Impact of Life Style Modification Behavior (LSMB) on physiological parameters, sleep pattern and quality of life among patients with Poly Cystic Ovarian Syndrome (PCOS) in Tertiary Care Hospital.

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Contributor ship statement-

PS is the principal investigator the study,who collected the data and conceptualized the data. Review the literature and write the manuscript. Dr. SRB and SD conceptualized the research idea and help manuscript writing and editing , TV helped in edited the manuscript .All the co-authors checked the manuscript for language and analysis of data.

Funding- Nil

Competing Interest- Nil

Acknowledgment-The author thanks all the volunteers and participants who took participate in the study.

Type of article- Original article

Word count of paper text-2762

Word count of abstract- 271

No of table- 16

No. of figures-2

Abstract:

Background: Polycystic ovary syndrome has greater impact on today's life of women. Lifestyle modification and weight managementplays a key role in management of PCOS. This study was carried out with the purpose to observe the Impact of Life Style Modification Behavior on Physiological Parameters, sleep pattern and Quality of Life among patients with Poly Cystic Ovarian Syndrome in tertiary care hospital.

Method: Quasi-Experimental study was conducted among 78 patients with Poly Cystic Ovarian Syndrome. In this study one group pre- test, post- test research design was used. Samples were selected by using purposive sampling technique who met the inclusive criteria. Data were collected by using physiological parameters scale, PSQI scale and WHOQOL-BREF questionnaire before the intervention after that life style modification behavior module was introduced on the same day. After that post intervention data was collected by using same tools after 4 weeks of application of intervention. Reliability of the tool PSQI was calculated by using Cronbach's alpha method i.e. 0.736. Reliability of WHOQOL-BREF questionnaire was calculated by Cronbach's alpha method i.e. 0.782 to 0.832.

Result: Result of the study showed that Life Style Modification Behavior module was effective in improving physiological parameters, sleep pattern ($p<0.0001$) and quality of life($p<0.0001$) at $p<0.05$ among patients with PCOS after intervention.

Conclusion: Research findings revealed that Life Style Modification Behavior is effective non- pharmacological treatment of Poly Cystic Ovarian Syndrome. Hence the Life Style Modification Behaviorintervention was effective non pharmacological treatment for maintaining physiological parameters, improving sleep pattern, improvement in quality of life among patients with PCOS.

Keywords: Life Style Modification Behavior, Physiological parameters, Sleep pattern, Quality of Life, Patients with PCOS.

INTRODUCTION

In polycystic ovarian syndrome there is imbalance in level in estrogen, follicle stimulating hormone and luteinizing hormone, progesterone and also androgen hormone.[1]

There are three major estrogens, known as estradiol, estrogen, and estriol. They work together to promote the healthy development of female sex characteristics during puberty and to ensure fertility. When there is excess production of these hormones, it leads to weight gain, premenstrual syndrome, menstrual disturbance like irregular and heavy bleeding, ovarian cysts etc. If these hormones produced in less amount it leads to anxiety, irritability, anger etc.[2]

Poly Cystic Ovarian Disease is the most common hormonal disorder in women of reproductive age. It is a condition in that women have difficulty to becoming pregnant and have high androgen level from ovary and adrenal gland. This disrupts the normal menstrual cycle and may lead to infertility, excess body hair and acne.[3]

In 2019, according to Institute of Medical Sciences stated that women with Poly Cystic Ovarian Syndrome are commonly shows the symptoms like sleep disturbance, abnormal menstruation, physiological parameters, obesity, hirsutism, hormonal imbalance and infertility.[4]

In 2020 according to BMC Endocrine Disorders research Centre stated that there is a significant association between life style modification and anthropometric, clinical, and biochemical parameters in adolescent girls with Poly Cystic Ovarian Syndrome.[5]

Present day lifestyle, food habit, environment exposure to toxins along with hereditary predisposition for metabolic syndrome (obesity, hyperlipidaemia, diabetes and hypertension) and stress has contributed to the common problem faced by today's female population which is polycystic ovarian disease because sedentary lifestyle and lack of exercises and fast food consumption by the women are leading to the leading to the rise in cases of Poly Cystic Ovarian Disease especially in urban population.[6]

There is no cure of Poly Cystic Ovarian Syndrome (PCOS) but treatment is available to alleviate the symptoms. Medical management and lifestyle modification are the best way to treat the disease. So, the goal is to assess the quality of life women with Poly Cystic Ovarian Disease in order to do lifestyle modification. The on-going goals are to prevent long term complication and to improve the fertility of the women.[7]

MATERIAL AND METHODOLOGY

Quasi-Experimental study was conducted among 78 patients with Poly Cystic Ovarian Syndrome. In this study one group pre- test, post- test research design was used. Samples were selected by using purposive sampling technique who met the inclusive criteria. Data were collected by using physiological parameters scale, PSQI scale and WHOQOL-BREF questionnaire before the intervention after that life style modification behavior module was introduced on the same day. After that post intervention data was collected by using same tools after 4 weeks of application of intervention. Reliability of the tool PSQI was calculated by using Cronbach's alpha method i.e. 0.736. Reliability of WHOQOL-BREF questionnaire was calculated by Cronbach's alpha method i.e. 0.782 to 0.832.

Data Collection process

Data collection was done from 28.02.2022 to 20.05.2022 in Gynae OPD at Queen Mary Hospital Lucknow; U.P. Ethical permission was obtained from concerned authority [No.2149/Ethics/2022]**.** Sample was selected by purposive sampling techniques according to inclusion criteria.Self-introduction and purpose of the study was explained to the subjects.Informed consent was taken from the participants. Then demographic data was obtained from participants.Assess the pre-test score related to physiological parameters, Sleep pattern, and Quality of Life before application of intervention. On the same day researcher had explained about Life style Modification Behavior intervention and advice to follow for 4 week. Reminder was made two times in a week via phone call to ask about whether they were follow the Life Style Modification Behavior intervention plan or not. Post – test data was obtained by using same tools after 4 week.

Development and Description of Tool

Assessment of demographic variables and clinical variables

Demographical variablesit consists of 6 items i.e. age (in years), educational qualification, marital status, occupation, Income.

Clinical variablesit deals to assess the clinical variables related to menstruation. It consists of 8 items i.e. Pattern of menstruation cycle, Age of menarche in years, how many sanitary pad / day used, Association of pain with menstruation, Frequency of menstruation, Duration of Polycystic ovarian syndrome, Family history of present illness, Presence of symptoms in Polycystic ovarian syndrome.

Physiological parameter Scale

It deals to assess the physiological parameters before and after the intervention to evaluate the impact of Life Style Modification Behavior on physiological parameters. It consists of 6 parameters i.e. BMI, Weight in kg, Waist circumference (cm), Hip circumference (cm), Level of Luteinizing hormone, Level of follicle stimulating hormone.

Pittsburgh sleep quality index (standardized tool)

Pittsburgh sleep quality index questionnaire is a standardized tool for the assessment of quality of sleep among women with Poly Cystic Ovarian Syndrome. In that questions are given relate to usual sleep habit. Candidate should tick right on the answer. The scale is used to assess the sleep habits for the majority of days and nights in the past month. Scale contains 19 self-rated questions and 5 question rated by the bed partner or roommate (if one is available). Only self -rated questions are included in the scoring, with the scoring range 0-21 points, 0-3 have mild difficulty and 21 score have worse condition in all areas.

WHOQOL - BRIEF checklist (standardized tool)

WHOQOL - BRIEF checklist is a standardized tool it is usedto assess the quality of life of women with Poly Cystic Ovarian syndrome (PCOS).In that questions were ask how you feel about your quality of life. Candidates were read out each question and tick right mark with the response options**.** Responses of the candidate were checked before and after application of intervention.

Data analysis

The process of data analysis involves numerous stages. It starts with raw data encoding further decoding for the data analysis.After decoding it formulated in statistical format to acquire specific data to check its association required in the study. The data analysis will be done by SPSS (version 23) and Excel Software.Descriptive statistics (frequency, percentage) for the assessment and inferential statistics (chi-square test,Wilcoxon test**,**paired t – test,Karl person's coefficient for correlation, and ANOVA testfor the association) was used.

RESULT

Socio-demographic profile and clinical variables

Majority of thepatient were in the age group of 24-27 years 37 (47.4%). Most of the patients were 12th passed 27 (34.6%). Most of the patients were unmarried 51 (65.8%). Most of the participants were doing job 30 (38.5%). Most of the patients family income were >20000 rupees 33 (41.7%).

In clinical variables majority of the patients had irregular menstrual cycle 59 (75.6%). Age of menarche in most of the patient was 13-14 years 41 (52%). Most of the patient used 4-5 sanitary pads in a day 27 (34.6%). Most of the patients had moderate pain in menstruation 34 (43.5%). Most of the patient had frequency of menstruation <28days 23 (29.5%).Family history of PCOS was absent in most of the patients 44 (56.4%). Most of the patients PCOS symptoms were Hirsutism 26 (33.3%).

Frequency and Percentage distribution based on the pre and post- test score of physiological parameters

Most of the patients were overweight before intervention 39 (50%). After intervention most of the patients had normal BMI 40(51.3%). Most of the women had overweight before intervention 40 (51%) after intervention most of the patients had normal weight 44 (56%). Before intervention most of the patients had medium hip circumference 67 (86%) after intervention 72 (92%) patients had medium hip circumference. Before intervention most of the patients had overweight waist circumference 50 (64%). Most of the patients had above than normal level of LH hormone before intervention 51 (65.4%) after intervention it was reduces 33 (42.3%). Before intervention FSH level of most of the patients were 44 (56.7%) after intervention it reduces in number 37 (47.4%).

Effectiveness of module LSMB on quality of life and sleep quality index among PCOS patients before and after intervention

There was significant improvement seen in scores of all component of PSQI after intervention, with p value < 0.0001 and there was significant improvement seen in all the domains of QOL, after intervention, with p<0.0001.

Compare the sleep pattern and quality of life among PCOS patients before and after intervention

Result shows thataverage sleep pattern after intervention was improved (5±1) as compared to before intervention(11±2) with the p<0.0001. So that there was a significant impact of LSMB on sleep pattern after intervention andaverage quality of life after intervention was improved (219.6±7.8) as compared to before

intervention(106±5) with the p<0.0001. So that there was a significant impact of LSMB on quality of life after intervention

Correlation of demographic variable with physiological parameters, Sleep quality index and quality of life before and after intervention

There is weak positive correlation was observed between weight and marital status (r=0.249, p=0.028), as well as between weight and occupation (r=0.292, p=0.009) at p< 0.05.

There was weak positive correlation was observed between marital status and component 3 of PSQI (r=0.291, p=0.010). Weak negative correlation was observed between occupation and Component 4 (r=-0.231, p=0.042), occupation and Component 5 (r=-0.291, p=0.010), occupation and Total PSQI score and occupation (r=-0.233, p=0.04) at p< 0.05.

There was weak positive correlation was found between Age and Domain 2. (r=0.287, p=0.011) and age and total QOL Score (r=0.232, p=0.041). Weak positive correlation was observed between education and Domain 4 (r=0.232, p=0.041). Weak positive correlation was observed between occupation and total score of QOL (r=0.263, p=0.02) at p<0.05.

Association between physiological parameters, sleep pattern and quality of sleep with the selected demographic variables and clinical variables

There Statistically Significant association was found between BMI v/s Occupation and Income; Weight v/s Occupation and Income; Waist circumference v/s age and Income, LH v/s Occupation; and FSH v/s Education at p<0.05.

Statistically Significant association was found between Hip Circumference v/s number of pad; Waist circumference v/s duration of disease; and LH v/s frequency of pad change, at p<0.05.

No significant association was observed between demographic parameters and components of PSQI at p<0.05.

No significant difference was observed between clinical parameters and components of PSQI as p>0.05

No significant difference was observed between demographic parameters and QOL as p>0.05.

No significant difference was observed between clinical parameters and QOL as p>0.05.

DISCUSSION

Demographic Variables and clinical variables

The invisible sufferings caused by unhealthy lifestyle life style, affect physiological parameters, sleep pattern and affect every aspect of life compromise the quality of life not only the inactive symptoms but often beyond symptomatic recovery. In light of the referred literature, the present study observations of the variables are discussed below.

Cross-sectional study was performed to assess the quality of life and satisfaction level among women with PCOS. 504 women age between 26- 35 affected more. Most of the women are married, higher socioeconomic standing lead to better quality of life.[8]

Cross-sectional study was performed to assess psychological parameters in reproductive PCOS women. Study was conducted on 71 women. Women working in any job are more stressed that affect the quality of life of PCOS women.[9]

Present study shows that most of patient had irregular menstrual cycle. Age of menarche in most of the patient was 13-14 years. Most of the patient used 4-5 pads. Most of the patients had moderate pain. Most of the patient had menstrual cycle of >45 days. Family history of PCOS was present in most of the patient. Most of the patient suffered from Hirsutism. The literature supports to the finding are-

Cross-sectional study was performed to assess the quality of life and satisfaction level among women with PCOS. 504 women were selected for study. Finding revealed that most of the PCOS women had irregular menstrual cycle with heavy flow; women were experiencing severe pain on 1, 2 day of the menstruation.[8]

Case control study was conducted to assess Long and irregular menstrual cycles among women with polycystic ovary syndrome. Result revealed that women with PCOS had menstrual cycle length of >35 days. Most commonly symptoms in PCOS were hirsutism and acne.[10]

Assessment of physiological parameters

Present study shows that in pre- test most of the patient come under overweight by checking weight and BMI. Few patients are present in medium hip circumference; most of the patient waist circumference is seen overweight, LH and FSH level was irregular but after application of the Life Style Modification Behaviour most of overweight patient reduced their weight and become normal BMI. Most of the patient's Hip circumference became normal. Waist circumference of the overweight patient was reduced and became normal. Positive impact of LSMB was also seen in LH and FSH.

The study supported to the finding were-

Prospective Observational study was conducted to assess the impact of Poly cystic Ovarian Syndrome on Physiological parameters. Total 125 women are involved in the study. Result revealed that most of the women with PCOS had major problem, women suffering with increased BMI, lead to obesity. PCOS affect quality of life.[11]

Cross sectional study was conducted to assess the physiological parameters among PCOS women, total 201 samples were selected. Result revealed that excess androgen level lead to increase BMI, women with PCOS have increase BMI, central obesity is mostly seen which is assess by increases hip circumference and waist circumference.[22]

Experimental study was conducted to assess the role of lifestyle modification in polycystic ovary syndrome. Total 87 women were selected. Result revealed that application of Life Style Modification helps in successfully reducingweight, it also helps in decreasing hip and waist circumference.[12]

Assessment of quality of sleep among PCOS patients

The finding of the present study showed that there was significant improvement seen on quality of sleep after application of Life Style Modification Behaviour. The findings of study were also found to have the same result in many research studies.

Prospective cross-sectional study was conductedto assess Sleep Duration in women with Polycystic Ovarian Syndrome. Total 231 women are selected.Results of the study revealed that women with PCOS suffering with insufficient sleep. It increased risk of menstrual disturbances.[13]

Quasi-experimental study was conducted, to evaluate the effect of aerobic exercise on quality of sleep among PCOS student. Total 134 samples were selected. Result showed that there was significant improvement in the quality of sleep ($p< 0.001$ and $p< 0.0001$), after 4 week application of intervention.[14]

Experimental study was conducted, to assess the effect of Music Therapy on Quality of sleep among the student of nursing department. 100 nursing students were included. Result determined that significant improvement seen in quality of sleep by music therapy.[15]

Assessment of quality of life among PCOS patients

The finding of the present study showed that there was significant improvement seen on quality of life after application of Life Style Modification Behavior. The findings of study were also found to have the same result in many research studies.

Prospective case-control study was conducted to assess the impact of Poly Cystic ovarian syndrome on quality of life among women with polycystic ovary syndrome. Total 300 women are selected. Result shows that symptoms like increased BMI, menstrual irregularities, educational status and marital status play a major role in altering Quality of Life in women with PCOS.[13]

Cross-sectional study was conducted, to assess the effect of Life Style Modification Behavior on quality of life among PCOS women.Total294 women were selected. Result shows that there is significant improvement seen in quality of life after following life style modification for 4weeks and most effective treatment for PCOS is lifestyle modification.[16]

From the finding of the study, it has been observed that Life Style Modification Behavior helps in improvement in physiological parameters, sleep pattern and quality of life.

Positive finding of this study support a growing body of evidence that non pharmacological intervention such as Life Style Modification Behavior is effective for physiological parameters, sleep pattern and quality of life.Fresh hand education training can be given to nurses regarding Life Style Modification Behavior.

Contributor ship statement

PS is the principal investigator of the study,who collected the data and conceptualized the data. Review the literature and write the manuscript. Dr. SRB and SD conceptualized the research idea and help manuscript writing and editing,TV helped in edited the manuscript .All the co-authors checked the manuscript for language and analysis of data.

Funding: The authors have not declared a specific grant for this research from any funding agency in the public, commercial, or not-for-profit sectors

Competing Interest: none declared

Ethics statements: Patient consent for publication has been obtained

Ethics approval: This study involved human participants and was approved by the institutional Ethics committee with registration no.[No.2149/Ethics/2022]

Provenance and peer review: Not commissioned, externally peer reviewed.

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SECTION I
Demographic variables
Table-1:Frequency and Percentage distribution of participants based on demographic Variables and clinical variables of PCOS patients

Table-1.1: Frequency and Percentage distribution of participants based on demographic variables of PCOS patients.

n=78

Demographic variable	Category	Frequency (f)	Percentage (%)
Age (in Years)	a) 18-21	17	21.8
	b) 21-24	16	20.5
	c) 24-27	37	47.4
	d)27-30	8	10.3
Educational qualification	a) Illiterate	9	11.5
	b) 10th	16	20.5
	c) 12th	27	34.6
	d) Graduation	26	33.3
Marital status	a) Married	27	34.1
	b) Unmarried	51	65.8
Occupation	a) Student	23	29.5
	b) Job	30	38.5
	c) House wife	25	32.1
Monthly family income in Rupees	a) <5000	14	17.72
	b) 5000-20000	31	40.51
	c) >20000	33	41.77

Table-1.2: Frequency and Percentage distribution of participants based on clinical variables of PCOS patients.

n=78

Clinical variable	Category	Frequency (f)	Percentage (%)
Pattern of menstruation cycle	a) Regular	19	24.4
	b) Irregular	59	75.6
Age of menarche in years	a) 11-12	6	7.7
	b) 12-13	31	39.7
	c) 13-14	41	52.6
How many sanitary in a day	a) <3	23	29.5
	b)3-4	10	12.8
	c) 4-5	27	34.6
	d)>5	18	23.1
Association of pain with menstruation	a)No pain	0	0.0

	b)Mild	21	26.9
	c)Moderate	34	43.5
	d)Severe	23	29.5
Frequency of menstruation	a)<28 days	23	29.5
	b)28-35 days	16	20.5
	c)35-45 days	18	23.1
	d)>45 days	21	26.9
Duration of Polycystic Ovarian Syndrome	a)> 1 year	14	17.9
	b)1-3 years	28	35.9
	c)3-5years	28	35.9
	d)< 5years	8	10.3
Family history of present illness	a)Present	34	43.6
	b)Absent	44	56.4
Presence of symptoms in Polycystic ovarian Syndrome	a) Mood swings	15	19.2
	b) Acne	15	19.2
	c) Hirsutism	26	33.3
	d)Sleep disturbance	22	28.2

SECTION-II

Table-2: Frequency and Percentage distribution based on the pre and post- test score of physiological parameters of PCOS patient.

n=78

Physiological Parameters	**Category**	**Pre test**		**Post test**	
		Frequency (f)	**Percentage (%)**	**Frequency (f)**	**Percentage (%)**
BMI	a)Underweight <18.5	11	14.1	5	6.4
	b)Normal 18.6- 24.9	28	35.9	40	51.3
	c)Overweight 25.0-29.0	39	50.0	33	42.3
	d)Obese >30	0	0.0	0	0.0
Weight	a) Underweight	7	9	3	4
	b) Normal	31	40	44	56
	c) Overweight	40	51	31	40
	d) Obese	0	0	0	0

Hip circumference (cm)	a)Small 66-96	5	6	3	4
	b)Medium96-119	67	86	72	92
	c)Large 119-137	5	6	2	3
	d)Extra-large 137-154	1	1	1	1
Waist circumference (cm)	a) Normal >= 80	24	31	36	46
	b)Over weight >=90	50	64	42	54
	c) Obese >= 105	4	5	3	4
Level of Luteinizing hormone	a)Normal 5-25 IU/L	3	3.8	29	37.2
	b)Below Normal <5 IU/L	24	30.8	16	20.5
	c)Above Normal >25 IU/L	51	65.4	33	42.3
Level of Follicle Stimulating Hormone	a)Normal 4.7-21.5 mIU/ml	6	7.7	15	19.2
	b)Below Normal <4.7 mIU/ml	28	35.9	26	33.3
	c)Above Normal >21.5 mIU/ml	44	56.4	37	47.4

SECTION III

Table 3: Determine the effectiveness of module LSMB on quality of life and sleep quality index among PCOS patients before and after intervention.

Table 3.1: Determine the effectiveness of module LSMB on sleep quality index among PCOS patients before and after intervention.

n=78

Sleep quality index		**Pre- test**		**Post-test**		**Wilcoxon test**	
Component	**Sleep quality**	**Mean**	**SD**	**Mean**	**SD**	***Z**	**p-value**
Component 1	Subject sleep quality	2	0	1	1	7.501	<0.0001
Component 2	Sleep latency	3	0	2	1	6.513	<0.0001
Component 3	Sleep duration	3	1	1	1	12.737	<0.0001
Component 4	Sleep efficiency	2	1	1	1	5.269	<0.0001
Component 5	Sleep disturbance	2	0	2	1	3.576	<0.0001
Component 6	Use of sleep medication	0	0	0	0	n/a	<0.0001
Component 7	Day time dysfunction	2	1	1	0	14.006	<0.0001

***Wilcoxon test, p value <0.0001**

Table 3.2: Determine the effectiveness of module LSMB on quality of life among PCOS patientsbefore and after intervention

n=78

WHO Quality of life		Pre-test		Post-test		Wilcoxon test	
Domain	**Category**	**Mean**	**SD**	**Mean**	**SD**	***Z**	**p-value**
Domain I	Physical Health	37.87	9.48	57.37	10.76	7.339	< .0001
Domain II	Psychological	45.09	11.11	62.07	13.37	6.212	< .0001
Domain III	Social Relationships	41.56	14.99	55.24	16.23	5.750	< .0001
Domain IV	Environment	36.5	10.87	43.67	10.05	6.717	< .0001

***Wilcoxon test, p value <0.0001**

SECTION IV

Table 4: Compare the sleep pattern and quality of life among PCOS patients before and after intervention.

Table 4.1: Compare the sleep pattern among PCOS patientsbefore intervention and after intervention.

n=78

Sleep Pattern	Mean	SD	Mean Difference	df	*Paired t-value	p value
Before intervention	11	2	5.5	154	22.28	<0.0001
After intervention	5	1				

*** paired t – test, p value <0.0001**

Table-4.2: Compare the quality of life among PCOS patients before intervention and after intervention.

n=78

Quality of life	Mean	SD	Mean Difference	Df	*Paired t-value	p value
Before intervention	106.5	3.9	113	154	10.016	0.0001
After intervention	219.6	7.8				

*** paired t – test, p value <0.0001**

SECTION V

Table 5: Correlation of demographic variable with physiological parameters, Sleep quality index and quality of life before and after intervention

Table 5.1: Correlation of demographic variable with physiological parameters before intervention

n=78

Physiological variables	BMI		Weight		Hip circumference		Waist circumference		Level of LH		Level of FSH	
Demographic variables	***r- value**	**p-value**	***r- value**	**p-value**	***r- value**	**p-value**	***r- value**	**p-value**	***r- value**	**p-value**	***r- value**	**p-value**
Age(in years)	0.148	0.195	-0.171	0.135	-0.209	0.066	0.063	0.583	-0.036	0.754	-0.019	0.866
Education qualification	-0.034	0.77	0.079	0.493	-0.034	0.767	0.032	0.779	-0.054	0.641	0.089	0.439
Marital status	0.202	0.076	0.249	0.028	-0.008	0.945	-0.09	0.433	0.174	0.128	0.049	0.67
Occupation	0.533	0.742	0.292	0.009	-0.074	0.52	-0.141	0.217	-0.211	0.064	0.078	0.498
Income	0.056	0.628	0.131	0.253	0.059	0.607	0.007	0.952	0.117	0.309	-0.049	0.673

***Karl person's coefficient of correlation (r- value) at p value < 0.05**

Table 5.2: Correlation of demographic variable with Sleep quality index before intervention

n=78

Sleep quality Index	Component 1		Component 2		Component 3		Component 4		Component 5		Component 6		Component 7		Total	
Demographic variables	***r-value**	**P -value**	***r-value**	**p-value**	***r-value**	**p-value**	***r-value**	**p-value**	***r-value**	**p-value**	***r-value**	**p-value**	***r-value**	**p-value**	***r-value**	**p-value**
Age(in years)	-0.158	0.167	0.004	0.973	-0.162	0.156	-0.101	0.378	-0.193	0.091	n/a	n/a	0.161	0.159	-0.177	0.121
Education qualification	-0.037	0.745	0.166	0.146	0.005	0.962	-0.007	0.948	0.09	0.435	n/a	n/a	0.216	0.057	0.09	0.434
Marital status	-0.094	0.415	-0.134	0.242	0.291	0.01	-0.042	0.718	-0.075	0.511	n/a	n/a	-0.164	0.152	-0.031	0.79
Occupation	0.079	0.49	0.079	0.49	0.177	0.12	-0.231	0.042	-0.291	0.01	n/a	n/a	-0.174	0.127	-0.233	0.04
Income of the family	0.152	0.185	-0.137	0.233	-0.002	0.985	-0.114	0.321	-0.113	0.323	n/a	n/a	0.191	0.094	-0.002	0.986

***Karl person's coefficient of correlation (r- value) at p value < 0.05**

Table 5.3: Correlation of demographic variable with quality of life before intervention

n=78

Quality of life	**Domain 1**		**Domain 2**		**Domain 3**		**Domain 4**		**Total**	
Demographic variables	***r-value**	**p-value**	***r- value**	**p-value**	***r- value**	**p-value**	***r- value**	**p-value**	***r- value**	**p-value**
Age(in years)	0.264	0.019	0.287	0.011	0.124	0.28	0.092	0.421	0.232	0.041
Education qualification	0.175	0.126	0.014	0.903	-0.139	0.226	0.232	0.041	0.061	0.595
Marital status	0.146	0.203	0.215	0.059	0.04	0.728	0.034	0.768	0.129	0.261
Occupation	0.284	0.012	0.014	0.903	0.11	0.337	0.069	0.547	0.263	0.02
Income	0.114	0.321	0.171	0.134	0.072	0.531	0.125	0.275	0.148	0.197

***Karl person's coefficient of correlation (r- value) at p value < 0.05**

SECTION VI

Table 6: Description of association between physiological parameters, sleep pattern and quality of sleep with the selected demographic variables and clinical variables

Table 6.1: Association between demographic variables with physiological parameters

n=78

Demographic variables	**AGE**			**EDUCATION**			**MARITAL STATUS**			**OCCUPATION**			**INCOME**		
Physiological parameters	***Chi-square**	**df**	**p-value**	**Chi-square**	**df**	**p-value**	**Chi-square**	**df**	**p-value**	**Chi-square**	**df**	**p-value**	**Chi-square**	**Df**	**p-value**
BMI	17.946	9	0.036	11.878	9	0.220	4.219	3	0.239	27.361	6	0.000	13.725	6	0.033
Weight	16.709	9	0.053	8.317	9	0.503	2.645	3	0.450	19.975	6	0.003	19.816	6	0.003

Hip Circumference	6.593	9	0.679	6.415	9	0.698	0.469	3	0.926	3.086	6	0.798	6.255	6	0.395
Waist Circumference	21.961	9	0.009	14.550	9	0.104	2.927	3	0.403	11.302	6	0.079	14.416	6	0.025
LH	6.455	6	0.374	12.449	6	0.053	6.009	2	0.050	9.765	4	0.045	6.962	4	0.138
FSH	11.502	6	0.074	12.954	6	0.044	0.733	2	0.693	8.923	4	0.063	7.781	4	0.100

***Chi square test at p value < 0.05**

Table 6.2: Association betweenclinical parameters with physiological parameters before intervention

n =78

Clinical Variables	**Pattern of menstruation cycle**			**Age of Menarche**			**No. of sanitary pad in a day**			**Pain associated with menstruation**			**Frequency of menstruation**			**Duration of PCOS**			**Family history of present illness**			**Symptoms in PCOS**		
Physio--logical parameter	***χ^2**	**df**	**P-value**	**χ^2**	**df**	**P-Value**	**χ^2**	**Df**	**p-value**	**χ^2**	**Df**	**p-value**	**χ^2**	**df**	**P-value**	**χ^2**	**df**	**p-value**	**χ^2**	**df**	**p-value**	**χ^2**	**f**	**p-value**
BMI	1.92	3	0.58	4.32	6	0.63	10.5	9	0.30	1.74	3	0.62	9.43	9	0.39	14.9	9	0.09	3.96	3	0.26	14.11		0.118
Weight	1.75	3	0.62	7.6	6	0.26	6.66	9	0.67	1.09	3	0.77	9.45	9	0.39	11.9	9	0.21	3.99	3	0.26	14.0		0.12
Hip Circumference	3.37	3	0.33	16.1	6	0.01	23.6	9	0.00	0.19	3	0.97	6.84	9	0.65	9.32	9	0.40	1.65	3	0.64	22.8		0.007
Waist Circumference	1.11	3	0.77	5.47	6	0.48	14.7	9	0.09	6.98	3	0.07	8.17	9	0.51	24.3	9	0.004	3.44	3	0.32	3.12		0.959
Level of LH	5.29	2	0.07	9.52	4	0.04	6.75	6	0.34	2.18	2	0.33	18.0	6	0.006	5.15	6	0.52	3.015	2	0.22	6.53		0.366
Level of FSH	2.86	2	0.23	5.76	4	0.21	7.5	6	0.27	0.76	2	0.68	8.52	6	0.20	11.07	6	0.08	1.83	2	0.4	5.77		0.449

***Chi square, p< 0.05**

Table 6.3: Association of demographic variables with sleep pattern before intervention

n =78

Quality of sleep		Component 1				Component 2				Component 3				Component 4				Component 5				Component 7				Total			
Physiological variables		**Mean**	**SD**	***F**	**P-value**	**Mean**	**SD**	**F**	**-alue**	**Mean**	**SD**	**F**	**P-value**	**Mean**	**SD**	**F**	**P-value**	**Mean**	**SD**	**F**	**P-value**	**Mean**	**SD**	**F**	**P-value**	**Mean**	**SD**	**F**	**P-value**
Age (in years)	**a) 18-21**	2	0	0.32	0.82	3	0	n/a	n/a	3	0	0.77	0.63	2	1	n/a	n/a	2	0	n/a	n/a	2	1	n/a	n/a	11	1	0.63	0.244
	b) 21-24	2	1			3	0			3	0			2	1			2	0			2	1			11	2		
	c) 24-27	2	0			3	0			3	1			2	1			2	0			2	1			11	2		
	d)27-30	3	1			3	0			3	0			2	1			2	0			2	1			12	1		
Educa-tion	**a) illiterate**	2	1	0.52	0.45	3	0	n/a	n/a	3	0	0.52	0.75	1	1	0.28	0.97	2	0	n/a	n/a	2	0	0.34	0.56	10	2	0.02	0.627
	b) 10th	2	0			3	0			3	1			1	1			2	0			2	1			10	1		
	c) 12th	2	0			3	0			3	1			2	1			2	0			3	1			11	2		
	d) graduate-on	2	0			3	0			3	1			2	1			2	0			2	1			11	1		
Marit-al Status	**a) Married**	2	1	0.65	0.82	3	0	n/a	n/a	2	1	0.73	0.54	2	1	n/a	n/a	2	0	n/a	n/a	2	1	n/a	n/a	11	2	n/a	n/a
	b) Unmarr-ied	2	0			3	0			3	1			2	1			2	0			2	1			11	2		
Occu-patio n	**a) student**	2	0	0.63	0.72	3	0	n/a	n/a	3	1	n/a	n/a	2	1	0.24	0.73	2	0	n/a	n/a	2	1	n/a	n/a	11	1	0.34	0.424
	b) job	2	0			3	0			3	1			2	1			2	0			2	1			11	1		
	c) house wife	2	1			3	0			3	1			1	1			2	0			2	1			10	2		
Income	**a) <5000**	2	0	0.53	0.77	3	0	n/a	n/a	3	0	0.47	0.21	2	1	0.72	0.82	2	0	0.23	0.82	2	1	n/a	n/a	11	1	0.34	0.625
	b) 5000-20000	2	0			3	0			3	1			1	1			2	1			2	1			11	2		
	c) >20000	2	0			3	0			3	1			2	1			2	0			2	1			11	1		

Sleep pattern		Component -1				Component -2				Component -3				Component -4				Component-5				Component -7				Total			
Clinical variable		Mean	SD	f	p-value	Mean	SD	f	p-value	Mean	SD	f	p-value	Mean	SD	f	p-value	Mean	SD	f	p-value	Mean	SD	f	p-value	Mean	SD	f	p-value
Pattern of menstru-ation cycle	a) Regular	22	10	0.89	0.48	33	00	n/a	n/a	33	01	0.14	0.32	12	11	0.30	0.26	22	00	0.19	0.57	22	11	0.57	0.51	11	22	0.55	0.60
	b)Irregular																												
Age of menarche	a) 11-12	23	10	0.25	0.36	33	00	n/a	n/a	23	11	0.72	0.72	22	11	0.50	0.54	22	00	0.14	0.83	22	11	0.61	0.34	11	22	0.55	0.603
	b) 12-13																												
	c) 13-14	22	10			33	00			33	11			22	11			22	00			11	22			11	22		
No. of sanitary pad	a) <3	22	00	n/a	n/a	33	00	n/a	n/a	33	10	0.47	0.34	22	11	0.33	0.18	22	00	n/a	n/a	32	10	0.64	0.72	11	21	0.60	0.40
	b)3-4																												
	c) 4-5																												
	d)>5																												
Pain Associated with menstruati-on	a)No pain	20	10	0.73	0.85	30	00	n/a	n/a	30	11	0.46	0.50	20	10	0.19	0.92	20	00	0.72	0.63	21	11	0.13	0.14	11	20	0.69	0.20
	b)Mild																												
	c)Moderate	20	00			30	00			33	10			20	10			20	00			21	11			11	20		
	d)Severe																												
Frequency of menstruatio-n	a)<28 days	20	00	0.40	0.19	30	00	n/a	n/a	23	11	0.29	0.53	22	11	0.66	0.85	22	10	0.94	0.22	22	11	n/a	n/a	11	22	0.23	0.13
	b)28-35 days	31	10			30	00			33	11			22	11			22	00			22	11			12	22		
	c)35-45 days																												
	d)>45 days	22	00			33	00			33	10			22	11			22	00			22	11			11	22		
Duration of PCOS	a)> 1 year	22	00	0.59	0.55	33	00	n/a	n/a	33	10	0.66	0.20	21	11	0.43	0.46	22	00	n/a	n/a	22	10	0.48	0.89	11	22	0.54	0.83
	b)1-3 years																												
	c)3-5years	22	00			33	00			33	01			22	11			22	00			22	01			11	21		

| | | |

Table 6.5: Association of demographic variables with QOL before intervention

n =78

Quality of life		Domain 1				Domain 2				Domain 3				Domain 4				Total			
Demographic Variables	Category	Mean	SD	F	p-value	Mean	SD	F	P-value	Mean	SD	F	p-value	Mean	SD	F	p-value	Mean	SD	F	p-value
Age in years	a) 18-21	38.1	7.0			44.5	11.5			43.1	15.1			39.3	7.7			165.1	31.6		
	b) 21-24	37.1	8.7			42.2	12.7			38.1	11.2			35.0	10.5			152.5	35.9		
	c) 24-27	40.2	10.3			48.8	9.3			44.1	16.1			37.7	12.0			170.4	37.6		
	d)27-30	26.8	3.9			35.8	7.5			33.4	14.2			27.4	8.8			122.9	16.1		
				0.51	0.20			0.13	0.84			0.39	0.52			0.62	0.20			0.37	0.76
Education	a) illiterate	37.0	6.0			52.4	7.0			45.4	13.2			36.9	6.1			171.6	22.9		
	b) 10th	41.7	10.7			46.2	11.8			37.1	15.1			36.5	10.9			161.6	40.9		
	c) 12th	38.5	9.4	0.12	0.53	45.0	11.0	0.38	0.31	40.2	13.5	0.66	0.82	39.6	10.5	0.89	0.38	163.0	33.2	0.70	0.94
	d) graduation	34.5	9.3			42.0	11.1			44.4	16.7			32.9	12.2			153.5	41.7		
Marital Status	a) Married	36.0	9.4			41.9	10.6			40.9	12.5			36.1	10.7			154.6	30.2		
	b) Unmarried	38.6	9.6	0.18	0.76	46.8	11.1	0.54	0.79	41.9	16.2	0.73	0.31	36.6	11.2	0.16	0.39	163.7	39.7	0.66	0.48
Occupation-	a) student	36.0	9.0			40.3	11.9			39.3	13.0			37.1	9.7			152.5	36.1		
	b) job	34.9	9.4			43.3	9.8			41.7	15.6			33.8	11.9			153.6	37.3		
	c) house wife	42.7	8.5	0.29	0.28	51.8	8.7	0.52	0.21	43.4	16.1	0.15	0.24	39.0	10.5	0.85	0.87	176.6	32.7	0.72	0.58
Income of the family	a) <5000	32.4	6.0			39.6	9.3			40.6	13.9			32.2	11.4			144.6	33.2		
				0.60	0.41			0.33	0.22			0.49	0.37			0.88	0.82			0.17	0.29
	b) 5000-20000	39.9	9.6			46.4	12.2			40.2	13.3			37.2	12.1			163.5	37.6		
	c) >20000	37.8	10.0			46.2	10.2			43.2	17.0			37.4	9.4			164.5	36.8		

***ANOVA test, at p value <0.05**

Table 6.6: Association of clinical parameters with QOL before intervention

n=78

Quality of life		Domain 1				Domain 2				Domain 3				Domain 4				Total			
Clinical Variables	**Category**	**Mean**	**SD**	**F**	**p-value**	**Mean**	**SD**	**F**	**p-value**	**Mean**	**SD**	**F**	**p-value**	**Mean**	**SD**	**F**	**P-value**	**Mean**	**SD**	**F**	**P-value**
Pattern of menstruation	**a) Regular**	9.3	10.4	0.65	0.72	45.2	10.6	0.44	0.863	43.1	12.7	0.45	0.90	35.4	8.7	0.89	0.60	162.8	35.5	0.25	0.17
	b) Irregular	7.2	9.3			45.1	11.3			41.0	15.7			36.7	11.6			159.9	37.5		
Age of menarche	**a) 11-12**	9.7	8.9			45.2	8.9			46.0	14.7			31.3	11.3			152.0	34.1		
	b) 12-13	8.9	8.4	0.94	0.5	48.9	9.0	0.33	0.738	42.3	11.8	0.76	0.56	37.0	12.0	0.82	0.77	166.8	30.2	0.86	0.321
	c) 13-14	8.0	10.1			42.3	12.1			40.3	17.1			36.7	10.2			157.2	41.5		
No. of sanitary pad	**a) <3**	8.7	7.9			50.3	10.2			45.3	15.5			38.3	10.6			172.4	36.7		
	b)3-4	2.5	12.1	0.67	0.96	49.7	12.2	0.35	0.745	38.3	14.8	0.17	0.38	40.8	13.1	0.90	0.21	171.1	41.0	0.86	0.5
	c) 4-5	5.5	11.0			43.5	11.1			40.8	14.8			34.4	11.5			154.2	39.5		
	d)>5	7.1	6.8			38.4	7.4			39.6	14.9			34.7	8.8			149.5	25.8		
Pain associated with menstruation	**a)No pain**	0.0	0.0			0.0	0.0			0.0	0.0			0.0	0.0			0.0	0.0		
	b)Mild	21.4	5.8	0.54	0.35	41.6	9.5	0.78	0.344	33.3	13.7	0.77	0.13	39.5	13	0.94	0.63	37.7	14.9	0.18	0.628
	c)Moderate	37.9	7.3			45.2	11.1			41.6	15.0			36.6	10.9			161.1	36.8		
	d)Severe	25.0	6.2			38.4	7.7			39.6	14			36.5	14.			32.9	8.3		
Frequency of menstruation	**a)<28 days**	8.9	10.5			43.3	9.7			41.7	11.3			35.3	9.7			158.9	33.1		
	b)28-35 days	7.6	8.2	0.41	0.78	39.1	12.9	0.74	0.974	36.4	14.4	0.35	0.31	32.9	8.3	0.20	0.75	145.9	36.8	0.45	0.31

	c)35-45 days	7.4	9.4			52.2	8.8			39.5	13.0			37.7	14.9			166.7	35.0		
	d)>45 days	6.8	10.1			45.7	10.0			46.7	19.0			39.0	10.0			168.0	40.9		
disease time	**a)> 1 year**	6.9	10.8			43.3	10.9			43.4	9.6			38.0	14.3			161.7	40.3		
	b)1-3 years	8.6	9.6			45.4	13.6			42.6	18.1			37.5	8.6			163.9	41.2		
	c)3-5years	6.5	7.7	0.31	0.43	43.7	7.7	0.89	0.218	37.6	13.9	0.92	0.63	34.7	10.8	0.25	0.54	152.2	27.7	0.54	0.153
	d)< 5years	0.0	13.4			52.6	10.6			48.0	13.1			35.6	13.0			176.3	41.5		
family history	**a)Present**	0.9	8.9	0.88	0.94	47.6	11.3	0.73	0.472	43.9	16.0	0.42	0.19	36.9	13.2	0.26	0.66	169.1	41.3	0.80	0.317
	b)Absent	5.1	9.3			43.2	10.7			39.6	14.0			36.0	8.9			153.8	31.7		
Symptoms	**a) Mood swings**	8.5	10.7			45.8	8.9			33.3	13.7			39.9	8.7			157.5	37.2		
	b) Acne	1.7	8.3			51.5	9.8			51.2	16.9			40.3	11.7			184.5	38.9		
	c) Hirsutism	5.4	9.1	0.49	0.50	43.4	12.7	0.56	0.414	40.5	13.5	0.22	0.98	32.4	12.3	0.71	0.82	151.4	35.3	0.90	0.292
	d)Sleep disturbance	7.2	9.8			42.5	10.0			41.8	13.1			36.3	8.6			157.6	32.1		

***ANOVA test, at p value <0.05**

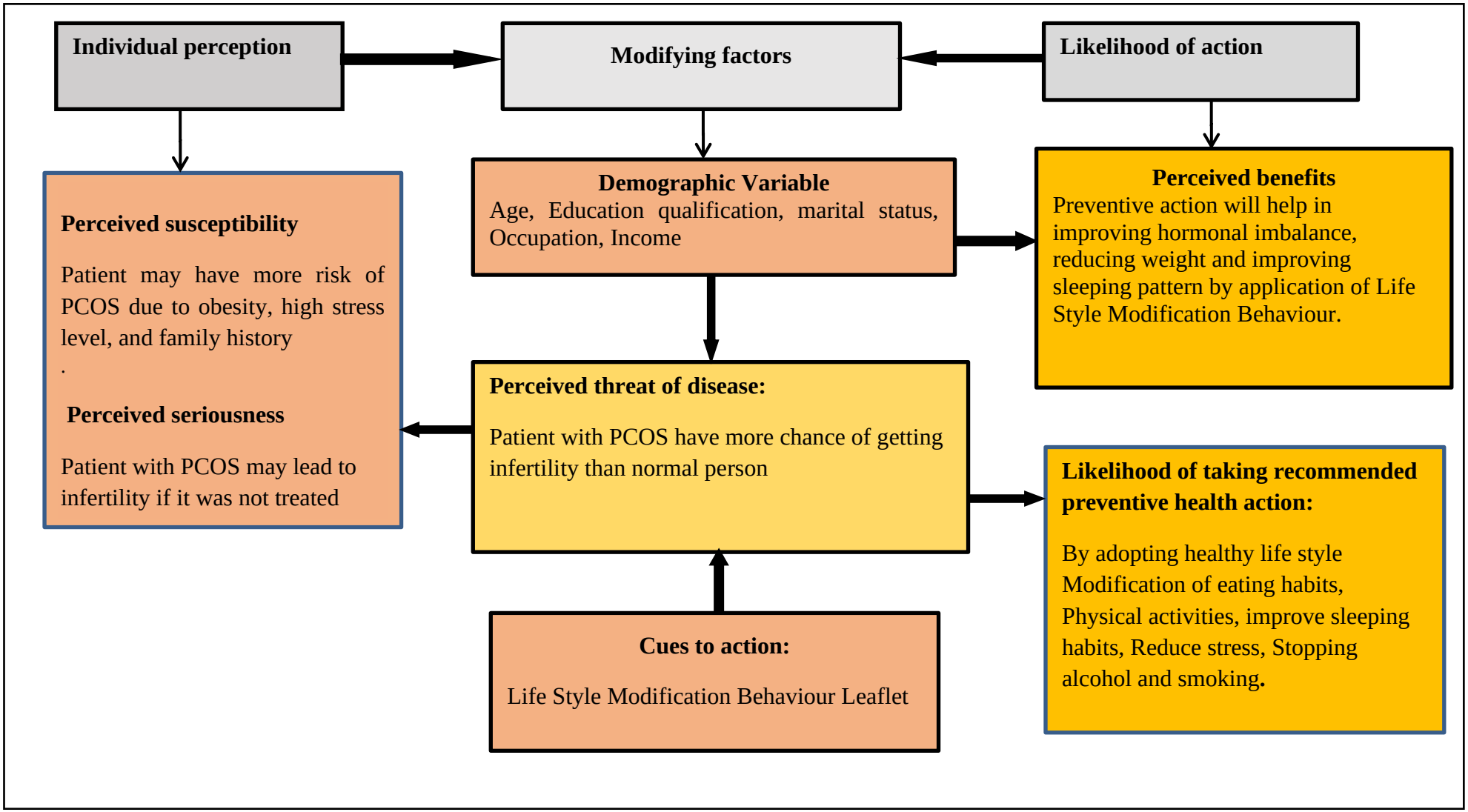

Figure 1: Modified conceptual framework model based on Health Belief Model

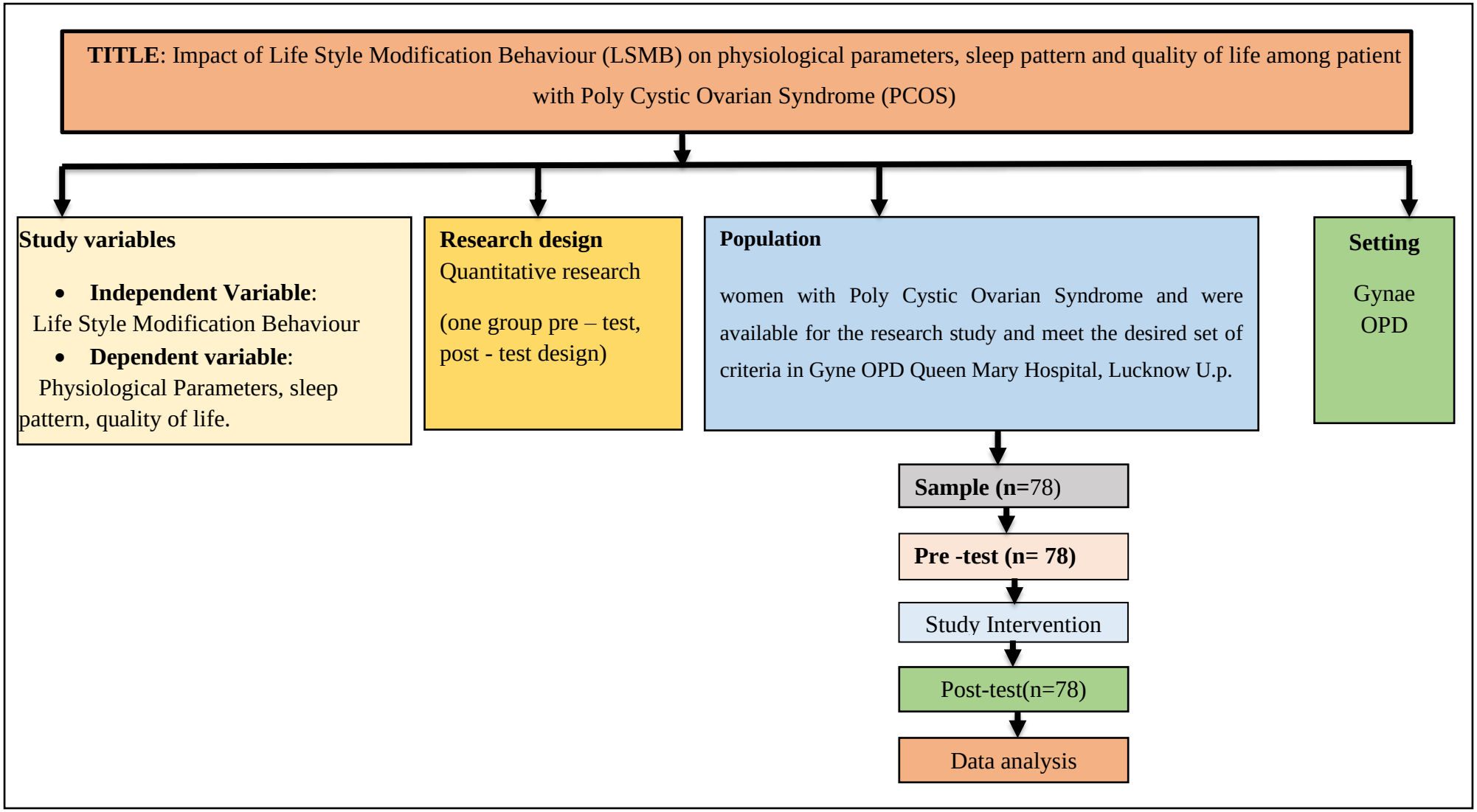

Figure 2: Schematic Representation of Research Methodology

STUDY INTERVENTION

LIFE STYLE MODIFICATION IN BEHAVIOUR WOMEN WITH POLY CYSTIC OVARIAN SYNDROME

INSTRUCTION:

These are the instruction for life style modification behaviour in women with PCOS. These instruction should follow for 6 week to make change in the physiological parameters, sleeping pattern , and quality of life. Is available.

1. Modification in eating habits.
2. Physiological activities.
3. Improving sleeping pattern.

4. Reduce stress.
5. Stopping alcohol and smoking

1. MODIFICATION OF EATING HABIT:

Advice the patient for -

- Eat healthy and nutritive diet.
- Eat small and frequent diet.
- Take breakfast in every morning .Never skip the breakfast. Breakfast should be fresh and healthy.
- In between lunch and breakfast take some fruits like apple, banana, guava etc. You can take seasonal fruits as per availability.
- Take healthy lunch in afternoon.
- In evening take light snakes.
- In night take small and light diet.
- Diet should be rich in fibre
- Drink plenty of water at least 3lit in a day.

Don't take:

- Don't take fast food and fatty food.
- Should not include Caffeine beverage like coffee.
- Limit the pastries, biscuit, non-nutritive sugar beverage in eating habits.

2. PHYSICAL ACTIVITY:

Advice the patient for -

- Walking for 30min in early morning/evening.
- Dancing may also be performed for 10-15min.
- Practice yoga like deep breathing exercise in morning.
- You can also undertake muscle strengthening activity such as yoga,
- Minimise the sedentary life style.

3.IMPROVING SLEEPING HABITS

Advice the patient to do :

- Maintain the ventilation in the room.
- Should wake up at same time every day.
- Offer the dim lighting during sleep.
- Listen to favourite music for at least for 15min it will help to induce sleep.
- Make the sleeping environment comfortable, should be noise free.

Don't do:

- Avoid eating close to bedtime.
- Limit or avoid the caffeine product like coffee and tea before going to bed.

Others:

- Don't watch TV, phone or any other device.
- Avoid taking naps during the day.
- Don't sleep on couch.

4. REDUCE STRESS

Advice the patient to do:

- Deep breathing exercise

Step of deep breathing exercise-

- Sit with cross-legged on floor.
- Close your eyes and try to relax the entire body
- Inhale deeply through nose while expanding the chest.
- Exhale with forceful abdominal muscle contraction to relax.
- Repeat 10 times (1cycle).

- Preform Meditation
- Listen to relaxing music.

- Understand that what is the cause of stress?
- Make socialization.
- Relax your - self with massage.
- Take some time for yourself.
- Get enough sleep.
- Ask for help and support when needed

5. STOPPING ALCOHOL AND SMOKING

Advice the patient to -

- Quit alcohol and smoking
- Take a cup of herbal tea instead of alcohol.
- Take anti- craving for cigarette like- take candy, do mind diversion work.
- Create a good new habit.
- Choose healthy snacks.

ANNEXURE VIII

STUDY INTERVENTION (HINDI VERSION)

पॉलीसिस्टिकओवेरियनसिंड्रोमवालीमहिलाओंमेंव्यवहारसंशोधन

निर्देश:

पीसीओकेसेपीड़ितमहिलाओंमेंलाइफस्टाइलमॉडिफिकेशनबिहेवियरकेलिएयेइंस्ट्रक्शनहैं।शारीरिकमापदंडों, नींदपैटर्न, औरजीवनकीगुणवत्तामेंपरिवर्तनकरनेकेलिएइन निर्देशोंकापालन6 सप्ताहकेलिएकरनाचाहिए।इसमेंशामिलहैं:

1. खानेकीआदतोंमेंसंशोधन।
2. शारीरिकगतिविधियां।
3. नींदकेपैटर्नमेंसुधार।
4. तनावकोकमकरें।
5. [illegible]

1. खानेकीआदतमेंसंशोधन:

- रोगीकोसलाहकेलिए -
- हेल्दीऔरन्यूट्रीशियनडाइटखाएं।
- छोटीऔरबार-बारडाइटखाएं।
- रोजसुबहकानाश्तालें . नाश्ताकभीनछोड़ें।नाश्ताताजाऔरस्वस्थहोनाचाहिए।
- दोपहरकेभोजनऔरनाश्तेकेबीचमेंकुछफलजैसेसेब, केला, अमरूदआदिलें।
- उपलब्धताकेअनुसारआपमौसमीफललेसकतेहैं।
- दोपहरमेंहेल्दीलंचलें।
- शामकोहल्केसांपलें।

मतलो:

- फास्टफूडऔरफैटीफूडनलें।
- कॉफीजैसेकैफीनपेयकोशामिलनहींकरनाचाहिए।
- खानेकीआदतोंमेंपेस्ट्री, बिस्कुट, गैरपोषकचीनीपेयकोसीमितकरें।

2. शारीरिकगतिविधि:

रोगीकोसलाहकेलिए–

- सुबह/शाम30मिनटकेलिएघूमना।
- नृत्यभी10-15min केलिएकियाजासकताहै।
- सुबहकेसमयडीपब्रीथिंगएक्सरसाइजकीतरहयोगाभ्यासकरें।
- आपयोगजैसीमांसपेशियोंकोमजबूतबनानेकीगतिविधिभीशुरूकरसकतेहैं

3. नींदकीआदतोंमेंसुधार

रोगीकोकरनेकीसलाह:

- कमरेमेंवेंटिलेशनबनाएरखें।
- हरदिनएकहीसमयपरजागजानाचाहिए।
- नींदकेदौरानमंदप्रकाशकीपेशकशकरतेहैं।
- कमसेकम15min केलिएपसंदीदासंगीतसुनेंयहनींदकोप्रेरित करनेमेंमददकरेगा।
- नींदकेवातावरणकोआरामदायकबनाएं, शोरमुक्तहोनाचाहिए।
- टीवी, फोनयाकिसीअन्यडिवाइसकोनदेखें।
- दिनमेंझपकीलेनेसेबचें।
- सोफेपरनसोएं।

4. तनावकोकमकरें

रोगीकोकरनेकीसलाह:

गहरीसांसलेनेकीकवायद

गहरीश्वासव्यायामकाकदम-

- फर्शपरक्रॉस-लेग्डकेसाथबैठतेहैं।
- अपनीआँखेंबंदकरोऔरपूरेशरीरकोआरामकरने कीकोशिश
- छातीकाविस्तारकरतेहुएनाककेमाध्यमसेगह राईसेश्वासलें।
- आरामकरनेकेलिएजबरदस्तीपेटकीमांसपेशि योंकेसंकुचनकेसाथसांसछोड़तेहैं।
- 10बार (1साइकिल) दोहराएं।

दूसरा:

- समझेंकितनावकाकारणक्याहै?
- समाजीकरणकरें।
- अपनेआराम - मालिशकेसाथस्वयं।
- अपनेलिएकुछसमयनिकालें।
- पर्याप्तनींदलें।
- जरूरतपड़नेपरमददऔरसमर्थनमांगें

5. शराबऔरधूम्रपानकोरोकना

रोगीकोसलाह–

- शराबऔरधूम्रपानछोड़ो
- शराबकीजगहएककपहर्बलचायलें।
- सिगरेटकेलिएविरोधीतरसलेजैसेकैंडीले, मनमोड़कामकरतेहैं।

3. नींदकीआदतोंमेंसुधार

रोगीकोकरनेकीसलाह:

- कमरेमेंवेंटिलेशनबनाएरखें।
- हरदिनएकहीसमयपरजागजानाचाहिए।
- नींदकेदौरानमंदप्रकाशकीपेशकशकरतेहैं।
- कमसेकम15min केलिएपसंदीदासंगीतसुनेंयहनींदकोप्रेरित करनेमेंमददकरेगा।
- नींदकेवातावरणकोआरामदायकबनाएं, शोरमुक्तहोनाचाहिए।
- टीवी, फोनयाकिसीअन्यडिवाइसकोनदेखें।
- दिनमेंझपकीलेनेसेबचें।
- सोफेपरनसोएं।

4. तनावकोकमकरें

रोगीकोकरनेकीसलाह:

गहरीसांसलेनेकीकवायद

गहरीश्वासव्यायामकाकदम-

- फर्शपरक्रॉस-लेग्डकेसाथबैठतेहैं।
- अपनीआँखेंबंदकरोऔरपूरेशरीरकोआरामकरने कीकोशिश
- छातीकाविस्तारकरतेहुएनाककेमाध्यमसेगह राईसेश्वासलें।
- आरामकरनेकेलिएजबरदस्तीपेटकीमांसपेशि योंकेसंकुचनकेसाथसांसछोड़तेहैं।
- 10बार (1साइकिल) दोहराएं।

दूसरा:

- समझेंकितनावकाकारणक्याहै?
- समाजीकरणकरें।
- अपनेआराम - मालिशकेसाथस्वयं।
- अपनेलिएकुछसमयनिकालें।
- पर्याप्तनींदलें।
- जरूरतपड़नेपरमददऔरसमर्थनमांगें

5. शराबऔरधूम्रपानकोरोकना

रोगीकोसलाह–

- शराबऔरधूम्रपानछोड़ो
- शराबकीजगहएककपहर्बलचायलें।
- सिगरेटकेलिएविरोधीतरसलेजैसेकैंडीले, मनमोड़कामकरतेहैं।