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Impact of pharmacist provided counseling on mental health status of post-menopausal Women

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ABSTRACT

Menopause is described as the point of time when the last menstruation occurs in a woman. This is the period during which changes in the bleeding patterns due to alterations in the hormone levels were noticed. Due to alterations in these hormone levels, physical as well as mental health changes occur in women resulting in menopausal symptoms. Hence, this study was conducted to analyze the impact of counseling on MHS of postmenopausal women. This simple prospective interventional study was conducted in the Gynecology department of Tertiary Care Hospital for a period of 4 months in 200 patients divided into two groups. Mental health status (MHS) scores were calculated by using a validated questionnaire. Statistically significant difference in the score of baseline MHS was found between the two groups. Reduction in the score of MHS was seen in both the groups after counseling. Thus, this study revealed that providing counseling to postmenopausal women has positive impact on their mental health. Therefore, rendering effectual and repeated counseling to menopausal women depends on their need assist in leading a happy moreover healthy life.

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INTRODUCTION

Menopause is described as the point of time when the last menstruation occurs in a woman. Menopause refers to complete termination of menstrual activity resulted by the erosion of ovarian follicular development (Elavsky *et al.,* 2007). A woman acquires menarche between the ages of 10-16 years and menopause at the age of 48-52 years (Rees *et al.,* 1995). Caucasian women attain menopause at the average age of 51.5 years whereas Latin, Hispanic, Chinese, Japanese and African-American women attain menopause a little earlier (Palmer *et al.,* 2003; Katherine *et al.,* 2008). Usually, women attain menopause by two different ways-natural and surgical. Women undergoing natural menopause may experience three stages such as pre, peri and post menopause. Premenopause refers to the period during which there will be no reduction in the regularity of menses onset (Bromberger *et al.,* 2003). Perimenopause refers to the ill defined period that occurs two to eight months prior to the menopause and one year following last menses (Santoro *et al.,* 2015). Postmenopause refers to the period after following 12 months of amenorrhea i.e., after the last menses (Harlow *et al.,* 2011). Surgical menopause sometimes may be referred to as premature menopause (before 40 years) or early menopause (at or before 45 years) that may be induced by medical interventions such as bilateral oophorectomy, chemotherapy etc., (Shuster *et al.,* 2010). Peri menopausal stage is also known as 'menstrual transition' (MT). This is the period during which changes in the bleeding patterns due to

alterations in the hormone levels were noticed (Su *et al.,* 2009). Changes are mainly noticed in follicle stimulating hormone (FSH), luteinizing hormone (LH) anti-Mullerian hormone (AMH), inhibin B and estradiol levels. FSH and LH levels are found to be elevated where as AMH, inhibin B and estradiol levels are found to be reduced during MT (Barbakadze *et al.,* 2015). Due to alterations in these hormone levels, physical as well as mental health changes occur in women resulting in menopausal symptoms (Soares *et al.,* 2008). Vasomotor symptoms like hot flushes, night sweats, vaginal dryness, pruritis etc., and psychological symptoms like depression, anxiety, mood swings, confusion, insomnia, memory getting poor, difficulty in concentration etc., are frequently seen in postmenopausal women. About 85% of postmenopausal women may experience menopausal symptoms (Pronob *et al.,* 2015; Tal *et al.,* 2015). On account of that, 20% of women experience depression and 40-50% of women experience insomnia and other mental disorders. It is estimated that one in five women may experience at least one psychiatric disorder, especially depression (most common) (Colenda *et al.,* 2010). Fluctuations in the hormone levels are considered to be a significant factor in changing mental health status (MHS) of postmenopausal women. In addition, other factors that lead to changes in MHS are surgical menopause, lack of social support, unemployment, poor overall health status, and smoking, little or no exercise, family history of depression, post partum depression, pre menstrual dysphoric disorder etc., (Dennerstein *et al.,* 1999). All these postmenopausal symptoms can be treated either pharmacologically or non-pharmacologically. Hormone replacement therapy (HRT) is found to be the gold standard treatment which is used in treating mild depression and antidepressants (SSRIs) are the first line choice of drugs for major depression. Changes in sleep patterns can be treated by using low dose estrogen and low dose progesterone therapy. Other psychological and vasomotor symptoms can be treated by using estrogen therapy (Gambacciani *et al.,* 2005; Kaunitz *et al.,* 2015). Non- pharmacological therapies include dietary intake of vitamin E and herbal medicine. Counseling and psychotherapy may help the women to lead a mindful life (Tong *et al.,* 2013). Counseling upgrades people's way of living physically and intellectually through providing information, advice and assistance to lead their life healthy. Therefore, this study was conducted to analyze the impact of counseling on MHS of postmenopausal women.

METHODOLOGY

This simple prospective interventional study was conducted in the Gyneacology department of Tertiary Care Hospital for a period of 4 months (September 2017 – December 2017). The study protocol was approved by the institutional ethical committee (IEC/RVSIMS/2017/05). Consent from the hospital authorities, gynecologist, and psychologist were obtained before accessing data from the women. Subjects who fulfilled the inclusion criterion were documented from the case sheets and recorded in a separately designed case report form. Written informed consents were obtained after explaining the study protocol to each individual woman.

Study Participants

This study comprises a total of 200 women with the age of 30-70 years who attained menopause either naturally or surgically. Mentally challenged women were excluded from the study. The study population was divided randomly into two groups as natural and surgical groups with each group consisting of 100 subjects.

Data Collection

Data including the subject demographics (age, height, weight, BMI, marital status, occupation, food habit, substance abuse, and literacy background), allergy status, past medical history, obstetric and gynecologic history (regularity of periods, nature of delivery, age at delivery, age at menopause) were obtained by medical history interview and from medical records of the subjects for both the groups. Women of both the groups were assessed for MHS using a questionnaire which is validated by both gynecologist and psychologist. Subjects were counseled verbally as well as by issuing a counseling leaflet in English and Telugu at R0 (baseline-before counseling (BC)), R1 (a week after counseling (AC)) and R2 (a month after counseling (AC)). Each counseling session lasted for 20-30 minutes.

Questionnaire Used to assess MHS

The questionnaire has 16 questions and each question was scored as one (1) for positive answer and zero (0) for negative answer. This validated questionnaire composed of questions concerning depression, sleep patterns, memory changes, anxiety, mood swings, confusion, weight gain, fear, sexual arousal, stress, appetite, vitality, attentiveness, discomfort, aging, postmenopausal disease.

Statistical Analysis

The collected data were analyzed using IBM SPSS 17 and Graph Pad Prism 7.0. Descriptive statistics was used to exhibit demographic details of the study population. Chi-square test was used to analyze the difference in nature of delivery and regularity of periods between the two groups. Paired t-test was used to analyze the difference in MHS of

Table 1: Demographic Details of Study Population

Parameter	Study Groups		P value
	Group I (Natural Menopause)	Group II (Surgical Menopause)	
Age (yrs)	57.17±7.34	50.23±8.63	<0.0001*
Height (ft.)	5.19±0.24	5.20±0.30	<0.0001*
Weight (kg)	59.05 ±8.10	62.42±8.54	0.1870*
BMI (kg/m^2)	23.7±4.03	25.02±4.63	0.0377*
Literacy Background	Illiterate-64(64%)	Illiterate-62(62%)	0.8836**
	Literate-36(36%)	Literate-38(38%)	
Food Habit	Mixed-84(84%)	Mixed-74 (74%)	0.0826**
	Veg-16(16%)	Veg-26(26%)	
Substance Abuse	Beetle nut-4(4%)	Beetle nut-3(03%)	0.7004**
	Nil-96(96%)	Nil-97(97%)	
Occupation	House wife-80(80%)	House wife-68(68%)	0.1254**
	Employee-16(16%)	Employee-23(23%)	
	Labor-04(04%)	Labor-09(09%)	

*Paired t-test **Chi-square test

Table 2: Obstetric and Gynecologic Details of Study Population

Parameter	Study Groups		P value
	Group I (Natural Menopause)	Group II (Surgical Menopause)	
Regularity of periods	Yes -82	Yes -62	0.0016**
	No-18	No-38	
Nature of delivery	Normal-89	Normal-63	<0.0001**
	Caesarean-11	Caesarean- 37	
Age at delivery (Yrs)	First child-21.26±3.55	First child-22.05±2.24	0.0476*
	Last child-24.36±4.16	Last child-24.83±2.20	0.2952*
Age at menopause (Yrs)	49.43±4.36	41.22± 5.46	<0.0001*
Duration of Menopause (Yrs)			
Mean ± SD	7.77±5.52	9.03±8.45	0.0002*
≤5	38	47	
6-10	31	23	
11-15	20	7	
16-20	11	11	
>20	0	12	

*Paired t-test **Chi-square test

two groups at R0 and one way analysis of variance (ANOVA) was used to analyze the difference in MH S at R0, R1 and R2 of each group. Wherever computed, a P value of less than 0.05 was considered significant, since the confidence interval (CI) was maintained at 95%.

RESULTS

A total of 200 postmenopausal women were enrolled and randomized equally into two groups (100 each) as group I (natural menopause) and group II (surgical menopause). The demographic details of the subjects included in the study are shown in Table 1.

Statistically significant difference in the demographic parameters was not found between the groups except age (<0.0001), height (<0.0001) and BMI (0.0377) parameter.

Ages of 200 participants have been segregated into different age quartiles as shown in Figure 1 and presence of various co morbidities among subjects were graphically presented in Figure 2. The mean (SD) age of the studied population was found to be 54 (8.70) years with a median age of 54 years. Statistically significant difference was found in all the obstetric and gynecologic parameters except age at last delivery (0.2952) as shown in Table 2.

Effect of Counseling on MHS

The descriptive and P value of MHS score on before and after counseling is shown in Table 3.

Statistically significant difference in the score of baseline MHS was found between the two groups

Table 3: Profile of MHS Score

Variable	Before Counseling (R0)		After Counseling (R1 & R2)			
	Group I	Group II	Group I		Group II	
			R1	R2	R1	R2
Minimum	0	1	0	0	1	0
Maximum	12	13	10	6	11	3
Mean	4.22	6.13	3.26	1.74	4.69	0.67
SD	3.22	2.55	2.62	1.59	2.12	0.72
P value	<0.0001*		<0.0001**		<0.0001**	

*Paired t-test ** One Way Anova

as shown in Figure 3. Reduction in the score of MHS was seen in both the groups after counseling as shown in Figure 4 & 5.

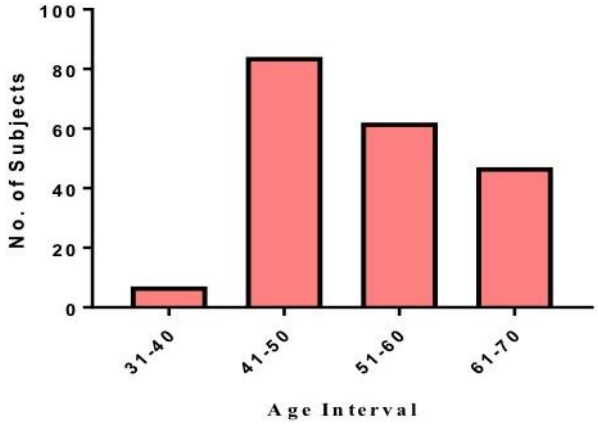

Figure 1: Age wise distribution

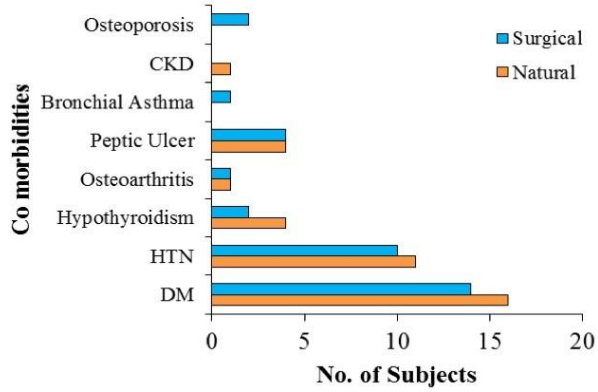

Figure 2: Co morbidities wise distribution

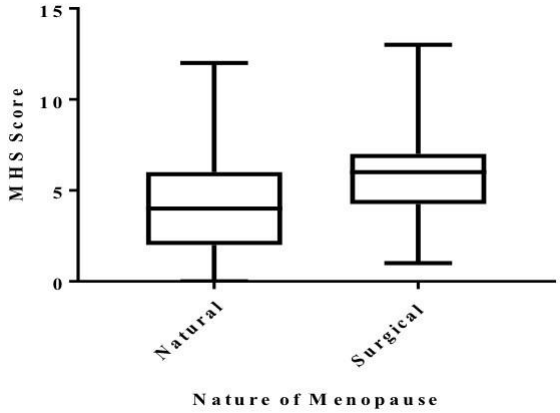

Figure 3: Comparison of MHS Score before Counseling between Study Groups

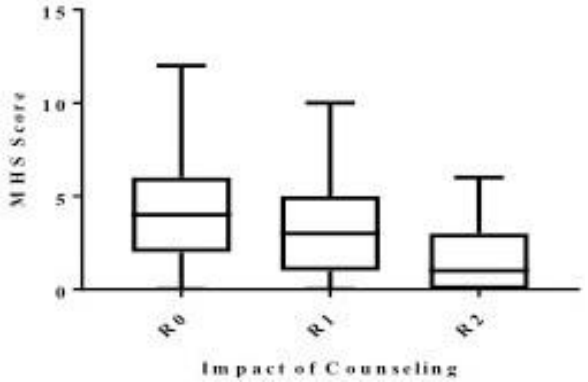

Figure 4: Impact of Counseling on MHS Score in Group I Subjects

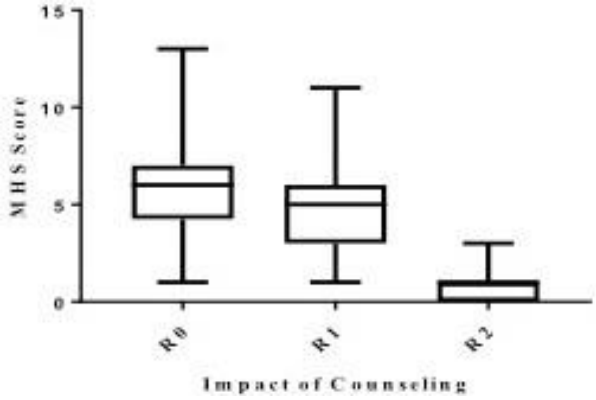

Figure 5: Impact of Counseling on MHS Score in Group II Subjects

DISCUSSION

Menopause is characterized by permanent cessation of menstruation results in the loss of ovarian follicle development. A postmenopausal woman experiences various physical, mental and emotional problems which interfere with their daily activities. Estrogen deficiency is a prime factor for the major consequences of menopause. Changing hormone levels during menopause may affect physical and emotional health. Depression during menopause is the major cause for all other problems which changes postmenopausal woman's mental health (Clayton *et al.,* 2010). This study showed that the mean age of women who attained menopause was 49 years in group-I and 41yrs in group-II which is shown in Table 2 and this is within the normal range. Significant difference in the age at menopause of study groups (P<0.0001)

were found since most of the women undergoing surgical menopause will be younger. Oophorectomy referred to as surgical menopause will be preferred for various conditions like endometriosis, ovarian cancer and cysts, ovary torsion and in some women to reduce the risk of developing ovarian or breast cancers (Hickey *et al.,* 2009). Common comorbidities which are seen in postmenopausal women are DM, HTN, hypothyroidism, osteoporosis, bronchial asthma, CKD and ulcer which complies with our study population as shown in Figure 2 (Marten *et al.,* 1993). Every woman will experience menopause in a different way. The reduction of estrogen during menopause has significant impact on women's mental health and also exacerbates a preexisting mental illness (Wharton *et al.,* 2012). This study revealed that MHS score was found to be high in group II. According to Llaneza P et al, women who attains menopause surgically will have higher rates of psychological symptoms due to various factors such as loss of reproductive organs, age, sex, family support etc., which supports our results (P<0.0001) as shown in Table 3 and Figure 3 (Placido *et al.,* 2011). The significance of counseling to post-menopausal women is to bring positive change among them. It focuses on how people function personally and in their relationship, typical life stresses and severe issues with which people may struggle. In addition, it helps people in resolving physical, emotional and mental health issues to improve their sense of well-being and attenuate feelings of distress (Susan *et al.,* 2010). This study showed that MHS scores were reduced after counseling (P<0.0001) as shown in Table 3 and Figure 4 & 5 which is similar to the result of Kirti et al study (Matilwala *et al.,* 2017). Apart from counseling, symptoms can also be controlled with HRT. The most effective treatment for menopausal disturbances is systemic estrogen therapy. When estrogen therapy is contraindicated, progestin therapy, drugs which alter central neurotransmitter pathways, selective serotonin reuptake inhibitors (SSRIs) will be effective in controlling menopausal symptoms (Andrea *et al.,* 2007).

CONCLUSION

Most of the postmenopausal women experience various problems especially psychological symptoms. This study revealed that providing counseling to postmenopausal women has positive impact on their mental health. Though the symptoms can be treated with medications, counseling will be more desirable and effective option either as a monotherapy or adjunctive therapy in improving the mental health status of postmenopausal women. Thus, rendering effectual and repeated counseling to menopausal women depends on their need assist in leading a happy moreover healthy life.

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CONFLICT OF INTEREST

The authors do not have any conflict of interest.

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