504 | 135 | 59 | 32 | 38 |
| 405 | 152 | 60 | 26 | 0.84 | 455 | 155 | 62 | 26 | 119 | 505 | 130 | 50 | 30 | 45 |
| 406 | 140 | 49 | 25 | 0.77 | 456 | 145 | 64 | 30 | 126 | 506 | 135 | 47 | 26 | 36 |
| 407 | 158 | 78 | 31 | 0.86 | 457 | 158 | 75 | 30 | 107 | 507 | 150 | 69 | 31 | 50 |
| 408 | 153 | 60 | 26 | 0.82 | 458 | 154 | 67 | 28 | 45 | 508 | 140 | 41 | 21 | 50 |
| 409 | 158 | 45 | 18 | 0.88 | 459 | 147 | 54 | 25 | 50 | 509 | 135 | 70 | 38 | 40 |
| 410 | 152 | 67 | 29 | 0.77 | 460 | 177 | 84 | 27 | 38 | 510 | 135 | 41 | 23 | 45 |
| 411 | 151 | 73 | 32 | 0.77 | 461 | 153 | 54 | 23 | 45 | 511 | 143 | 51 | 25 | 50 |
| 412 | 152 | 70 | 30 | 0.77 | 462 | 154 | 43 | 18 | 36 | 512 | 160 | 47 | 18 | 38 |
| 413 | 146 | 52 | 24 | 0.88 | 463 | 153 | 50 | 21 | 50 | 513 | 145 | 69 | 33 | 45 |
| 414 | 160 | 60 | 23 | 0.88 | 464 | 153 | 53 | 21 | 50 | 514 | 150 | 59 | 26 | 36 |
| 415 | 152 | 67 | 29 | 0.86 | 465 | 158 | 46 | 18 | 40 | 515 | 150 | 50 | 22 | 40 |
| 416 | 155 | 48 | 20 | 0.89 | 466 | 156 | 45 | 18 | 45 | 516 | 150 | 66 | 29 | 37 |
| 417 | 150 | 54 | 24 | 0.96 | 467 | 161 | 54 | 21 | 50 | 517 | 150 | 55 | 24 | 38 |
| 418 | 153 | 65 | 28 | 0.78 | 468 | 152 | 41 | 18 | 38 | 518 | 156 | 60 | 25 | 45 |
| 419 | 158 | 58 | 23 | 0.78 | 469 | 154 | 39 | 16 | 45 | 519 | 154 | 56 | 24 | 36 |
| 420 | 159 | 50 | 20 | 0.78 | 470 | 154 | 46 | 19 | 36 | 520 | 154 | 55 | 23 | 40 |
| 421 | 158 | 59 | 24 | 0.73 | 471 | 154 | 45 | 19 | 50 | 521 | 160 | 63 | 25 | 37 |
| 422 | 158 | 58 | 23 | 0.94 | 472 | 154 | 54 | 23 | 50 | 522 | 159 | 58 | 23 | 36 |
| 423 | 154 | 42 | 18 | 0.88 | 473 | 153 | 41 | 18 | 40 | 523 | 154 | 48 | 20 | 40 |
| 424 | 154 | 59 | 25 | 0.88 | 474 | 152 | 39 | 17 | 45 | 524 | 150 | 54 | 24 | 40 |
| 425 | 158 | 42 | 17 | 0.94 | 475 | 151 | 35 | 15 | 50 | 525 | 153 | 65 | 28 | 46 |
| 426 | 160 | 65 | 25 | 0.88 | 476 | 157 | 65 | 26 | 38 | 526 | 158 | 58 | 23 | 41 |
| 427 | 165 | 58 | 21 | 0.87 | 477 | 157 | 65 | 26 | 45 | 527 | 158 | 50 | 20 | 30 |
| 428 | 150 | 63 | 28 | 0.94 | 478 | 162 | 63 | 24 | 36 | 528 | 156 | 59 | 24 | 25 |
| 429 | 154 | 52 | 22 | 0.88 | 479 | 162 | 62 | 24 | 40 | 529 | 158 | 58 | 23 | 119 |
| 430 | 159 | 57 | 23 | 0.88 | 480 | 162 | 44 | 17 | 37 | 530 | 154 | 42 | 18 | 40 |
| 431 | 152 | 50 | 22 | 0.94 | 481 | 147 | 49 | 23 | 38 | 531 | 156 | 59 | 24 | 37 |
| 432 | 154 | 63 | 27 | 0.88 | 482 | 150 | 53 | 24 | 45 | 532 | 158 | 42 | 17 | 36 |
| 433 | 143 | 50 | 24 | 0.87 | 483 | 154 | 59 | 25 | 36 | 533 | 160 | 65 | 25 | 40 |
| 434 | 161 | 60 | 23 | 0.87 | 484 | 161 | 61 | 24 | 40 | 534 | 154 | 58 | 24 | 40 |
| 435 | 154 | 63 | 27 | 0.82 | 485 | 161 | 61 | 24 | 37 | 535 | 153 | 63 | 27 | 46 |
| 436 | 154 | 63 | 27 | 0.81 | 486 | 158 | 60 | 24 | 36 | 536 | 156 | 52 | 21 | 41 |
| 437 | 154 | 63 | 27 | 0.84 | 487 | 162 | 45 | 17 | 40 | 537 | 159 | 57 | 23 | 30 |
| 438 | 158 | 42 | 17 | 0.77 | 488 | 158 | 51 | 20 | 40 | 538 | 152 | 50 | 22 | 25 |
| 439 | 158 | 42 | 17 | 0.86 | 489 | 152 | 48 | 21 | 46 | 539 | 143 | 50 | 24 | 119 |
| 440 | 158 | 42 | 17 | 0.82 | 490 | 152 | 48 | 21 | 41 | 540 | 160 | 60 | 23 | 119 |
| 441 | 158 | 42 | 17 | 0.88 | 491 | 152 | 50 | 22 | 30 | 541 | 156 | 63 | 26 | 119 |
| 442 | 151 | 73 | 32 | 0.77 | 492 | 143 | 48 | 23 | 25 | | | | | |
| 443 | 152 | 70 | 30 | 0.77 | 493 | 151 | 77 | 34 | 119 | | | | | |
| 444 | 146 | 52 | 24 | 0.77 | 494 | 159 | 50 | 20 | 45 | | | | | |
| 445 | 160 | 60 | 23 | 0.88 | 495 | 150 | 60 | 27 | 50 | | | | | |
| 446 | 152 | 67 | 29 | 0.88 | 496 | 151 | 81 | 36 | 38 | | | | | |
| 447 | 150 | 66 | 29 | 0.81 | 497 | 156 | 60 | 25 | 45 | | | | | |
| 448 | 154 | 50 | 21 | 0.84 | 498 | 154 | 46 | 19 | 36 | | | | | |
| 449 | 152 | 60 | 26 | 0.77 | 499 | 146 | 34 | 16 | 50 | | | | | |
| 450 | 140 | 49 | 25 | 0.86 | 500 | 150 | 40 | 18 | 50 | | | | | |

Appendix - X

HAEMOGLOBIN LEVELS OF THE SELECTED PARTICIPANTS

| SNo | HB | SNo | HB | SNo | HB | SNo | HB | SNo | HB | SNo | HB | SNo | HB | SNo | HB | SNo | HB | SNo | HB | SNo | HB |
|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|
| 1. | 11 | 51 | 9 | 101 | 12 | 151 | 10 | 201 | 8 | 251 | 10 | 301 | 9 | 351 | 10 | 401 | 0 | 451 | 13 | 501 | 13 |
| 2. | 12 | 52 | 12 | 102 | 12 | 152 | 7 | 202 | 8 | 252 | 10 | 302 | 9 | 352 | 12 | 402 | 12 | 452 | 10 | 502 | 12 |
| 3. | 13 | 53 | 12 | 103 | 15 | 153 | 15 | 203 | 7 | 253 | 10 | 303 | 9 | 353 | 11 | 403 | 10 | 453 | 12 | 503 | 9 |
| 4. | 13 | 54 | 10 | 104 | 10 | 154 | 16 | 204 | 7 | 254 | 10 | 304 | 8 | 354 | 11 | 404 | 9 | 454 | 11 | 504 | 9 |
| 5. | 12 | 55 | 8 | 105 | 13 | 155 | 13 | 205 | 7 | 255 | 11 | 305 | 7 | 355 | 10 | 405 | 8 | 455 | 10 | 505 | 9 |
| 6. | 11 | 56 | 9 | 106 | 10 | 156 | 10 | 206 | 7 | 256 | 11 | 306 | 8 | 356 | 14 | 406 | 7 | 456 | 11 | 506 | 9 |
| 7. | 11 | 57 | 8 | 107 | 10 | 157 | 10 | 207 | 9 | 257 | 11 | 307 | 8 | 357 | 9 | 407 | 8 | 457 | 10 | 507 | 8 |
| 8. | 11 | 58 | 10 | 108 | 16 | 158 | 12 | 208 | 9 | 258 | 11 | 308 | 8 | 358 | 4 | 408 | 9 | 458 | 7 | 508 | 8 |
| 9. | 13 | 59 | 10 | 109 | 12 | 159 | 12 | 209 | 9 | 259 | 11 | 309 | 14 | 359 | 9 | 409 | 12 | 459 | 10 | 509 | 8 |
| 10. | 14 | 60 | 9 | 110 | 9 | 160 | 12 | 210 | 9 | 260 | 11 | 310 | 12 | 360 | 12 | 410 | 12 | 460 | 7 | 510 | 8 |
| 11. | 13 | 61 | 8 | 111 | 8 | 161 | 13 | 211 | 10 | 261 | 11 | 311 | 13 | 361 | 12 | 411 | 15 | 461 | 12 | 511 | 7 |
| 12. | 11 | 62 | 10 | 112 | 8 | 162 | 13 | 212 | 11 | 262 | 11 | 312 | 13 | 362 | 10 | 412 | 10 | 462 | 12 | 512 | 7 |
| 13. | 14 | 63 | 10 | 113 | 12 | 163 | 10 | 213 | 11 | 263 | 12 | 313 | 12 | 363 | 8 | 413 | 13 | 463 | 13 | 513 | 7 |
| 14. | 11 | 64 | 9 | 114 | 11 | 164 | 9 | 214 | 11 | 264 | 12 | 314 | 11 | 364 | 9 | 414 | 10 | 464 | 10 | 514 | 7 |
| 15. | 13 | 65 | 7 | 115 | 11 | 165 | 9 | 215 | 11 | 265 | 12 | 315 | 11 | 365 | 8 | 415 | 10 | 465 | 10 | 515 | 9 |
| 16. | 13 | 66 | 11 | 116 | 10 | 166 | 10 | 216 | 12 | 266 | 12 | 316 | 11 | 366 | 10 | 416 | 16 | 466 | 12 | 516 | 9 |
| 17. | 12 | 67 | 12 | 117 | 7 | 167 | 9 | 217 | 12 | 267 | 12 | 317 | 13 | 367 | 10 | 417 | 12 | 467 | 12 | 517 | 9 |
| 18. | 14 | 68 | 9 | 118 | 10 | 168 | 10 | 218 | 12 | 268 | 12 | 318 | 14 | 368 | 9 | 418 | 9 | 468 | 12 | 518 | 9 |
| 19. | 11 | 69 | 10 | 119 | 15 | 169 | 9 | 219 | 13 | 269 | 13 | 319 | 13 | 369 | 8 | 419 | 8 | 469 | 13 | 519 | 10 |
| 20. | 12 | 70 | 12 | 120 | 9 | 170 | 10 | 220 | 13 | 270 | 13 | 320 | 11 | 370 | 10 | 420 | 8 | 470 | 13 | 520 | 11 |
| 21. | 11 | 71 | 11 | 121 | 7 | 171 | 9 | 221 | 13 | 271 | 13 | 321 | 14 | 371 | 10 | 421 | 12 | 471 | 10 | 521 | 11 |
| 22. | 13 | 72 | 11 | 122 | 7 | 172 | 10 | 222 | 13 | 272 | 14 | 322 | 11 | 372 | 9 | 422 | 11 | 472 | 9 | 522 | 11 |
| 23. | 11 | 73 | 10 | 123 | 7 | 173 | 10 | 223 | 9 | 273 | 14 | 323 | 13 | 373 | 7 | 423 | 11 | 473 | 9 | 523 | 11 |
| 24. | 13 | 74 | 14 | 124 | 10 | 174 | 12 | 224 | 9 | 274 | 14 | 324 | 13 | 374 | 11 | 424 | 10 | 474 | 10 | 524 | 12 |
| 25. | 14 | 75 | 9 | 125 | 9 | 175 | 13 | 225 | 9 | 275 | 14 | 325 | 12 | 375 | 12 | 425 | 7 | 475 | 9 | 525 | 12 |
| 26. | 8 | 76 | 12 | 126 | 8 | 176 | 13 | 226 | 9 | 276 | 14 | 326 | 14 | 376 | 9 | 426 | 10 | 476 | 10 | 526 | 12 |
| 27. | 11 | 77 | 12 | 127 | 11 | 177 | 14 | 227 | 9 | 277 | 15 | 327 | 11 | 377 | 10 | 427 | 15 | 477 | 9 | 527 | 13 |
| 28. | 10 | 78 | 11 | 128 | 11 | 178 | 15 | 228 | 9 | 278 | 12 | 328 | 12 | 378 | 12 | 428 | 9 | 478 | 10 | 528 | 13 |
| 29. | 11 | 79 | 8 | 129 | 15 | 179 | 15 | 229 | 9 | 279 | 12 | 329 | 11 | 379 | 11 | 429 | 7 | 479 | 9 | 529 | 13 |
| 30. | 11 | 80 | 8 | 130 | 11 | 180 | 16 | 230 | 9 | 280 | 12 | 330 | 13 | 380 | 11 | 430 | 7 | 480 | 10 | 530 | 13 |
| 31. | 13 | 81 | 8 | 131 | 12 | 181 | 14 | 231 | 9 | 281 | 12 | 331 | 11 | 381 | 10 | 431 | 7 | 481 | 10 | 531 | 9 |
| 32. | 13 | 82 | 10 | 132 | 8 | 182 | 13 | 232 | 9 | 282 | 11 | 332 | 13 | 382 | 14 | 432 | 10 | 482 | 12 | 532 | 9 |
| 33. | 10 | 83 | 7 | 133 | 9 | 183 | 12 | 233 | 9 | 283 | 11 | 333 | 14 | 383 | 9 | 433 | 9 | 483 | 13 | 533 | 9 |
| 34. | 13 | 84 | 8 | 134 | 10 | 184 | 11 | 234 | 9 | 284 | 11 | 334 | 8 | 384 | 12 | 434 | 8 | 484 | 13 | 534 | 9 |
| 35. | 9 | 85 | 10 | 135 | 11 | 185 | 15 | 235 | 9 | 285 | 11 | 335 | 11 | 385 | 12 | 435 | 11 | 485 | 14 | 535 | 9 |
| 36. | 10 | 86 | 7 | 136 | 11 | 186 | 12 | 236 | 9 | 286 | 11 | 336 | 10 | 386 | 11 | 436 | 11 | 486 | 15 | 536 | 9 |
| 37. | 9 | 87 | 10 | 137 | 9 | 187 | 13 | 237 | 8 | 287 | 11 | 337 | 11 | 387 | 8 | 437 | 15 | 487 | 15 | 537 | 9 |
| 38. | 10 | 88 | 12 | 138 | 13 | 188 | 11 | 238 | 8 | 288 | 11 | 338 | 11 | 388 | 8 | 438 | 11 | 488 | 16 | 538 | 9 |
| 39. | 7 | 89 | 8 | 139 | 13 | 189 | 12 | 239 | 8 | 289 | 11 | 339 | 13 | 389 | 8 | 439 | 12 | 489 | 14 | 539 | 9 |
| 40. | 10 | 90 | 8 | 140 | 12 | 190 | 12 | 240 | 8 | 290 | 12 | 340 | 13 | 390 | 10 | 440 | 8 | 490 | 13 | 540 | 9 |
| 41. | 12 | 91 | 8 | 141 | 14 | 191 | 11 | 241 | 8 | 291 | 12 | 341 | 10 | 391 | 7 | 441 | 9 | 491 | 12 | 541 | 9 |
| 42. | 9 | 92 | 9 | 142 | 13 | 192 | 11 | 242 | 8 | 292 | 11 | 342 | 13 | 392 | 8 | 442 | 10 | 492 | 11 | 542 | |
| 43. | 10 | 93 | 0 | 143 | 13 | 193 | 13 | 243 | 8 | 293 | 12 | 343 | 9 | 393 | 10 | 443 | 11 | 493 | 15 | 543 | |
| 44. | 12 | 94 | 12 | 144 | 10 | 194 | 12 | 244 | 8 | 294 | 12 | 344 | 10 | 394 | 7 | 444 | 11 | 494 | 12 | 544 | |
| 45. | 11 | 95 | 10 | 145 | 12 | 195 | 9 | 245 | 8 | 295 | 12 | 345 | 8 | 395 | 10 | 445 | 9 | 495 | 13 | 545 | |
| 46. | 11 | 96 | 9 | 146 | 11 | 196 | 9 | 246 | 8 | 296 | 13 | 346 | 10 | 396 | 12 | 446 | 13 | 496 | 11 | 546 | |
| 47. | 10 | 97 | 8 | 147 | 10 | 197 | 9 | 247 | 8 | 297 | 11 | 347 | 7 | 397 | 8 | 447 | 13 | 497 | 12 | 547 | |
| 48. | 10 | 98 | 7 | 148 | 11 | 198 | 9 | 248 | 8 | 298 | 9 | 348 | 10 | 398 | 8 | 448 | 12 | 498 | 12 | 548 | |
| 49. | 9 | 99 | 8 | 149 | 10 | 199 | 8 | 249 | 11 | 299 | 9 | 349 | 12 | 399 | 8 | 449 | 14 | 499 | 11 | 549 | |
| 50. | 10 | 100 | 9 | 150 | 7 | 200 | 8 | 250 | 10 | 300 | 6 | 350 | 9 | 400 | 9 | 450 | 13 | 500 | 11 | 550 | |

Appendix - XI

ANXIETY AND SELFESTEEM SCORES OF THE SELECTED PARTICIPANTS (N=541)

| S.No | Stai | Sta-i | Self esteem | S.No | stai | sta-i | self esteem | S.No | stai | sta-i | self esteem | S.No | stai | sta-i | self esteem | S.No | stai | sta-i | self esteem |
|------|------|-------|-------------|------|------|-------|-------------|------|------|-------|-------------|------|------|-------|-------------|------|------|-------|-------------|
| 1 | 2.15 | 3 | 3 | 51 | 1.7 | 1.85 | 2.6 | 101 | 2.6 | 2.3 | 2.9 | 151 | 2.3 | 2.5 | 2.8 | 201 | 2.3 | 3.8 | 3.3 |
| 2 | 2 | 2 | 3 | 52 | 2.5 | 2.7 | 1.5 | 102 | 2.5 | 3 | 3.2 | 152 | 2.15 | 3.15 | 3.3 | 202 | 1.6 | 2.25 | 3.2 |
| 3 | 2.35 | 3.1 | 2.6 | 53 | 2.5 | 1 | 1.5 | 103 | 2.6 | 2.65 | 2.2 | 153 | 2.3 | 2.4 | 2.4 | 203 | 2.6 | 2.5 | 2.8 |
| 4 | 2.5 | 2.3 | 2.9 | 54 | 1.65 | 1.3 | 2.5 | 104 | 2.45 | 2.8 | 3.8 | 154 | 2.25 | 2.9 | 2.7 | 204 | 3.2 | 2.65 | 2.4 |
| 5 | 2.45 | 2 | 2.1 | 55 | 1.62 | 2 | 1 | 105 | 2.3 | 2.3 | 3.1 | 155 | 2.45 | 2.3 | 3.3 | 205 | 2 | 2 | 2 |
| 6 | 2.6 | 2.25 | 2.4 | 56 | 2.35 | 2.5 | 2.5 | 106 | 2.3 | 2.2 | 3.3 | 156 | 3 | 3 | 3 | 206 | 1 | 2.1 | 2.4 |
| 7 | 2.3 | 3.1 | 2.7 | 57 | 2.35 | 1.68 | 1.5 | 107 | 1 | 2.25 | 3.1 | 157 | 2.05 | 2.35 | 3.1 | 207 | 2.1 | 1.7 | 2 |
| 8 | 2.4 | 1.8 | 2.5 | 58 | 2.4 | 2.5 | 3.5 | 108 | 2.4 | 2.5 | 3.6 | 158 | 2.95 | 2.95 | 3.1 | 208 | 0.85 | 0.95 | 2.8 |
| 9 | 3.9 | 1.8 | 2 | 59 | 2.45 | 2.85 | 2.7 | 109 | 2.25 | 2.2 | 3.1 | 159 | 1.2 | 1.8 | 3 | 209 | 2.4 | 2.35 | 2.8 |
| 10 | 2.15 | 2.2 | 2.5 | 60 | 2.2 | 2.3 | 2.7 | 110 | 1.6 | 2.6 | 2.8 | 160 | 3 | 2.65 | 2.7 | 210 | 1.75 | 1.95 | 3 |
| 11 | 1 | 1.8 | 1 | 61 | 2.1 | 2.5 | 2.8 | 111 | 2.5 | 2.15 | 2.5 | 161 | 2.15 | 2 | 3.5 | 211 | 2.5 | 2.25 | 2.7 |
| 12 | 4.5 | 1.6 | 2.2 | 62 | 2.45 | 2.45 | 2.5 | 112 | 2.1 | 2.35 | 2.5 | 162 | 2.25 | 2.9 | 2.7 | 212 | 1.75 | 1.95 | 3 |
| 13 | 2.2 | 3.4 | 2.1 | 63 | 2.1 | 1.4 | 2.7 | 113 | 2.5 | 2.5 | 2.2 | 163 | 2.45 | 2.3 | 3.3 | 213 | 2.35 | 3 | 1.3 |
| 14 | 2.45 | 2.25 | 3.2 | 64 | 2.35 | 2.3 | 2.8 | 114 | 2.15 | 2.25 | 3.1 | 164 | 3 | 3 | 3 | 214 | 1.65 | 1.9 | 2.6 |
| 15 | 1.85 | 1.75 | 2.6 | 65 | 2 | 1 | 1.8 | 115 | 1.7 | 2.3 | 2.9 | 165 | 2.05 | 2.35 | 3.1 | 215 | 2.6 | 3.5 | 1.3 |
| 16 | 2.1 | 3 | 2.2 | 66 | 2.35 | 1.5 | 2.2 | 116 | 2.1 | 2.4 | 2.3 | 166 | 2.95 | 2.95 | 3.1 | 216 | 2.45 | 1.65 | 1 |
| 17 | 1.85 | 2.45 | 2.4 | 67 | 2.55 | 1.65 | 2.8 | 117 | 2.6 | 2.25 | 2.4 | 167 | 1.2 | 1.25 | 2.5 | 217 | 2.3 | 2.9 | 3.2 |
| 18 | 2.15 | 2.4 | 2.5 | 68 | 1.95 | 1.9 | 2.3 | 118 | 2.45 | 2.1 | 2.2 | 168 | 2.65 | 2.5 | 3.1 | 218 | 2.3 | 3.2 | 2.9 |
| 19 | 2.3 | 3.8 | 3.3 | 69 | 1.85 | 1.95 | 2.4 | 119 | 2.25 | 2.2 | 2.3 | 169 | 2.2 | 2.6 | 2.8 | 219 | 1.6 | 2 | 2.7 |
| 20 | 1.6 | 2.25 | 3.2 | 70 | 2.5 | 2.7 | 1.6 | 120 | 2.5 | 2.9 | 2.8 | 170 | 2.5 | 2.25 | 2.7 | 220 | 3.5 | 3.5 | 2.9 |
| 21 | 2.6 | 2.5 | 2.8 | 71 | 2.25 | 2.3 | 2.4 | 121 | 2.5 | 2.2 | 2.3 | 171 | 3 | 2.5 | 2.6 | 221 | 2.5 | 2.5 | 3.5 |
| 22 | 3.2 | 2.65 | 2.4 | 72 | 2.3 | 3.15 | 2.9 | 122 | 2.3 | 2.7 | 2.8 | 172 | 3 | 2.6 | 2.8 | 222 | 2.2 | 1.9 | 3.3 |
| 23 | 2 | 2.5 | 2 | 73 | 2.15 | 2.27 | 3.2 | 123 | 2.45 | 2.5 | 2.1 | 173 | 2.75 | 2.75 | 2.2 | 223 | 2.5 | 1.2 | 0.3 |
| 24 | 1 | 2.1 | 2.4 | 74 | 2.05 | 2.5 | 3.6 | 124 | 2.45 | 2.01 | 2.1 | 174 | 2.55 | 3.1 | 2.9 | 224 | 1 | 2.1 | 1.3 |
| 25 | 2.1 | 1.7 | 2 | 75 | 2.65 | 2.8 | 2.8 | 125 | 2.45 | 2.2 | 2.3 | 175 | 2.65 | 3 | 2.2 | 225 | 1 | 2.1 | 1.3 |
| 26 | 0.85 | 0.95 | 2.8 | 76 | 2.95 | 2.85 | 2.6 | 126 | 2 | 2.4 | 2.25 | 176 | 4.8 | 3.4 | 2.7 | 226 | 1 | 2.1 | 1 |
| 27 | 2.4 | 2.35 | 2.8 | 77 | 1.8 | 1.25 | 2.2 | 127 | 2.5 | 2.55 | 2.5 | 177 | 2.7 | 3.6 | 2.9 | 227 | 1 | 2.45 | 2 |
| 28 | 1.75 | 1.95 | 3 | 78 | 1.7 | 1.85 | 2.2 | 128 | 2.35 | 2.4 | 2.4 | 178 | 1.4 | 1.85 | 2.4 | 228 | 3 | 2.45 | 2.5 |
| 29 | 2.5 | 2.25 | 2.7 | 79 | 1.25 | 0 | 2.4 | 129 | 2.55 | 2.45 | 2.4 | 179 | 2.9 | 2.55 | 2.8 | 229 | 2.4 | 2.25 | 2.9 |
| 30 | 1.75 | 1.95 | 3 | 80 | 2 | 2.2 | 1.1 | 130 | 2.55 | 2.5 | 2.6 | 180 | 3.2 | 3.25 | 2.9 | 230 | 2.13 | 1.85 | 1.7 |
| 31 | 2.35 | 3 | 1.3 | 81 | 2.45 | 2.5 | 1.7 | 131 | 2.4 | 2.5 | 2.4 | 181 | 3 | 3 | 3 | 231 | 2.25 | 2.5 | 1.7 |
| 32 | 1.65 | 1.9 | 2.6 | 82 | 2.2 | 2.3 | 2.8 | 132 | 2.45 | 2.45 | 2.45 | 182 | 2.15 | | 3 | 232 | 1.7 | 1.85 | 2.6 |
| 33 | 2.6 | 3.5 | 1.3 | 83 | 2.45 | 2.3 | 3.3 | 133 | 2.05 | 2.45 | 2.45 | 183 | 2 | 2 | 3 | 233 | 1.7 | 1.85 | 2.5 |
| 34 | 2.45 | 1.65 | 1 | 84 | 2 | 2.3 | 2.4 | 134 | 2.6 | 2.2 | 2.3 | 184 | 2.35 | 3.1 | 2.6 | 234 | 2.5 | 2.7 | 1.5 |
| 35 | 2.3 | 2.9 | 3.2 | 85 | 2.4 | 1.85 | 2.9 | 135 | 2.5 | 2.5 | 2.5 | 185 | 2.5 | 2.3 | 2.9 | 235 | 2.5 | 1 | 1.5 |
| 36 | 2.3 | 3.2 | 2.9 | 86 | 2.25 | 2.75 | 3.4 | 136 | 2.45 | 2.1 | 2 | 186 | 2.45 | 2 | 2.1 | 236 | 1.65 | 1.3 | 2.5 |
| 37 | 1.6 | 2 | 2.7 | 87 | 2.35 | 2.8 | 2.7 | 137 | 2 | 2.1 | 2.3 | 187 | 2.6 | 2.25 | 2.4 | 237 | 1.65 | 2 | 1 |
| 38 | 3.5 | 3.5 | 2.9 | 88 | 1.85 | 4.55 | 2.6 | 138 | 2.3 | 2.4 | 2.5 | 188 | 1.7 | 1.85 | 2.6 | 238 | 2.35 | 2.5 | 2.5 |
| 39 | 2.5 | 2.5 | 3.5 | 89 | 1.85 | 4.55 | 2.6 | 139 | 2.3 | 2.35 | 2.4 | 189 | 1.7 | 1.85 | 2.5 | 239 | 2.35 | 1.68 | 1.5 |
| 40 | 2.2 | 1.9 | 3.3 | 90 | 1.75 | 1.55 | 2.6 | 140 | 2.05 | 2.55 | 2.5 | 190 | 2.5 | 2.7 | 1.5 | 240 | 2.4 | 2.5 | 3.5 |
| 41 | 2.5 | 1.2 | 0.3 | 91 | 2.25 | 1.15 | 2.5 | 141 | 2.3 | 2.4 | 2.5 | 191 | 2.5 | 1 | 1.5 | 241 | 2.4 | 2.5 | 3.5 |
| 42 | 1 | 1.2 | 0.3 | 92 | 2.7 | 2.6 | 2.8 | 142 | 2.3 | 2.4 | 2.5 | 192 | 1.65 | 1.3 | 2.5 | 242 | 3 | 2.6 | 2.8 |
| 43 | 1 | 2.1 | 1.3 | 93 | 2.7 | 2.6 | 2.8 | 143 | 2.3 | 2.4 | 2.5 | 193 | 1.65 | 2 | 1 | 243 | 2.75 | 2.75 | 2.2 |
| 44 | 1 | 2.1 | 1.3 | 94 | 1.9 | 1.75 | 2.2 | 144 | 2.4 | 2.5 | 2.4 | 194 | 2.35 | 2.5 | 2.5 | 244 | 2.55 | 3.1 | 2.9 |
| 45 | 1 | 2.1 | 1.3 | 95 | 2.5 | 1.2 | 3 | 145 | 2.4 | 2.5 | 2.4 | 195 | 2.35 | 1.68 | 1.5 | 245 | 2.65 | 3 | 2.2 |
| 46 | 3 | 2.45 | 2.5 | 96 | 3 | 3 | 3 | 146 | 2.4 | 2.5 | 2.4 | 196 | 2.4 | 2.5 | 3.5 | 246 | 4.8 | 3.4 | 2.7 |
| 47 | 2.4 | 2.25 | 2.9 | 97 | 1.15 | 2.4 | 2.1 | 147 | 2.6 | 2.65 | 2.5 | 197 | 2.4 | 2.5 | 3.5 | 247 | 2.7 | 3.6 | 2.9 |
| 48 | 2.13 | 1.85 | 1.7 | 98 | 2.95 | 2.65 | 3.2 | 148 | 2.05 | 1.75 | 1.7 | 198 | | | | 248 | 1.4 | 1.85 | 2.4 |
| 49 | 2.25 | 2.5 | 1.7 | 99 | 2.95 | 2.55 | 2.8 | 149 | 2.6 | 2.45 | 3.2 | 199 | 1.7 | 1.85 | 2.6 | 249 | 2.9 | 2.55 | 2.8 |
| 50 | 1.7 | 1.85 | 2.6 | 100 | 1.7 | 1.85 | 2.6 | 150 | 2.15 | 2.4 | 2.2 | 200 | 1.7 | 1.85 | 2.5 | 250 | 3.2 | 3.25 | 2.9 |

| S.No | Stai | Sta-i | Self esteem | S.No | stai | sta-i | self esteem | S.No | stai | sta-i | self esteem | S.No | stai | sta-i | self esteem | S.No | stai | sta-i | self esteem |
|------|------|-------|-------------|------|------|-------|-------------|------|------|-------|-------------|------|------|-------|-------------|------|------|-------|-------------|
| 251 | 2.15 | 3 | 3 | 301 | 1.7 | 1.85 | 2.6 | 351 | 2.6 | 2.3 | 2.9 | 401 | 2.4 | 2.2 | 1.2 | 451 | 2.95 | 2.5 | 3.3 |
| 252 | 2 | 2 | 3 | 302 | 2.5 | 2.7 | 1.5 | 352 | 2.5 | 3 | 3.2 | 402 | 2.65 | 2.25 | 2.8 | 452 | 2.3 | 2.5 | 2.8 |
| 253 | 2.35 | 3.1 | 2.6 | 303 | 2.5 | 1 | 1.5 | 353 | 2.6 | 2.65 | 2.2 | 403 | 1.85 | 2.3 | 0.9 | 453 | 2.15 | 3.15 | 3.3 |
| 254 | 2.5 | 2.3 | 2.9 | 304 | 1.65 | 1.3 | 2.5 | 354 | 2.45 | 2.8 | 3.8 | 404 | 2.6 | 2.45 | 3.2 | 454 | 2.3 | 2.4 | 2.4 |
| 255 | 2.45 | 2 | 2.1 | 305 | 1.62 | 2 | 1 | 355 | 2.3 | 2.3 | 3.1 | 405 | 2.4 | 2.5 | 3.8 | 455 | 2.25 | 2.9 | 2.7 |
| 256 | 2.6 | 2.25 | 2.4 | 306 | 2.35 | 2.5 | 2.5 | 356 | 2.3 | 2.2 | 3.3 | 406 | 1.9 | 2.35 | 3.1 | 456 | 2.45 | 2.3 | 3.3 |
| 257 | 2.3 | 3.1 | 2.7 | 307 | 2.35 | 1.68 | 1.5 | 357 | 1 | 2.25 | 3.1 | 407 | 2.95 | 2.5 | 3.3 | 457 | 3 | 3 | 3 |
| 258 | 2.4 | 1.8 | 2.5 | 308 | 2.4 | 2.5 | 3.5 | 358 | 2.4 | 2.5 | 3.6 | 408 | 2.3 | 2.5 | 2.8 | 458 | 2.05 | 2.35 | 3.1 |
| 259 | 3.9 | 1.8 | 2 | 309 | 2.45 | 2.85 | 2.7 | 359 | 2.25 | 2.2 | 3.1 | 409 | 2.15 | 3.15 | 3.3 | 459 | 2.95 | 2.95 | 3.1 |
| 260 | 2.15 | 2.2 | 2.5 | 310 | 2.2 | 2.3 | 2.7 | 360 | 1.6 | 2.6 | 2.8 | 410 | 2.3 | 2.4 | 2.4 | 460 | 1.2 | 1.8 | 3 |
| 261 | 1 | 1.8 | 1 | 311 | 2.1 | 2.5 | 2.8 | 361 | 2.5 | 2.15 | 2.5 | 411 | 2.05 | 1.75 | 1.7 | 461 | 3 | 2.65 | 2.7 |
| 262 | 4.5 | 1.6 | 2.2 | 312 | 2.45 | 2.45 | 2.5 | 362 | 2.1 | 2.35 | 2.5 | 412 | 2.6 | 2.45 | 3.2 | 462 | 2.15 | 2 | 3.5 |
| 263 | 2.2 | 3.4 | 2.1 | 313 | 2.1 | 1.4 | 2.7 | 363 | 2.5 | 2.5 | 2.2 | 413 | 2.15 | 2.4 | 2.2 | 463 | 2.25 | 2.9 | 2.7 |
| 264 | 2.45 | 2.25 | 3.2 | 314 | 2.35 | 2.3 | 2.8 | 364 | 2.15 | 2.25 | 3.1 | 414 | 2.4 | 2.2 | 1.2 | 464 | 2.45 | 2.3 | 3.3 |
| 265 | 1.85 | 1.75 | 2.6 | 315 | 2 | 1 | 1.8 | 365 | 1.7 | 2.3 | 2.9 | 415 | 2.65 | 2.25 | 2.8 | 465 | 3 | 3 | 3 |
| 266 | 2.1 | 3 | 2.2 | 316 | 2.35 | 1.5 | 2.2 | 366 | 2.1 | 2.4 | 2.3 | 416 | 2.3 | 2.7 | 2.8 | 466 | 2.05 | 2.35 | 3.1 |
| 267 | 1.85 | 2.45 | 2.4 | 317 | 2.55 | 1.65 | 2.8 | 367 | 2.6 | 2.25 | 2.4 | 417 | 2.45 | 2.5 | 2.1 | 467 | 2.95 | 2.95 | 3.1 |
| 268 | 2.15 | 2.4 | 2.5 | 318 | 1.95 | 1.9 | 2.3 | 368 | 2.45 | 2.1 | 2.2 | 418 | 2.45 | 2.01 | 2.1 | 468 | 1.2 | 1.25 | 2.5 |
| 269 | 2.3 | 3.8 | 3.3 | 319 | 1.85 | 1.95 | 2.4 | 369 | 2.25 | 2.2 | 2.3 | 419 | 2.45 | 2.2 | 2.3 | 469 | 2.65 | 2.5 | 3.1 |
| 270 | 1.6 | 2.25 | 3.2 | 320 | 2.5 | 2.7 | 1.6 | 370 | 2.5 | 2.9 | 2.8 | 420 | 2 | 2.4 | 2.25 | 470 | 2.2 | 2.6 | 2.8 |
| 271 | 2.6 | 2.5 | 2.8 | 321 | 2.25 | 2.3 | 2.4 | 371 | 2.5 | 2.2 | 2.3 | 421 | 2.5 | 2.55 | 2.5 | 471 | 2.5 | 2.25 | 2.7 |
| 272 | 3.2 | 2.65 | 2.4 | 322 | 2.3 | 3.15 | 2.9 | 372 | 2.3 | 2.7 | 2.8 | 422 | 2.35 | 2.4 | 2.4 | 472 | 3 | 2.5 | 2.6 |
| 273 | 2 | 2.5 | 2 | 323 | 2.15 | 2.27 | 3.2 | 373 | 2.45 | 2.5 | 2.1 | 423 | 2.55 | 2.45 | 2.4 | 473 | 3 | 2.6 | 2.8 |
| 274 | 1 | 2.1 | 2.4 | 324 | 2.05 | 2.5 | 3.6 | 374 | 2.45 | 2.01 | 2.1 | 424 | 2.55 | 2.5 | 2.6 | 474 | 2.75 | 2.75 | 2.2 |
| 275 | 2.1 | 1.7 | 2 | 325 | 2.65 | 2.8 | 2.8 | 375 | 2.45 | 2.2 | 2.3 | 425 | 2.4 | 2.5 | 2.4 | 475 | 2.55 | 3.1 | 2.9 |
| 276 | 0.85 | 0.95 | 2.8 | 326 | 2.95 | 2.85 | 2.6 | 376 | 2 | 2.4 | 2.25 | 426 | 2.45 | 2.45 | 2.45 | 476 | 2.65 | 3 | 2.2 |
| 277 | 2.4 | 2.35 | 2.8 | 327 | 1.8 | 1.25 | 2.2 | 377 | 2.5 | 2.55 | 2.5 | 427 | 2.7 | 3.6 | 2.9 | 477 | 4.8 | 3.4 | 2.7 |
| 278 | 1.75 | 1.95 | 3 | 328 | 1.7 | 1.85 | 2.2 | 378 | 2.35 | 2.4 | 2.4 | 428 | 1.4 | 1.85 | 2.4 | 478 | 2.7 | 3.6 | 2.9 |
| 279 | 2.5 | 2.25 | 2.7 | 329 | 1.25 | 0 | 2.4 | 379 | 2.55 | 2.45 | 2.4 | 429 | 2.9 | 2.55 | 2.8 | 479 | 1.4 | 1.85 | 2.4 |
| 280 | 1.75 | 1.95 | 3 | 330 | 2 | 2.2 | 1.1 | 380 | 2.55 | 2.5 | 2.6 | 430 | 3.2 | 3.25 | 2.9 | 480 | 2.9 | 2.55 | 2.8 |
| 281 | 2.35 | 3 | 1.3 | 331 | 2.45 | 2.5 | 1.7 | 381 | 2.4 | 2.5 | 2.4 | 431 | 3 | 3 | 3 | 481 | 3.2 | 3.25 | 2.9 |
| 282 | 1.65 | 1.9 | 2.6 | 332 | 2.2 | 2.3 | 2.8 | 382 | 2.45 | 2.45 | 2.45 | 432 | 2.15 | | 3 | 482 | 3 | 3 | 3 |
| 283 | 2.6 | 3.5 | 1.3 | 333 | 2.45 | 2.3 | 3.3 | 383 | 2.05 | 2.45 | 2.45 | 433 | 2 | 2 | 3 | 483 | 2.15 | 2.65 | 3 |
| 284 | 2.45 | 1.65 | 1 | 334 | 2 | 2.3 | 2.4 | 384 | 2.6 | 2.2 | 2.3 | 434 | 2.35 | 3.1 | 2.6 | 484 | 2 | 2 | 3 |
| 285 | 2.3 | 2.9 | 3.2 | 335 | 2.4 | 1.85 | 2.9 | 385 | 2.5 | 2.5 | 2.5 | 435 | 2.5 | 2.3 | 2.9 | 485 | 2.35 | 3.1 | 2.6 |
| 286 | 2.3 | 3.2 | 2.9 | 336 | 2.25 | 2.75 | 3.4 | 386 | 2.45 | 2.1 | 2 | 436 | 2.45 | 2 | 2.1 | 486 | 2.5 | 2.3 | 2.9 |
| 287 | 1.6 | 2 | 2.7 | 337 | 2.35 | 2.8 | 2.7 | 387 | 2 | 2.1 | 2.3 | 437 | 2.6 | 2.25 | 2.4 | 487 | 2.45 | 2 | 2.1 |
| 288 | 3.5 | 3.5 | 2.9 | 338 | 1.85 | 4.55 | 2.6 | 388 | 2.3 | 2.4 | 2.5 | 438 | 1.7 | 1.85 | 2.6 | 488 | 2.6 | 2.25 | 2.4 |
| 289 | 2.5 | 2.5 | 3.5 | 339 | 1.85 | 4.55 | 2.6 | 389 | 2.3 | 2.35 | 2.4 | 439 | 1.7 | 1.85 | 2.5 | 489 | 2.3 | 3.1 | 2.7 |
| 290 | 2.2 | 1.9 | 3.3 | 340 | 1.75 | 1.55 | 2.6 | 390 | 2.05 | 2.55 | 2.5 | 440 | 2.5 | 2.7 | 1.5 | 490 | 2.4 | 1.8 | 2.5 |
| 291 | 2.5 | 1.2 | 0.3 | 341 | 2.25 | 1.15 | 2.5 | 391 | 2.3 | 2.4 | 2.5 | 441 | 2.5 | 1 | 1.5 | 491 | 3.9 | | 2 |
| 292 | 1 | 1.2 | 0.3 | 342 | 2.7 | 2.6 | 2.8 | 392 | 2.3 | 2.4 | 2.5 | 442 | 1.65 | 1.3 | 2.5 | 492 | 2.15 | 2.2 | 2.5 |
| 293 | 1 | 2.1 | 1.3 | 343 | 2.7 | 2.6 | 2.8 | 393 | 2.3 | 2.4 | 2.5 | 443 | 1.65 | 2 | 1 | 493 | 1 | 1.8 | 1 |
| 294 | 1 | 2.1 | 1.3 | 344 | 1.9 | 1.75 | 2.2 | 394 | 2.4 | 2.5 | 2.4 | 444 | 2.35 | 2.5 | 2.5 | 494 | 4.5 | 1.6 | 2.2 |
| 295 | 1 | 2.1 | 1.3 | 345 | 2.5 | 1.2 | 3 | 395 | 2.4 | 2.5 | 2.4 | 445 | 2.35 | 1.68 | 1.5 | 495 | 2.2 | 3.4 | 2.1 |
| 296 | 3 | 2.45 | 2.5 | 346 | 3 | 3 | 3 | 396 | 2.4 | 2.5 | 2.4 | 446 | 2.4 | 2.5 | 3.5 | 496 | 2.45 | 2.25 | 3.2 |
| 297 | 2.4 | 2.25 | 2.9 | 347 | 1.15 | 2.4 | 2.1 | 397 | 2.6 | 2.65 | 2.5 | 447 | 2.4 | 2.5 | 3.5 | 497 | 1.85 | 1.75 | 2.6 |
| 298 | 2.13 | 1.85 | 1.7 | 348 | 2.95 | 2.65 | 3.2 | 398 | 2.05 | 1.75 | 1.7 | 448 | | | | 498 | 2.1 | 3 | 2.2 |
| 299 | 2.25 | 2.5 | 1.7 | 349 | 2.95 | 2.55 | 2.8 | 399 | 2.6 | 2.45 | 3.2 | 449 | 1.7 | 1.85 | 2.6 | 499 | 1.85 | 2.45 | 2.4 |
| 300 | 1.7 | 1.85 | 2.6 | 350 | 1.7 | 1.85 | 2.6 | 400 | 2.15 | 2.4 | 2.2 | 450 | 1.7 | 1.85 | 2.5 | 500 | 2.15 | 2.4 | 2.5 |

| S.No | Stai | Sta-i | Self esteem |
|-------------|-------------|--------------|--------------------|
| 501 | 2.00 | 2.00 | 3.00 |
| 502 | 2.35 | 3.10 | 2.60 |
| 503 | 2.50 | 2.30 | 2.90 |
| 504 | 2.45 | 2.00 | 2.10 |
| 505 | 2.60 | 2.25 | 2.40 |
| 506 | 2.30 | 3.10 | 2.70 |
| 507 | 2.40 | 1.80 | 2.50 |
| 508 | 3.90 | 1.80 | 2.00 |
| 509 | 2.15 | 2.20 | 2.50 |
| 510 | 1.00 | 1.80 | 1.00 |
| 511 | 4.50 | 1.60 | 2.20 |
| 512 | 2.20 | 3.40 | 2.10 |
| 513 | 2.45 | 2.25 | 3.20 |
| 514 | 1.85 | 1.75 | 2.60 |
| 515 | 2.10 | 3.00 | 2.20 |
| 516 | 1.85 | 2.45 | 2.40 |
| 517 | 2.15 | 2.40 | 2.50 |
| 518 | 2.30 | 3.80 | 3.30 |
| 519 | 1.60 | 2.25 | 3.20 |
| 520 | 2.60 | 2.50 | 2.80 |
| 521 | 3.20 | 2.65 | 2.40 |
| 522 | 2.00 | 2.50 | 2.00 |
| 523 | 1.00 | 2.10 | 2.40 |
| 524 | 2.10 | 1.70 | 2.00 |
| 525 | .85 | .95 | 2.80 |
| 526 | 2.40 | 2.35 | 2.80 |
| 527 | 1.75 | 1.95 | 3.00 |
| 528 | 2.50 | 2.25 | 2.70 |
| 529 | 1.75 | 1.95 | 3.00 |
| 530 | 2.35 | 3.00 | 1.30 |
| 531 | 1.65 | 1.90 | 2.60 |
| 532 | 2.60 | 3.50 | 1.30 |
| 533 | 2.45 | 1.65 | 1.00 |
| 534 | 2.30 | 2.90 | 3.20 |
| 535 | 2.30 | 3.20 | 2.90 |
| 536 | 1.60 | 2.00 | 2.70 |
| 537 | 3.50 | 3.50 | 2.90 |
| 538 | 2.50 | 2.50 | 3.50 |
| 539 | 2.20 | 1.90 | 3.30 |
| 540 | 2.50 | 1.20 | .30 |
| 541 | 1.50 | 2.00 | 2.70 |

Appendix - XII

PMS SYMPTOM SCORE AND PMS KNOWLEDGE SCORE OF THE SELECTED PARTICIPANTS (N=541)

| s.no | pms score | PMS knowledge score | s.no | PMS score | PMS knowledge score | s.no | PMS score | PMS knowledge score | s.no | PMS score | PMS knowledge score | s.no | PMS score | PMS knowledge score | s.no | PMS score | PMS knowledge score |
|------|-----------|---------------------|------|-----------|---------------------|------|-----------|---------------------|------|-----------|---------------------|------|-----------|---------------------|------|-----------|---------------------|
| 1. | 2 | 4 | 51 | 2.5 | 2 | 101 | 1 | 1 | 151 | 2 | 2 | 201 | 2 | 1 | 251 | 1 | 2 |
| 2. | 2 | 4 | 52 | 2.5 | 4 | 102 | 2 | 0 | 152 | 2 | 1 | 202 | 2 | 2 | 252 | 3 | 3 |
| 3. | 3 | 2 | 53 | 2 | 1 | 103 | 4 | 3 | 153 | 2 | 0 | 203 | 2 | 2 | 253 | 3 | 3 |
| 4. | 1.4 | 8 | 54 | 2 | 4 | 104 | 2 | 3 | 154 | 2 | 5 | 204 | 2 | 2 | 254 | 3 | 3 |
| 5. | 3 | 1 | 55 | 2 | 3 | 105 | 2 | 2 | 155 | 2.5 | 4 | 205 | 2 | 2 | 255 | 4 | 2 |
| 6. | 3.06 | 1 | 56 | 1 | 4 | 106 | 2 | 3 | 156 | 2 | 3 | 206 | 2 | 4 | 256 | 3 | 3 |
| 7. | 2 | 5 | 57 | 1 | 3 | 107 | 2 | 3 | 157 | 2.5 | 5 | 207 | 2 | 5 | 257 | 3 | 3 |
| 8. | 2 | 5 | 58 | 0 | 2 | 108 | 1 | 10 | 158 | 3 | 2 | 208 | 3 | 1 | 258 | 1 | 1 |
| 9. | 2.3 | 4 | 59 | 2 | 2 | 109 | 2 | 5 | 159 | 2.6 | 1 | 209 | 3 | 3 | 259 | 3 | 3 |
| 10. | 2.5 | 4 | 60 | 2 | 3 | 110 | 2 | 4 | 160 | 2.35 | 4 | 210 | 2 | 1 | 260 | 1 | 3 |
| 11. | 2 | 2 | 61 | 3 | 2 | 111 | 2 | 5 | 161 | 3 | 2 | 211 | 3 | 8 | 261 | 1 | 6 |
| 12. | 2 | 2 | 62 | 2.5 | 2 | 112 | 2 | 6 | 162 | 3.3 | 3 | 212 | 3 | 1 | 262 | 1 | 4 |
| 13. | 3 | 1 | 63 | 0.25 | 6 | 113 | 2 | 3 | 163 | 2.1 | 3 | 213 | 2 | 1 | 263 | 1 | 3 |
| 14. | 3.06 | 8 | 64 | 0.25 | 4 | 114 | 2 | 3 | 164 | 0 | 1 | 214 | 3 | 1 | 264 | 1 | 3 |
| 15. | 2.3 | 5 | 65 | 1 | 6 | 115 | 2 | 1 | 165 | 4 | 2 | 215 | 1 | 2 | 265 | 2 | 3 |
| 16. | 2.5 | 5 | 66 | 1 | 2 | 116 | 2 | 1 | 166 | 2.5 | 4 | 216 | 2 | 2 | 266 | 3 | 4 |
| 17. | 2.3 | 4 | 67 | 1 | 0 | 117 | 2 | 2 | 167 | 3 | 2 | 217 | 2 | 2 | 267 | 2 | 1 |
| 18. | 2.5 | 4 | 68 | 2.4 | 0 | 118 | 2 | 2 | 168 | 3 | 1 | 218 | 2 | 1 | 268 | 3 | 2 |
| 19. | 2 | 2 | 69 | 2 | 8 | 119 | 1 | 8 | 169 | 2 | 1 | 219 | 2 | 1 | 269 | 2 | 3 |
| 20. | 2 | 2 | 70 | 1 | 8 | 120 | 2 | 3 | 170 | 3 | 1 | 220 | 3 | 1 | 270 | 1 | 4 |
| 21. | 4 | 1 | 71 | 2.2 | 3 | 121 | 2 | 4 | 171 | 2 | 2 | 221 | 2 | 2 | 271 | 1 | 3 |
| 22. | 3 | 2 | 72 | 1 | 2 | 122 | 2 | 3 | 172 | 2 | 2 | 222 | 2 | 4 | 272 | 1 | 2 |
| 23. | 2.5 | 4 | 73 | 2 | 3 | 123 | 2 | 4 | 173 | 2 | 1 | 223 | 2 | 3 | 273 | 2 | 2 |
| 24. | 3 | 1 | 74 | 2 | 3.6 | 124 | 2 | 5 | 174 | 2 | 4 | 224 | 0 | 3 | 274 | 3 | 3 |
| 25. | 3.3 | 3 | 75 | 2 | 3.6 | 125 | 2 | 3 | 175 | 3 | 1 | 225 | 3 | 1 | 275 | 3 | 2 |
| 26. | 2.35 | 4 | 76 | 1 | 2 | 126 | 2 | 1 | 176 | 2 | 1 | 226 | 1.8 | 2 | 276 | 2.5 | 2 |
| 27. | 3 | 2 | 77 | 2 | 2 | 127 | 2 | 1 | 177 | 3 | 4 | 227 | 1.8 | 2 | 277 | 2.5 | 2 |
| 28. | 2.5 | 5 | 78 | 2 | 3 | 128 | 3 | 4 | 178 | 3 | 5 | 228 | 2 | 2 | 278 | 3 | 2 |
| 29. | 2.5 | 2 | 79 | 3 | 2 | 129 | 2 | 4 | 179 | 2 | 5 | 229 | 0 | 1 | 279 | 3 | 6 |
| 30. | 4 | 1 | 80 | 2.5 | 2 | 130 | 2 | 4 | 180 | 2 | 1 | 230 | 2.5 | 1 | 280 | 2 | 2 |
| 31. | 4 | 3 | 81 | 0.25 | 6 | 131 | 3.5 | 1 | 181 | 2 | 1 | 231 | 2.5 | 1 | 281 | 0 | 1 |
| 32. | 3 | 4 | 82 | 0.25 | 4 | 132 | 3.5 | 1 | 182 | 2 | 5 | 232 | 3 | 2 | 282 | 2.4 | 1 |
| 33. | 1 | 2 | 83 | 1 | 6 | 133 | 3.5 | 1 | 183 | 2 | 2 | 233 | 2.65 | 2 | 283 | 1 | 1 |
| 34. | 1 | 4 | 84 | 1 | 2 | 134 | 3.5 | 1 | 184 | 2 | 1 | 234 | 2.5 | 3 | 284 | 1 | 0 |
| 35. | 1 | 5 | 85 | 1 | 0 | 135 | 3 | 3 | 185 | 4 | 2 | 235 | 1 | 1 | 285 | 2.2 | 3 |
| 36. | 1 | 2 | 86 | 2.4 | 0 | 136 | 2 | 3 | 186 | 2 | 2 | 236 | 4 | 2 | 286 | 3 | 2 |
| 37. | 1 | 3 | 87 | 2 | 8 | 137 | 2 | 4 | 187 | 2 | 3 | 237 | 2.5 | 4 | 287 | 2.5 | 2 |
| 38. | 3 | 3 | 88 | 1 | 8 | 138 | 2 | 3 | 188 | 2 | 1 | 238 | 2.6 | 1 | 288 | 0.25 | 3.6 |
| 39. | 3 | 3 | 89 | 2.2 | 3 | 139 | 3.25 | 2 | 189 | 2 | 1 | 239 | 3.3 | 3 | 289 | 0.25 | 3.6 |
| 40. | 3 | 3 | 90 | 1 | 2 | 140 | 3.85 | 2 | 190 | 2 | 1 | 240 | 2.35 | 4 | 290 | 1 | 2 |
| 41. | 4 | 2 | 91 | 2 | 3 | 141 | 1.8 | 2 | 191 | 2 | 3 | 241 | 3 | 2 | 291 | 3.5 | 0 |
| 42. | 3 | 3 | 92 | 2 | 3.6 | 142 | 1.8 | 2 | 192 | 2 | 1 | 242 | 2.5 | 5 | 292 | 2 | 1 |
| 43. | 3 | 3 | 93 | 2 | 3.6 | 143 | 2 | 2 | 193 | 2 | 2 | 243 | 3 | 2 | 293 | 3 | 1 |
| 44. | 0 | 1 | 94 | 1 | 2 | 144 | 0 | 1 | 194 | 2 | 3 | 244 | 4 | 1 | 294 | 3 | 1 |
| 45. | 3 | 3 | 95 | 2 | 2 | 145 | 2.5 | 1 | 195 | 2 | 1 | 245 | 1 | 3 | 295 | 3 | 1 |
| 46. | 1 | 4 | 96 | 2 | 3 | 146 | 2.5 | 1 | 196 | 2 | 1 | 246 | 3 | 4 | 296 | 4 | 2 |
| 47. | 1 | 6 | 97 | 3 | 2 | 147 | 3 | 2 | 197 | 2 | 1 | 247 | 1 | 2 | 297 | 4 | 3 |
| 48. | 1 | 4 | 98 | 2.5 | 2 | 148 | 2.65 | 2 | 198 | 2 | 2 | 248 | 1 | 3 | 298 | 4 | 2 |
| 49. | 0 | 3 | 99 | 0.25 | 6 | 149 | 2.5 | 3 | 199 | 2 | 1 | 249 | 1 | 4 | 299 | 3 | 1 |
| 50. | 0 | 3 | 100 | 0.25 | 4 | 150 | 2.5 | 2 | 200 | 2 | 2 | 250 | 1 | 3 | 300 | 3 | 3 |

Appendix - XIII

ANTHROPOMETRIC MEASUREMENTS OF THE CONTROL GROUP BEFORE AND AFTER INTERVENTION (N=50)

| SNo | BEFORE | | | | AFTER | | | |
|-----|--------|--------|-----|-----------|--------|--------|-----|-----------|
| | height | weight | BMI | W/H ratio | height | weight | BMI | W/H ratio |
| 1. | 154 | 44 | 29 | 1.540 | 154 | 44 | 19 | 0.775 |
| 2. | 143 | 72 | 50 | 1.430 | 143 | 72 | 25 | 0.841 |
| 3. | 159 | 75 | 47 | 1.590 | 159 | 75 | 25 | 0.841 |
| 4. | 159 | 62 | 39 | 1.590 | 159 | 62 | 21 | 0.667 |
| 5. | 149 | 60 | 40 | 1.490 | 149 | 60 | 20 | 0.600 |
| 6. | 150 | 47 | 31 | 1.500 | 150 | 47 | 20 | 0.831 |
| 7. | 150 | 47 | 31 | 1.500 | 150 | 47 | 18 | 0.636 |
| 8. | 148 | 48 | 32 | 1.480 | 148 | 48 | 18 | 0.722 |
| 9. | 149 | 48 | 32 | 1.490 | 149 | 48 | 18 | 0.667 |
| 10. | 155 | 48 | 31 | 1.550 | 155 | 48 | 20 | 0.645 |
| 11. | 143 | 72 | 50 | 1.430 | 143 | 72 | 23 | 0.649 |
| 12. | 150 | 35 | 23 | 1.500 | 150 | 35 | 21 | 0.752 |
| 13. | 154 | 47 | 31 | 1.540 | 154 | 47 | 16 | 0.752 |
| 14. | 154 | 44 | 29 | 1.540 | 154 | 44 | 15 | 0.750 |
| 15. | 154 | 44 | 29 | 1.540 | 154 | 44 | 17 | 0.873 |
| 16. | 146 | 46 | 32 | 1.460 | 146 | 46 | 15 | 0.873 |
| 17. | 170 | 63 | 37 | 1.700 | 170 | 63 | 21 | 0.873 |
| 18. | 165 | 52 | 32 | 1.650 | 165 | 52 | 16 | 0.667 |
| 19. | 152 | 48 | 32 | 1.520 | 152 | 48 | 20 | 0.676 |
| 20. | 145 | 52 | 36 | 1.450 | 145 | 52 | 17 | 0.960 |
| 21. | 155 | 58 | 37 | 1.550 | 155 | 58 | 19 | 0.960 |
| 22. | 145 | 58 | 40 | 1.450 | 145 | 58 | 25 | 0.847 |
| 23. | 155 | 58 | 37 | 1.550 | 155 | 58 | 20 | 0.622 |
| 24. | 145 | 52 | 36 | 1.450 | 145 | 52 | 21 | 0.814 |
| 25. | 158 | 59 | 37 | 1.580 | 158 | 59 | 23 | 0.837 |
| 26. | 160 | 35 | 22 | 1.600 | 160 | 35 | 21 | 0.771 |
| 27. | 160 | 45 | 28 | 1.600 | 160 | 45 | 15 | 0.855 |
| 28. | 153 | 42 | 27 | 1.530 | 153 | 42 | 24 | 0.819 |
| 29. | 153 | 54 | 35 | 1.530 | 153 | 54 | 18 | 0.875 |
| 30. | 153 | 51 | 33 | 1.530 | 153 | 51 | 17 | 0.770 |
| 31. | 149 | 43 | 29 | 1.490 | 149 | 43 | 14 | 0.770 |
| 32. | 155 | 48 | 31 | 1.550 | 155 | 48 | 16 | 0.770 |
| 33. | 156 | 52 | 33 | 1.560 | 156 | 52 | 17 | 0.875 |
| 34. | 145 | 58 | 40 | 1.450 | 145 | 58 | 19 | 0.875 |
| 35. | 162 | 55 | 34 | 1.620 | 162 | 55 | 18 | 0.859 |
| 36. | 145 | 64 | 44 | 1.450 | 145 | 64 | 21 | 0.889 |
| 37. | 152 | 43 | 28 | 1.520 | 152 | 43 | 18 | 0.955 |
| 38. | 150 | 42 | 28 | 1.500 | 150 | 42 | 18 | 0.780 |
| 39. | 149 | 41 | 28 | 1.490 | 149 | 41 | 16 | 0.780 |
| 40. | 153 | 56 | 37 | 1.530 | 153 | 56 | 19 | 0.780 |
| 41. | 154 | 35 | 23 | 1.540 | 154 | 35 | 21 | 0.727 |
| 42. | 152 | 43 | 28 | 1.520 | 152 | 43 | 18 | 0.944 |
| 43. | 151 | 43 | 28 | 1.510 | 151 | 43 | 18 | 0.881 |
| 44. | 162 | 71 | 44 | 1.620 | 162 | 71 | 24 | 0.881 |
| 45. | 163 | 45 | 28 | 1.630 | 163 | 45 | 15 | 0.944 |
| 46. | 159 | 42 | 26 | 1.590 | 159 | 42 | 14 | 0.881 |
| 47. | 158 | 41 | 26 | 1.580 | 158 | 41 | 14 | 0.872 |
| 48. | 156 | 50 | 32 | 1.560 | 156 | 50 | 17 | 0.944 |
| 49. | 161 | 49 | 30 | 1.610 | 161 | 49 | 16 | 0.881 |
| 50. | 149 | 52 | 35 | 1.490 | 149 | 52 | 20 | 0.881 |

Appendix - XIV

ANTHROPOMETRIC MEASUREMENTS OF EXPERIMENTAL GROUP BEFORE AND AFTER INTERVENTION

| SNo | BEFORE | | | | AFTER | | | |
|-----|--------|--------|-----|-----------|--------|--------|-------|-----------|
| | height | weight | BMI | W/H ratio | height | weight | BMI | W/H ratio |
| 1. | 154 | 50 | 19 | .944 | 154 | 50.00 | 19.00 | 0.94 |
| 2. | 155 | 50 | 21 | .881 | 155 | 50.00 | 21.00 | 0.88 |
| 3. | 154 | 53 | 22 | .872 | 154 | 53.00 | 22.40 | 0.87 |
| 4. | 144 | 52 | 25 | .872 | 144 | 52.00 | 25.00 | 0.87 |
| 5. | 144 | 52 | 25 | .818 | 144 | 52.00 | 25.00 | 0.82 |
| 6. | 154 | 51 | 21 | .814 | 154 | 51.00 | 19.00 | 0.81 |
| 7. | 154 | 50 | 21 | .837 | 154 | 50.00 | 21.00 | 0.84 |
| 8. | 165 | 57 | 21 | .771 | 165 | 57.00 | 20.90 | 0.77 |
| 9. | 154 | 54 | 23 | .855 | 154 | 54.00 | 23.30 | 0.86 |
| 10. | 160 | 64 | 25 | .819 | 160 | 60.00 | 25.00 | 0.82 |
| 11. | 155 | 68 | 29 | .875 | 155 | 60.00 | 20.00 | 0.88 |
| 12. | 154 | 44 | 18 | .770 | 154 | 50.00 | 20.00 | 0.77 |
| 13. | 155 | 44 | 18 | .770 | 155 | 50.00 | 19.00 | 0.77 |
| 14. | 154 | 52 | 23 | .770 | 154 | 52.00 | 22.60 | 0.77 |
| 15. | 154 | 38 | 16 | .875 | 154 | 40.00 | 20.00 | 0.88 |
| 16. | 154 | 50 | 20 | .875 | 154 | 50.00 | 20.00 | 0.88 |
| 17. | 154 | 48 | 20 | .814 | 154 | 48.00 | 20.30 | 0.81 |
| 18. | 160 | 70 | 27 | .837 | 160 | 65.00 | 27.30 | 0.84 |
| 19. | 160 | 70 | 27 | .900 | 160 | 59.00 | 22.00 | 0.77 |
| 20. | 157 | 63 | 26 | .855 | 157 | 59.00 | 25.60 | 0.86 |
| 21. | 157 | 60 | 24 | .819 | 157 | 58.00 | 24.40 | 0.82 |
| 22. | 157 | 58 | 24 | .875 | 157 | 58.00 | 23.60 | 0.88 |
| 23. | 156 | 50 | 26 | .900 | 156 | 50.00 | 26.00 | 0.77 |
| 24. | 152 | 37 | 16 | .900 | 152 | 40.00 | 20.00 | 0.77 |
| 25. | 154 | 50 | 19 | .900 | 154 | 49.00 | 19.00 | 0.77 |
| 26. | 155 | 50 | 21 | .875 | 155 | 49.00 | 21.00 | 0.88 |
| 27. | 154 | 53 | 22 | .875 | 154 | 51.00 | 22.00 | 0.88 |
| 28. | 144 | 52 | 25 | .875 | 144 | 52.00 | 25.00 | 0.88 |
| 29. | 144 | 52 | 25 | .875 | 144 | 52.00 | 25.00 | 0.88 |
| 30. | 154 | 51 | 20 | .875 | 154 | 45.00 | 20.00 | 0.88 |
| 31. | 154 | 50 | 21 | .887 | 154 | 45.00 | 21.00 | 0.89 |
| 32. | 165 | 57 | 21 | .776 | 165 | 50.00 | 21.00 | 0.78 |
| 33. | 154 | 54 | 23 | 1.000 | 154 | 54.00 | 23.00 | 0.78 |
| 34. | 160 | 64 | 25 | 1.000 | 160 | 53.00 | 25.00 | 0.77 |
| 35. | 155 | 68 | 28 | 1.000 | 155 | 51.00 | 28.00 | 0.85 |
| 36. | 154 | 44 | 18 | 1.000 | 154 | 51.00 | 19.00 | 0.77 |
| 37. | 154 | 44 | 18 | .770 | 154 | 44.00 | 18.00 | 0.77 |
| 38. | 154 | 52 | 22 | 1.000 | 154 | 51.00 | 22.00 | 0.77 |
| 39. | 154 | 38 | 16 | .875 | 154 | 50.00 | 16.00 | 0.88 |
| 40. | 154 | 38 | 16 | .875 | 154 | 51.00 | 16.00 | 0.88 |
| 41. | 154 | 48 | 20 | .814 | 154 | 50.00 | 20.30 | 0.81 |
| 42. | 160 | 70 | 27 | .837 | 160 | 55.00 | 27.00 | 0.84 |
| 43. | 154 | 70 | 30 | .771 | 154 | 55.00 | 27.00 | 0.77 |
| 44. | 157 | 63 | 27 | .821 | 157 | 55.00 | 24.00 | 0.82 |
| 45. | 157 | 60 | 24 | .810 | 157 | 57.00 | 24.40 | 0.81 |
| 46. | 157 | 58 | 24 | .865 | 157 | 58.00 | 23.60 | 0.86 |
| 47. | 156 | 50 | 26 | .839 | 156 | 50.00 | 25.50 | 0.84 |
| 48. | 154 | 50 | 20 | .889 | 154 | 55.00 | 20.00 | 0.89 |
| 49. | 154 | 45 | 18 | .821 | 154 | 50.00 | 18.20 | 0.82 |
| 50. | 154 | 45 | 18 | .810 | 154 | 50.00 | 18.20 | 0.81 |

Appendix - XV

BIOCHEMICAL PROFILE OF THE CONTROL GROUP BEFORE AND AFTER INTERVENTION

| S.No | BEFORE | | | | | | AFTER | | | | | |
|------|-------------|---------|-----------|----------|-------|------|-------------|---------|-----------|----------|-------|-------|
| | Haemoglobin | Calcium | Magnesium | ferritin | Iron | TIBC | Haemoglobin | Calcium | magnesium | Ferritin | Iron | TIBC |
| 1 | 9.6 | 9.3 | 1.5 | 35.07 | 44.4 | 282 | 9.2 | 8.8 | 1.7 | 32.8 | 54.3 | 381 |
| 2 | 9.4 | 9.6 | 1.7 | 16.52 | 69.4 | 426 | 9.5 | 9 | 1.7 | 16.99 | 65.4 | 473 |
| 3 | 9.1 | 9.4 | 2 | 14.99 | 78 | 425 | 9.1 | 8.2 | 1.9 | 17.96 | 130.6 | 361.9 |
| 4 | 9.8 | 9.1 | 1.8 | 17.71 | 54.5 | 336 | 9.7 | 8.8 | 1.9 | 17.4 | 55 | 373.3 |
| 5 | 9.8 | 9.8 | 1.8 | 11.43 | 52 | 395 | 9.4 | 8.6 | 1.8 | 10.48 | 35.8 | 433.7 |
| 6 | 9.4 | 9.8 | 1.9 | 30 | 52.5 | 465 | 9.6 | 8.7 | 2 | 31.09 | 142.7 | 334.5 |
| 7 | 9.4 | 9.4 | 2.1 | 11.1 | 105.1 | 322 | 9.3 | 9.2 | 2 | 17.95 | 30.3 | 372.3 |
| 8 | 9.5 | 9.4 | 2.1 | 30.01 | 123.8 | 460 | 9.2 | 8.7 | 1.8 | 30.89 | 123.6 | 391.5 |
| 9 | 9.2 | 9.5 | 1.7 | 35.12 | 79.5 | 285 | 9.5 | 8.5 | 1.8 | 28.33 | 81.9 | 440 |
| 10 | 9.3 | 9.2 | 2 | 12.51 | 38.5 | 391 | 9.1 | 9.1 | 1.6 | 12.29 | 127.7 | 355.3 |
| 11 | 9.4 | 9.3 | 2.1 | 23 | 100.4 | 281 | 9.7 | 8.5 | 2 | 22.09 | 92.3 | 337.9 |
| 12 | 9.7 | 9.4 | 2.3 | 44.08 | 54.6 | 395 | 9.4 | 9.2 | 1.8 | 44.08 | 105.8 | 369 |
| 13 | 9.4 | 9.7 | 1.9 | 56.15 | 116 | 244 | 9.6 | 9 | 2 | 55.77 | 64.2 | 339 |
| 14 | 9.4 | 9.4 | 1.8 | 55.75 | 56.2 | 283 | 10 | 8.7 | 2.1 | 52.61 | 81.1 | 412.5 |
| 15 | 9.7 | 9.4 | 2 | 19.28 | 29.4 | 402 | 10 | 8.8 | 1.8 | 18.29 | 38.8 | 397.3 |
| 16 | 9.2 | 9.7 | 2.1 | 24.44 | 60.3 | 459 | 10 | 9 | 1.9 | 26.35 | 135.9 | 338.4 |
| 17 | 9.5 | 9.2 | 2 | 44.4 | 94.4 | 253 | 9.2 | 9 | 2 | 10.03 | 34.3 | 464.3 |
| 18 | 9.1 | 9.5 | 2 | 16.16 | 64.1 | 352 | 9.5 | 8.9 | 1.9 | 45.05 | 142.9 | 392 |
| 19 | 9.7 | 9.1 | 1.9 | 86 | 177.1 | 303 | 9.1 | 8.8 | 2 | 82.89 | 112.2 | 395.3 |
| 20 | 9.4 | 9.7 | 2.2 | 45.13 | 134 | 250 | 9.7 | 8.8 | 2 | 46.6 | 106.6 | 250 |
| 21 | 9.6 | 9.4 | 2 | 48.78 | 92.2 | 308 | 10 | 8.8 | 2.2 | 44.31 | 45.2 | 473.5 |
| 22 | 9.3 | 9.6 | 2.3 | 25.73 | 36 | 393 | 10 | 8.7 | 1.9 | 21.99 | 80.8 | 300 |
| 23 | 8.9 | 9.3 | 2.1 | 31.76 | 47.9 | 302 | 9 | 8.4 | 2 | 5.04 | 30.2 | 381 |
| 24 | 9.3 | 8.9 | 2.1 | 12.82 | 18.2 | 452 | 9 | 8.6 | 1.8 | 12.51 | 56.9 | 250 |
| 25 | 9.2 | 9.3 | 1.7 | 12.43 | 87.4 | 284 | 9.3 | 8.4 | 1.9 | 13.39 | 69.7 | 280 |
| 26 | 9.6 | 9.6 | 1.7 | 16.52 | 69.4 | 426 | 9.6 | 9 | 1.7 | 16.99 | 65.4 | 473 |
| 27 | 9.4 | 9.4 | 2 | 16.99 | 78 | 361 | 10 | 8.2 | 1.9 | 17.96 | 130.6 | 352 |
| 28 | 9.1 | 9.1 | 1.8 | 17.71 | 54.5 | 336 | 10 | 8.8 | 1.9 | 19.4 | 55 | 373.3 |
| 29 | 9.8 | 9.8 | 1.8 | 11.43 | 52 | 395 | 9 | 8.6 | 1.8 | 10.48 | 35.8 | 390 |
| 30 | 9.8 | 9.8 | 1.9 | 27.44 | 52.5 | 330 | 9.8 | 8.7 | 2 | 31.09 | 142.7 | 334.5 |
| 31 | 9.4 | 9.4 | 2.1 | 17.1 | 105.1 | 322 | 9.4 | 9.2 | 2 | 17.95 | 30.3 | 372.3 |
| 32 | 9.4 | 9.4 | 2.1 | 32.67 | 23.8 | 360 | 9.4 | 8.7 | 1.8 | 30.89 | 123.6 | 391.5 |
| 33 | 9.5 | 9.5 | 1.7 | 35.12 | 79.5 | 285 | 10 | 8.5 | 1.8 | 28.33 | 81.9 | 200 |
| 34 | 9.2 | 9.2 | 2 | 12.51 | 38.5 | 391 | 11.2 | 9.1 | 1.6 | 12.29 | 127.7 | 355.3 |
| 35 | 9.3 | 9.3 | 2.1 | 22.55 | 100.4 | 281 | 12.3 | 8.5 | 2 | 22.09 | 92.3 | 290 |
| 36 | 11 | 9.4 | 2.3 | 44.38 | 54.6 | 395 | 12.9 | 9.2 | 1.8 | 44.08 | 105.8 | 369 |
| 37 | 9.7 | 9.7 | 1.9 | 56.15 | 116 | 244 | 12.7 | 9 | 2 | 55.77 | 64.2 | 250 |
| 38 | 9.4 | 9.4 | 1.8 | 55.75 | 56.2 | 283 | 9.2 | 8.7 | 2.1 | 52.61 | 81.1 | 380 |
| 39 | 9.4 | 9.4 | 2 | 19.28 | 29.4 | 402 | 9.5 | 8.8 | 1.8 | 19.76 | 38.8 | 397.3 |
| 40 | 9.7 | 9.7 | 2.1 | 24.44 | 60.3 | 459 | 9.1 | 9 | 1.9 | 26.35 | 135.9 | 338.4 |
| 41 | 9.2 | 9.2 | 2 | 44.4 | 94.4 | 253 | 9.7 | 9 | 2 | 40.03 | 34.3 | 300 |
| 42 | 9.5 | 9.5 | 2 | 46.16 | 64.1 | 352 | 9.4 | 8.9 | 1.9 | 45.05 | 142.9 | 392 |
| 43 | 9.1 | 9.1 | 1.9 | 86.16 | 177.1 | 303 | 9.6 | 8.8 | 2 | 82.89 | 112.2 | 395.3 |
| 44 | 9.7 | 9.7 | 2.2 | 45.13 | 134 | 250 | 9.3 | 8.8 | 2 | 46.06 | 106.6 | 301.6 |
| 45 | 9.4 | 9.4 | 2 | 28.78 | 92.2 | 308 | 12.4 | 8.8 | 2.2 | 24.31 | 45.2 | 340 |
| 46 | 9.6 | 9.6 | 2.3 | 25.73 | 36 | 393 | 10 | 8.7 | 1.9 | 21.99 | 80.8 | 448.1 |
| 47 | 9.3 | 9.3 | 2.1 | 31.76 | 47.9 | 302 | 9.3 | 8.4 | 2 | 35.04 | 30.2 | 381 |
| 48 | 8.9 | 8.9 | 2.1 | 1.82 | 18.2 | 459 | 9 | 8.6 | 1.8 | 12.51 | 56.9 | 420 |
| 49 | 9.3 | 9.3 | 1.7 | 12.43 | 67.4 | 284 | 10 | 8.4 | 1.9 | 13.39 | 69.7 | 302 |
| 50 | 9.2 | 9.2 | 2 | 24.9 | 127.5 | 317 | 11.3 | 9 | 1.7 | 15.69 | 134 | 307.3 |

Appendix - XVI

BIOCHEMICAL PROFILE OF THE EXPERIMENTAL GROUP BEFORE AND AFTER INTERVENTION

| Sno | BEFORE | | | | | | AFTER | | | | | |
|-----|-------------|---------|-----------|----------|-------|------|-------------|---------|-----------|----------|-------|-------|
| | Haemoglobin | Calcium | Magnesium | Ferritin | Iron | TIBC | Haemoglobin | Calcium | Magnesium | Ferritin | Iron | TIBC |
| 1 | 10 | 8.9 | 1.9 | 23.61 | 84.2 | 360 | 10 | 8.9 | 1.8 | 28.19 | 111 | 511.4 |
| 2 | 10 | 9 | 2 | 28.42 | 116.4 | 245 | 10 | 9.6 | 2.1 | 38.7 | 165.9 | 378.6 |
| 3 | 10 | 8.5 | 2.4 | 10.96 | 70 | 305 | 10 | 8.8 | 2 | 8.35 | 39.3 | 409 |
| 4 | 10 | 8.9 | 2.1 | 21.49 | 75.9 | 379 | 10 | 8.9 | 2.1 | 20.19 | 118.7 | 449.8 |
| 5 | 10.05 | 9 | 1.9 | 44.47 | 95.6 | 281 | 10 | 9 | 2 | 41.52 | 73.5 | 308.7 |
| 6 | 10.05 | 9 | 2.1 | 50.49 | 81.6 | 281 | 10 | 8 | 2.1 | 34.58 | 92.3 | 440.3 |
| 7 | 10.06 | 8.7 | 2 | 23.92 | 117.4 | 327 | 10 | 8.7 | 1.9 | 23.14 | 86.5 | 358.6 |
| 8 | 10.05 | 8.9 | 1.9 | 17.09 | 43 | 431 | 9 | 8.9 | 1.7 | 14.53 | 46 | 361.9 |
| 9 | 9.6 | 8.9 | 1.8 | 26.93 | 91.5 | 284 | 10 | 8.9 | 1.7 | 26.12 | 72.3 | 405.7 |
| 10 | 11 | 8.7 | 2 | 40.3 | 77.8 | 275 | 11 | 8.5 | 2.2 | 42.37 | 151.9 | 413.3 |
| 11 | 11 | 9.1 | 1.9 | 19.38 | 65.2 | 357 | 10 | 9.1 | 1.8 | 15.55 | 49 | 349.8 |
| 12 | 11 | 8.6 | 1.8 | 30.33 | 82 | 304 | 10 | 8.6 | 1.8 | 40.02 | 59.9 | 340.2 |
| 13 | 12 | 9 | 1.8 | 24.54 | 134.4 | 286 | 10 | 9 | 1.9 | 20.72 | 102.5 | 362.1 |
| 14 | 11 | 8.8 | 2.1 | 23.03 | 69.4 | 372 | 10 | 8.8 | 2.2 | 31.83 | 96.3 | 442.8 |
| 15 | 10 | 8.5 | 2.1 | 115.7 | 85.9 | 247 | 10 | 8.5 | 2.2 | 66.01 | 50.4 | 357.9 |
| 16 | 10 | 8.5 | 2.1 | 7.17 | 31.7 | 507 | 10 | 8.5 | 2.2 | 8.24 | 38.3 | 389.3 |
| 17 | 9.4 | 9 | 1.9 | 57.31 | 71.8 | 345 | 11 | 9 | 2.2 | 46.75 | 75 | 425.9 |
| 18 | 10 | 10 | 1.9 | 29.35 | 120.1 | 269 | 11 | 9.4 | 1.9 | 17.43 | 74.3 | 343.2 |
| 19 | 10.3 | 8.9 | 1.9 | 57.64 | 157.2 | 214 | 10 | 8 | 2 | 76.28 | 91.6 | 366.6 |
| 20 | 10.5 | 8.4 | 2 | 3.56 | 18.4 | 521 | 11 | 8 | 1.8 | 5.36 | 23.5 | 378.2 |
| 21 | 10 | 8.8 | 1.8 | 8.25 | 38.6 | 469 | 10 | 8 | 2.1 | 11.66 | 39.1 | 330.8 |
| 22 | 11 | 8.6 | 2 | 23.09 | 58 | 381 | 10 | 9 | 2 | 23.09 | 58 | 455.2 |
| 23 | 10.5 | 8.3 | 2.3 | 7.29 | 27.5 | 459 | 9 | 10 | 2.3 | 7.29 | 27.5 | 368.9 |
| 24 | 10 | 8.5 | 1.9 | 5.61 | 23.8 | 470 | 9 | 9 | 1.9 | 5.61 | 23.8 | 338.7 |
| 25 | 10 | 8.8 | 1.7 | 35.07 | 44.4 | 282 | 9.3 | 8.5 | 1.5 | 32.8 | 54.3 | 381 |
| 26 | 9.4 | 8.9 | 1.9 | 23.61 | 84.2 | 360 | 9.6 | 8.9 | 1.8 | 28.19 | 111 | 511.4 |
| 27 | 9.1 | 9 | 2 | 28.42 | 116.4 | 245 | 10 | 9 | 2.1 | 38.7 | 165.9 | 378.6 |
| 28 | 9.8 | 9 | 2.4 | 10.96 | 70 | 305 | 10 | 9 | 2 | 8.35 | 39.3 | 409 |
| 29 | 9.8 | 8.9 | 2.1 | 21.49 | 75.9 | 379 | 9 | 9 | 2.1 | 20.19 | 118.7 | 449.8 |
| 30 | 9.4 | 9 | 1.9 | 44.47 | 95.6 | 281 | 9.8 | 8.5 | 2 | 41.52 | 73.5 | 308.7 |
| 31 | 9.4 | 9 | 2.1 | 50.49 | 81.6 | 281 | 9.4 | 9.2 | 2.1 | 34.58 | 92.3 | 200 |
| 32 | 10 | 8.7 | 2 | 23.92 | 117.4 | 327 | 9.4 | 8.7 | 1.9 | 23.14 | 86.5 | 110 |
| 33 | 10 | 8.9 | 1.9 | 17.09 | 43 | 431 | 10 | 8.6 | 1.7 | 14.53 | 46 | 361.9 |
| 34 | 10 | 8.9 | 1.8 | 26.93 | 91.5 | 284 | 11.2 | 9.05 | 1.7 | 26.12 | 72.3 | 300 |
| 35 | 12 | 8.7 | 2 | 40.3 | 77.8 | 275 | 12.3 | 8.9 | 2.2 | 42.37 | 151.9 | 300 |
| 36 | 10 | 9.1 | 1.9 | 19.38 | 65.2 | 357 | 12.9 | 9.9 | 1.8 | 15.55 | 49 | 349.8 |
| 37 | 9.9 | 9 | 1.8 | 30.33 | 82 | 304 | 12.7 | 9 | 1.8 | 40.02 | 59.9 | 340.2 |
| 38 | 11 | 9.1 | 1.8 | 24.54 | 134.4 | 286 | 11.4 | 9.8 | 1.9 | 20.72 | 102.5 | 200 |
| 39 | 11 | 8.8 | 2.1 | 23.03 | 69.4 | 372 | 11.4 | 9 | 2.2 | 31.83 | 96.3 | 220 |
| 40 | 11 | 8.5 | 2.1 | 115.7 | 85.9 | 247 | 12.7 | 9.2 | 2.2 | 66.01 | 50.4 | 357.9 |
| 41 | 9.5 | 8.5 | 2.1 | 7.17 | 31.7 | 507 | 11 | 9.4 | 2.2 | 8.24 | 38.3 | 389.3 |
| 42 | 9.1 | 8.7 | 1.9 | 57.31 | 71.8 | 345 | 12.5 | 9 | 2.2 | 46.75 | 75 | 335 |
| 43 | 9.7 | 9.1 | 1.9 | 29.35 | 120.1 | 269 | 11.1 | 9.4 | 1.9 | 17.43 | 74.3 | 343.2 |
| 44 | 9.4 | 10 | 1.9 | 57.64 | 157.2 | 214 | 10 | 9 | 2 | 76.28 | 91.6 | 300 |
| 45 | 9.6 | 8.4 | 2 | 3.56 | 18.4 | 521 | 12.4 | 9.3 | 1.8 | 5.36 | 23.5 | 378.2 |
| 46 | 9.3 | 9.5 | 1.8 | 8.25 | 38.6 | 469 | 10 | 9 | 2.1 | 11.66 | 39.1 | 400 |
| 47 | 10 | 8.6 | 2 | 23.09 | 58 | 381 | 9.3 | 9 | 2 | 23.09 | 58 | 300 |
| 48 | 10 | 8.3 | 2.3 | 7.29 | 27.5 | 459 | 9 | 9 | 2.3 | 7.29 | 27.5 | 400 |
| 49 | 9.2 | 8.5 | 1.9 | 5.61 | 23.8 | 470 | 10 | 8.5 | 1.9 | 5.61 | 23.8 | 400 |
| 50 | 9.2 | 9 | 1.7 | 8.25 | 38.6 | 469 | 11.3 | 9.3 | 1.5 | 32.8 | 54.3 | 381 |

Appendix - XVII

MEAN NUTRIENT INTAKE OF THE CONTROL GROUP BEFORE AND AFTER INTERVENTION (BEFORE)

| Sno | Calorie | Protein | CHO | FAT | Calcium | Magnesium | Iron | Beta carotene | Thiamine | Riboflavin | Niacin | Vit C |
|-----|---------|---------|--------|-------|---------|-----------|-------|---------------|----------|------------|--------|-------|
| 1. | 1200.00 | 43.00 | 339.80 | 34.84 | 350.00 | 900.00 | 32.90 | 1200.00 | .50 | 1.00 | 1.49 | 20.00 |
| 2. | 1236.00 | 43.00 | 216.00 | 20.90 | 350.00 | 550.00 | 30.00 | 1236.00 | .10 | 1.50 | 1.55 | 20.00 |
| 3. | 1236.00 | 43.00 | 300.00 | 20.90 | 350.00 | 550.00 | 30.00 | 1236.00 | .10 | 1.50 | 1.55 | 2.00 |
| 4. | 1500.00 | 43.00 | 239.00 | 29.90 | 350.00 | 950.00 | 25.90 | 1500.00 | .60 | .22 | 1.00 | 15.00 |
| 5. | 1255.00 | 43.00 | 286.30 | 25.90 | 350.00 | 680.00 | 15.65 | 1255.00 | .20 | 1.20 | 1.20 | 15.00 |
| 6. | 1255.00 | 43.00 | 342.60 | 30.50 | 350.00 | 1180.00 | 17.96 | 1255.00 | .10 | 1.80 | 1.33 | 15.00 |
| 7. | 1621.10 | 40.68 | 248.33 | 35.35 | 350.00 | 965.00 | 10.11 | 1621.10 | .40 | 1.30 | 2.05 | 20.00 |
| 8. | 2110.00 | 45.90 | 265.00 | 32.90 | 350.00 | 750.00 | 16.60 | 2110.00 | .50 | 1.20 | .17 | 20.00 |
| 9. | 1989.01 | 44.00 | 320.00 | 32.00 | 350.00 | 870.00 | 20.40 | 1989.01 | .30 | 1.50 | .25 | 20.00 |
| 10. | 1536.00 | 44.00 | 350.00 | 35.00 | 350.00 | 780.00 | 6.00 | 1536.00 | .50 | 1.80 | .01 | 15.00 |
| 11. | 1236.00 | 44.00 | 251.00 | 18.00 | 350.00 | 900.00 | 11.70 | 1236.00 | .11 | 1.30 | .45 | 15.00 |
| 12. | 1050.00 | 48.70 | 230.00 | 25.00 | 350.00 | 950.00 | 31.39 | 1050.00 | .50 | 1.25 | .28 | 15.00 |
| 13. | 1500.00 | 45.00 | 355.00 | 45.60 | 650.00 | 955.00 | 50.60 | 1500.00 | .70 | 1.02 | .36 | 12.00 |
| 14. | 1050.00 | 50.10 | 304.00 | 35.00 | 600.00 | 990.80 | 15.40 | 1050.00 | .60 | 1.09 | .55 | 12.00 |
| 15. | 1505.00 | 29.60 | 365.50 | 54.20 | 793.00 | 780.00 | 23.48 | 1505.00 | .30 | 1.20 | .47 | 12.00 |
| 16. | 1500.00 | 40.00 | 355.00 | 28.00 | 856.00 | 880.00 | 19.00 | 1500.00 | .50 | 1.00 | 1.80 | 12.00 |
| 17. | 1549.00 | 46.38 | 350.00 | 25.00 | 315.80 | 1112.00 | 8.12 | 1549.00 | .70 | .02 | 1.50 | 12.00 |
| 18. | 1036.00 | 50.60 | 392.00 | 35.50 | 626.30 | 995.00 | 10.10 | 1036.00 | .90 | .06 | 1.30 | 10.00 |
| 19. | 1048.00 | 44.00 | 254.00 | 25.30 | 825.30 | 885.40 | 14.03 | 1048.00 | .80 | .12 | .75 | 2.00 |
| 20. | 2150.00 | 44.00 | 325.00 | 29.00 | 800.00 | 955.20 | 17.00 | 2150.00 | .10 | 1.10 | .22 | 2.00 |
| 21. | 1020.00 | 44.00 | 321.40 | 20.10 | 755.00 | 990.70 | 16.60 | 1020.00 | .80 | 1.35 | 2.00 | 2.00 |
| 22. | 1202.00 | 44.00 | 248.00 | 10.50 | 335.00 | 795.14 | 20.00 | 1202.00 | .11 | .58 | .85 | 2.00 |
| 23. | 1500.00 | 44.00 | 339.80 | 34.84 | 335.00 | 900.00 | 32.90 | 1500.00 | .50 | 1.00 | 1.49 | 2.00 |
| 24. | 1503.00 | 44.50 | 392.00 | 20.90 | 335.00 | 550.00 | 30.00 | 1503.00 | .10 | 1.50 | 1.55 | 10.00 |
| 25. | 1503.00 | 44.50 | 216.00 | 20.90 | 335.00 | 550.00 | 30.00 | 1503.00 | .10 | 1.50 | 1.55 | 10.00 |
| 26. | 1020.00 | 49.00 | 239.00 | 29.90 | 335.00 | 950.00 | 25.90 | 1020.00 | .60 | .22 | 1.00 | 1.50 |
| 27. | 1300.00 | 49.00 | 286.30 | 25.90 | 335.00 | 680.00 | 15.65 | 1300.00 | .20 | 1.20 | 1.20 | 11 |
| 28. | 1030.00 | 49.00 | 342.60 | 30.50 | 335.00 | 1180.00 | 17.96 | 1030.00 | .10 | 1.80 | 1.33 | 51 |
| 29. | 999.00 | 49.00 | 248.33 | 35.35 | 335.00 | 965.00 | 19.00 | 999.00 | .40 | 1.30 | 2.05 | 65 |
| 30. | 1100.00 | 49.00 | 265.00 | 32.90 | 335.00 | 750.00 | 16.60 | 1100.00 | .50 | 1.20 | .17 | 3.60 |
| 31. | 1200.00 | 49.00 | 320.00 | 32.00 | 335.00 | 870.00 | 20.40 | 1200.00 | .30 | 1.50 | .25 | 1.50 |
| 32. | 1600.00 | 45.90 | 350.00 | 35.00 | 335.00 | 780.00 | 20.00 | 1600.00 | .50 | 1.80 | .01 | 1.85 |
| 33. | 1672.00 | 44.00 | 251.00 | 18.90 | 335.00 | 900.00 | 11.70 | 1672.00 | .11 | 1.30 | .45 | 1.23 |
| 34. | 1500.00 | 48.70 | 238.50 | 25.00 | 335.00 | 950.00 | 31.39 | 1500.00 | .50 | 1.25 | .28 | 1.90 |
| 35. | 1022.00 | 65.00 | 355.00 | 30.00 | 335.00 | 955.00 | 25.00 | 1022.00 | .70 | 1.02 | .36 | 2.00 |
| 36. | 1200.00 | 43.00 | 304.00 | 35.00 | 335.00 | 990.80 | 15.40 | 1200.00 | .60 | 1.09 | .55 | 2.50 |
| 37. | 1500.00 | 29.60 | 365.50 | 34.00 | 335.00 | 780.00 | 23.48 | 1500.00 | .30 | 1.20 | .47 | 1.00 |
| 38. | 1900.00 | 40.00 | 355.00 | 28.00 | 335.00 | 880.00 | 19.00 | 1900.00 | .50 | 1.00 | 1.80 | 1.52 |
| 39. | 1549.00 | 46.38 | 397.00 | 28.00 | 335.00 | 1112.00 | 28.00 | 1549.00 | .70 | .02 | 1.50 | 1.54 |
| 40. | 1550.00 | 45.00 | 315.00 | 35.50 | 335.00 | 995.00 | 22.00 | 1550.00 | .90 | .06 | 1.30 | 2.00 |
| 41. | 1060.00 | 47.00 | 254.00 | 25.30 | 250.00 | 885.40 | 14.03 | 1060.00 | .80 | .12 | .75 | 2.15 |
| 42. | 1200.00 | 44.00 | 325.00 | 29.00 | 250.00 | 955.20 | 17.00 | 1200.00 | .10 | 1.10 | .22 | 2.63 |
| 43. | 1200.00 | 56.60 | 321.40 | 20.10 | 250.00 | 990.70 | 16.60 | 1200.00 | .80 | 1.35 | 2.00 | 1.05 |
| 44. | 1530.00 | 55.00 | 248.00 | 10.50 | 250.00 | 795.14 | 20.00 | 1530.00 | .11 | .58 | .85 | 6.0 |
| 45. | 1549.00 | 46.38 | 197.30 | 65.28 | 250.00 | 1112.00 | 16.00 | 1549.00 | .70 | .02 | 1.50 | 1.54 |
| 46. | 2000.00 | 44.00 | 301.00 | 35.50 | 250.00 | 995.00 | 21.00 | 2000.00 | .90 | .06 | 1.30 | 2.00 |
| 47. | 1876.00 | 42.00 | 254.00 | 25.30 | 250.00 | 885.40 | 14.03 | 1876.00 | .50 | 1.00 | 1.80 | 1.52 |
| 48. | 1987.00 | 43.00 | 325.00 | 29.00 | 250.00 | 955.20 | 17.00 | 1987.00 | .70 | .02 | 1.50 | 1.54 |
| 49. | 1200.00 | 46.00 | 321.40 | 20.10 | 250.00 | 990.70 | 16.60 | 1200.00 | .90 | .06 | 1.30 | 2.00 |
| 50. | 1758.90 | 45.00 | 248.00 | 10.50 | 200.00 | 795.14 | 20.00 | 1758.90 | .80 | .12 | .75 | 2.15 |

NUTRIENT INTAKE OF THE CONTROL GROUP INTERVENTION (AFTER)

| S.no | Calorie | Protein | Cho | FAT | Calcium | Magnesium | Iron | Beta carotene | Thiamine | Riboflavin | Niacin | Vit C |
|------|---------|---------|--------|-------|---------|-----------|-------|---------------|----------|------------|--------|-------|
| 1. | 1502.20 | 40.53 | 336.00 | 20.00 | 500.00 | 650.00 | 25.00 | 800.00 | 1.00 | .40 | 2.00 | 2.11 |
| 2. | 1045.00 | 35.86 | 380.00 | 25.00 | 410.00 | 650.00 | 27.00 | 755.00 | .11 | .70 | .85 | 3.00 |
| 3. | 1054.00 | 35.86 | 380.00 | 25.00 | 200.00 | 650.00 | 27.00 | 755.00 | .11 | .70 | .85 | 3.00 |
| 4. | 1098.00 | 40.65 | 365.00 | 28.00 | 200.00 | 650.00 | 28.00 | 700.00 | 1.80 | .11 | .12 | 2.58 |
| 5. | 1835.50 | 50.50 | 405.20 | 27.00 | 200.00 | 650.00 | 23.00 | 855.00 | 1.30 | .54 | 1.02 | 2.00 |
| 6. | 1920.00 | 50.45 | 363.00 | 26.00 | 200.00 | 450.00 | 24.30 | 655.00 | 1.50 | .20 | 1.25 | 2.80 |
| 7. | 1935.60 | 55.70 | 385.00 | 23.00 | 895.00 | 690.00 | 20.30 | 700.00 | 1.50 | 1.00 | .22 | .95 |
| 8. | 1805.00 | 56.00 | 227.50 | 30.90 | 206.00 | 790.00 | 18.50 | 800.00 | 1.00 | .55 | .85 | 1.58 |
| 9. | 1085.00 | 40.35 | 345.80 | 25.10 | 390.00 | 685.00 | 23.41 | 675.60 | 1.20 | .47 | .25 | .23 |
| 10 | 1085.00 | 45.00 | 445.00 | 27.80 | 390.00 | 970.00 | 11.07 | 800.65 | 1.20 | .60 | .50 | 3.00 |
| 11 | 1379.00 | 45.00 | 227.80 | 30.54 | 390.00 | 850.00 | 19.25 | 715.50 | .15 | .30 | .65 | 22.00 |
| 12 | 1085.00 | 45.00 | 295.50 | 26.56 | 390.00 | 670.00 | 20.18 | 550.70 | .80 | .40 | .25 | 47.00 |
| 13 | 1085.00 | 45.00 | 394.60 | 32.45 | 390.00 | 850.00 | 15.65 | 1158.00 | .60 | .80 | 1.02 | 10.00 |
| 14 | 1085.00 | 45.00 | 350.00 | 20.10 | 390.00 | 750.00 | 18.00 | 850.60 | 1.00 | .14 | 1.25 | 21.00 |
| 15 | 1350.00 | 45.00 | 444.90 | 25.00 | 390.00 | 655.00 | 15.80 | 795.80 | 1.00 | .12 | 1.09 | 78.00 |
| 16 | 1085.00 | 45.00 | 369.90 | 22.70 | 390.00 | 895.00 | 16.90 | 800.00 | .11 | .58 | 1.00 | .36 |
| 17 | 1200.00 | 45.00 | 363.00 | 23.89 | 390.00 | 955.00 | 20.19 | 784.90 | .24 | .98 | .02 | 10.00 |
| 18 | 1520.00 | 40.60 | 385.00 | 20.67 | 390.00 | 910.00 | 11.07 | 800.00 | 1.20 | 1.02 | .58 | .47 |
| 19 | 1205.00 | 41.70 | 315.00 | 24.80 | 783.00 | 690.00 | 15.16 | 782.56 | 1.50 | .02 | .35 | 11.00 |
| 20 | 1035.00 | 60.70 | 340.00 | 23.10 | 210.00 | 865.00 | 19.70 | 745.90 | 1.60 | .58 | .74 | .11 |
| 21 | 1500.00 | 58.89 | 365.00 | 30.67 | 401.00 | 450.00 | 20.40 | 789.60 | 1.20 | .90 | 1.54 | .90 |
| 22 | 1600.00 | 59.60 | 320.00 | 28.90 | 305.00 | 900.00 | 20.89 | 845.00 | .45 | .50 | .60 | 2.00 |
| 23 | 1502.20 | 40.53 | 336.00 | 20.00 | 411.00 | 650.00 | 25.00 | 800.00 | 1.00 | .40 | 2.00 | 2.11 |
| 24 | 1302.00 | 35.86 | 380.00 | 25.00 | 300.00 | 700.00 | 27.00 | 755.00 | .11 | .70 | .85 | 10.00 |
| 25 | 1302.00 | 35.86 | 380.00 | 25.00 | 300.00 | 700.00 | 27.00 | 755.00 | .11 | .70 | .85 | 10.00 |
| 26 | 1302.00 | 40.65 | 365.00 | 28.00 | 300.00 | 800.00 | 28.00 | 700.00 | 1.80 | .11 | .12 | 12.00 |
| 27 | 1302.00 | 50.50 | 305.00 | 27.00 | 300.00 | 970.00 | 23.00 | 855.00 | 1.30 | .54 | 1.02 | 2.00 |
| 28 | 1302.00 | 50.45 | 363.00 | 26.00 | 300.00 | 450.00 | 24.30 | 655.00 | 1.50 | .20 | 1.25 | 2.80 |
| 29 | 1302.00 | 55.70 | 385.00 | 23.00 | 300.00 | 690.00 | 20.30 | 700.00 | 1.50 | 1.00 | .22 | 10.00 |
| 30 | 1203.00 | 56.00 | 227.50 | 30.90 | 401.00 | 790.00 | 18.50 | 800.00 | 1.00 | .55 | .85 | 1.58 |
| 31 | 1200.00 | 40.35 | 345.80 | 25.10 | 335.00 | 685.00 | 23.41 | 675.60 | 1.20 | .47 | .25 | .23 |
| 32 | 1230.00 | 40.35 | 225.00 | 27.80 | 440.00 | 970.00 | 11.07 | 800.65 | 1.20 | .60 | .50 | 30.00 |
| 33 | 1379.00 | 40.35 | 227.80 | 20.00 | 200.00 | 850.00 | 19.25 | 715.50 | .15 | .30 | .65 | 10.00 |
| 34 | 1320.00 | 40.35 | 295.50 | 22.00 | 290.00 | 670.00 | 20.18 | 550.70 | .80 | .40 | .25 | 10.00 |
| 35 | 1320.00 | 40.35 | 294.00 | 21.00 | 440.00 | 850.00 | 15.65 | 1158.00 | .60 | .80 | 1.02 | .10 |
| 36 | 1360.00 | 40.35 | 315.00 | 20.10 | 401.00 | 750.00 | 18.00 | 850.60 | 1.00 | .14 | 1.25 | .21 |
| 37 | 1360.00 | 40.35 | 225.00 | 21.00 | 800.00 | 655.00 | 15.80 | 795.80 | 1.00 | .12 | 1.09 | .78 |
| 38 | 1360.00 | 40.35 | 369.90 | 22.70 | 502.00 | 895.00 | 16.90 | 800.00 | .11 | .58 | 1.00 | .36 |
| 39 | 1360.00 | 40.35 | 208.00 | 23.89 | 400.00 | 955.00 | 20.19 | 784.90 | .24 | .98 | .02 | 10.00 |
| 40 | 1360.00 | 40.60 | 293.00 | 20.67 | 209.00 | 910.00 | 11.07 | 800.00 | 1.20 | 1.02 | .58 | 10.00 |
| 41 | 1360.00 | 41.70 | 315.00 | 24.80 | 185.00 | 690.00 | 15.16 | 782.56 | 1.50 | .02 | .35 | 1.00 |
| 42 | 1500.00 | 60.70 | 305.00 | 23.10 | 689.00 | 865.00 | 19.70 | 745.90 | 1.60 | .58 | .74 | 1.00 |
| 43 | 1200.00 | 48.00 | 365.00 | 25.00 | 350.00 | 450.00 | 20.40 | 789.60 | 1.20 | .90 | 1.54 | 11.00 |
| 44 | 1500.00 | 49.00 | 320.00 | 21.00 | 290.00 | 600.00 | 20.89 | 845.00 | .45 | .50 | .60 | 2.00 |
| 45 | 1500.00 | 52.00 | 363.00 | 23.89 | 290.00 | 600.00 | 20.19 | 784.90 | .24 | .98 | .02 | .98 |
| 46 | 1888.90 | 40.60 | 342.00 | 20.67 | 290.00 | 600.00 | 11.07 | 800.00 | 1.20 | 1.02 | .58 | 5.00 |
| 47 | 1876.00 | 41.70 | 315.00 | 24.80 | 290.00 | 600.00 | 15.16 | 782.56 | 1.50 | .02 | .35 | 5.00 |
| 48 | 1987.00 | 60.70 | 320.00 | 23.10 | 290.00 | 600.00 | 19.70 | 745.90 | 1.60 | .58 | .74 | 5.00 |
| 49 | 1900.00 | 49.00 | 295.00 | 23.00 | 290.00 | 600.00 | 20.40 | 789.60 | 1.20 | .90 | 1.54 | 5.00 |
| 50 | 1758.90 | 57.00 | 320.00 | 28.90 | 350.00 | 600.00 | 20.89 | 845.00 | .45 | .50 | .60 | 5.00 |

Appendix - VIII

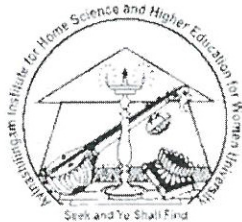
MEAN NUTRIENT INTAKE OF THE EXPERIMENTAL GROUP BEFORE AND INTERVENTION (BEFORE)

| S.No | Calorie | Protein | Cho | Fat | Calcium | Magnesium | Iron | Beta carotene | Thiamine | Riboflavin | Niacin | Vit C |
|------|---------|---------|-------|-------|---------|-----------|-------|---------------|----------|------------|--------|-------|
| 1. | 836.60 | 168.26 | 30.00 | 16.50 | 381.00 | 766.56 | 16.00 | 341.50 | .81 | .74 | 8.93 | 41.10 |
| 2. | 1605.00 | 356.00 | 58.20 | 23.85 | 362.00 | 1137.00 | 16.00 | 179.70 | 1.10 | .97 | 8.60 | 4.50 |
| 3. | 1867.00 | 369.40 | 45.00 | 19.35 | 793.00 | 1656.00 | 16.00 | 302.03 | 1.66 | 2.50 | 9.50 | 10.10 |
| 4. | 1867.00 | 369.40 | 45.00 | 19.35 | 362.00 | 1656.00 | 16.00 | 302.03 | 1.66 | 2.50 | 9.50 | 4.50 |
| 5. | 1867.00 | 369.40 | 45.00 | 19.35 | 362.00 | 1656.00 | 16.00 | 302.03 | 1.66 | 2.40 | 9.50 | 4.50 |
| 6. | 1605.00 | 356.00 | 58.00 | 23.85 | 800.00 | 1137.00 | 16.00 | 179.70 | 1.10 | .97 | 8.60 | 20.00 |
| 7. | 834.40 | 168.16 | 40.00 | 16.50 | 920.00 | 766.44 | 16.00 | 351.50 | .81 | .56 | 8.88 | 36.00 |
| 8. | 834.40 | 168.16 | 40.00 | 16.50 | 1000.00 | 766.44 | 16.00 | 351.50 | .81 | .56 | 8.88 | 40.00 |
| 9. | 834.40 | 168.16 | 27.81 | 16.50 | 381.00 | 766.44 | 16.00 | 351.50 | .81 | .56 | 8.88 | 41.10 |
| 10. | 1500.00 | 300.00 | 30.00 | 30.00 | 362.00 | 600.00 | 16.00 | 250.00 | .80 | 1.00 | 7.00 | 4.50 |
| 11. | 817.00 | 139.60 | 20.80 | 21.70 | 793.00 | 652.00 | 16.00 | 1133.00 | .36 | .96 | 5.50 | 10.10 |
| 12. | 1070.00 | 144.00 | 25.00 | 42.00 | 362.00 | 800.00 | 16.00 | 415.00 | 1.05 | 1.70 | 8.00 | 4.50 |
| 13. | 834.40 | 168.16 | 27.81 | 16.50 | 362.00 | 766.44 | 16.00 | 351.50 | .81 | .56 | 8.88 | 4.50 |
| 14. | 834.00 | 168.16 | 27.81 | 16.50 | 800.00 | 766.44 | 16.00 | 351.50 | .81 | .56 | 8.88 | 20.00 |
| 15. | 836.60 | 168.26 | 28.21 | 16.50 | 920.00 | 766.56 | 16.00 | 341.50 | .81 | .74 | 8.93 | 36.00 |
| 16. | 1605.00 | 356.00 | 58.20 | 23.85 | 1000.00 | 137.00 | 16.00 | 179.70 | 1.10 | .97 | 8.60 | 40.00 |
| 17. | 836.60 | 168.26 | 28.21 | 16.50 | 381.00 | 766.56 | 16.00 | 341.50 | .81 | .74 | 8.93 | 41.10 |
| 18. | 1605.00 | 356.00 | 58.20 | 23.85 | 362.00 | 1137.00 | 16.00 | 179.70 | 1.10 | .97 | 8.60 | 4.50 |
| 19. | 836.60 | 168.26 | 28.21 | 16.50 | 793.00 | 766.56 | 16.00 | 341.50 | .81 | .74 | 8.93 | 10.10 |
| 20. | 1605.00 | 356.00 | 58.20 | 23.85 | 362.00 | 1137.00 | 95.00 | 179.70 | 1.10 | .97 | 8.60 | 4.50 |
| 21. | 1867.00 | 369.40 | 40.00 | 19.35 | 362.00 | 1656.00 | 15.00 | 302.03 | 1.66 | 2.50 | 12.20 | 4.50 |
| 22. | 1867.00 | 369.40 | 40.00 | 19.35 | 800.00 | 1656.00 | 15.00 | 302.03 | 1.66 | 2.50 | 12.20 | 20.00 |
| 23. | 1867.00 | 369.40 | 40.00 | 19.35 | 920.00 | 1656.00 | 15.00 | 302.03 | 1.66 | 2.50 | 12.20 | 36.00 |
| 24. | 1605.00 | 356.00 | 58.00 | 23.85 | 1000.00 | 1137.00 | 15.00 | 179.70 | 1.10 | .97 | 8.60 | 40.00 |
| 25. | 834.40 | 168.16 | 27.81 | 16.50 | 381.00 | 766.44 | 15.00 | 351.50 | .81 | .56 | 8.88 | 41.10 |
| 26. | 834.40 | 168.16 | 27.81 | 16.50 | 362.00 | 766.44 | 15.00 | 351.50 | .81 | .56 | 8.88 | 4.50 |
| 27. | 834.40 | 168.16 | 27.81 | 16.50 | 793.00 | 766.44 | 15.00 | 351.50 | .81 | .56 | 8.88 | 10.10 |
| 28. | 1500.00 | 300.00 | 30.00 | 30.00 | 362.00 | 600.00 | 15.00 | 250.00 | .50 | 1.00 | 7.00 | 4.50 |
| 29. | 817.00 | 139.60 | 20.80 | 21.70 | 362.00 | 652.00 | 15.00 | 1133.00 | .50 | .96 | 5.50 | 4.50 |
| 30. | 1070.00 | 144.00 | 44.00 | 42.00 | 800.00 | 800.00 | 15.00 | 415.00 | 1.05 | 1.00 | 8.00 | 20.00 |
| 31. | 834.40 | 168.16 | 27.81 | 16.50 | 920.00 | 766.44 | 15.00 | 351.50 | .81 | .56 | 8.88 | 36.00 |
| 32. | 834.00 | 168.16 | 27.81 | 16.50 | 1000.00 | 766.44 | 15.00 | 351.50 | .81 | .56 | 8.88 | 40.00 |
| 33. | 836.60 | 168.26 | 28.21 | 16.50 | 381.00 | 766.56 | 15.00 | 341.50 | .81 | .74 | 8.93 | 41.10 |
| 34. | 1605.00 | 356.00 | 58.20 | 23.85 | 362.00 | 1137.00 | 12.00 | 179.70 | 4.42 | .97 | 8.60 | 4.50 |
| 35. | 836.60 | 168.26 | 44.00 | 16.50 | 793.00 | 766.56 | 12.00 | 341.50 | .81 | .74 | 8.93 | 10.10 |
| 36. | 1605.00 | 356.00 | 58.20 | 23.85 | 362.00 | 1137.00 | 12.00 | 179.70 | 1.40 | .97 | 8.60 | 4.50 |
| 37. | 836.60 | 168.26 | 48.00 | 16.50 | 362.00 | 766.56 | 12.00 | 341.50 | .81 | .74 | 8.93 | 4.50 |
| 38. | 1605.00 | 356.00 | 58.20 | 23.85 | 800.00 | 1137.00 | 12.00 | 179.70 | 1.50 | .97 | 8.60 | 20.00 |
| 39. | 1867.00 | 369.40 | 45.00 | 19.35 | 920.00 | 1656.00 | 12.00 | 302.03 | 1.66 | 2.40 | 12.50 | 36.00 |
| 40. | 1867.00 | 369.40 | 45.00 | 19.35 | 1000.00 | 1656.00 | 12.00 | 302.03 | 1.66 | .10 | 10.00 | 40.00 |
| 41. | 1867.00 | 369.40 | 45.00 | 19.35 | 381.00 | 1656.00 | 12.00 | 302.03 | 1.66 | .90 | 10.00 | 41.10 |
| 42. | 1605.00 | 356.00 | 58.00 | 23.85 | 362.00 | 1137.00 | 12.00 | 179.70 | 1.20 | .97 | 8.60 | 4.50 |
| 43. | 834.40 | 168.16 | 47.00 | 16.50 | 793.00 | 766.44 | 12.00 | 351.50 | .81 | .56 | 8.88 | 10.10 |
| 44. | 834.40 | 168.16 | 47.00 | 16.50 | 362.00 | 766.44 | 12.00 | 351.50 | .81 | .56 | 8.88 | 4.50 |
| 45. | 834.40 | 168.16 | 47.00 | 16.50 | 362.00 | 766.44 | 12.00 | 351.50 | .81 | .56 | 8.88 | 4.50 |
| 46. | 1500.00 | 300.00 | 39.00 | 30.00 | 800.00 | 600.00 | 12.00 | 250.00 | .80 | 1.00 | 7.00 | 20.00 |
| 47. | 817.00 | 139.60 | 45.00 | 21.70 | 920.00 | 652.00 | 12.00 | 1133.00 | .36 | .96 | 5.50 | 36.00 |
| 48. | 1070.00 | 144.00 | 45.00 | 42.00 | 1000.00 | 800.00 | 12.00 | 415.00 | 1.05 | 1.50 | 8.00 | 40.00 |
| 49. | 834.40 | 168.16 | 30.00 | 16.50 | 381.00 | 766.44 | 12.00 | 351.50 | .81 | .56 | 8.88 | 41.10 |
| 50. | 834.00 | 168.16 | 27.81 | 16.50 | 362.00 | 766.44 | 12.00 | 351.50 | .81 | .56 | 8.88 | 4.50 |

AFTER

| S.No | Calorie | Protein | Cho | Fat | Calcium | Magnesium | Iron | Beta carotene | Thiamine | Riboflavin | Niacin | Vit C |
|------|---------|---------|----------|-------|---------|-----------|-------|---------------|----------|------------|--------|-------|
| 1. | 1305.20 | 174.04 | 43.60000 | 26.55 | 697.81 | 570.00 | 26.01 | 727.55 | 1.44 | 2.53 | 10.27 | 51.20 |
| 2. | 1476.50 | 121.50 | 56.25000 | 43.85 | 697.62 | 370.00 | 25.91 | 1127.00 | 1.20 | 2.65 | 10.36 | 4.01 |
| 3. | 1842.00 | 166.60 | 51.00000 | 39.35 | 701.93 | 650.00 | 22.39 | 642.83 | 1.66 | 1.64 | 15.13 | 72.00 |
| 4. | 1476.50 | 121.50 | 56.25000 | 39.35 | 697.62 | 250.00 | 25.91 | 1127.00 | 1.20 | 2.65 | 10.36 | 72.00 |
| 5. | 1476.50 | 121.50 | 56.25000 | 39.35 | 697.62 | 440.00 | 25.91 | 1127.00 | 1.20 | 2.65 | 10.36 | 72.00 |
| 6. | 1400.00 | 163.00 | 53.00000 | 43.85 | 900.00 | 450.00 | 25.01 | 713.00 | 1.46 | 3.31 | 9.66 | 4.01 |
| 7. | 1485.00 | 59.80 | 54.10000 | 26.44 | 703.20 | 550.00 | 35.02 | 2465.00 | 1.62 | 2.74 | 9.06 | 50.00 |
| 8. | 1365.00 | 222.00 | 43.00000 | 26.44 | 704.00 | 650.00 | 37.01 | 1063.00 | 2.66 | 3.10 | 10.40 | 50.00 |
| 9. | 1305.20 | 174.04 | 43.60000 | 26.44 | 697.81 | 450.00 | 16.55 | 727.55 | 1.44 | 2.53 | 10.27 | 50.00 |
| 10 | 1476.50 | 121.50 | 56.25000 | 50.00 | 697.62 | 300.00 | 25.91 | 1127.00 | 1.20 | 2.65 | 10.36 | 62.00 |
| 11 | 1842.00 | 166.60 | 51.00000 | 41.70 | 701.93 | 450.00 | 22.39 | 642.83 | 1.66 | 1.64 | 15.13 | 16.00 |
| 12 | 1476.50 | 121.50 | 56.25000 | 62.00 | 697.62 | 350.00 | 25.91 | 1127.00 | 1.20 | 2.65 | 10.36 | 42.00 |
| 13 | 1476.50 | 121.50 | 56.25000 | 26.44 | 890.00 | 500.00 | 25.91 | 1127.00 | 1.20 | 2.65 | 10.36 | 50.00 |
| 14 | 1400.00 | 163.00 | 53.00000 | 26.44 | 702.00 | 650.00 | 25.01 | 713.00 | 1.46 | 3.31 | 9.66 | 50.00 |
| 15 | 1485.00 | 59.80 | 54.10000 | 26.55 | 703.20 | 571.00 | 35.02 | 2465.00 | 1.62 | 2.74 | 9.06 | 51.20 |
| 16 | 1365.00 | 222.00 | 43.00000 | 43.85 | 704.00 | 781.00 | 37.01 | 1063.00 | 2.66 | 3.10 | 10.40 | 4.01 |
| 17 | 1305.20 | 174.04 | 43.60000 | 26.55 | 697.81 | 650.00 | 26.01 | 727.55 | 1.44 | 2.53 | 10.27 | 51.20 |
| 18 | 1476.50 | 121.50 | 56.25000 | 43.85 | 697.62 | 658.00 | 25.91 | 1127.00 | 1.20 | 2.65 | 10.36 | 4.01 |
| 19 | 1842.00 | 166.60 | 51.00000 | 26.55 | 701.93 | 580.00 | 22.39 | 642.83 | 1.66 | 1.64 | 15.13 | 51.20 |
| 20 | 1476.50 | 121.50 | 56.25000 | 43.85 | 1200.00 | 300.00 | 25.91 | 1127.00 | 1.20 | 2.65 | 10.36 | 4.01 |
| 21 | 1476.50 | 121.50 | 56.25000 | 39.35 | 780.00 | 350.00 | 25.91 | 1127.00 | 1.20 | 2.65 | 10.36 | 72.00 |
| 22 | 1400.00 | 163.00 | 53.00000 | 39.35 | 702.00 | 380.00 | 25.01 | 713.00 | 1.46 | 3.31 | 9.66 | 72.00 |
| 23 | 1485.00 | 59.80 | 54.10000 | 39.35 | 703.20 | 550.00 | 35.02 | 2465.00 | 1.62 | 2.74 | 9.06 | 72.00 |
| 24 | 1365.00 | 222.00 | 43.00000 | 43.85 | 704.00 | 550.00 | 37.01 | 1063.00 | 2.66 | 3.10 | 10.40 | 4.01 |
| 25 | 1305.20 | 174.04 | 43.60000 | 26.44 | 697.81 | 336.00 | 26.01 | 727.55 | 1.44 | 2.53 | 10.27 | 50.00 |
| 26 | 1476.50 | 121.50 | 56.25000 | 26.44 | 697.62 | 436.00 | 25.91 | 1127.00 | 1.20 | 2.65 | 10.36 | 50.00 |
| 27 | 1842.00 | 166.60 | 51.00000 | 26.44 | 701.93 | 330.00 | 22.39 | 642.83 | 1.66 | 1.64 | 15.13 | 50.00 |
| 28 | 1476.50 | 121.50 | 56.25000 | 50.00 | 697.62 | 350.00 | 25.91 | 1127.00 | 1.20 | 2.65 | 10.36 | 62.00 |
| 29 | 1476.50 | 121.50 | 56.25000 | 41.70 | 697.62 | 550.00 | 25.91 | 1127.00 | 1.20 | 2.65 | 10.36 | 16.00 |
| 30 | 1400.00 | 163.00 | 53.00000 | 62.00 | 702.00 | 770.00 | 25.01 | 713.00 | 1.46 | 3.31 | 9.66 | 42.00 |
| 31 | 1485.00 | 59.80 | 54.10000 | 26.44 | 703.20 | 771.00 | 35.02 | 2465.00 | 1.62 | 2.74 | 9.06 | 50.00 |
| 32 | 1365.00 | 222.00 | 43.00000 | 26.44 | 704.00 | 781.00 | 37.01 | 1063.00 | 2.66 | 3.10 | 10.40 | 50.00 |
| 33 | 1305.20 | 174.04 | 43.60000 | 26.55 | 697.81 | 736.00 | 26.01 | 727.55 | 1.44 | 2.53 | 10.27 | 51.20 |
| 34 | 1476.50 | 121.50 | 56.25000 | 43.85 | 697.62 | 700.00 | 25.91 | 1127.00 | 1.20 | 2.65 | 10.36 | 4.01 |
| 35 | 1842.00 | 166.60 | 51.00000 | 26.55 | 701.93 | 450.00 | 22.39 | 642.83 | 1.66 | 1.64 | 15.13 | 51.20 |
| 36 | 1476.50 | 121.50 | 56.25000 | 43.85 | 697.62 | 330.00 | 25.91 | 1127.00 | 1.20 | 2.65 | 10.36 | 4.01 |
| 37 | 1476.50 | 121.50 | 56.25000 | 26.55 | 697.62 | 420.00 | 25.91 | 1127.00 | 1.20 | 2.65 | 10.36 | 51.20 |
| 38 | 1400.00 | 163.00 | 53.00000 | 43.85 | 702.00 | 330.00 | 25.01 | 713.00 | 1.46 | 3.31 | 9.66 | 4.01 |
| 39 | 1485.00 | 59.80 | 54.10000 | 39.35 | 703.20 | 450.00 | 35.02 | 2465.00 | 1.62 | 2.74 | 9.06 | 72.00 |
| 40 | 1365.00 | 222.00 | 43.00000 | 39.35 | 704.00 | 450.00 | 37.01 | 1063.00 | 2.66 | 3.10 | 10.40 | 72.00 |
| 41 | 1305.20 | 174.04 | 43.60000 | 39.35 | 697.81 | 350.00 | 26.01 | 727.55 | 1.44 | 2.53 | 10.27 | 72.00 |
| 42 | 1476.50 | 121.50 | 56.25000 | 43.85 | 697.62 | 550.00 | 25.91 | 1127.00 | 1.20 | 2.65 | 10.36 | 4.01 |
| 43 | 1842.00 | 166.60 | 51.00000 | 26.44 | 701.93 | 450.00 | 22.39 | 642.83 | 1.66 | 1.64 | 15.13 | 50.00 |
| 44 | 1476.50 | 121.50 | 56.25000 | 26.44 | 697.62 | 350.00 | 25.91 | 1127.00 | 1.20 | 2.65 | 10.36 | 50.00 |
| 45 | 1476.50 | 121.50 | 56.25000 | 26.44 | 697.62 | 440.00 | 25.91 | 1127.00 | 1.20 | 2.65 | 10.36 | 50.00 |
| 46 | 1400.00 | 163.00 | 53.00000 | 50.00 | 702.00 | 770.00 | 25.01 | 713.00 | 1.46 | 3.31 | 9.66 | 62.00 |
| 47 | 1485.00 | 59.80 | 54.10000 | 41.70 | 703.20 | 554.00 | 35.02 | 2465.00 | 1.62 | 2.74 | 9.06 | 16.00 |
| 48 | 1365.00 | 222.00 | 43.00000 | 62.00 | 704.00 | 781.00 | 37.01 | 1063.00 | 2.66 | 3.10 | 10.40 | 42.00 |
| 49 | 1305.20 | 174.04 | 43.60000 | 26.44 | 697.81 | 820.00 | 26.01 | 727.55 | 1.44 | 2.53 | 10.27 | 50.00 |
| 50 | 1476.50 | 121.50 | 56.25000 | 26.44 | 697.62 | 658.00 | 25.91 | 1127.00 | 1.20 | 2.65 | 10.36 | 50.00 |

INSTITUTIONAL HUMAN ETHICS COMMITTEE



Avinashilingam

Institute for Home Science and Higher Education for Women

University

(Estd. u/s 3 of UGC Act 1956)

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24th December 2014

To
Ms. Suba G
Department of Food Science and Nutrition
Avinashilingam Institute for Home Science and
Higher Education for Women
Coimbatore – 641 043

Dear Madam,

Ref : Our letter dt. 21st February 2014 in response to your proposal No. AUW.IHEC.2013:18 entitled "Prevalence of premenstrual syndrome among the reproductive age group women and effect of supplementation of iron and calcium rich health mix on the selected subjects (20-45 years)"

With reference to the above letter, in continuation with the documents submitted by you in support of your proposal and the revisions made in the work plan, as per the suggestions made by the IHEC, the Institutional Human Ethics Committee of our University hereby grants approval to your research proposal No. AUW.IHEC.2013:18 entitled "Prevalence of premenstrual syndrome among the reproductive age group women and effect of supplementation of iron and calcium rich health mix on the selected subjects (20-45 years)". The Approval number for the same is AUW/IHEC-13-14/FHP-01.

We wish you all the best in your research endeavours.

Regards,

Dr. P. R. Padma
Member Secretary





Avinashilingam
Institute for Home Science and Higher Education for Women
University

(Estd. u/s 3 of UGC Act 1956)
Coimbatore - 641 043, Tamil Nadu, India
(Deemed University under Category 'A' by MHRD)
Re-accredited with 'A' Grade by NAAC

Certificate of Participation

This is to certify that Mrs. / Ms. Suba. S, Ph.D scholar

of Department of Food science and Nutrition was
a participant of Research Convention titled "Post Research Methods" held at Avinashilingam

Institute for Home Science and Higher Education for Women, Coimbatore, during 18th-2nd August, 2014.

Parvathi
Dr. A. Parvathi
Dean, Faculty of Science

Dr. Gauri Ramakrishnan
Dr. Gauri Ramakrishnan
Registrar



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(Deemed University under Category 'A' by MHRD)
Re-accredited with 'A' Grade by NAAC

Certificate of Participation

This is to certify that Mrs. / Ms. Gr. Subha, PhD (Past time)

of Food Science & Nutrition Department was

a participant of Research Convention titled "Path Finder - Explore, Experiment, Elucidate

Research" held at Avinashilingam Institute for Home Science and Higher Education for Women,

Coimbatore, during 5th - 7th Feb 2014.

Pawthe
Dean, Faculty of Science

Dr. Govri Ramakrishnan
Registrar