



“QUALITY OF LIFE AND PREVALENCE OF URINARY INCONTINENCE IN WORKING AND NON WORKING PERI-MENOPAUSAL WOMEN”

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ABSTRACT

TITLE:“QUALITY OF LIFE AND PREVALENCE OF URINARY INCONTINENCE IN WORKING AND NON WORKING PERI-MENOPAUSAL WOMEN”

BACKGROUND & PURPOSE:Urinary incontinence is a common problem in middle aged and older women associated with decreased quality of life.To study the quality of life and prevalence of urinary incontinence in working and nonworking peri-menopausal women.

METHODOLOGY:With an intention to assess the strength of pelvic floor muscle Manual muscle testing (MMT) was done. To find out presence and type of urinary incontinence the questionnaire for female urinary incontinence diagnosis (QUID) was adopted. All subjects were asked questions regarding demographic data, irregularity of menstruation, number of deliveries, and type of labor. Subjects were asked questions related to quality of life from the Menopause specific quality of life (MENQOL) scale.

RESULT:There is 42.22% prevalence of urinary incontinence in working and non working women in the present study. The prevalence of urinary incontinence inworking women is 28.89% and in non working women is 55.55%. The working women are not having mixed type of urinary incontinence. There is weak correlation with QUID and variables (i.e. c-section delivery, MMT and miscarriage) by Pearson correlation test. In both groups decreased quality of life is seen but non working women has more affection than working women.

CONCLUSION:There is a significant difference in urinary incontinence and menopausal symptoms in both groups. Working women shows decreased affection of menopause on their quality of life whereas non working women perceive increased symptoms.

KEY-WORDS: Peri-menopausal women, Urinary incontinence, Questionnaire for urinary incontinence diagnosis, Menopause specific quality of life scale.

INTRODUCTION

Menopause is a transition from fertility to infertility. It is found at the age of 45-55 years and covers about a third part of a life of women.^(6,11) According to WHO menopause can be defined as cessation of menstrual cycle because of changes in ovarian follicular functioning. It has two terms closely connected to it. 1) Peri-menopause, it is a phase just before the menopause from which symptoms start to showing up and is also called as menopausal transition stage or a climacteric. Climacterium word has been derived from a Greek word klimakter which means 'rung of a ladder' or process of making progress.⁽¹¹⁾ 2) Post menopause, it is a stage after a period of 12 months of amenorrhea.^(3,12) In the rural areas menopause is believed to be a positive change in the life of a woman as it provides freedom from many rituals and cultural restrictions connected with menstruation and pressure of childbirth.⁽¹⁾ The cessation of menstruation followed by simple hysterectomy or bilateral oophorectomy is called as surgical menopause.

The symptoms are frequent and associated with decadence of quality of life⁽³⁾. Quality of life refers to women's health, comfort and happiness.⁽¹³⁾ Quality of life is affected by many factors such as mental or psychological conditions, level of independence, social relations, environmental influences and physical well being. One of the major components required for perception of good life is a satisfaction. Because of that quality of life is also termed as Health related quality of life (HRQOL).⁽⁵⁾ Number of children, social and economic conditions, cast or culture and work has shown a great impact on the women's life, so they can be considered as relevant variables affecting climacterium and the menopause.⁽⁵⁾

The most common types of urinary incontinence are

1. Stress urinary incontinence (SUI),
2. Urge incontinence (UI) and
3. Combination of both called as mixed urinary incontinence.⁽⁷⁾

Pelvic floor muscles are the key muscles to maintain urinary continence. Pelvic floor muscles are made up of two muscular layers, the pelvic diaphragm and urogenital diaphragm. The muscular layers provide structural support, the volume of pelvic floor muscle influences anatomical location of pelvic organs. The strong and fast contraction of pelvic floor maintains continence during increase in the intra abdominal pressure.⁽⁹⁾

The questionnaire for urinary incontinence diagnosis (QUID) is framed to determine presence and frequency of urinary incontinence. MENQOL questionnaire has been developed to identify the presence and severity of the symptoms related to menopause. It exhibits menopause specific quality of life. There are 29 items or symptoms in MENQOL. It is an eight point scale. It has covered 4 domains, vasomotor, psychosocial, physical and sexual. For the manual muscle testing of pelvic floor muscles modified oxford grading system has been incorporated with vaginal palpation.

NEED OF STUDY

The peri-menopausal phase is associated with an increase in the hazard for developing monthly and more frequent incontinence. In peri-menopause, the vasomotor, physical, psychological, social and sexual factors get affected. This deteriorates the quality of life of women disregard of their profession. There is a lack of literature comparing the affection of quality of life and urinary incontinence in peri-menopausal working and non-working women. There aren't any government policies available in India for menopausal women so. It can be helpful to build up menopause policy for women employees in private and government sectors.

METHOD OF DATA COLLECTION:

Study design: An observational study

Source of data: Sainath hospital, Ahmedabad, Palanpur female hospital, Palanpur

Sample size: 90 peri-menopausal women

Sample design: Simple random sampling

Study duration: 1 year

INCLUSION CRITERIA

Who are willing to participate, Diagnosed peri-menopausal women, Age- 40-55years, Having Irregular menstruation

EXCLUSION CRITERIA

Breast or thyroid cancer, Pregnant women, Lactation, Had hysterectomy, Bilateral oophorectomy, Hormone replacement therapy, No menstrual period in >3months, Current urinary incontinence drug therapy, Stage 3 or 4 pelvic organ prolapsed, Neurological or Cardiac conditions

METHODOLOGY

The subjects were selected from Sainath hospital, Gynecological department Ahmadabad and from Palanpur female hospital at Palanpur. Written consent was taken from each subject. Those who fulfilled inclusion criteria only those were included in the study. Total 90 subjects were taken. Working women (working for more than 6-hours) and Non- working peri-menopausal women were included. All subjects were asked questions regarding demographic data, irregularity of menstruation, number of deliveries, and type of labor. Subjects were asked questions related to quality of life from the Menopause specific quality of life (MENQOL) scale. To find out

presence and type of urinary incontinence the questionnaire for female urinary incontinence diagnosis (QUID) was adopted. With an intention to assess the strength of pelvic floor muscle Manual muscle testing (MMT) was done. Modified oxford scale (MOS) was used to evaluate the strength of pelvic floor muscle. With consent of patient MMT was performed.

RESULT

The present study was done on 90 peri-menopausal women. The age group ranged from 40 to 55years.

TABLE 1.1 THE MEAN AGE OF PARTICIPANTS

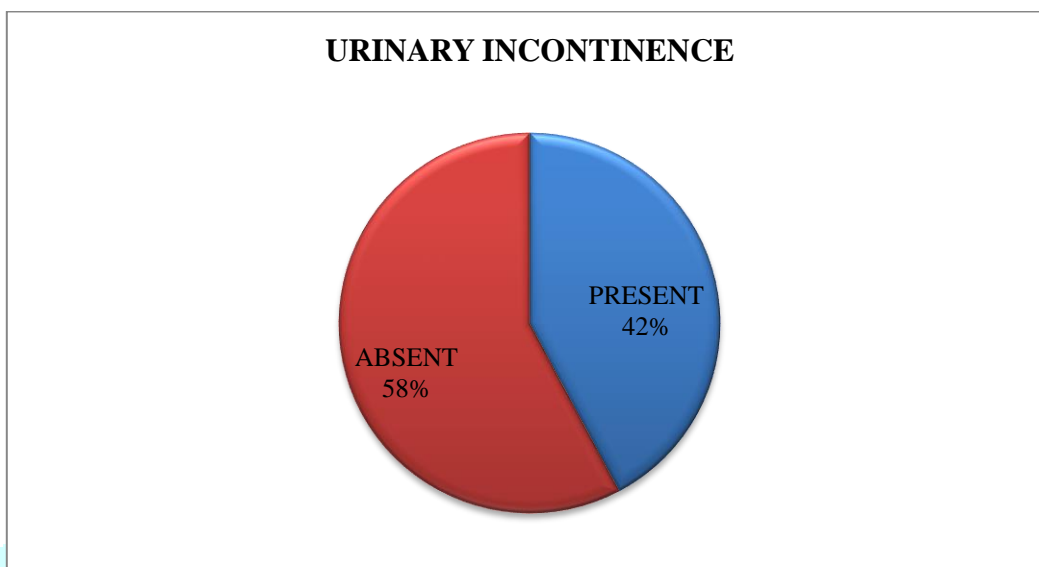
Group	N	Mean Age	Standard Deviation
Working women	45	45.29	4.14
Non working women	45	45.84	4.29

TABLE1.2 PREVALENCE OF URINARY INCONTINENCE IN PERI-MENOPAUSAL WOMEN

Perimenopausal Women	Urinary Incontinence		Total
	Present	Absent	
Working	13	32	45
Non Working	25	20	45
Total	38	52	90

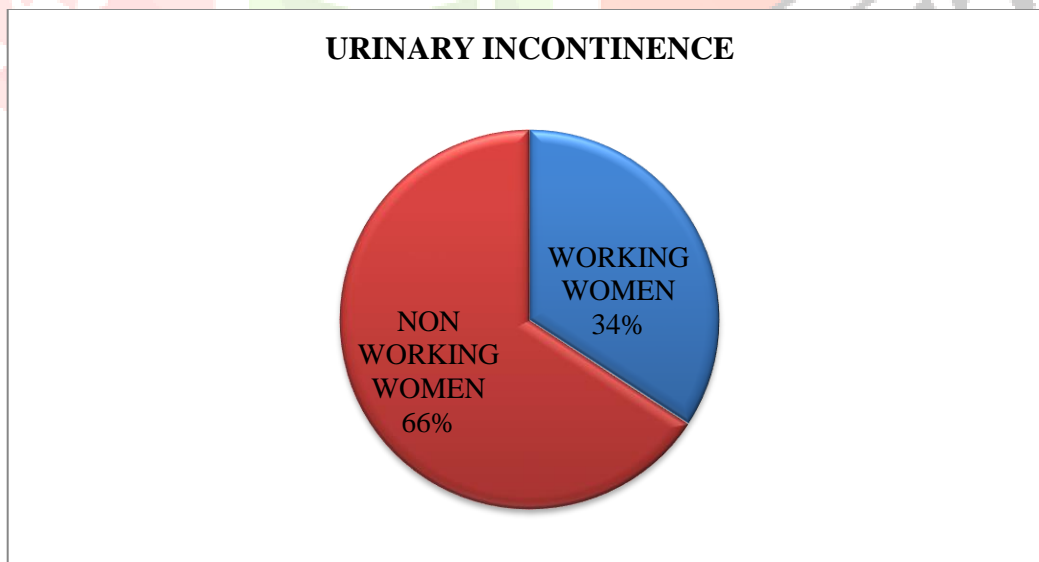
As per the table out of 90 perimenopausal women 38 women had urinary incontinence. Among them 13 women are working and 25 women are non working.

GRAPH 1.1 PIE CHART SHOWING PREVALENCE OF URINARY INCONTINENCE IN PERIMENOPAUSAL WOMEN



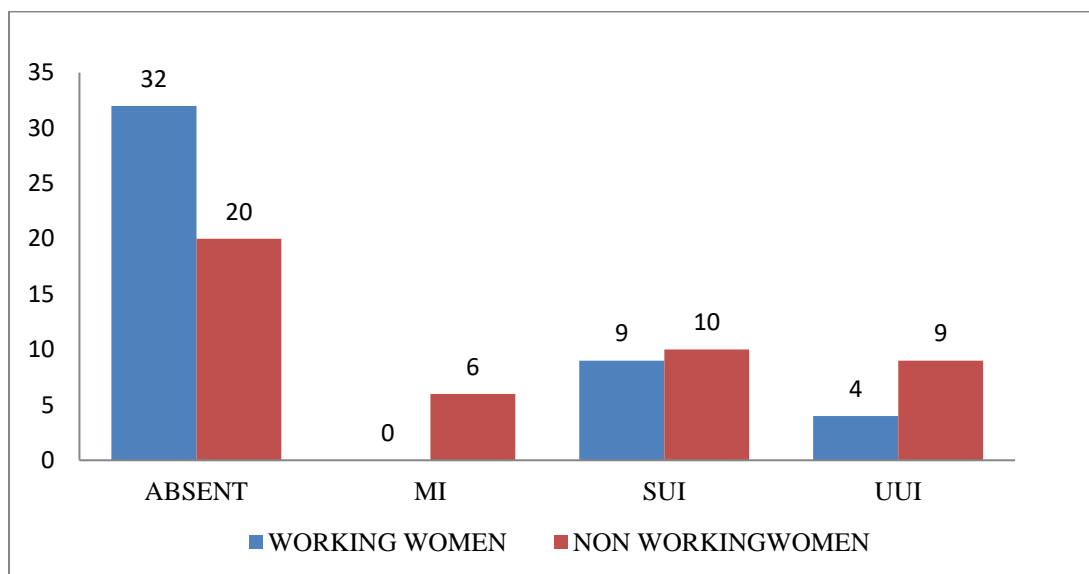
The prevalence of Urinary incontinence in peri-menopausal women is 42%.

GRAPH 1.2 PIE CHART SHOWING PREVALENCE OF URINARY INCONTINENCE IN WORKING AND NONWORKING PERI-MENOPAUSAL WOMEN



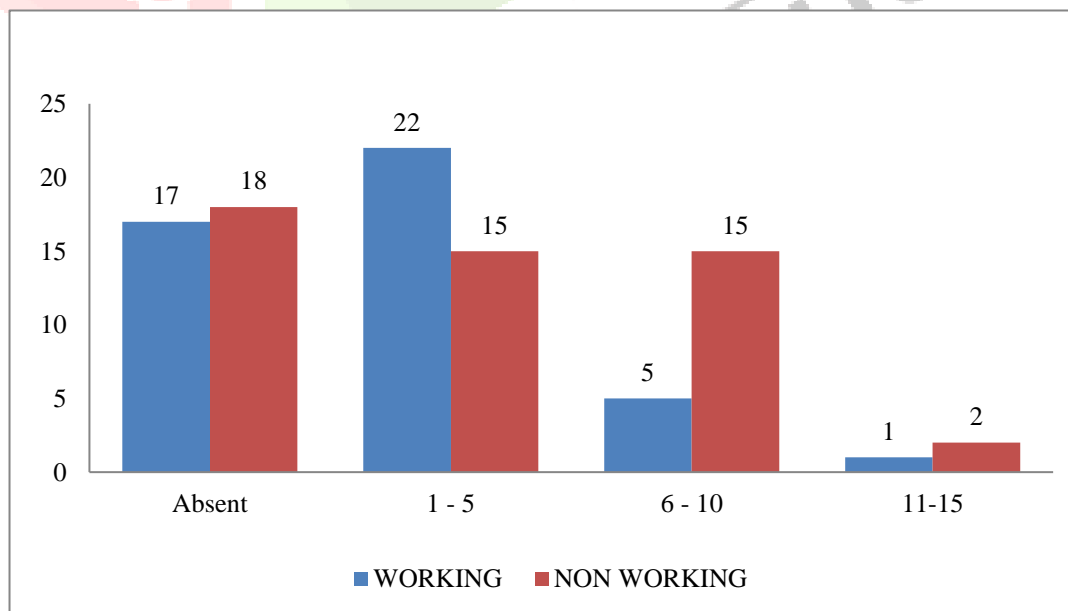
34% working women and 66% non working women shows urinary incontinence in peri-menopause.

GRAPH 1.3 TYPE OF INCONTINENCE IN WORKING AND NON WORKING PERI-MENOPAUSAL WOMEN



The stress urinary incontinence was found in maximum women(19),among them 9 women were working and 10 were non working. The working women were not having mixed type of urinary incontinence but 6 non working women had MI. The UII was found in 4 working and in 9 non working peri-menopausal women.

GRAPH 1.4 CLASSIFICATION OF WOMEN DEPENDING ON SEVERITY OF URINARY INCONTINENCE USING QUID SCALE



The maximum number of women felt very mild affection of urinary incontinence which is scored as 1-5 on QUID scale. A moderate effect was found in 5 working and 15 non working women. The quality of life compromising

effect was found in 1 working and 2 non working perimenopausal women. Seventeen working and 18 non working perimenopausal women are having continence.

TABLE 1.3(A) CORRELATION BETWEEN QUID SCORE AND VARIABLES IN WORKING PERIMENOPAUSAL WOMEN

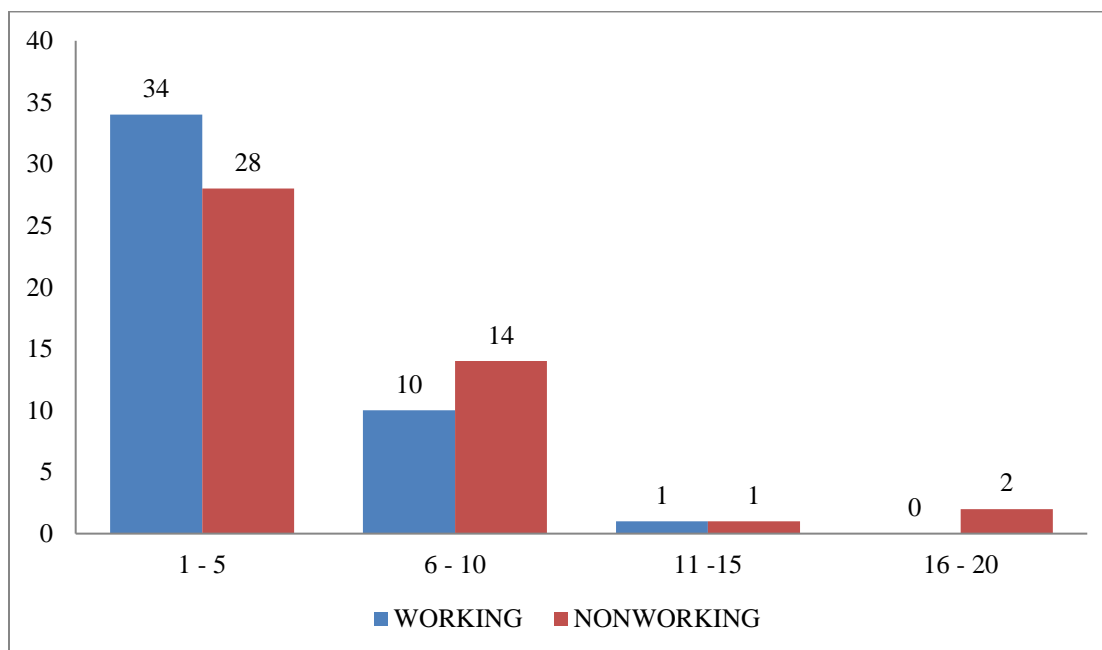
PEARSON CORRELATION TEST IN WORKING WOMEN				
VARIABLES		R	CORRELATION	
QUID SCORE	Vaginal delivery	0.038	Positive	Weak
	C- section	0.013	Positive	Weak
	Total delivery	0.043	Positive	Weak
	MMT	0.021	Positive	Weak
	Miscarriage	0.029	Positive	Weak
	Abortion	0.129	Positive	Weak

TABLE 1.3(B) CORRELATION BETWEEN QUID SCORE AND VARIABLES IN NON WORKING PERIMENOPAUSAL WOMEN

PEARSON CORRELATION TEST IN NON WORKING WOMEN				
VARIABLES		R	CORRELATION	
QUID SCORE	Vaginal delivery	0.234	Positive	Weak
	C- section	0.1	Positive	Weak
	Total delivery	0.283	Positive	Weak
	MMT	0.139	Positive	Weak
	Miscarriage	0.052	Positive	Weak
	Abortion	0.392	Positive	Weak

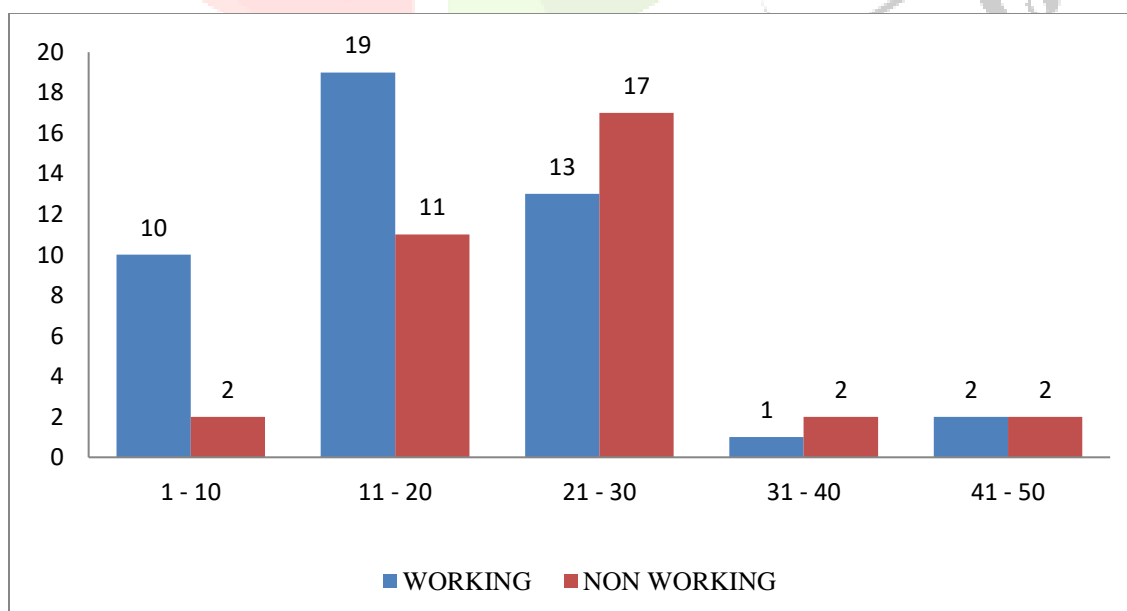
The table shows values of R in both working and non working women. The correlation between urinary incontinence (score using QUID scale) and the variables like vaginal delivery, c-section, total delivery, manual muscle testing of pelvic floor (score using modified oxford scale), miscarriage and abortion has been evaluated by using Pearson correlation test.

GRAPH 1.5 VASOMOTOR DOMAIN SEVERITY IN WORKING AND NON WORKING PERIMENOPAUSAL WOMEN



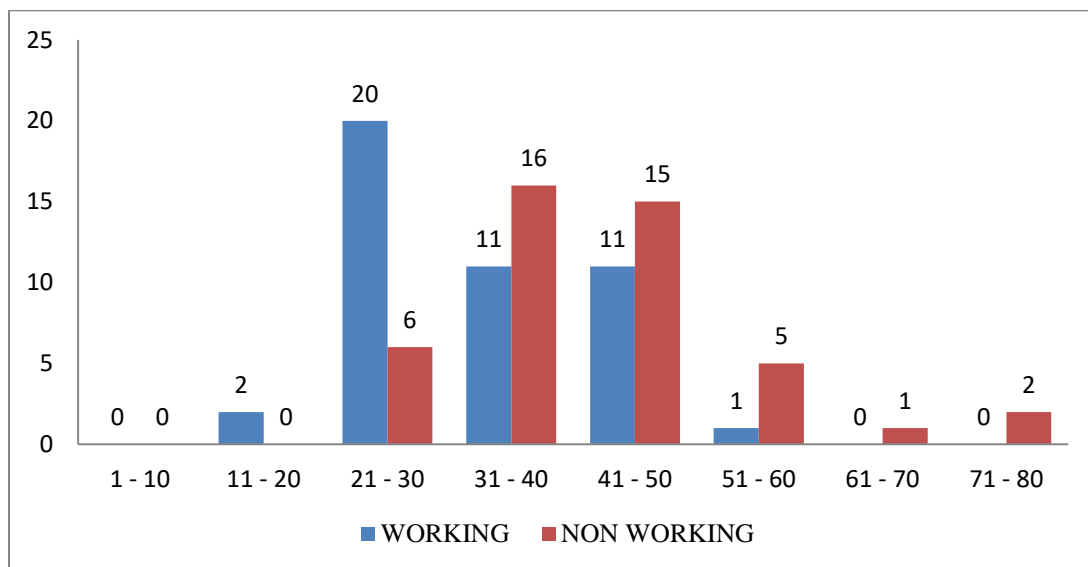
Above table and graph gives an information about score of vasomotor domain in both working and non working women. Only 4 women felt it bothersome. Large number of women (62) had mild symptoms related to vasomotor domain.

GRAPH 1.6 PSYCHOSOCIAL DOMAIN SEVERITY IN WORKING AND NON WORKING PERIMENOPAUSAL WOMEN



The graph represents number of women with severity of the symptom. The psychosocial symptoms were more prevalent than vasomotor symptoms. Only 3 working and 4 non working women had shown severe affection .

GRAPH1.7PHYSICALDOMAIN SEVERITY IN WORKING AND NON WORKING PERI-MENOPAUSAL WOMEN



The physical symptoms were to peak in all the symptoms affecting the quality of life. A few women shown absence of physical domain on their quality of life. On an average all the women had physical symptoms of perimenopause hampering their quality of life.

GRAPH 1.8 SEXUAL DOMAIN SEVERITY IN WORKING AND NON WORKING PERI-MENOPAUSAL WOMEN

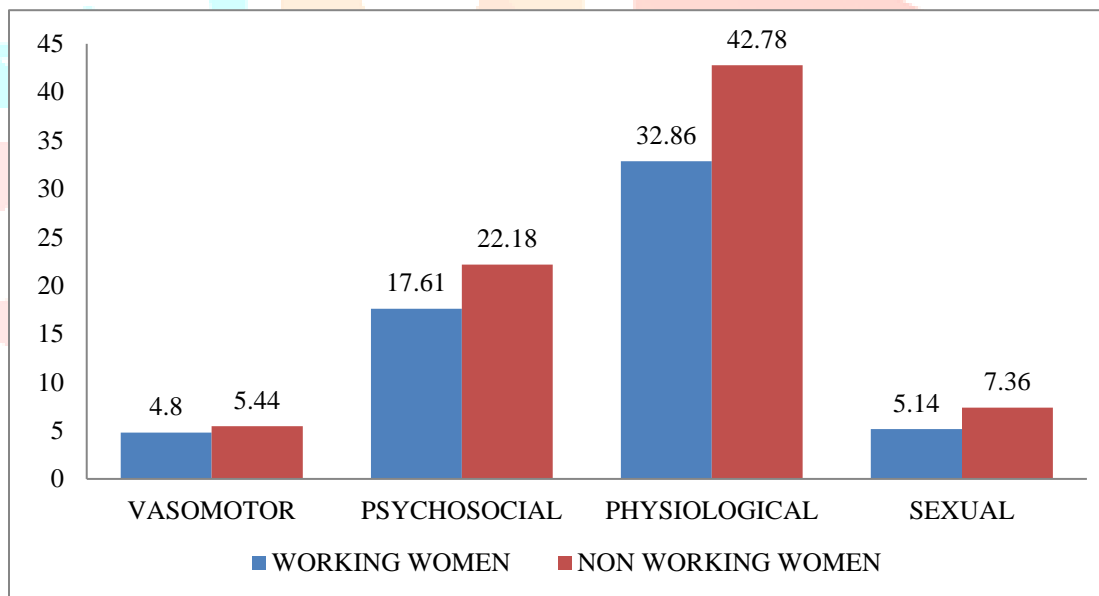


The graph represents sexual symptoms severity with number of women. Maximum(working 30& non working17) women had mild affection on quality of life due to the symptoms regarding sexual life. A few women had severe affection on their quality of life due to increased frequency of urination, vaginal dryness.

TABLE 1.4 UNPAIRED T TEST FOR WORKING AND NON WORKING PERI -MENOPAUSAL WOMEN COMPARISION

Variables	WORKING		NON WORKING		Unpaired t	P Value	Se
	Mean	Sd	Mean	Sd			
Vasomotor	4.8	2.43	5.44	3.11	1.0878	0.10878	0.588
Psychosocial	17.61	8.83	22.18	7.81	2.6006	0.0109	1.757
Physical	32.86	9.48	42.78	11.62	4.442	<0.0001	2.233
Sexual	5.14	2.67	7.36	4.32	2.932	0.0043	0.757
QUID	2.55	3.07	4.22	3.64	2.352	0.0209	0.710

GRAPH 1.9 MEAN OF WORKING AND NON WORKING WOMEN MENQOL DOMAINS



All four domains vascular, psychosocial, physical and sexual were elevated in the non working group. The maximum affection was seen in the physical domain of both groups, where nonworking women (42.78 ± 11.6); there was extreme significance in the unpaired t test between both groups ($p=0.0001$, $t=4.442$) The vasomotor domain doesn't significantly vary in both groups. There was significant difference in psychosocial domains ($p=0.0109$, $t=2.6006$). Whereas sexual domain was very significant ($p=0.0043$, $t=2.9324$).

DISCUSSION

The study represents peri-menopausal symptoms in women from Gujarat, India. Where, comparison of quality of life and prevalence of urinary incontinence in working (more than 6 hours) and non working peri-menopausal women has taken place. The working women were highly educated and had fairly lower number of deliveries, abortion and miscarriage than non working women.

In the study, peri-menopausal women of 45-55 age group were taken. Total 90 women were taken among them 38(42.22%) women had incontinence, where 13(28.89%) working and 25(55.55%) non working women were incontinent. Out of 90 women maximum women(42.22%) represented SUI and least women(13.33%) showed mix type of incontinence. UUI was seen in 13 women.

Quid represented significant difference in both working and non working groups. While comparing the type of incontinence in working and non working women there was predominating SUI in working women which is 20% but the symptoms were mild, not hampering their quality of life. Risk factors for stress urinary incontinence may include vaginal delivery, obesity, and chronic gynecological diseases. Moreover non working women are found to have more numbers of vaginal delivery than working women, which may lead to increased prevalence of urinary incontinence in them.

Although there is no clear mechanism identified by which the correlation between vaginal deliveries and changes in urethral control can be understood but studies have shown 2.4 fold increase in SUI in women with 2 vaginal deliveries. The decrease in sexual desires with presence of SUI has been seen in more than half of the population. Previous studies have reported association between age, mode of delivery and obesity.⁽⁸⁾

Besides this working perimenopausal women have no prevalence of MI, whereas 22.22% non working women were having SUI and 13.33% had MI. The UUI is more in non working peri-menopausal women than working women, as there is sedentary life of nonworking women and decreased physical efforts. Joanne Booth et al proved that long period of inactivity or sitting leads to UUI, supports our result.

Manual muscle training is clinically related to the urinary incontinence, statistically there is weak correlation between urinary incontinence and manual muscle testing in non working women ($r=0.234$) and working women ($r=0.038$). The weak correlation of manual muscle training and urinary incontinence suggest that different measurement tools evaluate different aspects of pelvic floor muscle function. Studies have shown that continent women had greater manual muscle testing ($p=0.01$) and greater endurance ($p<0.001$) rather than incontinent women on perineometry.⁽¹³⁾

According to Pearson correlation efficient there is weak correlation between urinary incontinence and normal delivery and c-section in both groups but in working women group abortion is positively correlated to urinary incontinence($R=0.129$). Non working women group presented positive correlation between urinary incontinence and normal/ vaginal delivery($R=0.234$) and total number of deliveries ($R=0.283$)

MENQOL was significantly different with its domains while comparing working and non working group values. All four domains vascular, psychosocial, physical and sexual are elevated in the non working group. The maximum affection is seen in the physical domain of both groups, where nonworking women (42.78 ± 11.6); there is extreme significance in the unpaired t test between both groups ($p=0.0001$, $t=4.442$) The vasomotor domain doesn't significantly vary in both groups ($p=0.2797$, $t=1.088$). There is significant difference in psychosocial domains ($p=0.0109$, $t=2.6006$). Whereas sexual domain is very significant ($p=0.0043$, $t=2.9324$).

Vasomotor symptoms were seen mild in maximum working women controversially the non working women group has been having more severity and increasing discomforts on their life. Vasomotor symptoms are least found in asian women rather than any other country. According to some studies vasomotor complaints are seen moreover in the peri-menopausal stage and psychological complaints are found more in the post menopausal phase⁽²⁾. The hot flushes and night sweats are problematic at work place.⁽⁴⁾ Difficulty in sleeping is closely related to night sweats which impact on work performance⁽¹⁰⁾.

The psychosocial symptoms are seen in all of the women but the severity varies. The non working women have shown more severe concern regarding the dissatisfaction towards life, anxiety, feeling of depression and impatience. The non working women represent more perception of psychological symptoms than working women. Moderate leveled physical activity has shown decreased psychosocial and physical symptoms in menopause and thereby increasing quality of life.

The physical symptoms are to peak in all the symptoms affecting the quality of life. The maximum bothersome symptom in the physical domain is back ache and neck ache. The maximum score is attained by non working group of women about 4.44% female has maximum affect on their life. Depending on work place environment and type of work symptoms may vary. As the quality of life definition suggest the affection is mostly person dependent, the quality of life relies on individual perception of the symptom, it may vary from person to person.

Significant difference was found in both working and non working women in regard to their sexual life ($p=0.0043$). Vaginal dryness is age related factor which is found in aging women. The decrease in estrogen levels leads to vaginal dryness and decreased libido.

CONCLUSION

There is a significant difference in urinary incontinence and peri-menopausal symptoms of both groups. Working women show decreased affection of menopause on their quality of life whereas non-working women perceive increased symptoms. Vasomotor domain affects both groups in the same manner but physiological, psychosocial and sexual domains show statistically significant difference.

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