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International Journal of Advanced Research in Medical, Nursing and Health Sciences

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International Journal of Advanced Research in Medical, Nursing and Health Sciences (IJARMNHS) aims to promote excellence in medical and nursing research, and healthcare with a vision to advance knowledge for practice, education, research and administration in healthcare. The journal intends to disseminate high quality research reviews, clinical and contemporary healthcare issues based articles for the advancement of evidence based healthcare.

The target audience for the journal includes medical and para - medical professionals in all domains and at all hierarchical levels, who are committed to advance practice and professional development on the basis of new knowledge and evidence.

The journal is peer reviewed and published bi-annually. The journal publishes articles related to healthcare of individuals, families and/or community to help them attain or recover health and improve quality of life. Quality articles in the field of education, administration, teaching and learning, are considered for publication.

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EDITORIAL

Dear Readers

It is my pride and privilege to announce that the inaugural issue of the International Journal of Advanced Research in Medical, Nursing and Health Sciences (IJARMNHS) will be published in 2023, based on chosen received papers from across the world. This issue has articles from a variety of fields in nursing and health sciences. Original research submissions of high standard will be published in IJARMNHS. This journal aims to provide a forum for academics, educators, and professionals in the field of Medical, Nursing and health Sciences to share their findings, innovative practice, and explore future trends and applications. However, this journal, on the other hand, will serve as a venue for the transmission of information on both theoretical and clinical research in the aforementioned domain, with the ultimate goal of bridging the gap between theory and practice.

As a result, the forum accelerates the advancement of technology for the future generation. This publication offers a comprehensive view on contemporary nursing subjects of relevance. A review article's scope and manuscript review method are identical to contemporary scientific submissions to IJARMNHS, which use a double-blind review process. I'd like to express my gratitude to the eminent personalities for reviewing the articles for the journal during the current year.

I am pleased to notice that IJARMNHS will gain widespread acclaim among educators, academics, and professionals in a short period of time. Ten shortlisted articles addressing various issues in the field of Nursing Sciences have been published in the inaugural issue of Volume 1.

- Chief Editor

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"A STUDY TO ASSESS MENOPAUSAL PROBLEMS AND TO COMPARE THE MENOPAUSE SPECIFIC QUALITY OF LIFE (MENQOL) AMONG MIDDLE AGED WORKING VS NON-WORKING WOMEN IN SELECTED URBAN AREAS IN MADURAI."

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Abstract:

Background of the study:

Background of the study: Menopause is the universal phenomenon and its commonly associated changes including interruption of sleep pattern, hot flashes and stress. There is great lack of awareness about the problem of menopause among women in India. Studies on issues related to menopause, especially in urban among urban women are also lacking. With this background, the present study was conducted with an aim to determine the menopausal problems and to compare the Menopause Specific Quality Of Life (MENQOL) among middle aged working women Versus non-working women in an urban area of Madurai. **Methods:** A descriptive comparative study carried out among 300 middle aged working and non-working women (40-55 years) in urban areas of Madurai, Tamil Nadu. Stratified random sampling technique was adopted. The questionnaire used as study tool had three sections; Section-I, as a screening tool Greene Climacteric Scale, Section-II, demographic variable and Section–III, Menopause Specific Quality Of Life (MENQOL) due to menopausal problems and Quality Of Life. **Result:** The mean score according to the menopausal problem in non-working women group according to the menopausal problems majority of the women had problem in physical factor 32.93 (3.52) and mean % 78.4. The psychological factor 73.48(6.79) mean% 76.5 and sexual factors 13.61 (1.80) mean% 75.6 and few of them were reported that they had problem in vasomotor factor13.19 (1.63) mean % 973.3. The association between MENQOL levels and selected demographic variables in working women and not significantly associated. And in non-working women it shows that weight (0.004), BMI (0.04) and Peri-menopause stage (0.022) have significant association with the demographic variables and other demographic variables were not significantly associated. **Conclusion:** The results support finding that menopause causes psychological and sexual problems in working and non -working middle aged women. Creating education awareness and proven suitable lifestyle modification to improve their quality of life.

Introduction:

Aging is the natural progression of changes in structure and performance that occur in the absence of known diseases. Aging of the female reproductive system begins in relation to follicle atresia at 20 weeks of gestation and proceeds as a continuum. **(Jacobs Pamela Hyland & Ley.2000)**

Menopause is a unique phase of the female reproductive life cycle, the transition from a reproductive to a non-reproductive phase. The word "menopause" literally means "the end of the menstrual cycle" **(Miles, 2016).**

Menopause is not a disease, but a natural process for every woman. In a woman's life, there comes a time when her reproductive cycle and system weakens and eventually shuts down. This is a normal and natural phenomenon. However, with the expansion of life expectancy it is one of the difficult phases in a woman's life, today's women are believed to spend a third of their lives in the post-menopausal phase. A large number of women associate menopause with the physical changes that occur in old age. Menopause is hardly accepted by most women and everyone reacts to it differently. Some women consider it normal and experience distinct changes in their mood or body, while others consider it abnormal and feel very distressed and upset **(Proctor Gramble 2010)**

Nearly, 71 million people over the age of 60 and menopausal women number about 43 million. According to the third consensus meeting of the Indian Menopause Society 2008. It is projected that the menopausal population in India will reach 103 million by the year 2026 **(Satpathy et al 2020).**

During the menopausal transition, hormone levels fluctuate greatly, making peri and post-menopausal women more susceptible to various mental and physical disorders. Due to increase in life expectancy, many women are expected to live for another 20-30 years. After menopause, they spend about a third of their lives in a state of estrogen deficiency. There are approximately 467 million women aged 50 and above in the world, a number expected to grow to 1200 million by 2030.

(**Maturitas, 1996).** Data from the Indian Menopause Society Research shows that there are about 65 million Indian women above the age of 45 and it is estimated that in the year 2026, the population in India will be 1.4 billion, with those above the age of 60 going to be 173 million. And so the menopausal population is going to be 103 million. The average age of Indian menopausal women is 47.5 years.

Conde et al found in their study that the most common menopausal symptoms were nervousness (67%) and hot flushes and sweating (51%). Factors associated with worse quality of life included sweating, palpitations, nervousness, dizziness, depression. insomnia, and dyspareunia. And the

authors observed that menopausal symptoms negatively affect quality of life in the postmenopausal phase.

Demographic transitions and epidemiological transitions have increased life expectancy of middle-aged women, resulting in the burden of morbidity associated with menopausal symptoms affecting their QOL. Individual response to menopause varies greatly due to genetic, cultural, lifestyle, socioeconomic, education, behavioral and dietary factors. Poor QOL among the high proportion of women in the menopausal stage will impose a significant large burden on public health care in developing countries such as India. **(Kalhana. et al)**

Quality of life (QOL) is an addition to health that plays a large role in the conduct and evaluation of health interventions. While research on QoL thus helps pave the way for simpler treatment and rehabilitation programs, new developments within medical science show that life expectancy has increased globally. Today, many women spend a third of their lives after menopause. Therefore, the QOL of postmenopausal women is of great public-health interest **(Nazarpour et al.2020).**

The process of menopause can extend over many years leading to complex Bio physiological and psychosocial changes. The poor QOL among the high proportion of women in the menopausal stage will impose a significant burden on public health care in countries such as India **(Ganapati, Al Furaikh 2018).**

Nurses are considered to be a part of decision-making tool as well as promoting healthy living women. This study will facilitate a better understanding of menopause to help women cope effectively. It will also help in developing IEC and counselling packages for healthy transition and healthier life.

Problem Statement:

"A study to assess menopausal problems and to compare the Menopause Specific Quality Of Life (MENQOL) among middle aged working Vs Non-working women in selected urban areas in Madurai."

Objectives:

To assess the menopausal problems among middle aged working and non-workingwomen.

To compare the Menopause Specific Quality of Life (MEN-QOL) among working and non-working women.

Hypothesis:

H_1: There will be a significant difference in the Menopause Specific Quality of Life (MENQOL) score between working and non-working middle aged women.

Research Approach:A Quantitative research approach was used for this study.

Research Design: The research design used in this study was under Non-Experimental design, Descriptive comparative study to describe the condition and related factors are measured at specific point in time for a defined population.

Settings of the Study: Study was conducted in different urban areas at Madurai, namely Railway colony, and Duraisamy Nagar. These places are at a distance of 5 to 10 kms from Sacred Heart Nursing College, Madurai.

Setting-I - Southern railway divisional office works under central government of India.

Population: In this study the targeted populations were women in the stage of menopause, working and non-working in selected urban areas.

Sample: In this study, middle aged menopause women from working and non-working category from selected urban areas of Madurai district, who fulfil the inclusion and exclusion criteria, were selected as the sample.

Sample Size: The study sample size was 300 nos. 150 in Working group and 150 in non-working group.

Sampling Technique: Stratified random sampling technique was adopted.

Sampling Criteria:

Inclusion Criteria

In menopausal stage with irregular cycle/variability in flow and in length of cycle/cessation for the past one year

Having menopausal problems at least for past 3months

Betweentheageof40-55years

Who gives consent

Exclusion Criteria

With surgical menopause

Who suffers from other gynaecological issues

Who are receiving any kind of hormone therapy

With severe illness like medical and mental problems

Research Tools and Techniques: The research tools were finalized after wide literature review and experts'

Opinions. The research tool consists of Data collection instrument and structured questionnaire

Section – I:

Screening checklist (Greene Climacteric Scale)

Greene Climacteric Scale: It is a Rating scale to measure menopausal symptoms and consists of 21 items; Psychological (Questions; 1-11 items), Physical (Questions 12-18 items) and Vasomotor (Questions;19-21items)

Scoring:

1 Not at all
2 A Little
3 Quite a bit
4 Extreme

Interpretations:

The level of symptoms will be calculated by converting the raw scores in to percentage.

01 – 33 % Mild
34 – 66 % Moderate
67 = 100 % Severe

Section – II:

Demographic Variables:

This includes age, education, height, weight, Body Mass Index, religion, type of diet, marital status duration of marriage in years, type of family, type of occupation, number of days absent per cycle from work due to menopausal problems, family and social support for health problems, economic independence, occupation of the family head, family income, number of children, type of delivery, leisure time and day time naps.

Physiological Variables:

Stressful events, exercise and workout, day time naps, sleep pattern and disturbances.

Clinical Variables:

This includes menopausal status: age of menarche, any menstrual problem fibroid, PCOD, dysmenorrhea, dysfunctional uterine bleeding etc.), menopause problems and medical variables such as chronic illness seeking for health care facilities.

Section – III:

Menopause-Specific Quality of Life questionnaire **(MENQoL) by Hilditchetal (1996)**

The development of MENQOL in considered a condition-specific self-report outcome of menopausal problems it consists of 29itemswith4sub-domain of MENQOL namely,

Vasomotor	Items (1-3)
Physical	Items (4-10)
Psycho-Social	Items (11 – 26)
Sexual	Items (27 – 29)

Interpretation: Lesser the score better the MENQOL; higher the score worsen the MENQOL

Validity and Reliability:

The established Cronbach's alpha for MENQOL is 0.87 for physical, 0.82 for vasomotor, 0.81 for psychosocial and 0.89 for sexual domains. It was translated to Tamil language and re-established by Split-half method.

Data Collection Procedure:

The prior approval obtained from the ethical committee of the Sacred Heart College of Nursing the pilot study and main study were conducted. Formal permission obtained from the Railway Divisional Office, Madurai Branch and selected apartment of Durainagar. The period of data collection was for 6 weeks and descriptive study design was used in this study.

Data was collected individually from 5-10 samples daily. During the five weeks of data collection, a total of 300 samples were interviewed and were recruited for the study using stratified sampling technique. The women were interviewed individually to collect the data, which lasted for 45 minutes. By using the eligible criteria will be selected by approaching the women at their choice of places.

For the Working Women:

All those who fulfil the criteria was contacted. Permission and informed consent were obtained a date and time convenient to them which does not disturb their work was fixed. The recruited samples in various categories were given the question in-person in their cabin. They were instructed to read and place their responses along the questionnaire provided if they are literates. Initially, the menopausal problems were assessed by Greene climacteric scale followed by which the administration of MENQOL Questionnaire was done.

As per the convenience of the working women data was collected by 5 in the morning and 5in the evening.

For the Non-Working Women:

After obtaining the permission from those non-working women, who were residing in selected urban areas in Madurai. the questionnaire were distributed in-person and samples was instructed to read and place their responses along the questionnaire provided, if they are literates as above said on the scale for menopausal symptoms and MENQOL was filled by the middle aged women . For those who had no formal education, using the questionnaire they will be interviewed by the investigator personally

1st week– 60women (10women per day)

2nd week–60women (10 women per day)

3rd week–60women (10 women per day)

4th week–60women (10 women per day)

5th week–60women (10women per day)

Data Analysis and Interpretation:

Section – A: Distribution of Samples

Table 1: Frequency and percentage wise distribution of middle-aged working Vs non-working women based on their demographic data

(n = 300)

S. No	Demographic Variables		Working Women		Non – Working Women	
			Frequency	Percentage	Frequency	Percentage
1.	Age (Years)	40-50	104	69.33	91	60.67
		51-55	46	30.67	59	39.33

2.	**Educational Status**	Primary	0	0.00	0	0.00
		Middle school	30	20.00	42	28.00
		High school	0	0.00	0	0.00
		Higher secondary and above	120	80.00	108	72.00
3.	**Height (Cm)**	145-155	27	18.00	20	13.33
		156-165	63	42.00	46	30.67
		166-175	48	32.00	78	52.00
		176-185	12	8.00	6	4.00
4.	**Weight (Kg)**	50-60	0	0.00	16	10.67
		61-70	21	14.00	41	27.33
		71-80	125	83.33	74	49.33
		>80	4	2.67	19	12.67
5.	**Religion**	Christian	34	22.67	40	26.67
		Hindu	82	54.67	70	46.67
		Muslim	34	22.67	40	26.67
		Others	0	0.00	0	0.00
6.	**Diet**	Vegetarian	12	8.00	4	2.67
		Non-vegetarian	15	10.00	47	31.33
		Both	123	82.00	99	66.00
7.	**Marital Status**	Married	84	56.00	148	98.67
		Unmarried	10	6.67	0	0.00
		Widow	32	21.33	2	1.33
		Divorced	24	16.00	0	0.00
8.	**Duration of Marriage**	<20	6	4.00	13	8.67
		21-30	131	87.33	103	68.67
		>30	13	8.67	34	22.67
9.	**Type of Family**	Nuclear	57	38.00	107	71.33
		Joint	93	62.00	43	28.67
		Extended	0	0.00	0	0.00
10.	**Type of Conception**	Coolie	30	20.00	0	0.00
		Teacher clerk	70	46.67	0	0.00
		Govt. employee	50	33.33	0	0.00
		Housewife	0	0.00	150	100
11.	**Family Support for Health Problems**	Family support	150	100	150	100
		Not family support	0	0.00	0	0.00
		Not	0	0.00	0	0.00

		applicable				
12.	**Social Support**	Social support	147	98.00	150	100
		No social support	3	2.00	0	0.00
13.	**Economic Independent**	Economic dependent	150	100	150	100
		Economic independent	0	0.00	0	0.00
14.	**Occupation of the Head**	Business	0	0.00	7	4.67
		Professional	16	10.67	23	15.33
		Salaried	69	46.00	52	34.67
		Others	65	43.30	68	45.33
15.	**Family Income (Rs)**	Below20000	30	20.00	6	4.00
		20000-40000	52	34.67	60	40.00
		41000-60000	67	44.67	80	53.33
		Above 60000	1	0.67	4	2.67
16.	**Number of Children**	None	10	6.67	1	0.67
		One	24	16.00	45	30.00
		Two	113	75.33	98	65.33
		Three	3	2.00	6	4.00
		Above three	0	0.00	0	0.00
17.	**Deliveries**	Nil	10	6.67	2	1.33
		LSCS	8	5.33	12	8.00
		NVD	60	40.00	91	60.67
		BOTH	72	48.00	45	30.00
18.	**Age of the Child**	None	10	6.67	2	1.33
		0-10	0	0.00	0	0.00
		11-18	35	23.30	48	32.67
		>18	105	70.00	100	66.67
19.	**Leisure time activities**	Yes	106	70.67	69	46.00
		No	44	29.33	81	54.00
20.	**Day time naps**	1-2 Hrs daily	0	0.00	8	5.33
		Sometime	122	81.33	134	89.33
		Never	28	18.67	8	5.33

Table 1 shows that the demographic variables among working Vs non- working women such as age in years, educational status, height, weight, BMI, religion, diet, marital status, type of family, occupation, family and social support, family income, deliveries, stress full event, exercise and

work out, leisure time activities, sleep pattern, age at menarche, peri-menopausal stage, menopausal problem, medical problem.

Regarding age in working women 104(69.33) belong to 40-50 years and 46(30.67) were 50-55 years in non-working women 91(60.67) belongs to 40-50 then 59(39.33) were 50-55 years.

Regarding to the educational status of the working women majority of them were studied up to higher secondary and above 120(80) were in working women and then 108(72) in nonworking women, majority of the women belongs to Hindu's 82(54.67) in working category and in non-working women 70(46.67) , diet they concentrated mostly mixed diet pattern about 123(82) working women and 99(66)in non-working women.

Regarding the marital status in non-working women 148(98.67) were married and remarkably 2(1.33) widower. And in working women the marital status were 84(56) in this category the working women were Unmarried 10 (6.67). And duration of the marriage 21 -30 years were about 131(87.33) in working women and in non- working women 103(68.67) and majority of them belong to joint family in working women 93(62) then in non-working category women prefers nuclear family107 (71.33).

In regarding to occupation of the women were in working category are teacher, clerk 70, (46.67), in occupation of the head of the family were salaried 69(46) in working women in non-working category the head of the family occupation were others such as contractor, drivers 68(45.33) and their income is about 40,000-60,000 67 (44.67) in working women and in non-working women their family head income about 40,000-60,000 were 80 (53.33).

With regard number of children majority of the working women were adapted 2 child norm 113 (75.33), and in non-working women 98(65.33), mode of deliveries were both normal vaginal delivery and LSCS in working women 72(48), but remarkably in non-working women normal vaginal delivery is common about 91(60.67), regarding with the age of the last child were >18 in both working and non- working women 105(70) and 100(66.67),

In concern with the leisure time activities in working women ranges between 106(70.67) and in non-working women group majority of the women stated that they are not having any type of leisure time activity 81(54). And day time naps in working women were sometime 122(81.33) and in non-working women was134 (89.33).

Table 1.2: Frequency and percentage distribution of middle-aged working Vs non-working women based on their physiological variables

(n = 300)

S. No	Physiological Variables		Working Women		Non – Working Women	
			Frequency	Percentage	Frequency	Percentage
1.	Stressful event in lastyear	Yes	26	17.33	5	3.33
		No	124	82.67	145	96.67
2.	Exercise or Physical Workout	Everyday	0	0.00	37	24.67
		3 - 4 times a Week	24	16.00	52	34.67
		Sometimes	90	60.00	57	38.00
		Not at all	36	24.00	4	2.67
3.	Sleep Pattern	Sound Sleep	58	38.67	96	64.00
		Disturbed sleep	86	57.33	52	34.67
		Sleepless night	6	4.00	2	1.33
4.	Sleep Disturbances	None	60	40.00	95	63.33
		Restless	9	6.00	6	4.00
		Sleepapneas	25	16.67	9	6.00
		Rest lesssyndrome	52	34.67	39	26.00
		Narcolepsy	4	2.67	1	0.67
		Any other	0	0.00	0	0.00

Table1.2: predicts that the women in both working women 124 (82.67) and non-working women 145 (96.67) having the stressful event in last one year. The women having the practice of exercise or physical workout working women were 90 (60) and in non-working women 57 (38).

Regarding Sleep pattern majority of the women facing the problem with disturbed sleep 86 (57.33) but were in non-working women they feel sound sleep 96 (64), and sleep disturbance majority of the women were 60 (40) in working women and 95 (63.33) in non-working women other than this woman facing restless leg syndrome were 52 (34.67) in working women and 39 (26) non-working women.

Table1.3: Frequency and percentage distribution of middle-aged working Vs non-working women based on their clinical variables related to menopause

(n=300)

S. No	Clinical Variables		Working Women		Non – Working Women	
			Frequency	Percentage	Frequency	Percentage
1.	Age at Menarche	<=15	107	71.33	118	78.67
		>15	43	28.67	32	21.33
2.	Peri-menopausal Stage	<2years	121	80.67	107	71.33
		2-4years	29	19.33	43	28.67
		>4 years	0	0.00	0	0.00
3.	Menopause Problems	Regular	16	10.67	11	7.33
		Irregular	60	40.00	55	36.67
		Heavy bleeding	44	29.33	56	37.33
		Not menstruated last 1 year	30	20.00	28	18.67
4.	Menstrual Problems	Dysmenorrhea	43	28.67	81	54.00
		PCOD	15	10.00	24	16.00
		Fibroids	39	26.00	13	8.67
		Abortion	43	28.67	27	18.00
		DUB	10	6.67	5	3.33
		Others	0	0.00	0	0.00

Table 1.3: Regards with the clinical variables related to menopausal problemlikeageatmenarchemajorityofthewomeninworkingandnon-working were107 (71.33) and 118 (78.67), and peri-menopausal stage women experience <2 years 121 (80.67) in working women and 107 (71.33) were non-working women. And in menopause problem it starts with irregular periods 60 (40) in working women and 55 (36.67) were non-working women. In order with menstrual problem in working women were dysmenorrhoeal and abort iron were 43 (28.67) and 43 (28.67) then in non-working women dysmenorrhoeal were 81 (54) and abortion were 27 (18),

Section B:

Distribution of working women and non-working women based on menopausal problem

Objective 1 to assess the menopausal problems among working and non-workingwomen

Table 2.1: Mean, SD and mean % of Menopausal problems among middle aged working women

(n = 300)

Menopausal Problem	Max score	Workingwomen		
		Mean	SD	Mean%
Vasomotor factor	18	13.22	1.60	73.40
Physical factor	42	32.83	3.99	78.20
Psychological factor	96	75.51	7.66	78.70
Sexual factor	18	14.91	2.14	82.80
Overall	174	136.4	13.6	78.40

Table 2.1 shows that in working women group the mean sore according to the menopausal problems. It depicts that majority of the working women had problem in sexual factor14.91(2.14) and mean % 82.8, the physical factor 32.83 (3.99) mean % 78.2 and psychological factors 75.51(7.66) mean % 78.7 and few of them had reported that they had problems in vasomotor factor 13.22 (1.60)mean% 73.4.

Table 2.2: Mean, SD and mean% of Menopause problems among middle aged non-workingwomen.

(n = 300)

Menopausal Problems	Max score	Non-Workingwomen		
		Mean	SD	Mean%
Vasomotor factor	18	13.19	1.63	73.30
Physical factor	42	32.93	3.52	78.40
Psychological factor	96	73.48	6.79	76.50
Sexual factor	18	13.61	1.80	75.60

Overall	174	133.2	12.0	76.60

Table 2.2 indicates that the distribution of non- working women group according to the menopausal problems. It depicts that majority of the non-working women had problem in physical factor 32.93 (3.52) and mean %78.4, the psychological factor 73.48 (6.79) mean % 76.5 and sexual factors 13.61 (1.80) mean% 75.6 and few of them were reported that they had problem in vasomotor factor 13.19 (1.63) mean % 73.3.

Section C: Distribution to compare the MENQOL among middle aged working Vs non-working women.

Objective 2: to assess and to compare Menopausal Specific Quality of Life (MENQOL) among working and non- working women

Table2.3: Mean, SD and mean% of comparison between the Menopause Specific Quality of Life (MENQOL) among middle aged working Vs non-working women

(n = 300)

MENQOL	**Max Score**	**Working women group**			**Non-working women group**			**Difference in Mean%**
		Mean	***SD***	***Mean %***	***Mean***	***SD***	***Mean%***	
Vasomotor factor	18	13.22	1.6	73.4	13.19	1.63	73.3	0.1
Physical factor	42	32.83	3.9	78.2	32.93	3.52	78.4	0.2
Psychological factor	96	75.51	7.6	78.7	73.48	6.79	76.5	2.2
Sexual factor	18	14.91	2.1	82.8	13.61	1.80	75.6	7.2
Overall	174	136.4	13.6	78.4	133.2	12.00	76.6	1.8

Table 2.3: show the comparison between the MENQOL of working and non-working women represent that

1. The mean score of quality of life relating to vasomotor factor in working women 73.4 and non- working women 73.3 and their difference is 0.1
2. The mean score of quality of life relating to physical factor in working women 78.2 and non -working women 78.4 and their difference is 0.2
3. The mean score of quality of life relating to psychological factor in working women 78.7 and non- working women76.5 and their difference is 2.2
4. The mean score of quality of life relating to sexual factor in working women 82.8 and non-working women 75.6 and their difference is 7.2.

Objective 2 to assess and to compare the Menopausal Specific Quality Of Life (MENQOL) among working and non-working women.

Table-2.5: Unpaired "t"-test was found to assess and to compare the Menopause Specific Quality of Life (MENQOL) among middle aged working and non-working women

(n = 300)

MENQOL	Workingwomen Score			Non-Workingwomen Score			FERENCE	
	Mean	SD	Mean %	Mean	SD	Mean %	Mean Difference	't' & 'p' value
Vasomotor Factor	13.2	1.6	73.4	13.1	1.6	73.3	0.02	0.146 p=0.887 (NS)
Physical factor	32.8	3.9	78.2	32.9	3.5	78.4	0.10	0.22, P=0.818 (NS)
Psychological Factor	75.5	7.6	78.7	73.4	6.7	76.5	2.02	2.42, P=0.016 *(S)
Sexual factor	14.9	2.1	82.8	13.6	1.80	75.6	1.30	5.68 P<0.001 ***(HS)
Overall	136.4	13.6	78.4	133.2	12.0	76.6	3.25	2.19 P=0.029 *(S)

*** Significant at 0.001

Table 2.5 reveals that unpaired "t" test to compare MENQOL among middle aged working and non –working women.The mean, standard deviation score of non-working groupregarding MENQOL in vasomotor factor (13.19+1.63) in work in group (13.22+1.60) the mean difference is (0.027).This indicates that the mean score of working women group was lower than the mean score of non-working group. The t-value obtained (0.146) which was statistically not significant p = 0.887.

The mean, standard deviation score of non–working group regarding MENQOL in physical factor (32.83+3.99) whereas in working women group (32.93+3.52), the mean difference is (0.1). This indicates that the mean score of working women group was lesser than the mean score non-working women group. The t-value obtained (0.22) was statistically not significant at p = 0.818. Hence research hypothesis is accepted.

The mean, standard deviation sore of working women group regarding MENQOL in psychological factor (75.51+7.66) whereas in non-working group (73.48+6.79), the mean difference is 2.02.This indicates that the mean score of non-working women group was lesser than the mean score of working women group. The t-value obtained (2.42) which was statistically significant at p = 0.016.

The mean, standard deviation sore of working women group regarding MENQOL in sexual factor (14.91+2.14) whereas in non-working group (13.61+1.80) the mean difference is 1.3. This indicates that the mean score of non-workingwomen group was lesser than the mean score of working women group. The t - value obtained (5.68) which was highly significant at p<0.001level.

The study concluded that there was remarkable difference in the psychological and sexual factor of MENQOL between the working and non-working women. So, The Lower the score higher the QOL and the higher the score worse the QOL.

Recommendations:

- Similar study can be conducted in rural setting
- An interventional study can be undertaken to determine the effectiveness of selected intervention in reducing menopause problems and improving the quality of life.
- A similar study can be replicated to intervene some therapies among the menopausal women.

Conclusions

- Menopausal problem is very common among post-menopausal women at the age group of 40-55 years.
- Menopausal problem may affect the women's quality of life in both the working and non-working women.

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"ASSESS OF KNOWLEDGE REGARDING MENSTRUAL HYGIENE AMONG +2 SCIENCE STUDENTS IN SELECTED SCHOOL OF TANGI, CUTTACK"

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Abstract:

Menstrual hygiene is crucial for the self-responsibility & well-being of women and girls around the world. It is not only about having access to proper sanitary napkins and toilets. It also all about making girls and women can handle their periods with dignity in a community that respects and support them. Beyond one –third of school lack single –sex lavatories, and at least 500 million women and girls lack adequate access to menstrual hygiene facilities (7).Objectives: To measure the knowledge regarding menstrual hygiene among +2 science girl students and to find relationship between knowledge on menstrual hygiene with selected demographic variables. Methodology: Non-experimental descriptive survey design was used to conduct the study among 30 +2 science girls' students in selected college of Tangi,Cuttack. Information was collected through a structured Knowledge questionnaire. Result: Of the 30 respondents, 70% had moderate knowledge, 20% had insufficient knowledge and 10 % had a good knowledge of menstrual hygiene. There was significant association between the knowledge score and the source of information. Conclusion: This study concludes that most of the participants were in sufficiently familiar about menstrual hygiene. Thus, it emphasizes about the need to enhance their knowledge among the +2 girls' students.

Key Words: Knowledge, menstrual hygiene, sanitary napkins.

Introduction:

Menstrual hygiene is about to acquire menstrual hygiene products like clothes, sanitary pads, tampons and menstrual cups to absorb or collect menstrual blood with other facilities to wash, dispose and private place for changing the pads.(1) As per study (2)around half of women i.e49.5% of young married women aged from 15-24 years carry out menstrual hygiene.

Menstrual is a normal and natural process of every girl's life. In India many women face many challenges & struggles to cope their period during reproductive age. The ancient superstition about menstruation in our nation have led a significant portion of the Indian community to believe that this natural cycle is a "curse", "besoil" and "nasty"(3). For girls & women's health & dignity, proper menstrual hygiene is to display any existing myths or misconceptions. In terms of personal comfort & enhance mobility, improving menstrual hygiene is crucial (4). As per the systematic review on menstrual hygiene practiceson teenage girls it was discovered that a 1/4 of girls skipped a school while on period due to inadequate rest room facilities (5). However, bad

menstrual hygiene can pose serious health risks, includes reproductive & urinary tract infections which can lead to infertility & complication at birth. Not washing hands before & after changing menstrual products can spread infections like hepatitis B and thrush.Also many studies exhibits that poor MHM can lead to discomfort & psychological stress. However many studies have expose the aided that using of sanitary products reduce STI, bacterial vaginosis (5).

There are more than 3.73 billion women in the world currently. The WHO estimates that 1.9 billion of those women, or 52% are of reproductive age & menstruate (WHO, 2018). Menstrual hygiene scheme (MHS) was launched by "The Ministry of health & family welfare" in the year 2011 in 107 selected districts (in 17 states) mainly for promoting menstrual hygiene among adolescent girls (10-19 Years) in rural areas. The main objective of the scheme are:

- To increase promotion of menstrual hygiene awareness among teenage females.
- To enhance rural adolescent girls accessibility and utilization of high quality sanitary products.
- To ensure that sanitary napkins are discarded away safely in an environmental friendly way. (6).

According to the cross sectional study conducted in Nepal among teenage school girls to evaluate the understanding of menstrual hygiene. This study reveals that majority of the teenage girls had a strong knowledgebut was significantly poor among adolescent residing in rural areas (8). A study conducted in Bhutan it shows that knowledge of menstrual hygiene was foundto be low (35.5%) among participants 1/5 of the student reveals about availability of water in college, 80% reports on absence of soap for washing hand & 24% highlight on absence of dustbin for waste disposal (9).

The important phase of a women's life is adolescent. The most frequent complaint among adolescents is menstrual disturbances, an unclean activities during menstruation could have harmful consequences like PID, infertility, reproductive & genito urinary tract infection, cancer of cervix, school abandonment, poor academic performance and an all-around low quality of life (10,11). A study conducted in Karnataka, shows that although urban adolescent girls studying in school have proper knowledge regarding menstrual hygiene but hygienic practice was under satisfactory (10).

A study of girls aged 10 to 19 in UP, India, found that about half of the girls did not have information or knowledge about menstruating less than a quarter have followed only good hygienic practices. Another study conducted in India suggests that girls who attended rural school 7 used old clothes and dried before re use suffered from genital infection (12).

Gathering information on knowledge regarding menstrual hygiene among the school girls can plan many intervention on how to overcome practice of socio –cultural behavior that restrict

activities and diet during menstruation. And also how to improve the healthy practice of menstrual hygiene.

MATERIALS AND METHODS

For this investigation, Quantitative Non-experimental descriptive survey methodology was employed, +2 Science students Tangi, Cuttack were the participants. The method of sampling at random was utilized. There were 30 +2 science girls students in the sample. To assess the understanding on menstrual hygiene, a systematic questionnaire was prepared.The instrument was split into two sections, Section A had seven demographic factors– age, types of family, residential area, religion, family annual income, no. of siblings, educational status of mother, previous exposure to awareness programme on menstrual health, source of information. Section B: It has 30questions to measure the knowledge ofmenstrual hygiene.

RESULTS

In this study, majority of +2 science students belongs to the age group of 16-17 years, none from 18-19 years, 60% belong to Hindu religion, 36% has one sibling, majority (53%) of mothers are post graduate, 73.3% got information about menstrual hygiene from family and majority were not attended any menstrual hygiene awareness programme. Among 30 respondents, 70% average knowledge, 20% poor knowledge and 10 % had good knowledge. There was significant association between knowledge score and source of information whereas there was no significant association between knowledge score and when compared to their age, residential areas, family annual income, educational status of the mother, number of siblings, type of family, religion & previous exposure to awareness of programme at 5% level of significance.

TABLE –1 : " Frequency and percentage distribution of antenatal mothers according to demographic variables" N=30

S.no.	Demographic variables	(f)	(%)
1.	**Age in years**		
	a) 14-15	14	47
	b) 16-17	16	53
	c) 18-19	0	0
2.	**Residential area**		
	a) Urban	18	60

	b) Rural	12	40
3.	**Religion**		
	a) Hindu	23	77
	b) Muslim	4	13
	c) Christian	1	3
	d) Any other	2	7
4.	**Types of family**		
	a) Nuclear	15	50
	b) Joint	15	50
5	**Family annual income**		
	a) 25000- 50000	6	20
	b) 50000 - 75000	11	37
	c) 75000 - 100000	9	30
	d) Above 100000	4	13
6	**Number of siblings**		
	a) None	5	17
	b) 1	11	37
	c) 2	10	33
	d) 3 & above	4	13
7	**Educational status of mother**		
	a) Illiterate	2	7
	b) Primary school	5	17
	c) Secondary school	7	23

	d) Post graduate	16	53
8	Previous exposure to awareness programme		
	a) Yes	12	40
	b) No	18	60
9	Source of Information		
	a) Mass media	1	3
	b) Relatives	5	17
	c) Family member	22	73
	d) Health personnel	2	7
	e) Friends	0	0

Table 1 shows that most of the samples 77%) were Hindu. Majority (53%) of mothers completed post graduate and (73% of them received information regarding menstrual hygiene from family members.

TABLE – 2 :Frequency and % distribution of prenatal maternal knowledgeofprenatal care.

Degree of knowledge	Range of score	(f)	(%)
Bad knowledge score	0-8	6	20
Moderate knowledge score	9-14	21	70
Good knowledge score	15 & above	3	10
			N=30

Table -2shown the general knowledge level of +2 students regarding menstrual hygiene.Among 30 pupil in grade plus two, 6(20%) had bad knowledge score, 21(70%) had an moderate knowledge score and a good knowledge score of 03(10%).

TABLE – 3 : Association between the knowledge score of +2 science students regarding menstrual hygiene with their demographic characteristics. N=30

"Demographic characteristic"	Chi-square X^2	'Df"	p-value	Degree of Significant (0.05%)
Age	0.631	4	0.98	NS
Types of family	1.04	2	0.958	NS
Residential area	0.33	2	0.99	NS
Religion	1.77	6	0.99	NS
Family annual Income	8.98	6	0.408	NS
Number of Siblings	17.5	6	0.06	NS
Educational status of the mother	10.07	6	0.430	NS
Previous exposure to awareness programme on menstrual hygiene	0.33	2	0.996	NS
Source of information	20.85	8	0.034	Significant

*NS- Not significant

Table 3 demonstrated that the computed chi-square values have no related to any of the demographic characteristic except source of information.

Discussion

In a study carried out in Mansoura,Egypt among 664 schoolgirls between 14 and 18 years old by El-Gilany et al [13] , mass media were the primary source of information regarding menstrual hygiene, followed by mother. And in a study done by Akhil R Nair et.al (14) at MP, among school going adolescents girls the main informant regarding menstrual hygiene was mother, Whereas in the current study, it was found that source of information was mainly from family members.

A study done by Sutanuka Santra(15) to examine theawareness regarding knowledge and maintenance of menstrual hygiene among the women of reproductive age group most of the women use sanitary pads followed by clothes but in the current study all girls used sanitary pads while they are menstruating.

Recommendation

- A similar nature of study can be undertaken in a large-scale for making more accurate generalizations.
- A alike study can be carried out related to knowledge,attitude and practice regarding menstrual hygiene
- A similar study can be conducted using other educational strategies on menstrual hygiene

Conclusion

The study conclude that majority of the +2 girls students lack information on menstrual hygiene and its significance. It highlight about the importance of imparting knowledge on menstrual hygiene to this age group mainly to prevent from complications that may occur in their reproductive life.

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EFFECTIVENESS OF NURSE LED PREOPERATIVE AWARENESS PROGRAM ON ANXIETY OF PATIENTS UNDERGOING INGUINAL HERNIA SURGERY

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Abstract:

During the time of surgical episode, preoperative anxiety is often viewed by patients as a worst part of the surgical episode. This study aims to evaluate the effectiveness of nurse led preoperative awareness program on anxiety of patients undergoing inguinal hernia surgery at selected hospitals in Rajkot. Gujarat. The research design selected was true experimental design. Totally 40 patients were recruited through simple random technique. and in each group 20 samples were allocated. One day prior to the surgery pre – anxiety level and on 2nd post – operative say the post – anxiety level of the samples in both groups were assessed. Samples in experimental group had received the preoperative awareness program led by nurses and those who were in control group had received routine nursing care. Tool used for data collection consisted of two sections. Section – I was designed to obtain information on samples demographic and clinical variables, whereas Section – II consists of State Trait Anxiety Inventory Y1 questionnaire (STAI – Y1 form). Data collection technique was self – reporting questionnaire method. Results of the study shows the mean and standard deviation preoperative anxiety scores among the patients in "experimental group was 32.9 $\pm$ 8.13, and among the control group samples 66.50 $\pm$ 8.8". the mean difference in anxiety level between the samples in two group was 33.6. Independent 't' test score was 12.45 for the degree of freedom 38 which was significant at the 'P' value $\leq$0.001. It was also found that the anxiety score before intervention to the samples in experimental group was having a significant association with demographic variables like history of surgery ('F' = 276.119, 'df' = 1 'P' <0.001) and risk factors ('F' = 6,515, 'df' = 5 'P' < 0.003). the study concluded that the nurse led preoperative awareness program was an effective anxiety reduction strategy among patients undergoing inguinal hernia surgery. Nurses working with preoperative patients are in a good position to deliver preoperative anxiety reduction awareness program. Similar type of study can be done with patients undergoing any other surgeries.

Key Words: Effectiveness, Nurse led preoperative awareness program, Anxiety, Inguinal Hernia Surgery

Introduction:

Anxiety is considered as the most frequent issue among patients undergoing any types of surgeries during the preoperative periods. This can lead to a number of postoperative issues such as increased postoperative pain, a slower rate of recovery, and an extended hospital stay. "Anxiety is defined as a feeling of unease, worry, fear, tension and apprehension. It is a response to external or internal stimuli that can have behavioural, emotional, cognitive and physical symptoms",[1] The preoperative care of patients is a difficult concept. Preoperative anxiety is common., especially for patients having their first few surgical procedures, and is a normal response to the uncertain and sometimes life – threatening situations involved in surgery.[2]

A difficult issue in the preoperative management of patients is preoperative anxiety, in particular for a patient having their first surgical response, a common low level of anxiety is an expected reaction to the uncertain and potentially life – threatening situations. However, a higher and prolonged level of preoperative anxiety causes a delay in wound healing, necessitates a higher anaesthetic dosages and results in a poor recovery. Anxiety is a typical patient response that is experienced by the majority of patients throughout the preoperative periods.[3-4]

The most frequent procedure in general surgery is inguinal hernia repair surgery.[5] "An inguinal hernia is a protrusion of abdominal cavity and its contents through the inguinal canal. It is very common in men with lifetime risk of 27 % and 3 % for women".[6] The most prevalent type of abdominal wall hernias are inguinal hernia. Although, the exact prevalence of inguinal hernia is unknown., roughly 500,000 instances are treated by doctors annually.[7] Inguinal hernia complications can result in incarceration, intestinal obstruction, and strangulation of bowel, with older people at the higher risk. Inguinal hernia accounts for more than 95 % of all groin hernia repairs and they are a popular general surgery procedure for both adult and children.[8]

Preoperative anxiety has been linked to a variety of issues, including higher risk of infection, nausea, vomiting and cardiovascular changes like tachycardia and hypertension. Studies have revealed that a significant part of patients undergoing surgery report having significant preoperative anxiety, which is said to affect between 60 and 80percent of surgical patients.[9] Preoperative education plays a very crucial role in easing anxiety and minimizing patients' problems brought on by anxiety. The desire of this "experimental, pre-test/post-test" study was to investigate the effectiveness of nurse led preoperative awareness program on anxiety of patients undergoing inguinal hernia surgery.

Problem Statement

A study to evaluate the effectiveness of nurse led pre-operative awareness program on anxiety of patients undergoing inguinal hernia surgery in selected hospitals in Rajkot. Gujarat.

Objectives

1. To evaluate the level of anxiety among patients having inguinal hernia surgery in the study and control groups before and after the nurse led pre-operative awareness program.
2. To assess the impact of nurse – led pre-operative awareness program on anxiety in the study group of patients having inguinal hernia surgery.
3. To ascertain the relationship between the level of anxiety and the demographic variables of patients undergoing surgery for inguinal hernia in study and control group.

Methodology

In this research, "true experimental research design" was adopted. Population of the study consisted of patients undergoing elective inguinal hernia surgery. Two multi – speciality private hospitals were selected in the city and legal permission were obtained for conducting this study from the hospital authorities.

All patients scheduled for elective inguinal hernia surgery who met the inclusion criteria's such as being a male or female patients over the age of 18 years with or without a history of prior surgical procedures, were included in the samples. The following samples were excluded, those who were with mental retardation and cognitive impairments, patients who were been diagnosed with anxiety disorder or any other mental disorders. Patients who were on anxiolytic medicates and those who were with communication disabilities were also been excluded from the study.

This study consisted of 40 patients having inguinal hernia surgery. Of 40 patients 20 were placed in the study group while the remaining 20 were in the control group.

Tool for Data Collection

Data collection tool for this study consists of three sections. Section – I includes, demographic data. Section – II had basic clinical variables such as respiratory rate, heart rate, systolic blood pressure and diastolic blood pressure and in Section – III State – trait anxiety inventory (STAI) form Y1 questionnaire was used to measure the level of anxiety during pre-test and post among samples in both groups. This tool was developed by Spielberger et al. STAI (Y1) it is a standardized and valid tool for the assessment of anxiety. This tool had 20 statements which evaluates how samples feels at that point of time and marked in a 4 – point scale and scored. Scores ranges between 20 and 80. With the higher scores correlating to higher anxiety. Reliability and internal consistency of the tool was tested through "test-retest method". The 'reliability' of the tool was 0.65 to 0.75.[10]

Data Collection and Analysis

Study was done for the period of 2 months from 1st march 2021 to 30th April 2021. Pre-operative level of anxiety among samples in both groups were measured by giving questionnaire preoperatively prior to the day of surgery and nurse led pre-operative awareness program were given to the samples in study group only followed by the assessment of pre-operative anxiety. One the second post-operative day the post-test was taken from the samples in both groups. Samples were selected randomly by following odd or even number method. All those samples who were in odd number were assigned to study group and those who were in even number series were put in control group. Single samples were selected and intervened at a single time. The duration of nurse led pre-operative awareness program was for 15 – 20 minutes. During the session the following aspects were taught to the samples and it includes pre-operative routines of hospital care on the day prior to surgery, and post-operative exercises. The samples in control group received the routine daily care prior to surgery through the nurses in the health team.

Statistical Analysis

After data collection, researchers utilised "descriptive and inferential statistics" and "frequency and percentage distribution" to analyse demographic factors. Sample anxiety and clinical characteristics were expressed by mean and standard deviation. An independent ‘t’ test was done to compare the effectiveness of nurse led preoperative awareness program on anxiety. Paired ‘t’ test was done for comparing the “level of anxiety” during pre-test and post-test within the group. Chi-square analysis was done to estimate the level of association of anxiety with the demographic variables of the samples in both groups. One – way ANOVA was done to identity association of anxiety with every individual option of demographic variables. For performing statistical analysis, the researcher had used IBM SPSS Statistical Software Version 20. (Armonk, NY, USA: IBM Corp).

Results

Socio-demographic characteristics:

Table – I: Samples Distribution Based on the Socio-demographic Characteristics

(N = 40)

SNo	Demographic Variables		Study Group		Control Group	
			Frequency	Percentage	Frequency	Percentage
1	Age	18 – 35	3	15.0	8	40.0
		36 – 55	13	65.0	3	15.0
		> 55	4	20.0	9	45.0
2	Gender	Male	10	50.0	15	75.0
		Female	10	50.0	5	25.0

3	Education	Primary School	2	10.0	2	10.0
		Middle School	6	30.0	6	30.0
		High School	7	35.0	7	35.0
		Intermediate / Diploma	4	20.0	4	20.0
		Graduate	1	5.0	1	5.0
4	Occupation	Unemployed	7	35.0	9	45.0
		Employed	11	55.0	8	40.0
		Retired	2	10.0	3	15.0
5	Family Monthly Income	68967 - 92185	0	0.0	1	5.0
		46095 - 68961	6	30.0	10	50.0
		27654 – 46089	8	40.0	7	35.0
		9232 – 27648	6	30.0	2	10.0
6	Marital Status	Unmarried	3	15.0	5	25.0
		Married	17	85.0	15	75.0
7	Residence	Rural	13	65.0	13	65.0
		Urban	7	35.0	7	35.0
8	History of Surgery	No	17	85.0	14	70.0
		Yes	3	15.0	6	30.0
9	Type of Anaesthesia	Epiduaral	1	5.0	2	10.0
		General	8	40.0	6	30.0
		Regional	2	10.0	4	20.0
		Spinal	9	45.0	8	40.0
10	Position of Hernia	Left side	5	25.0	5	25.0
		Right side	13	65.0	10	50.0
		Bilateral	2	10.0	5	25.0
11	Type of Hernia	Direct	4	20.0	7	35.0
		Indirect	16	80.0	13	65.0
12	Risk Factors	Smoking	2	10.0	1	5.0
		Alcohol	2	10.0	4	20.0
		Heavy Objects Lifting	5	25.0	7	35.0
		Chronic Cough	4	20.0	2	10.0
		Family History	2	10.0	5	25.0
		Bowel / Bladder Disturbances	5	25.0	1	5.0

In this study, with regard to age of the samples, majority 13 (65.0 %) were in the age between 36 – 55 years in experimental group, in control group 9 (45.0 %) of the samples were in the age > 55 years. About the distribution of gender among the samples in ‘study group’, male

and female were equally distributed 10 (50.0 %) were as among the samples in control group three fourth of the total samples were males 15 (75.0 %). Samples distribution according to education reveals in both group majority 7 (35. 0 %) were with high school certificate and among samples. Occupation of the samples shows in study group majority 11 (55.0 %) are employed and in case of 'control group unemployed were majority 9 (45.0 %). Samples family monthly income represents in study group majority 8 (40.0 %) has 27654 Rs – 46089 Rs, and among the samples in control group one half of the total samples 10 (50.0 %) had 46095 Rs – 68961 Rs. In view of marital status of the samples in both groups married samples were maximum 17 (85.0 %) in 'study group' and 15 (75.0 %) in 'control group'. Residence of the samples reports that in both group equal numbers of samples 13 (65.0 %) belongs to rural area. In both groups majority were had no history of surgeries 17 (85.0 %) in study group and 14 (70.0 %) in 'control group'. For majority of the samples in 'study group' 9 (45.0 %) and in 'control group' 8 (40.0 %) had spinal anaesthesia. Right side hernia was found to be present commonly among samples in both groups 13 (65.0 %) in 'study group' and 10 (50.0 %) of the samples in 'control group'. Type of hernia among the samples reveals indirect was more common 16 (80.0 %) in 'study group' and 13 (65.0 %) in 'control group'. With regard to the risk factors for inguinal hernia lifting heavy objects was common among samples in 'study group' 5 (25.0 %) and in control group 7 (35.0 %),

Table – II: Clinical Variable Characteristics of the Samples

(N = 40)

Clinical Variables	**Study Group**		**Control Group**	
	Pre – Test	**Post – Test**	**Pre – Test**	**Post – Test**
Respiratory Rate	16.42 $\pm$ 8.12	15.11 + 6.81	16.28 $\pm$ 8.04	16.34 $\pm$ 8.18
Systolic BP	132.32 $\pm$ 13.85	130.49 $\pm$ 11.05	132.42 $\pm$ 13.03	132.51 $\pm$ 13.14
Diastolic BP	78.12 $\pm$ 7.92	76.00 $\pm$ 6.20	77.52 $\pm$ 8.10	78.28 $\pm$ 8.44
Heart Rate	76.01 $\pm$ 32.01	73.62 $\pm$ 28.40	77.21 $\pm$ 33.60	76.41 $\pm$ 32.01

Table – II talks about the mean and standard deviation values of samples clinical variables such as respiratory rate, heart rate, systolic and diastolic BP. Among samples in 'study group' during pre-test the mean respiratory rate was 16.42 (SD 8.12), mean systolic BP was 132.32 (SD 13.85), mean diastolic BP was 78.12 (SD 7.92) mean heart rate was 76.01 (SD 32.01). Similarly at the time of post – test the mean respiratory rate was 15.11 (SD 6.81) mean systolic BP was 130.49 (SD 11.05), the mean diastolic BP was 76.00 (SD 6.20) and mean heart rate was 73.62 (SD 28.40).

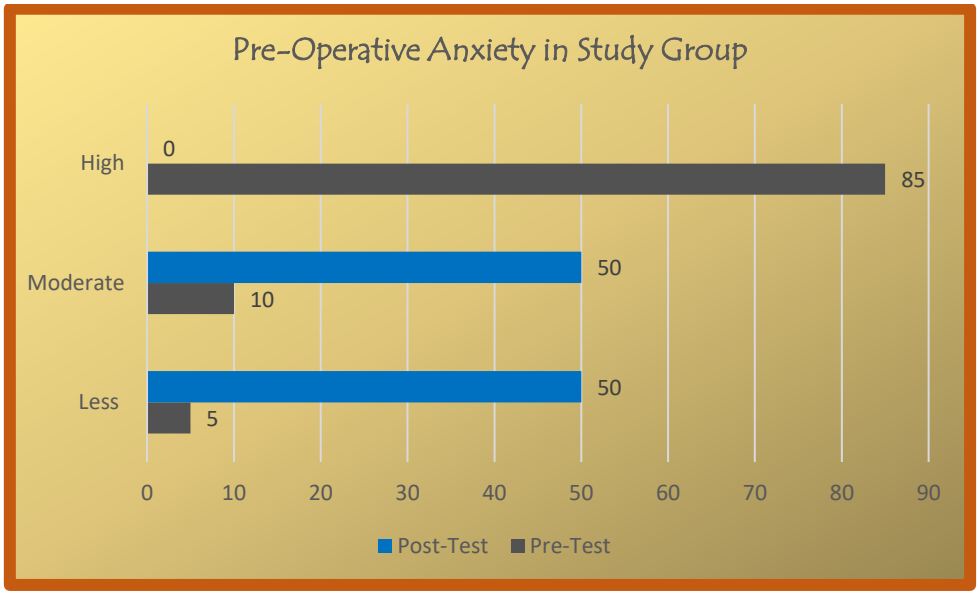

Figure – I: Clustered Bar – Chart Showing the Distribution of Pre-Operative Anxiety (Study Group)

Percentage distribution of samples in 'study group' according to level of anxiety were depicted in figure – 1. During pre-test an overwhelming majority of the samples 18 (85.0 %) had high level of anxiety and in post – test equal number of samples 10 (50.0 %) had moderate and low levels of anxiety.

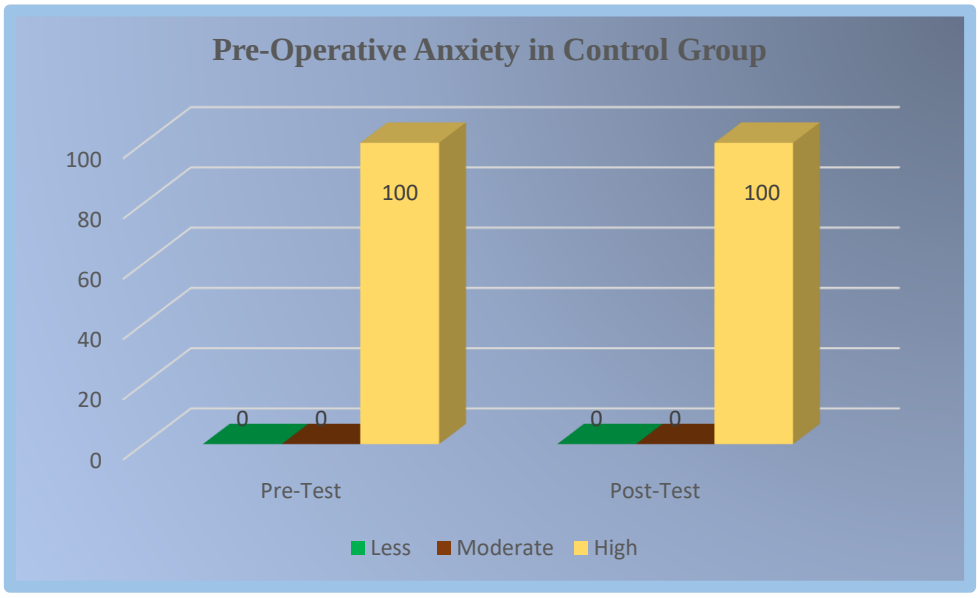

Figure – 2: Clustered Bar – Chart Showing the Distribution of Pre-Operative Anxiety (Control Group)

Level of anxiety of the samples in 'control group' were illustrated in figure – 2. All the samples 20 (100.0 %) were with high levels of anxiety during 'pre and post – test'.

Table – III: Comparison of Pre-Operative 'Anxiety Level' Among Samples in Both Groups

(n = 20)

Group	Test	Mean	Standard Deviation	Paired 'T' test Value	'P' Value
Study	**Pre-Test**	65.4	11.89	12.37 (df = 19)	0.001***
	Post-Test	32.9	8.13		
Control	**Pre-Test**	66.65	9.12	0.154 (df = 19)	0.879^{NS}
	Post-Test	66.50	8.88		

*** - Highly Significant, NS – Not Significant

Table – III shows the paired 't' test values of level of anxiety among samples in 'study and control group'. With regard to 'study group', the pre-test mean and standard deviation anxiety scores were 65.4 + 11.89 and the post-test mean and standard deviation anxiety scores were 32.9 $\pm$ 8.13. the paired 't' test valued was 12.3 for the degree of freedom 19 and it was significant at the 'P' value < 0.001. In 'control group', the pre-test mean and standard deviation anxiety scores were 66.5 $\pm$ 9.12 and the post-test mean and standard deviation anxiety scores were 66.50 $\pm$ 8.88. the paired 't' test value was 0.154 for the degree of freedom 19, it was not significant at the 'P' value < 0.879.

Table – IV: Comparison of Post – Operative Anxiety Mean, Mean Difference, Standard Deviation and Independent 't' test Among Samples in Both Groups

(n = 20)

Post - Test	Mean	Mean Difference	Standard Deviation	Independent 't' test	'P' value
Study	32.9	33.6	8.13	12.45 (df = 38)	0.001***
Control	66.50		8.88		

*** - Highly Significant

The above table shows the post-test mean and standard deviation values of anxiety among samples in 'study group' as 32.9 $\pm$ 8.13. similarly, in 'control group' it was 66.50 $\pm$ 8.88. the difference in mean of 33.6 and the independent 't' test value was 12.45 for degree of freedom 38. It was significant at the 'P' value < 0.001.

Table – V: Association of Pre-operative Anxiety on Socio-Demographic Variables

(n = 20)

S. No	Demographic Variables		Pre-Test			Post-Test		
			Mean	SD	P	Mean	SD	P
1	Age	18 – 35	67.33	1.155	0.09^{NS}	30.33	9.292	0.33^{NS}
		36 – 55	68.46	8.491		34.92	8.088	
		> 55	54.00	19.715		28.50	7.047	
2	Gender	Male	63.50	13.201	0.49^{NS}	34.10	8.034	0.54^{NS}
		Female	67.30	10.781		31.80	8.496	
3	Education	Primary School	53.00	24.042	0.41^{NS}	33.50	12.021	0.66^{NS}
		Middle School	65.33	11.622		29.67	8.595	
		High School	70.43	4.117		35.43	8.243	
		Intermediate / Diploma	69.75	2.630		35.00	7.348	
		Graduate	38.00	0		26.00	0	
4	Occupation	Unemployed	7	66.14	0.41^{NS}	32.57	8.364	0.27^{NS}
		Employed	11	66.91		34.73	8.113	
		Retired	2	54.50		24.50	.707	
5	Family Monthly Income	68967 - 92185	0	0	0.24^{NS}	0	0	0.9^{NS}
		46095 - 68961	6	64.67		32.17	8.377	
		27654 – 46089	8	70.38		34.00	9.118	
		9232 – 27648	6	59.50		32.33	7.866	
6	Marital Status	Unmarried	72.00	4.000	0.31^{NS}	40.33	3.786	0.08^{NS}
		Married	64.24	12.503		31.65	8.046	
7	Residence	Rural	65.31	11.506	0.96^{NS}	31.92	8.291	0.45^{NS}
		Urban	65.57	13.526		34.86	8.092	
8	History of Surgery	No	70.12	3.018	0.01***	34.18	8.233	0.11^{NS}
		Yes	38.67	3.055		26.00	1.000	
9	Type of Anaesthesia	Epiduaral	68.00	.0	0.93^{NS}	41.00	0	0.41^{NS}
		General	63.13	14.701		33.88	7.754	
		Regional	67.00	1.414		25.00	1.414	
		Spinal	66.78	11.734		33.00	8.916	
10	Position of Hernia	Left side	62.80	14.043	0.29^{NS}	35.00	8.426	0.8^{NS}
		Right side	68.08	8.411		32.08	8.149	
		Bilateral	54.50	26.163		33.50	12.021	
11	Type of Hernia	Direct	62.50	16.442	0.59^{NS}	36.50	7.326	0.34^{NS}
		Indirect	66.13	11.057		32.06	8.298	
12	Risk Factors	Smoking	69.00	4.243	0.03***	34.50	12.021	0.82^{NS}
		Alcohol	70.50	3.536		31.50	13.435	

		Heavy Objects Lifting	65.40	13.446		33.00	7.036	
		Chronic Cough	71.25	2.217		36.25	9.605	
		Family History	37.00	1.414		25.50	.707	
		Bowel / Bladder Disturbances	68.60	3.050		33.20	8.556	

NS – Not Significant, * - Significant at 'P' value < than 0.05

Table – V shows the pre-test anxiety with the demographic variables such as history of surgery (P value 0.001) and risk factors (P value 0.03), was found highly significant.

Discussion

The present study was done with the objective to evaluate the effectiveness of nurse – led preoperative awareness program on anxiety among patients undergoing surgery for inguinal hernia. Study findings revealed the decrease in 'anxiety' among samples in 'experimental group' while compared with the samples in 'control group'. These findings are similar to the results of the following studies.

A study was done by **Mary J.I et al. [11]**in a tertiary care teaching hospital at Puducherry with the aim to evaluate the effectiveness of video – assisted teaching program in reducing anxiety level among patients undergoing upper gastro -endoscopy. The results of this study shows the difference in mean level of anxiety before and after the intervention at P=<0.01 in experimental group.

Padam A et al.[12] done a randomized control trial with the aim to assess the effect of listening to vedic chants and Indian classical instrumental music on anxiety levels and blood pressure, heart rate and oxygen saturation levels among patients undergoing upper GI endoscopy. Results of the study shows a significant reduction in anxiety state scores was witnessed in the interventional group samples from 40.4 $\pm$ 8.9 to 38.5 $\pm$ 10.7, p value < 0.05.

In a quasi-experimental study, which was conducted at Valli hospital. Erode by **Ganesh S and Padmavathi P[13]** The main objective of the research was 'to assess the effectiveness of intra-operative video therapy on anxiety among patients under spinal anaesthesia'. As per the findings of the study, the patient's 'anxiety' decreased from the mean value of 36.33 $\pm$ 8.96 and 35.67 $\pm$ 7.78 to 34.33 $\pm$ 8.06 and 28.07 $\pm$ 5.54 in control and experimental group respectively.

Some of the studies were quoted below which do not support the findings of the present study. **Vimala T. J. C et al.[14]** done an experimental study with the aim to evaluate the effectiveness of structured pre-operative education on anxiety level of patients undergoing elective orthapaedic surgery, based on the findings of this study, the author concluded that the structured education did not produce any significant impact on the post-operative anxiety in patients undergoing orthopaedic surgery.In another study done by **Paripoorani D et al.[15]**

conducted a quasi-experimental study with the aim to evaluate the effectiveness of instructional video on preoperative anxiety among patients undergoing orthopaedic surgery in selected orthopaedic wards of CMC hospital Vellore. Results of the study depicts that there was no significant association between the preoperative anxiety levels and the demographic variables such as age, sex, education and occupation ($p = > 0.05$).

Nurse led preoperative awareness program was found to be highly effective among the selected samples for this study. All the samples in the experimental group were satisfied by the information given related to the expected pain, anaesthesia effect, pain control interventions during post-operative days. These might help to lower the level of preoperative anxiety in the samples in interventional group.

Conclusion

Most significant finding of this study shows majority of the patients who undergoes surgeries were with moderate or high levels of anxiety. The pre-operative awareness program led by nurses had helped the patients undergoing inguinal hernia surgery to have a significant decrease in their level of pre-operative anxiety. This study also had given the new evidence to the nursing world that all patients who had gone through the nurse led preoperative awareness program had also experienced significant reduction in their clinical variables like respiratory rate, heart rate, diastolic and systolic blood pressure. It is also very essential for the nurses working with preoperative patients to locate the risk factors prompting anxiety and assure that patients are at easeful.

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KNOWLEDGE REGARDING ORGAN DONATION AMONG SENIOR SECONDARY SCHOOL CHILDREN IN CHAKEISIHANI. BHUBANEWSWAR – ODISHA.

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Abstract

Background: A precondition for a valuable and balanced dialogue regarding organ donation is accurate information. Many authors and organizations have made the case that it is the teacher's duty to enlighten the students of government schools about organ donation and to teach school children about organ donation. Aim and Objective: To determine the extent of organ donation knowledge among secondary school students. **Methodology:** The research method was non-experimental descriptive survey research. The sample size was 50 senior secondary school children in Chakeisihani. Bhubaneswar. India. Selected using purposive sampling technique. Structured knowledge questionnaire on organ donation was developed by refereeing various books and journals and the validity of the tool were obtained from 3 nursing experts and 2 medical experts. Reliability of the tool was test by test-retest method and it was calculated with 'Karl Pearson' Correlation Co-efficient method ('r' = 0.75). Data were collected through face-to-face interview method and descriptive and inferential statistics were used in analysing the data. **Results:** A total of 50 participants were interviewed about their knowledge towards organ donation 62 % (31/50) of the participants had inadequate knowledge about organ donation. 26 % of the participants were found to have moderate knowledge. The chi-square analysis shown the existence of statistically significant association between demographic variables like age, gender, fathers' education, mothers' education, type of family, previous knowledge regarding organ donation and source of information at the 'P' < 0.001 levels of significance**. Conclusion:** School teachers must educate their students towards organ donation and in the school curriculum lessons on organ and tissue donation should be added at the senior secondary certificate level.

Key Words: *Assess, Knowledge, Organ donation, Secondary school children.*

Introduction

In countries like India, human organs are in great need. Serious shortage of organ transplantation is prevailing at current point of time. For any end – stage organ failure, organ transplantation is an accepted treatment. The total number of brain fatalities caused by accidents is about 1.5 million a year.[1]The organ donation rate in the Indian states such as Odisha has been weak over the last decade. Organ donation is whilst someone permits an organ of theirs to be removed, legally both via by means of consent whilst the donor is alive or after loss of life with the assent of subsequent of kin.[2] Common transplantations consist of

kidneys, heart, liver, pancreas, bones, lunes, intestines, bone marrow, corneas and skin. Some organs and tissues may be donated with the aid of using dwelling donors, together with a kidney or a part of the liver, a part of the pancreas, a part of the lungs, or a part of the intestines. Although possibly alive, most donations take place only after the donor dies.[3]

The timely donation and transplantation of organs can significantly reduce the number of fatalities brought on by an organ failure. But when it comes to India., there is a severe shortage of organs that are suitable for transplantation. "The dismal organ donation rate (ODR) for India is 0.34 per million people (PMP).[4] In contrast to the demand for 1.75 lakh kidney transplants in 2015, only 5000 transplants were performed. Similarly, of the 50,000 persons with end stage liver disease who died, just 1,000 had a liver transplant. In the instance of heart or lung transplants, the statistics are distressingly dismal.[5] It is necessary to act on two levels to ensure cadaver organ donation: the health care professionals and the general population particularly school children.[6] If trained, health care professional can play a significant role in educating school children and their families about organ donation and in motivating them to donate.[7]

As a novel method to resolving the donor scarcity, the school students must be educated about transplantation and the need to assume the responsibility to give organs. A daily average of 79 people undergo organ transplants, while 22 people lose their lives while waiting for transplants that cannot be performed due to a lack of donor organs.[8] Currently more than 1,2333,000 men, women and children require organ transplants to save their lives. In India, Particularly in Odisha, knowledge about organ donation is very poor. In order to raise awareness and foster a supportive attitude regarding organ donation, it is necessary to construct several sensitization programmes that can be planned and put into action.[9] Therefore, this research has been chosen to knowledge among school students and to create a data base in nursing.

Problem Statement

A descriptive study to assess the knowledge regarding organ donation among the senior secondary school students in a selected school at Chakeisihani. Bhubaneswar.

Objectives

1. To determine the extent of organ donation knowledge among secondary school students at Chakeisihani, Bhubaneswar.
2. To associate knowledge regarding organ donation among secondary school students with the demographic variables

Materials and Methods

The researcher decided to use a non-experimental descriptive survey research methodology in order to complete the tasks that were outline for this particular study. The government senior secondary school in Chakeisihani. Bhubaneswar, served as the study setting. 50 students between the ages of 15 and 18 make up the sample for the study. The study's sample

recruitment was done using a purposive sampling technique. Students who agreed to participate in the study, students present on the day of data collection, and students of both genders were the inclusion criteria for the samples. Students who refused to participate in the study, those who were ill, and those who were missing during the times when the data was being collected were all omitted from this study. In order to collect data from the samples about their, understanding of their organ donation, a questionnaire that had been predesigned was used.It was divided into two parts. The first component of the questionnaire describes the socio-demographic factors used to collect personal information from secondary school students, and the second section is a self – structured knowledge questionnaire used to gauge the students' level of familiarity with organ donation. It had 30 multiple choice questions with four possible answers. For each right answer selected by the samples, one mark was given. The total score is thirty for thirty items and the scores are divided into the following categories to indicate the level of knowledge.

Table 1.1: Criteria for measuring the knowledge level on organ donation

Scores	Percentage	Interpretation
21 - 30	67 – 100 %	Adequate Knowledge
11 - 20	34 – 66 %	Moderate Knowledge
0 - 10	0 – 33 %	Inadequate Knowledge

Excel was used to enter data in codes, and SPSS was utilized for analysis. The data were characterized using descriptive statistics, which comprised frequency, mean, standard deviation and percentages. The chi-square test was used to determine association between knowledge and samples socio-demographic variables and the 'p' value was calculated. A 'p' value of < than 0.05 was considered significant.

Data Analysis and Results

According to the objectives, the analysed data were arranged and presented in the following sections.

Section – A: Distribution of samples in terms of frequency and percentage for each demographic variable.

Section – B: Distribution of samples in terms of frequency and percentage based on level of knowledge on organ donation.

Section – C: Association between organ donation knowledge and demographic variables of the samples

Table – 2.1: Distribution of sample based on their age (years)

(n = 50)

Age	Frequency	Percentage
15 – 16 years	**43**	**86.0 %**
17 – 18 years	**7**	**14 %**

The frequency and percentage distribution of samples by age in years was depicted in Table 2.1 depicted the frequency and percentage wise distribution of samples according to age in years. An overwhelming majority of the subjects 43 (86.0 %) were in age 15 – 16 years

Table – 2.2: Distribution of sample based on their gender

(n = 50)

Gender	Frequency	Percentage
Females	**30**	**60.0 %**
Males	**20**	**40.0 %**

The frequency and percentage distribution of samples by gender are shown in Table 2.2. Compared to males, females outnumbered males by a margin of 30 (60.0 %) to 20 (40.0 %).

Table – 2.3: Distribution of sample based on their education of father

(n = 50)

Education of father	Frequency	Percentage
Illiterate	**9**	**18.0 %**
Primary education	**7**	**14.0 %**
Secondary education	**12**	**24.0 %**
Graduate	**22**	**44.0 %**

In Table 2.3 we see the frequency and percentage distribution of samples fathers' level of education. It was discovered that the majority of them 22 (44.0 %) had graduation, while those with a secondary education numbered 12 (24.0 %).

Table – 2.4: Distribution of sample based on their education of mother

(n = 50)

Education of mother	Frequency	Percentage
Illiterate	**5**	**10.0 %**
Primary education	**16**	**32.0 %**

Secondary education	**20**	**40.0 %**
Graduate	**9**	**18.0 %**

The frequency and percentage distribution of samples mothers' level of education were found in table 2.4. Twenty mothers have secondary education (40.0 %). Whereas sixteen had primary education (32.0 %).

Table – 2.5: Distribution of sample based on their family type

(n = 50)

Family type	Frequency	Percentage
Nuclear	**21**	**42.0 %**
Joint	**28**	**46.0 %**
Extended	**1**	**2.0 %**

Table 2.5 depicts the distribution of samples according to their family type. The Majority of the samples in this study, 28 (56.0 %) are from joint family, while 21 (42.0 %) are from nuclear families.

Table – 2.6: Distribution of sample based on their previous knowledge regarding organ donation

(n = 50)

Previous knowledge regarding organ donation	Frequency	Percentage
Yes	**8**	**16.0 %**
No	**42**	**84.0 %**

Regarding prior knowledge of organ donation, an overwhelming majority of the samples 42 (84.0 %) had no prior knowledge.

The pie – chart below illustrates the source of knowledge regarding organ donation. The Majority of the samples 3 (37.5 %) received information from parents, while an equal proportion of samples 2 (25.0 %) acquired information from social media and teachers.

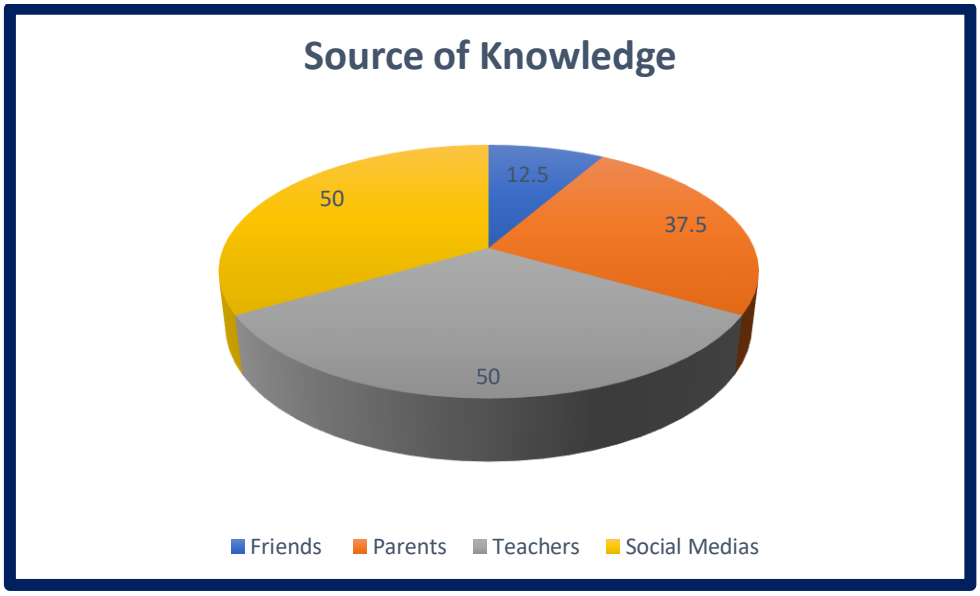

Figure – 1: Pie – Chart shows Percentage WiseDistribution of sample based on where they learned about regarding organ donation

The Funnel chart below depicts the organ donation knowledge of research participants. 31 (62.0 %) of the samples had inadequate knowledge. 13 (26.0 %) of the samples had moderate knowledge.

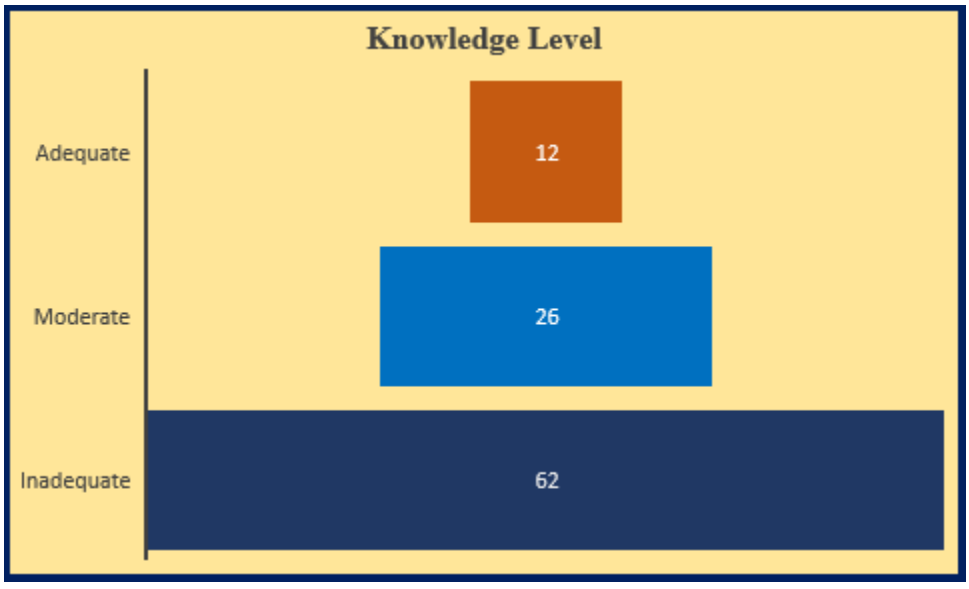

Figure – 2: Funnel Chart depicts the Percentage Distribution of sample based on their knowledge regarding organ donation

Table – 2.7: Association between Knowledge Regarding Organ Donation and Demographic Variables

(n = 50)

S. No	Demographic Variables		Knowledge Level			$\chi 2$ Value	'P' Value
			Adequate	**Moderate**	**Inadequate**		
1	Age	15 - 16	0	12	31	42.33 (df = 2)	0.001*
			0.0%	27.9%	72.1%		
		17 - 18	6	1	0		
			85.7%	14.3%	0.0%		
2	Gender	Female	6	13	11	20.43 (df = 2)	0.001*
			20.0%	43.3%	36.7%		
		Male	0	0	20		
			0.0%	0.0%	100.0%		
3	Fathers Education	Illiterate	6	2	0	67.17 (df = 6)	0.001*
			75.0%	25.0%	0.0%		
		Primary	0	7	0		
			0.0%	100.0%	0.0%		
		Secondary	0	4	8		
			0.0%	33.3%	66.7%		
		Graduate	0	0	23		
			0.0%	0.0%	100.0%		
4	Mothers Education	Illiterate	0	5	0	61.25 (df = 6)	0.001*
			0.0%	100.0%	0.0%		
		Primary	0	6	10		
			0.0%	37.5%	62.5%		
		Secondary	0	0	21		
			0.0%	0.0%	100.0%		
		Graduate	6	2	0		
			75.0%	25.0%	0.0%		
5	Type of Family	Nuclear	5	13	2	48.34 (df = 4)	0.001*
			25.0%	65.0%	10.0%		
		Joint	0	0	29		
			0.0%	0.0%	100.0%		
		Extended	1	0	0		
			100.0%	0.0%	0.0%		
6	Previous Knowledge	Yes	6	2	0	37.40 (df = 2)	0.001*
			75.0%	25.0%	0.0%		
		No	0	11	31		
			0.0%	26.2%	73.8%		

* Significant at 'P' value < than 0.05

Table 2.7 shows the association between knowledge level and demographic variables of the samples. In this study it was found that all the demographic variables age ($\square^2$ = 42.33, df = 2, 'P' < 0.00.1), gender ($\square^2$ = 20.43, df = 2, 'P' < 0.00.1), fathers' education ($\square^2$ = 67.17, df = 2, 'P' < 0.00.1) mothers' education ($\square^2$ = 61.25, df = 2, 'P' < 0.00.1), type of family ($\square^2$ = 48.34 df = 4, 'P' < 0.00.1) and Previous knowledge ($\square^2$ = 37.4, df = 2, 'P' < 0.00.1) are associated with the level of knowledge.

Discussion

This study among the school students in Odisha assessed their knowledge towards organ donation. Majority of the students in this study 31 (62.0 %) had inadequate knowledge on organ donation. These students have to be educated towards organ donation its importance's, and the procedures to be followed in organ donation, this will improve the knowledge of the school students. The improvement of knowledge of these students will be a significant factor in organ procurement rates. The lack of organ donors is the main obstacle to transplantation in Odisha, as it is across the rest of India. The lack of student's awareness about organ / tissue donation and procurement is the cause of this shortage.

In Turkey, a survey was conducted among 200 high school students studying in a single high school using a 25-item questionnaire in which demographics of the research participants were assessed with 11 questions and 14 specific questions were for assessing the specific knowledge towards organ donation. Prior to the training program 24.9 % of 189 respondents said they would donate their organs after death, whereas, 38.4 % of the 138 respondents said they would do so after training.[10]

A cross – sectional study in Kerala showed that knowledge and attitude regarding organ donation were assessed among government medical college students at Trivandrum. Study was conducted among 194 final year MBBS students. The findings showed that a majority of students had adequate knowledge regarding organ donation.[11]

A community based cross – sectional survey was conducted among 18 years age population in Kerala, regarding Organ donation. Results of the study demonstrate 97 % of the respondents had adequate knowledge, but only 53 % had good knowledge.[12]

Conclusion

The study's strength is that it is a school – based study and it is also one of the few studies in Odisha, that has assessed the knowledge of government senior secondary students towards organ donation. However greater emphasis must be placed on raising awareness of the concept of organ donation. The implication of this study are that it will aid in determining the best approach to educate senior secondary school children about organ donation.

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THE IMPACT OF STRUCTURED TEACHING PROGRAMME ON HOUSEWIVES 'AWARENESS OF THE HEALTH HAZARDS ASSOCIATED WITH PLASTIC USE

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Abstract:

Background of the Study: There is a wide range of health risks associated with plastic bag use. Little is known about how well the average Indian housewives understands the risks they face to their health. Communities are seen as ideal places to promote health, reduce the spread of disease, and raise public awareness about the importance of health in the nation's development.

Objective: The objective of this study is to analyse how effective a structured teaching programme is at informing housewives about the health hazards of using plastics.

Methodology: A pre-experimental study was done to evaluate the impact of structed teaching programme on the health hazards plastic usage among housewives living in a specific neighbourhood of Lokipur, Odisha. The study samples were subjected to pre-test using a structured knowledge questionnaire, followed by a structured teaching programme. A post-test was performed seven days later. **Results:**During, the pre-test, the majority of the samples, 16 (53.1 %) had an average level of knowledge on health hazards associated with plastics, whilst 12 of the samples, (40.0 %) had a poor level of knowledge, at the time of the post-test, the majority of the study samples, 17 had an excellent level of knowledge; however, 10 of the study samples or 33. 3 % had an average level of knowledge.**Conclusion:** The community health nurse's primary focus should be on increasing women's awareness of the potential risks posed by everyday plastic use in the home through means such as health education, the media, the classroom instruction etc.

Keywords: *Impact, Structured teaching programme, Health hazards. Plastic use, Housewives*

Introduction:

Each year millions of tones of plastic enter the oceans, suffocating whales and other animals. Plastic trash has numerous negative effects on ecosystems and human health. Effects on human health include impaired immunological function, cataracts, kidney and liver damage. Changes in lung function, and the induction of obesity and diabetes , as well as irritation of the eyes, nose and throat.[1-2]

Plastic carry bags are typically employed for transporting or dispensing merchandise. There is an annual global production of 150 million tonnes. It employs around 30,000 processing units. The packaging industry is the greatest consumer of plastics (35 % of

total consumption). Each year, India generates 5.6 million metric tonnes of plastic garbage.[3]

When food is packed in plastic bags while it is still hot, the toxicchemicals in the plastic leach into the meal. These include the carcinogenic styrene, the hormone disrupting phthalates, and the organ failing Bisphenol A. Because of this, it is past due that we start using new materials for shipping and storage.[4]

The health of humans is being compromised by the widespread use of plastic, chemicals leach from plastic and end up in our bodies, accumulating in organs and blood. Malignant growths, birth deprivation, impaired immunity, endocrine disruption, and other problems all play a role in their presentation. For example some of the chemical added compounds used in plastic production have been linked to cancer and endocrine disruptions in humans.[5]

Plastic bags are notoriously challenging and expensive to recycle, which is why the vast majority of them wind up in landfills, where they take approximately three hundred years to photodegrade. These plastics breakdown into tiny poisonous pieces that pollute the soil and waterways and get into the food chain when animals eat them by accident. For a healthy environment in the future, everyone should know the basics how to deal with plastic trash.[6]

Educators and parents need to be made aware of the risks associated with plastic use so that they may help raise their children's understanding of these issues.[7] Research found that most students needed health education about plastic disposal since they did not know how to properly dispose of plastic and how to manage plastic waste.[8] A other study found that housewives knew less about the dangers of plastic garbage.[9] Recent research and statistics shed light on plastic garbage as a serious concern in the modern approach, with more rural community inhabitants affected than ever before, largely as a result of incorrect disposal methods and insufficient information among housewives regarding disposal tactics.

Methodology:

The effectiveness of structured teaching about the health hazards of plastic wastes among housewives in Lokipur, Odisha was evaluated using a quantitative research approach using pre-experimental one-group pre-test and post-test study design. The non-probability convenient sampling strategy was used to select 30 housewives. General demographic factors and a structured questionnaire regarding the health hazards of plastic thrash are utilised to obtain data. A pre-test was administered along with a structured teaching programme. A post-test was administered one week after the adoption of the organized structured teaching programme. Descriptive and inferential statistics were used to analyse the data.

Results:

Subjects' socio-demographic characteristics are described in Table – 1: In terms of age, the majority of 10 (33.00 %) were over 50 years old. In terms of educational attainment, the majority of the subjects, 13 (46.0%), had completed secondary school. Monthly family income of the subjects depicted, the majority of subjects 12 (40.00 %)

had a monthly family income of Rs. 5001 to Rs. 10,000. The subjects' religion revealed an overwhelming majority of Hindus (84.0 %). In terms of waste disposal methods, the majority of 22 (73.00 %) dispose of their plastic wastes through open land disposal.

Table – I: Frequency and Percentage Distribution of Samples According to Demographic Factors

(n = 30)

S. No	Demographic Variables		Frequency	Percentage
1.	**Age (Years)**	**18 – 28 years**	5	16.00
		29 – 38 years	7	23.00
		39 – 49 years	8	26.00
		> than 50 years	10	33.00
2.	**Educational Status**	**Primary**	4	13.00
		Secondary	13	43.00
		Higher Secondary	7	23.00
		Graduation	6	21.00
3.	**Monthly Family Income**	**< than 5000**	4	14.00
		Rs 5001 – 10000	12	40.00
		Rs 10,001 – 20,000	8	26.00
		> Rs 20,001 and above	6	20.00
4.	**Religion**	**Hindu**	25	84.00
		Muslim	2	6.00
		Christian	2	6.00
		Others	1	4.00
5.	**Methods of Waste disposal**	**Open land**	22	73.00
		Burial	4	14.00
		Burning	1	3.00
		Other types	3	10.00

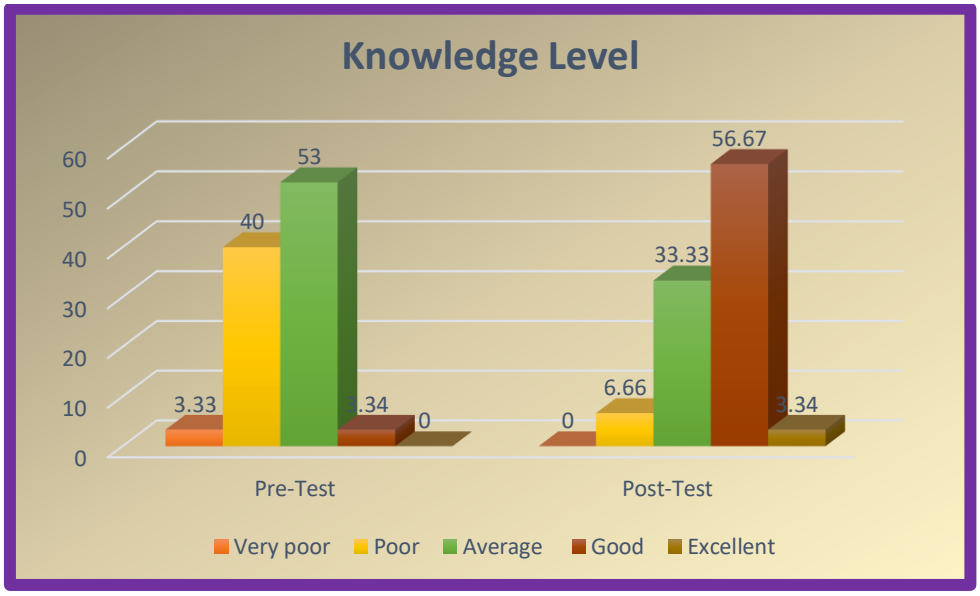

Figure -1: Percentage distribution of subjects according to level of knowledge

Figure – I depicts the percentage distribution of subjects according to level of knowledge regarding health hazards of plastic wastes.

At the time of the pre-test, the majority of the respondents (16, 53.00 %) had an average level of knowledge about the health hazards of plastic wastes. However, at the time of the post-test, majority of the subjects, (17, 56.67 %) had an excellent level of knowledge about these hazards.

Table – II: Mean, Mean Difference, Standard Deviation and Paired 't' test values related to knowledge regarding health hazards of plastic waste

(n = 30)

Knowledge	Mean	Mean Difference	Standard Deviation	Paired 't' test	'P' value
Pre-test	12.18	13.04	4.1	21.35	0.001***
Post-test	25.22		2.5	(df = 29)	

Level of significance at 'P' value < 0.05

The results of the mean, mean difference, standard deviation, and paired 't' test can be found in table – II. These numbers pertain to the individual's level of knowledge of the dangers that plastic wastes pose to human health. The pre-test knowledge mean and standard deviation scores were 12.18 + 4.1, similarly, the post-test knowledge mean and standard deviation scores were 25.22 + 2.5. The mean difference score was 13.04. For a degree of freedom of 29, the paired "t" test score was 21.35. It shows that the difference in subjects' knowledge between pre- and post-test assessments was statistically significant at 'p' < 0.001.

Discussion:

Both the manufacturing and disposal of plastic products are extremely harmful to the surrounding environment. As a result, the only approach to lessen the risks posed by plastic is to cut back on our consumption of the material., which will in turn lead to a reduction in the amount of plastic that is manufactured. The purpose of this study was to evaluate the impact of structured teaching programme designed to educate housewives of Lokipur. Odisha, about the dangers posed by plastics and the correct way to dispose them.

Post-test results from research conducted by R. Regi. Bai (2021) to evaluate the efficiency of a structured training programme on the dangers of plastic waste among rural housewives reveal an overall knowledge score of 94%. 20% of the housewives had moderate knowledge on the post-test, whereas 80% had adequate knowledge.[9]

Kaur S, Jeganathan J and Kaur M. (2019) conducted a study in Sirmour, Himachal Pradesh, and found that during pre-test, 60 % of experimental group participants had poor knowledge and 40 % have average knowledge regarding the health hazards of plastic use. During the post-test, 40 % of the subjects had excellent knowledge and 60 % had average knowledge.[11]

Malik H. and Roy K. (2017) investigated the knowledge and attitudes of adolescents in Neelamangala's designated community area on the mishandling of plastic garbage and its environmental hazards. The majority of adolescents, 37 (61.67%), had poor understanding of plastic waste management and its environmental dangers, while 23 (38.33%) had moderate awareness.[12]

Conclusion:

Plastic toxicity is a major concern on a global scale. As a result of exposure to hazardous chemicals used in the production of plastics, the usage of plastics can have determined effects on human health and the environment. The negative impacts of plastic can be mitigated by housewives' instruction.The study most crucial results showed that participants' average knowledge increased from 12.18 to 25.22 points between the first and second tests. To put it another way, the average difference score was 13.04. the mean difference between the two groups' paired t-test scores was 21.35, indicating a statistically significant gap in housewives' knowledge.

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EFFECTS OF APPLIED RELAXATION TRAINING PROGRAMME ON REDUCING ANXIETY AND PERCEIVED STRESS IN PREGNANT WOMEN

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Abstract:

Background of the Study: Practicing relaxation can take on a variety of forms; one of these forms is called "applied relaxation," and it includes activities such as breathing exercises and muscle relaxation. When it comes to treating anxiety problems, applied relaxation is just as helpful as cognitive treatment. **Objective:** The purpose of this study is to assess the efficacy of a relaxation training programme in lowering stress and anxiety in pregnant women. **Methodology:** Research design adopted in the study is based on pre-experimental design. Settings of the study was selected antenatal care centres in Panipat. Haryana. Size of the sample was 30 pregnant women. Sampling technique used for selecting samples were based on the purposive sampling technique. Data collection tools are Spielberger state-trait anxiety inventory and Cohen's Perceived Stress Scale. The applied relaxation training delivered to a participants consisted of seven 30 minutes group instruction sessions over the course of seven weeks. Statistical methods including descriptive and inferential were used to examine the data. **Results:** The results revealed a significant difference in the levels of state anxiety, trait anxiety, and perceived stress before and after the relaxation training programme [State Anxiety ('t' = 22.4, 'P' 0.001), Trait Anxiety ('t' = 23.33, 'P' 0.001), Perceived Stress ("t' = 22.89, 'P' 0.001)]. It was also discovered that no demographic variables were significantly related to pre-test levels of state anxiety, trait anxiety, or perceived stress. **Conclusion:** This study suggests that teaching applied relaxation may be a nonpharmacological way to help nervous pregnant women, at least throughout pregnancy. Future research must determine the intervention's long-term effects. Learning relaxation techniques could make women more health-conscious, which could contribute to healthy childbirth and childrearing. Maternity nurses and midwives should be trained in relaxation techniques to improve maternal mental health.

Keywords: Effectiveness, Applied Relaxation Training Program, Anxiety, Perceived Stress, Pregnant Women.

Introduction:

Pregnancy, Particularly the third trimester, is frequently accompanied by maternal worry. Depending on personality attributes, prior experience, hereditary factors, and social support, pregnant women react differently to identically stressful stimuli. In addition., normal pregnancy is linked with physical changes, hormonal shifts and anxiety about labour or foetal prognosis, all of which may exacerbate the stress response.[1] In the past two decades. There has been a substantial interest, both

from a clinical and a scientific point of view, in the influence of stress and anxiety during pregnancy on the health and the well-being of both the mother and her baby.[2]

Physically demanding employment, prolonged standing, shift and night work, and a high cumulative work tiredness score were shown in a meta-analysis of 29 studies to be strongly correlated with pre-term birth. Pregnancy related hypertension and preeclampsia were also associated with physically demanding jobs.[3] The emotional and mental health of women is often overlooked in poor nations in favour of resolving obstetric problems and decreasing maternal mortality. Pregnant women are more prone to brush off symptoms like insomnia, and fatigue, which point to a potential problem with their mental health, as being unavoidable side – effects of pregnancy.[4]

Hormonal shifts, altered mental outlooks, and reorganisation of one's career and social life are only some of the hallmarks of pregnancy.[5] Depending on the nature of the changes, the extent to which they are supported by the environment, and a host of other (personal) variables, these transitions can cause significant emotional upheaval and stress.[6] Negative maternal emotions or prolonged maternal stress influence not just the mother's mental health but also the child's development. Several studies suggest that prenatal distress and peripartum mental problems have harmful consequences on foetal and new-born development.[7]

To avoid or compensate for detrimental effects of maternal stress, preventive methods including as relaxation techniques are important. Most research show that mother relaxing during pregnancy reduces stress and improves wellbeing.[8] In pregnant women, a number of research have indicated that relaxation tactics positively affects the autonomic nervous system and reduce anxiety and depression. Di Pietro and colleagues gave pregnant women 18 minutes of guided imagery and music to relax and found that significant alterations in maternal heart rate (HR) and skin conduction level (SCL). [9] In a questionnaire – based study, Nwebube and colleagues found that pregnant women who listened to relaxation music for 12 weeks throughout their pregnancy exhibited fewer anxiety and depressed symptoms than women the control group. A substantial drop in maternal systolic and diastolic blood pressure, heart rate and uterine contractions was recorded after a prenatal music intervention for relaxation. Moreover, relaxation may improve the feeling of maternal labour pain.[10]

Practicing relaxation can take on a variety of forms; one of these forms is called "applied relaxation," and it includes activities such as breathing exercises and muscle relaxation is just as helpful as cognitive treatment.[11] It was observed in a study that involved 118 firefighters that the practise of applied relaxation considerably lowered both the participants' state and their trait anxiety.[12] In the current study, we wanted to determine whether or not practising relaxation techniques helps pregnant women feel less stressed and anxious about their pregnancy.

Statement of the Problem:

A study to evaluate the effectiveness of applied relaxation training programme on reducing anxiety and perceived stress among pregnant women in selected hospital, Cuttack. Odisha.

Objectives of the Study:

1. To assess the level of anxiety among pregnant women before and after applied relaxation training programme.
2. To assess the level of perceived stress among pregnant women before and after applied relaxation training programme.
3. To evaluate the effectiveness of applied relaxation training programme on reducing anxiety and perceived stress among pregnant women.
4. To determine correlation between anxiety and perceived stress among pregnant women,
5. To find out the association between level of anxiety and demographic variables of pregnant women.
6. To find out the association between level of perceived stress and demographic variables of pregnant women.

Methodology:

This study was prospective in nature, consisting of a set of pre- and post-tests, in this study, a course of 7 weekly applied relaxation training was used as the independent variable. Anxiety (both state and trait) and perceived stress were the primary outcomes of the interest. We took these readings both before and after the intervention was over, seven weeks later.

Thirty women who were pregnant for the first time were taken from three different antenatal care facilities to serve as a convenience sample. Women between the ages of 18 and 30 who were carrying a singleton pregnancy without any known medical or obstetric risks were considered eligible. All participants were educated adults who spoke Hindi fluently.

Participants were selected from a pool of people whose scores on the Spielberger State/Trait Anxiety Inventory ranged from 20 to 60, indicating moderate to high anxiety. Research was done in the three antenatal care centres of Panipat City, between October 2016 and February 2017. The Prem Institute of Medical Sciences Review Board in Panipat, Haryana, gave the study the green light from an ethical point of view.

During routine visits to the antenatal clinic, subjects completed questionnaires in a small private room. The applied relaxation training delivered to a participants consisted of seven 30 minutes group instruction sessions over the course of seven

weeks. For the majority of topics of interest to pregnant women, group instruction is more effective and less expensive than the individual instruction.

Classes were planned at the convenient times of participants. During the applied relaxation training, the women sat in a quiet room at the prenatal clinic and were instructed to imitate the various exercises performed by the instructor. Participants were also instructed to consistently practise the applied relaxation, and they kept daily records of their home relaxation practise throughout the day.

Table – I: Applied Relaxation Technique Session Schedule

Session	Activities	Content
One	**Introductory Session**	Group discussion of anxiety and stress-related problems in pregnancy, as well as a general and logical explanation of what applied relaxation is for.
Two	**Teaching Relaxation**	Teaching subjects to relax with a reduced version of progressive relaxation (tight for 5 seconds, relax for 10 seconds) in the hands, arms, face, shoulders, back, chest, stomach, breathing, hips, legs, and feet.
Three	**Relax Only Sessions**	The third session included "release-only" relaxation, which removes muscular tensing to speed relaxation.
Four	**Deep Breathing Techniques**	The fourth session emphasised deep breathing techniques to bring more oxygen to muscles and tissues.
Five	**Cue-Controlled Relaxation**	Cue controlled relaxation connects the self-instruction "relax" to being relaxed. This exercise emphasised breathing. For 5 breath cycles, the women were taught to "inhale" and "calm" before each breath.
Six	**Differential Relaxation**	This lesson teaches women to relax body regions not engaged in standing or walking.
Seven	**Rapid Relaxation**	Participants relaxed when making a phone call or unlocking a cabinet. The target was 20 to 30 seconds.

To enhance the event, the researchers employed, posters and handouts. A leaflet featured information on anxiety and stress in pregnancy and applied relaxation. Simple Hindi was used to ensure comprehension. As the eighth and final week of the study progressed, the participants were given a questionnaire to fill out as the post-test. This was done oneweek following the final session.

Self – administered questionnaire containing state / trait anxiety and perceived stress ratings were used to collect data. These were administered as pre- and post – tests prior to and during seven – week instructional programme.

Statistical methods including descriptive and inferential were used to examine the data. State anxiety, trait anxiety, and perceived stress data were also summarised using descriptive statistics, as were the demographics of the study population.

Results:

Table – I: Distribution of Study Participants According to Socio-Demographic Variables

(n = 30)

S. No	Demographic Variables		Frequency	Percentage
1.	**Age (Years)**	18 – 22	3	10.0
		23 – 26	14	46.7
		27 – 30	13	43.3
2.	**Gestational Age (Weeks)**	21 – 28	18	60.0
		29 – 36	12	40.0
3.	**Education**	Middle school	2	6.7
		High school	18	60.0
		Diploma / graduate	10	33.3
4.	**Occupation**	Housewife	18	60.0
		Laborer	4	13.3
		Employee	8	26.7
5.	**Family Type**	Joint	12	40.0
		Nuclear	18	60.0
6.	**Residence**	Rural	18	60.0
		Urban	12	40.0
7.	**Socio-Economic Status**	Poor	1	3.3
		Moderate	21	70.0
		Good	8	26.7

Table I indicates research participants' socio-demographics. Most study participants were between 23 and 26 years old (46.7%).Most study participants (60%) were between 21- and 28-weeks gestation.Most study participants (18,60%) had high school education.In terms of occupation, housewives constituted the majority (18 (60.0%) of study participants.According to the study participants' family type, the majority of them (18 (60.0%) belonged to a joint family. Majority of the study participants 18 (60.0 %) were residing in rural areas. Results showed that 18 people (60.0%) who participated in the study were from rural areas.Of the total number of people who took part in the study, 21 (or 70.0% of the total) come from middle-class backgrounds.

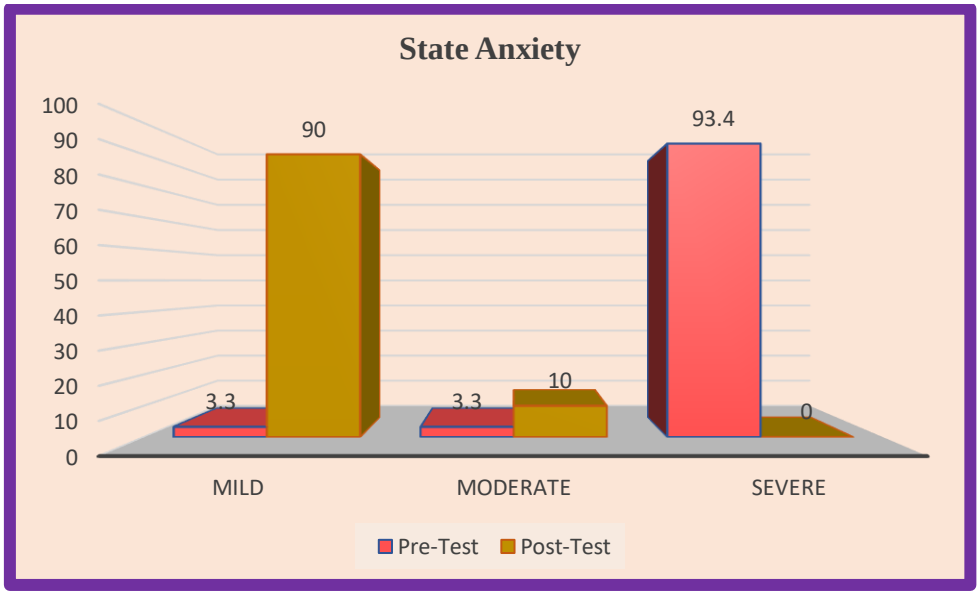

Figure – 1: Clustered Column Chart Shows the Level of State Anxiety

At the time of the pre-test, the vast majority of the study's participants, a total of 28 (93.3%), were experiencing severe levels of state anxiety. At the time of the post-test, the majority (90%) of participants had minor state anxiety.

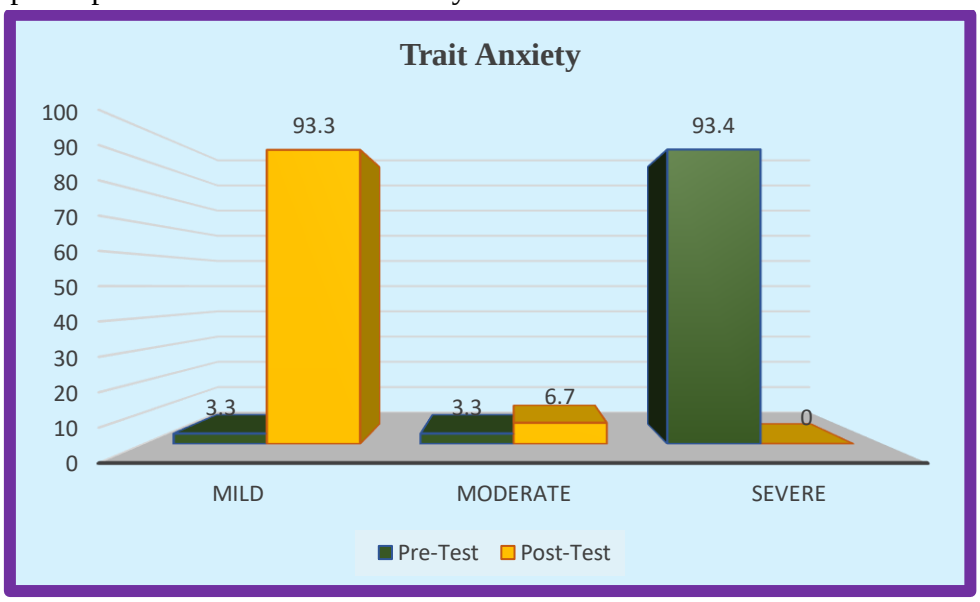

Figure – 2: Clustered Column Chart Shows the Level of Trait Anxiety

The vast majority of study participants (28.93.3%) had severe trait anxiety at the time of the pre-test assessment, and the overwhelming majority of study participants (29.93.3%) had mild trait anxiety at the time of the post-test assessment.

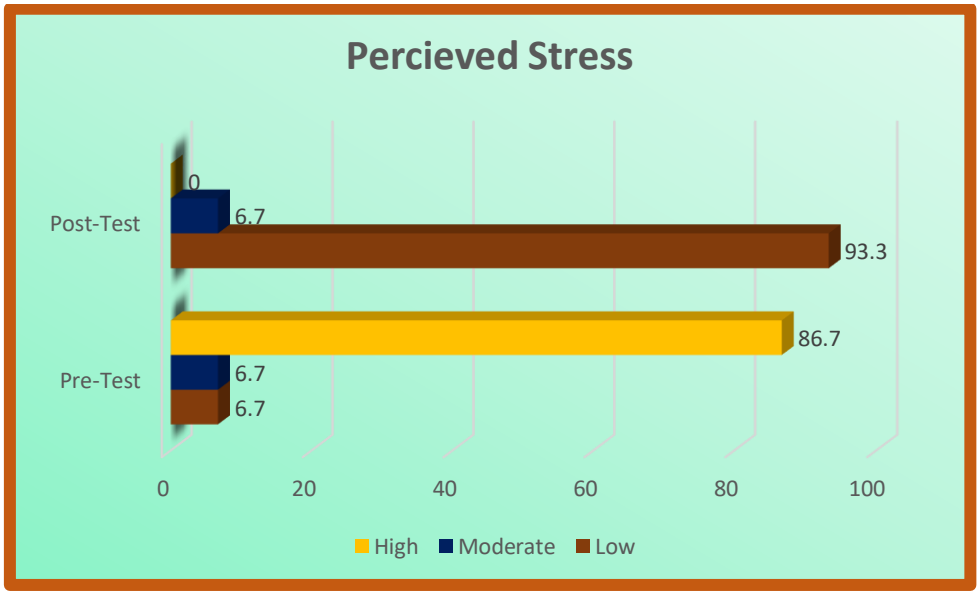

Figure – 3: Clustered Bar Chart Shows the Level of Perceived Stress

The perceived stress level of study participants reveals that during the pre-test assessment, most of them (26.7%) had high perceived stress, while during the post-test assessment, the majority (28.3%) had low perceived stress.

Table – II: Comparison of Mean, Standard Deviation, Mean % and Variance levels of State, Trait Anxiety and Perceived Stress of the Study Participants

(n = 30)

Variables	Pre-Test			Post-Test		
	Mean (S.D)	Mean %	Variance	Mean (S.D)	Mean %	Variance
State Anxiety	65.6 (6.84)	76.00	46.8	27.5 (6.49)	50.00	42.19
Trait Anxiety	66.5 (7.47)	73.00	55.9	27.4 (6.27)	49.00	39.42
Perceived Stress	32.5(6.46)	38.00	41.7	10.0 (3.67)	26.00	13.51

The mean and standard deviation score for state anxiety during the pre-test was 65.6 ± 6.84. The mean percentage score was 76.0, while the variance was 46.8. Similarly, the mean and standard deviation scores for the post-test evaluation were 27.5 ± 6.49. The mean percent score was 50 and the standard deviation was 42.19.

Pre-test mean and standard deviation scores for trait anxiety were 66.5 ± 7.47 and 73 was the mean %. Variance was 55.7. Post-test score was 27.4 ± 6.27. Mean % was 49.00. 39.42 was variance.

Mean and standard deviation scores for perceived stress during the pre-test were 32.5 ± 6.46, and the mean percent score was 38. The variance was 41.7, and the post-test score was 10.0± 3.67. The mean percentage was 26.0, while the variance was 13.51.

Table – III: Effectiveness of Applied Relaxation Techniques on State Anxiety, Trait Anxiety and Perceived Stress

(n = 30)

Tests	Mean	Mean Difference	S. D	LL	UL	Paired 't' test Score	'P' Value
				95 % CI			
State - Anxiety							
Pre - Test	65.60	39.0	6.8	34.2	41.5	22.44 (df = 29)	0.001***
Post - Test	27.50		6.4				
Trait - Anxiety							
Pre - Test	66.50	39.07	7.4	35.6	42.4	23.33 (df = 29)	0.001***
Post - Test	27.43		6.2				
Perceived Stress							
Pre - Test	32.57	22.57	6.4	20.5	24.5	22.89 (df = 29)	0.001***
Post - Test	10.00		3.6				

From Table III, we can conclude that the applied relaxation training programme reduced state anxiety, trait anxiety, and perceived stress significantly. The mean and standard deviation of state anxiety prior to the test were 65.6 $\pm$ 27.5. The mean score for difference was 39.0. The paired 't' test score of 22.44 for degree of freedom 29 was statistically significant at 'P' value 0.001. Similarly, the mean and standard deviation scores for trait anxiety were 66.50 $\pm$ 27.43, and the mean difference score was 39.07. The calculated paired 't' test score for the degree of freedom was 23.33, which was statistically significant at P 0.001. Mean and standard deviation for perceived stress were 32.57 $\pm$ 10.00. The mean score was 22.57 percent. The paired 't' test score for degree of freedom 29 was 22.89, which was statistically significant at a 'P' value 0.001.

Table – IV: Level of Association Between Pre-Test State Anxiety and Demographic variables

(n = 30)

S. No	Demographic Variables		N	M (S.D)	LL	UL	F Value	'P' Value
					95 % CI			
1.	**Age (Years)**	**18 – 22**	3	59.3 (17.7)	15.1	103.5	2.04 (2, 27)	0.15^{NS}
		23 – 26	14	67.5 (4.1)	65.1	69.9		
		27 – 30	13	64.9 (5.1)	61.7	68.0		

2.	**Gestational Age (Weeks)**	**21 – 28**	18	65.3 (8.7)	60.9	69.6	0.06 (1, 28)	0.79^{NS}
		29 – 36	12	66.0 (2.1)	64.6	67.3		
3.	**Education**	**Middle school**	2	68.0 (1.4)	55.2	80.7	0.47 (2, 27)	0.62^{NS}
		High school	18	64.6 (7.3)	60.9	68.2		
		Diploma / graduate	10	66.9 (6.6)	62.1	71.6		
4.	**Occupation**	**Housewife**	18	65.9 (4.9)	63.4	68.4	0.872 (2, 27)	0.42^{NS}
		Laborer	4	61.5 (15.7)	36.3	86.61		
		Employee	8	66.8 (4.0)	63.4	70.26		
5.	**Family Type**	**Joint**	12	66.6 (3.4)	64.4	68.8	0.47 (1, 28)	0.49^{NS}
		Nuclear	18	64.8 (8.4)	60.7	69.0		
6.	**Residence**	**Rural**	18	66.1 (7.8)	62.2	70.0	0.30 (1, 28)	0.58^{NS}
		Urban	12	64.7 (5.2)	61.3	68.1		
7.	**Socio-Economic Status**	**Poor**	1	70.0 (0)	0	0	0.33 (2, 27)	0.71^{NS}
		Moderate	21	65.8 (4.7)	63.6	68.0		
		Good	8	64.3 (11.1)	55.0	73.5		

The level of association between pre-test state anxiety and demographic variables is depicted in Table IV. According to this table, none of the demographic variables such as age, gestational age, education, occupation, family type, residence, or socioeconomic status had a significant relationship with pre-test state anxiety.

Table – IV: Level of Association Between Pre-Test State Anxiety and Demographic variables

(n = 30)

S. No	Demographic Variables		N	M (S.D)	LL	UL	F Value	'P' Value
					95 % CI			
1.	**Age (Years)**	18 – 22	3	58.6 (19.6)	9.84	107.4	2.75 (2, 27)	0.08^{NS}
		23 – 26	14	68.9 (2.4)	67.5	70.3		
		27 – 30	13	64.9 (5.1)	61.8	69.5		
2.	**Gestational Age (Weeks)**	21 – 28	18	65.7 (9.4)	61.0	70.4	0.06 (1, 28)	0.79^{NS}
		29 – 36	12	67.5 (2.5)	65.9	69.1		
3.	**Education**	Middle school	2	69.0 (0)	69.0	69.0	0.24 (2, 27)	0.78^{NS}
		High school	18	65.7 (8.0)	61.7	69.7		
		Diploma / graduate	10	67.3 (7.4)	61.9	72.6		
4.	**Occupation**	Housewife	18	67.1 (5.6)	63.4	68.4	2.10 (2, 27)	0.14^{NS}
		Laborer	4	59.7 (16.1)	36.3	86.61		
		Employee	8	68.3 (3.2)	63.4	70.26		
5.	**Family Type**	Joint	12	68.7 (2.1)	67.3	70.1	1.86 (1, 28)	0.18^{NS}
		Nuclear	18	65.0 (9.2)	60.3	69.6		
6.	**Residence**	Rural	18	67.2 (8.2)	63.1	71.3	0.47 (1, 28)	0.49^{NS}
		Urban	12	65.3 (6.3)	61.3	69.3		
7.	**Socio-Economic Status**	Poor	1	69.0 (0)	0	0	0.24 (2, 27)	0.78^{NS}
		Moderate	21	66.9 (5.5)	64.4	69.4		
		Good	8	65.0 (11.8)	55.0	74.9		

Table V demonstrates the degree of association between pre-test trait anxiety and demographic variables. According to this table, none of the demographic variables such as

age, gestational age, education, occupation, family type, residence, or socioeconomic status had a significant relationship with pre-test trait anxiety.

Table – IV: Level of Association Between Pre-Test State Perceived Stress and Demographic variables

(n = 30)

S. No	Demographic Variables		N	M (S.D)	LL	UL	F Value	'P' Value
					95 % CI			
1.	**Age (Years)**	18 – 22	3	27.3 (13.2)	-5.6	60.3	1.22 (2, 27)	0.31^{NS}
		23 – 26	14	33.7 (4.0)	31.3	36.0		
		27 – 30	13	32.5 (6.7)	28.4	36.6		
2.	**Gestational Age (Weeks)**	21 – 28	18	30.8 (7.9)	61.0	70.4	3.27 (1, 28)	0.08^{NS}
		29 – 36	12	35.0 (0.9)	65.9	69.1		
3.	**Education**	Middle school	2	34.0 (0)	8.59	59.4	0.12 (2, 27)	0.88^{NS}
		High school	18	32.8 (8.0)	29.9	35.7		
		Diploma / graduate	10	31.8 (7.4)	25.9	37.6		
4.	**Occupation**	Housewife	18	33.6 (5.8)	30.7	36.5	2.9 (2, 27)	0.07^{NS}
		Laborer	4	25.7 (10.2)	9.4	42.1		
		Employee	8	33.5 (3.8)	30.2	36.7		
5.	**Family Type**	Joint	12	33.8 (3.2)	31.7	35.9	0.76 (1, 28)	0.39^{NS}
		Nuclear	18	31.7 (7.8)	27.8	35.6		
6.	**Residence**	Rural	18	32.5 (6.2)	29.3	35.6	0.05 (1, 28)	0.94^{NS}
		Urban	12	32.6 (6.9)	28.2	37.1		
7.	**Socio-Economic Status**	Poor	1	36.0 (0)	0	0	0.51 (2, 27)	0.60^{NS}
		Moderate	21	33.1 (5.7)	30.46	35.7		
		Good	8	30.7 (8.4)	23.72	37.7		

The association between perceived stress prior to the test and demographic variables is illustrated in Table V. According to this table, none of the demographic variables, including age, gestational age, education, occupation, family type, residence, or socioeconomic status, had a significant relationship with trait anxiety prior to the test.

Discussion:

This study sought to determine the efficacy of an applied relaxation technique on state anxiety, trait anxiety, and perceived stress in pregnant women. After seven weeks of applied relaxation training, there was a significant difference between pre-test and post-test scores in terms of mean state anxiety, trait anxiety, and perceived stress mean and standard deviation scores.

Preeclampsia can be triggered by stress and worry, and recent reports in different parts of India indicate that these conditions are on the rise among pregnant women there. Therefore, lowering the worry or stress of expectant moms through the use of applied relaxation methods can improve hypertension symptoms and other maternal, foetal, and neonatal outcomes. The philosophy behind the practise of ACT is rooted in the fields of psychology, neurology, and immunology.[12]

Prenatal maternal stress causes birth defects. Relaxation practises may reduce stress then. Tragea C et al. (2014) studied the effects of applied relaxation on pregnant women in their second trimester. N = 31 primigravida women in their second trimester received a 6-week stress management programme (relaxation breathing and progressive muscle relaxation, RB-PMR, twice a day). The study found that the strategies improved pregnant women's mental health. Systematic use of prescribed relaxation techniques reduced perceived stress (mean change 3.23, 95% CI: 4.29 to 0.29) and increased sensation of control (mean change 1.99, 95% CI: 0.02–3.7).[13]

It has been discovered that maternal worry and stress are predictors of unfavourable pregnancy outcomes, such as low birth weight and premature delivery. A study was carried out in Iran on 110 women who were considered to be at a low risk of obstetrical complications and medical complications during their first pregnancies. The purpose of the study was to determine whether relaxation education in anxious pregnant Iranian women in their first pregnancy affects certain pregnancy outcomes. These outcomes included birth weight, the rate of preterm birth, and the rate of surgical delivery. In the study, participants in the control group simply got regular prenatal care, but those in the experimental group also participated in applied relaxation training sessions over the course of seven weeks. Both preeducational and posteducational intervention were used to measure levels of anxiety as well as felt stress. In the experimental group, significant decreases in low birth weight, caesarean section, and/or instrumental extraction were identified compared to the control group's findings. These findings were based on the findings of the study. It was discovered that there were no significant variations in the rates of premature birth.[14]

Conclusion:

According to the findings, there may be positive impacts of participating in relaxation training programmes throughout the prenatal period. This intervention has the potential to act as a resource for improving the outcomes of pregnancies in women who experience high levels of stress and anxiety.

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- ***For Books and other monograph Format***:

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  Nadkarni KM. Indian MateriaMedica. Edn 3, Vol. I, Popular Prakashan, Mumbai, 2000, 242-246.

- ***For Patent Reference:***

  Aviv H, Friedman D and Vered K. Submicron emulsions as ocular drug delivery vehicles. U.S. Patent 5496811; 1996.

- ***For Website Reference:***

  Habitat utilization pattern by winter migrants at Kolleru lake in Andhra Pradesh. http://www.biospace.com. 27 may, 2007.

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Write about the people in your study in a way that acknowledges their participation. Source(s) of support in the form of grants/equipment/ drugs

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