PSYCHOSOCIAL ADJUSTMENT IN POST-MENOPAUSAL WOMEN

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The menopause is defined as cessation of menses for longer than six months. Most women experience the menopause at about 50 years of age, and it is estimated that 30% of the population will be menopausal by the year 2000. Recently there has been considerable interest in the relation between hormone replacement therapy (HRT) for menopausal women and the incidence of osteoporosis, cardiovascular disease, and cancer of the breast and endometrium. Of equal importance is the effect of menopause and related therapies on the quality of life of these women. The purpose of this study was to examine the psychosocial adjustment to menopause in subjects enrolled in a trial of hormone replacement and in subjects attending a family practice unit. In addition, the effects of different HRT regimes on the quality of life of menopausal women were compared. The results of bone mass measurements showing increased bone mass for HRT groups are reported elsewhere (Blake, Chambers, Roberts & Webber, 1993).

Literature Review

The research literature on menopause is vast and the subject has been broached by different disciplines. The findings are divergent. It was suggested by Wilson and Wilson (1963) that estrogen solves all the problems of the post-menopausal woman. Utian (1972), on the other hand, concluded that only hot flushes and atrophic vaginitis were directly associated with estrogen deficiency; depression, irritability, angina pectoris, insomnia, palpitations as well as other reported signs, were not.

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Epidemiological studies have surveyed menopausal symptoms and searched for relationships between them. Hunter, Battersby, and Whitehead (1986) used principal component analysis to examine the association between symptomatology, general health, and psychosocial factors. They found that certain psychological and somatic symptoms occurred in clusters. Some, such as vasomotor symptoms and sexual changes, were most closely associated with menopausal status; others were more clearly associated with psychosocial factors such as social class, employment status, and age. Kaufert, Gilbert, and Hassard (1988) searched for relationships between physical, menopausal, and psychological symptoms using factor analysis and found a significant association only between vasomotor symptoms and menopause. A recent Danish study (Koster, 1990) found that hot flushes (49%) and psychological symptoms (33%) were the two most common reasons women gave for starting HRT.

Psychological studies have been reviewed by Dennerstein (1987) and showed that clinicians need to be aware of underlying personality factors that may be important determinants of a woman's response to hormonal changes. For example, in a small sample size correlational study, women who were anxious and detached were shown to be more likely to develop symptoms in the peri-menopausal period (Collins, Hanson & Eneroth, 1983). However, Youngs (1990) concluded that contemporary epidemiologic and clinical studies failed to substantiate the existence of menopausal depression as a separate entity; Gath and Iles (1990) considered that depressive disorders are no more common at the time of menopause than at other physiological stages.

Social scientists have maintained that the psychological symptoms of mid-life are not causally related to biological changes, but reflect expectations and attitudes of particular socio-cultural groups. Cultural norms and values determine the significance of youth, menstruation, fertility, menopause, and aging. More menopausal complaints are expected from women living in youth-oriented cultures where fertility is valued and aging is feared. For example, Arabian women report few or no menopausal symptoms (Maoz, 1973). Similarly, women from India eagerly await menopause because their social status improves; more respect is given to elders in Indian society (Flint, 1975).

Socio-demographic variables such as unemployment have been associated with menopausal, somatic, and anxiety symptoms (Hunter, Battersby & Whitehead, 1986). Thus, many psychosocial factors may be important in determining women's experience of menopause. In a double-blind, crossover trial of HRT in women undergoing surgical menopause (Dennerstein et al., 1979), treatment had a beneficial effect on anxiety, irritability, and insomnia in part due to the alleviation of hot flushes.

The nursing literature has examined various means of assessing women's attitudes towards menopause, including a questionnaire developed by Bowles (1986) and tested in a group of 923 women. It was based on self-assessment of

20 factors on a seven-point scale. This menopause attitude scale was shown to be a valid and reliable instrument for the assessment of attitudes towards menopause. The Massachusetts Women's Health Study, as reported by Avis and McKinlay (1991), indicated that symptom reporting during menopause was related to women's negative attitudes prior to menopause.

Recently, there have been interdisciplinary analyses of studies from the medical, nursing, social, and psychological literature. It is apparent that in addition to endocrine changes, socio-cultural, attitudinal, and psychological factors all contribute to symptoms associated with the menopause. However, there are few studies that examine how women adjust psychosocially with or without medical therapy. One study by Polit and Larocco (1980) explored the relationship between social and psychological characteristics of women and the manifestation of menopausal symptoms. Twenty percent of subjects said their symptoms were somewhat severe. The social factors that appeared to be related to the reporting of more symptoms were a lower level of education, unemployment, and a perception of poor general health. However, symptom reporting was not related to such social factors as marital status, religion, age, parity or income. The number of symptoms reported was significantly related to psychological variables such as self-confidence and personal adjustment, but unrelated to others such as heterosexuality or autonomy.

In 1933, 10% of 1,220 women included in a survey said they were incapacitated by menopausal symptoms (Council of Medical Women's Federation, 1933), and in 1974 McKinlay and Jefferys found that 20% of 638 women sought medical treatment for menopause-related symptoms. These figures are similar to those reported by Newton and Odon (1964): of 80 women surveyed, 10% claimed that menopausal symptoms interfered with their work and 23% consulted a physician. Studies have asked women to list symptoms of menopause, but rarely examined the effect of these on the menopausal woman's quality of life or the impact of HRT.

Research questions

What is the incidence of poor psychosocial adjustment in a sample of post-menopausal volunteers who entered a study of the effect of HRT upon bone mass (Sample A)? How does the psychosocial adjustment of Sample A compare to a sample of post-menopausal women attending a family practice clinic for other health reasons (Sample B)?

Is the change in psychosocial adjustment over an 18-month treatment period different between groups of menopausal women receiving calcium alone or calcium plus HRT (Sample A)?

METHODOLOGY

Sample A

Volunteers for a menopause research clinic were recruited by means of advertisements in local newspapers and on radio and television. All 258 respondents were contacted. Eligible candidates were within 10 years of last menstrual period (LMP), were not currently using HRT, and were in good health. Those meeting the eligibility criteria were invited to enter a trial of treatment with calcium alone or calcium and HRT for two years. Measures of socio-demographic variables, perceived knowledge of menopause, psychosocial adjustment to menopause, bone strength, and the effects of therapy upon expressed symptoms were taken.

Thirty-five women chose to enter the calcium-alone group. Eighteen were randomized to receive continuous 0.3 mg Premarin and 2.5 mg Provera, and 19 to receive 0.625 mg Premarin on days 1-25 and 5.0 mg Provera on days 16-25. All women visited a research clinic every six months where they were able to discuss all questions about menopause with the clinic gynecologist or with a research assistant.

Sample B

To test if women in Sample A were representative of other post-menopausal women, 37 women attending a family practice clinic were also studied. They had begun menopause within the preceding five years, were not on HRT, and were visiting their family physician for various health reasons. Of 185 individuals approached, only 37 who were not on HRT were eligible for the study.

Sample A volunteers were asked to complete all of the data sheets and questionnaires as described in the following section; Sample B participants completed all but the symptomatology checklist.

Socio-demographic data

The socio-demographic data sheet requested information on marital status, age, employment status, date of last menstrual period, number of children, exercise level, and use of drugs such as caffeine, tobacco, alcohol, and calcium. In addition, subjects were asked if they had a past history of fractures, hysterectomy or a family history of osteoporosis. Body mass index (BMI) was determined from weight and height.

Menopause knowledge

A menopause knowledge questionnaire was constructed by the authors in order to assess each subject's level of understanding of menopausal concerns.

The higher the score, the higher the level of understanding. Also measured was their degree of comfort when discussing these concerns with others, and the sources of information that each subject found useful were identified.

Face and content validity was assessed by three expert clinicians as good. Criterion validity was assessed by correlating their level of unanswered questions with a question in the Psychosocial Adjustment to Illness Scale Self Report (PAIS-SR) questionnaire asking if the person had many unanswered questions. There was a modest positive correlation ($r = 0.29$).

Psychological adjustment questionnaire

Psychosocial adjustment was measured using the Psychosocial Adjustment to Illness Scale (PAIS) self-report questionnaire developed by Derogatis and Lopez (1983) to measure psychosocial adjustment to illness. The questionnaire measures the individual's interaction with other individuals and institutions representing the sociocultural environment. The PAIS-SR is comprised of 46 questions divided into seven domains of psychosocial adjustment: health care orientation, vocational environment, domestic environment, sexual relationships, extended family relationships, social environment, and psychological distress derived from their widespread acceptance in health care practice. Each question was rated on a four-point scale. It is considered reliable and valid for a population of people with chronic illness (Morrow, Chiarello & Derogatis, 1978). It has not previously been used to determine psychosocial adjustment to menopause. In this study, reliability (internal consistency) of the PAIS-SR was determined by measuring Cronbach's alpha for each subscale ($\alpha = 0.65, 0.86, 0.88, 0.81, 0.55, 0.95, 0.93$).

The PAIS-SR questionnaire was used, but the word "menopause" was substituted for "illness." Brenner and Wrubel (1989) define illness as the human experience of loss, dysfunction or concern, and they indicate that a symptom is an interruption, an inconvenience or a health worry. Illness is the human response to the symptom. Thus, it was considered that, at least with respect to psychosocial adjustment, it was justifiable to substitute the word "menopause" for "illness." Subjects had no difficulty answering the PAIS questions as related to menopause. Assessments of psychosocial adjustment were made at enrolment for sample A and B and after 18 months of therapy in Sample A.

Symptomatology checklist

The symptomatology checklist was a 16-item questionnaire which asked subjects to rate a number of signs and symptoms (benefits and side effects) as increased, unchanged or decreased after therapy. Signs and symptoms included weight gain, bloating, headaches, breast tenderness, hot flushes, vaginal dryness, appetite, sleep disturbance, sexual interest, feelings of depression, feelings of well being, feelings of optimism, feelings of attractiveness, clearer thought

process, and heavy heartbeat or heart flutter. These were divided into beneficial effects and negative effects of HRT. The symptomatology checklist was completed after six months of therapy.

Results

Sample A

The comparison of baseline socio-demographic and lifestyle measures for the three groups of volunteer menopausal women in Sample A is shown in Table 1. There were no statistically significant differences among the three groups, except for marital status. On the average, the women were approximately 54 years of age, had been menopausal for about three years, had 2-3 children, were not heavy drinkers of alcohol or coffee, and were mostly non-smokers. Most were married and working.

The psychosocial adjustment scores are given in Table 2. A score greater than 50 is considered to represent poor adjustment (Derogatis and Lopes, 1983) while a score between 35 and 50 is considered to represent fair adjustment as determined in a previous study (Browne et al., 1985).

The mean total PAIS score for the 72 women was 21.6 at enrolment, indicating that most were well adjusted. There was no statistically significant difference between groups as determined by analysis of variance or Kruskal-Wallis (when non-homogeneity of variances was evident) in any of the subscale or total PAIS scores before therapy (Table 2). Psychosocial adjustment was generally good in all three groups. In total, three women were poorly adjusted and seven were fairly adjusted for a total of 10; therefore, 14% of the sample was not well adjusted. As measured by the subscales, the most poorly adjusted area was in health care orientation, followed by psychological distress, and altered sexual relationships. The health care orientation subscale is comprised of eight questions about health attitudes and reception of menopause-related health care information. The psychological distress subscale asked women whether the menopause had made them feel more anxious, depressed or worried or had altered their body image. The sexual relations subscale dealt with adjustment to, interest in, and the quality of interpersonal sexual relationships.

No differences were detected when the three treatment groups were compared with respect to perceived knowledge of menopausal issues (Table 3). All three groups demonstrated a poor understanding of bone health and the safety and efficacy of estrogen replacement therapy. In all three groups women indicated that they would be more comfortable discussing their menopausal concerns with health professionals and friends than with husbands or relatives. All groups indicated that in the past they had found written sources the most useful for learning about menopausal concerns.

Table 1

Comparison of Socio-demographic, Lifestyle and Bone Health Variables for Three Groups of Postmenopausal Women (Sample A)

	Calcium only (n = 35)		Continuous HRT[2] (n = 18)		Cyclic HRT (n = 19)		Statistic		
	Mean	(SD)[1]	Mean	(SD)	Mean	(SD)	$F_{2,69}$		P
Age	54.4	(3.0)	54.6	(3.3)	53.1	(3.4)	1.28		0.28
BMI	25.6	(5.1)	23.9	(3.3)	24.1	(4.3)	1.13		0.33
Years Since Last Menstrual Period	2.5	(1.7)	2.8	(2.3)	3.0	(1.8)	0.49		0.62
Children	2.9	(1.5)	2.4	(1.7)	2.4	(1.2)	1.02		0.37
Coffee: Cups/Day	2.7	(2.1)	2.9	(2.6)	2.4	(1.7)	0.27		0.77
Alcohol: Drinks/Week	2.6	(2.6)	3.7	(2.4)	3.1	(2.5)	1.05		0.36
	N	%	N	%	N	%	X^2	df	P
Current or Former Smoker	12	34%	9	50%	5	26%	2.35	2	0.35
Little Exercise	17	49%	10	56%	11	58%	0.50	2	0.78
History of Fracture	11	31%	7	39%	3	16%	2.60	2	0.28
History of Osteoporosis	17	49%	7	39%	8	42%	0.51	2	0.78
Hysterectomy	4	11%	3	17%	2	11%	0.39	2	0.82
Calcium Use	15	43%	6	33%	6	32%	0.85	2	0.66
Working	21	60%	13	72%	13	68%	0.90	2	0.64
Married	33	94%	12	67%	16	84%	7.01	2	0.03*

[1] SD: standard deviation
[2] HRT: hormone replacement therapy
*$p \leq .05$

Table 2

Psychosocial Adjustment at Enrolment for Sample A

	Calcium only (n = 35)		Continuous HRT[2] (n = 18)		Cyclic HRT (n = 19)		Statistic ANOVA or Kruskal-Wallis	
	Mean	(SD)[1]	Mean	(SD)	Mean	(SD)	F(KW)	P
Health Care Orientation	6.5	(2.3)	6.8	(3.6)	6.3	(3.1)	0.32	0.73
Vocational Environment	1.8	(1.9)	1.6	(3.1)	1.5	(1.9)	(1.3)	0.53
Domestic Environment	2.1	(2.6)	2.3	(4.5)	1.5	(2.4)	(1.6)	0.45
Sex Relations	3.8	(3.3)	2.7	(2.9)	2.8	(2.5)	1.1	0.35
Extended Family Relations	1.0	(1.9)	0.7	(1.6)	0.5	(0.7)	(0.37)	0.83
Social Relations	2.4	(2.6)	2.9	(4.9)	2.4	(3.5)	(0.18)	0.91
Psychological Distress	5.0	(3.6)	4.6	(4.9)	5.4	(3.6)	0.22	0.80
TOTAL PAIS	22.3	(13.2)	21.7	(20.3)	20.4	(11.5)	(0.50)	0.61
	N	%	N	%	N	%	x^2	P
Not Well Adjusted	6	17	2	11	2	11	0.61	0.74

[1] SD: standard deviation
[2] HRT: hormone replacement therapy

Changes in signs and symptoms after six months of therapy are shown in Table 4 for each of the three treatment groups. In the calcium-only group there was a perceived worsening of hot flushes, vaginal dryness, and more sleep disturbance, whereas for both HRT groups these signs and symptoms improved. It is of interest that there was some correlation between vaginal dryness and sexual interest ($r = 0.41$), feelings of optimism ($r = 0.26$) and feelings of attractiveness ($r = 0.24$). Hot flushes correlated with sleep disturbance ($r = 0.18$), while sleep disturbance correlated with feelings of well being ($r = 0.38$), optimism ($r = 0.32$), and attractiveness ($r = 0.26$). Compared to the calcium-only group, the HRT groups experienced an increase in sexual interest, breast tenderness, and bloating, in addition to feelings of optimism and attractiveness ($p < 0.05$). Correlations of psychosocial adjustment scores with symptomatology scores indicated some important non-associations: PAIS score did not correlate well with hot flushes ($r = 0.13$), vaginal dryness ($r = 0.09$), breast tenderness ($r = 0.01$) or sleep disturbance ($r = 0.03$).

Table 3

Level of Understanding of Menopause Issues at Enrolment

	Calcium		Continuous		Cyclic		Statistic	
	Mean	(SD)[1]	Mean	(SD)	Mean	(SD)	$F_{2,69}$	P
Hot Flushes	4.6	(1.8)	5.2	(2.1)	3.8	(1.8)	2.47	0.09
Mood Changes	4.4	(1.9)	4.3	(2.1)	4.1	(1.9)	0.17	0.84
Bone Strength	2.9	(1.8)	3.6	(2.0)	2.6	(1.8)	1.20	0.31
Safety of Estrogen	2.2	(1.8)	2.5	(1.8)	2.4	(1.4)	0.17	0.84
Need for Estrogen	2.4	(1.8)	2.9	(2.1)	3.3	(2.1)	1.45	0.24
Sexuality	4.7	(1.9)	5.0	(1.7)	4.2	(1.8)	0.89	0.42
Physical Changes	4.3	(1.8)	3.8	(2.1)	4.1	(1.8)	0.27	0.77
Diet	4.9	(1.9)	4.3	(2.3)	4.6	(1.9)	0.51	0.61
Exercise	5.4	(1.8)	5.1	(2.1)	5.4	(1.5)	0.16	0.85
Calcium	3.6	(1.9)	3.9	(2.3)	3.8	(2.1)	0.15	0.86
TOTAL SCORE	39.3	(12.3)	40.7	(14.1)	38.2	(13.0)	0.17	0.84

[1] SD: standard deviation
Scoring range: 1 = many unanswered questions; 7 = know as much as is needed

There was an 18% improvement in the total psychosocial adjustment score for all three groups combined when the baseline measure was compared with that made after 18 months of treatment (Table 5). The most significant changes were in the subscales of health care orientation, psychological distress, and social relationships. The total changes were not as great in the HRT groups as in the calcium-alone group, but the difference was not statistically significant (Table 6). This change in score did not correlate well with changes in symptoms such as hot flushes, headaches, and vaginal dryness ($r = 0.01$ to 0.10).

After 18 months of therapy the number of subjects who were not well adjusted had dropped from 10 (14%) to 6 (8%). Only in the cyclic HRT group did the number of poorly adjusted subjects fail to drop; both at baseline and after 18 months of HRT two people were poorly adjusted, although they were not the same two people.

Table 4

Change in Symptoms After Six Months of Treatment

	Calcium		Continuous		Cyclic		$F_{2,69}$	P
	Mean	(SD)[1]	Mean	(SD)	Mean	(SD)		
Weight Gain	+0.17	(0.6)	+0.39	(0.6)	+0.42	(0.6)	1.44	0.24
Bloating	+0.09	(0.3)	+0.17	(0.5)	+0.42	(0.5)	4.08	0.02*
Headaches	+0.09	(0.4)	+0.22	(0.4)	+0.05	(0.4)	0.99	0.38
Breast Tenderness	+0.09	(0.3)	+0.22	(0.4)	+0.42	(0.5)	4.57	0.01*
Hot Flushes	+0.40	(0.7)	-0.50	(0.7)	-0.42	(0.6)	14.6	0.00*
Vaginal Dryness	+0.31	(0.5)	-0.44	(0.7)	-0.63	(0.5)	22.8	0.00*
Appetite Alteration	0.00	(0.00)	+0.06	(0.2)	-0.05	(0.2)	1.97	0.14
Sleep Disturbance	+0.31	(0.5)	-0.17	(0.6)	-0.26	(0.7)	7.49	0.00*
Feelings of Depression	-0.14	(0.4)	-0.06	(0.2)	-0.11	(0.3)	0.45	0.65
Heavy Heart Beat or Flutter	+.11	(0.3)	-0.11	(0.5)	+0.05	(0.2)	2.53	0.08
Sexual Interest	-0.0	(0.3)	+0.06	(0.2)	+0.32	(0.5)	8.79	0.00*
Feelings of Well Being	-0.14	(0.4)	+0.33	(0.9)	+0.32	(0.7)	2.10	0.12
Feelings of Optimism	+0.09	(0.4)	+0.33	(0.5)	+0.42	(0.5)	4.16	0.02*
Feelings of Attractiveness	0.00	(0.2)	+0.06	(0.4)	+0.26	(0.5)	3.48	0.04*
Clearer Thought Process	+0.03	(0.2)	+0.17	(0.4)	0.00	(0.3)	0.93	0.15

[1] SD: standard deviation
Scoring range: −1 = reduced; 0 = no change; +1 = increased
*$p \leq .05$

Table 5

Mean Change in Psychosocial Adjustment for Three Treatment Groups After Six Months of HRT (Sample A)

	At Enrolment		At 6 Months		Difference		Statistic	
	Mean	(SD)[1]	Mean	(SD)	Mean	(SD)	Paired t	P
Health Care Orientation	6.4	(2.8)	5.0	(2.3)	1.4	(2.9)	4.06	0.00*
Vocational Environment	1.7	(2.2)	1.5	(1.8)	0.2	(2.3)	0.65	0.51
Domestic Environment	2.0	(3.1)	1.6	(2.5)	0.4	(2.8)	1.17	0.25
Sex Relations	3.3	(3.0)	3.3	(3.1)	0.0	(3.1)	0.00	0.99
Extended Family Relations	0.8	(1.6)	0.8	(1.5)	0.0	(3.1)	0.13	0.89
Social Relations	2.5	(3.5)	1.7	(2.9)	0.8	(3.6)	1.98	0.05*
Psychological Distress	5.0	(3.9)	4.0	(4.0)	1.0	(4.0)	2.10	0.04*
TOTAL PAIS	21.6	(14.7)	17.8	(13.0)	3.8	(14.4)	2.26	0.03*

[1] SD: standard deviation
*$p \leq .05$

Sample A versus Sample B

The socio-demographic and lifestyle measures of the research (Sample A) and family practice samples (Sample B) were compared. Results indicated that the latter had more cumulative menopausal years, and fewer used calcium or had a family history of osteoporosis (Table 7). There were no statistically significant differences between the two samples in the PAIS subscale and total scores (Table 8). Four (11%) of the family practice group were not adjusting well to menopause. Both groups of women had the PAIS subscales ranked in precisely the same order of adjustment.

Table 6

Changes in Psychosocial Adjustment Scores After 18 Months of Treatment (Sample A)

	Calcium (n = 35)		Continuous (n = 18)		Cyclic (n = 19)		Statistic ANOVA or Kruskal-Wallis	
	Mean	(SD)[1]	Mean	(SD)	Mean	(SD)	F(KW)	P
Health Care Orientation	1.2	(2.6)	1.7	(4.3)	1.4	(2.1)	(0.09)	0.95
Vocational Environment	0.1	(1.7)	0.5	(3.4)	-0.5	(2.2)	(0.63)	0.73
Domestic Environment	0.4	(2.1)	1.3	(4.3)	-0.5	(2.1)	(1.56)	0.46
Sex Relations	0.7	(3.1)	-0.6	(2.4)	-0.7	(3.4)	1.8	0.18
Extended Family Relations	0.2	(1.8)	0.3	(1.8)	-0.6	(1.6)	1.9	0.16
Social Relations	0.9	(3.3)	0.7	(5.1)	0.7	(2.3)	(1.26)	0.53
Psychological Distress	1.1	(2.8)	0.1	(6.5)	1.7	(2.9)	(4.7)	0.10
TOTAL PAIS	4.7	(11.6)	4.1	(22.8)	1.9	(8.4)	(2.7)	0.26

[1] SD: standard deviation

Women in Sample B indicated that they did not have many unanswered questions and thought they had a high level of understanding of menopausal issues (Table 9). Differences were detected between sample groups in all areas except questions concerning estrogen, diet and exercise.

Sample B indicated they were more comfortable than Sample A in discussing menopausal concerns with their physician. Although many women from both groups indicated they found books a useful resource, more women from the family practice clinic indicated that their physician was a useful source of information about menopause.

Table 7

Demographic Variables of Samples A and B

	SAMPLE A		SAMPLE B		t	p
	Mean	(SD)[1]	Mean	(SD)		
Age	54.1	(3.2)	55.4	(2.8)	2.17	0.03*
Years Since Last Menstrual Period	2.7	(1.9)	5.1	(3.0)	5.16	0.01*
Number of Children	2.6	(1.5)	2.3	(1.3)	1.21	0.23
Coffee/Day	2.7	(2.1)	2.8	(2.3)	0.03	0.97
Alcohol Drinks/Week	3.0	(2.6)	2.8	(4.1)	0.76	0.45
	N	%	N	%	x^2	p
Used Calcium	27	38	5	14	6.78	0.01*
Working	47	65	26	70	0.28	0.60
Previous Fracture	21	29	5	14	3.30	0.07
Hysterectomy	9	13	6	16	0.28	0.59
History of Osteoporosis	32	44	4	11	12.50	0.01*
Married	61	85	26	70	3.17	0.08
Smoker	6	8	6	16	1.55	0.21

[1] SD: standard deviation
*$p \leq .05$

Table 8

PAIS Scores of Samples A and B

	SAMPLE A		SAMPLE B		t	p
	Mean	(SD)[1]	Mean	(SD)		
Health Care Orientation	6.4	(2.8)	6.6	(4.0)	0.37	0.71
Vocational Relations	1.7	(2.2)	1.1	(1.8)	1.23	0.22
Domestic Relations	2.0	(3.1)	1.4	(2.7)	1.99	0.33
Sexual Relations	3.3	(3.0)	2.5	(2.7)	1.37	0.17
Extended Family Relations	0.8	(1.6)	0.5	(1.6)	0.78	0.44
Social Relations	2.5	(3.5)	1.6	(3.1)	1.29	0.20
Psychological Distress	5.0	(3.9)	4.4	(3.7)	0.82	0.41

[1] SD: standard deviation

Table 9

Comparison of Level of Understanding of Menopause Issues

	SAMPLE A		SAMPLE B		t	p
	Mean	(SD)[1]	Mean	(SD)		
Hot Flushes	4.5	(1.9)	5.2	(2.1)	1.66	0.10
Mood Changes	4.3	(1.9)	5.0	(2.1)	1.70	0.09
Bone Strength	3.0	(1.9)	4.2	(2.5)	2.60	0.01*
Safety of Estrogen	2.3	(1.7)	3.3	(2.5)	2.05	0.04*
Need for Estrogen	2.8	(1.8)	3.4	(2.8)	1.24	0.22
Sexuality	4.6	(1.8)	5.5	(2.0)	2.40	0.02*
Physical Changes	4.1	(1.9)	4.9	(2.2)	1.95	0.05*
Diet	4.6	(2.0)	5.2	(2.3)	1.29	0.20
Exercise	5.3	(1.8)	5.4	(2.2)	0.08	0.94
Calcium	3.8	(2.0)	5.0	(2.4)	2.87	0.01*
TOTAL LEVEL (10-70)	39.4	(12.8)	47.0	(17.0)	2.37	0.02*

[1] SD: standard deviation
Scoring range: 1 = many unanswered questions; 7 = know as much as is needed
*$p \leq .05$

Discussion

This study has shown that approximately 14% of women were not adjusting well to menopause. They had many concerns about health care issues and difficulties in their sexual relationships. They experienced such psychological distress as anxiety, nervousness, anger, and body image difficulties. However, the majority of women were adjusting well to menopause and coping well with psychosocial issues at this time of their lives.

These results were obtained from a volunteer sample of women and our conclusions may be biased by the volunteer effect. That is, we may inadvertently have selected women for Sample A who were particularly sensitive to the problems of adjustment to menopause, whose questions were not answered and needs were un-met by family physicians. It was thought that by studying another non-volunteer sample of menopausal women, any bias in our volunteer sample might be detected. Nevertheless, although the two samples had different levels of understanding of menopausal issues, they exhibited comparable degrees of psychosocial adjustment to menopause. On average, all women in Sample A experienced an improvement in psychosocial adjustment, with the greatest change occurring in the health care orientation subscale.

Calcium supplementation (which was not expected to influence psychosocial adjustment) and both HRT regimes, along with counselling, appeared to improve quality of life. Of importance is the fact that there was no difference in change of psychosocial adjustment between calcium-alone or calcium-plus-HRT groups. It is reasonable to conclude that involvement in a research program that focused on menopause-related concerns led directly to the observed improvement in psychosocial adjustment. Subjects felt comfortable discussing such concerns with health professionals and found written material useful. Consequently, it would be useful to provide peri-menopausal women with better access to counselling services and reliable documentation concerning menopause. Hormone replacement therapy may not be the panacea for all quality of life issues, and individual counselling may be a more important factor in assisting women with psychosocial issues during menopause.

Future research should examine the effect of different counselling methods for peri-menopausal women in conjunction with medical therapies. One method for improving psychosocial adjustment that could be examined is cognitive behavioural or problem-solving therapy.

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RÉSUMÉ

Adaptation psychosociale des femmes post-ménopausiques

La ménopause est un événement marquant aux niveaux socio-culturel, psychologique et physiologique pour les femmes dans la quarantaine. La fréquence d'un déséquilibre psychosocial face à la ménopause et l'effet d'un traitement hormono-supplétif (HRT) sur les femmes sont abordés ici. Soixante-douze femmes reçurent un apport complémentaire de calcium pendant six mois. Elles choisirent ensuite de continuer à prendre le calcium seul ou avec le traitement hormono-supplétif. Les sujets qui prenaient le traitement hormono-supplétif furent répartis au hasard afin de recevoir sans interruption 0,3 mg de Prémarine et 2,5 mg de Provera, ou 0,625 mg de Prémarine (du 1er au 25^{e} jour) et 5 mg de Provera (du 16^{e} au 25^{e} jour). Les facteurs psychosociaux furent enregistrés au début, puis après 18 mois de traitement. Les trois groupes furent conseillés individuellement au sujet de la ménopause par un médecin et par l'assistant de recherche. Tous les groupes eurent une meilleure adaptation psychosociale à la ménopause pendant la période de traitement de 18 mois, et aucune différence significative ne fut notée d'un point de vue statistique entre les groupes. Trente-sept femmes ménopausées qui ne prenaient pas le traitement hormono-supplétif furent recrutées dans un cabinet de consultation de famille et on leur a demandé de remplir les mêmes questionnaires que les trois groupes sous traitement. Il n'apparut pas de différence significative d'un point de vue statistique au niveau de l'adaptation psychosociale entre les sujets qui avaient pris le traitement hormono-supplétif et les femmes qui ne l'avaient pas pris.