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Attitudes towards the menopause and hormone therapy over the turn of the century.

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ABSTRACT

Objective: To assess attitudes and beliefs about the menopausal transition in a population of peri- and postmenopausal women, and if these attitudes differed before and after publication of studies on risks and benefits with hormone therapy (HT).

Material and methods: In 1999 and 2003 all women aged 53 and 54 years in the community of Linköping, Sweden, were sent a questionnaire about use of HT, menopausal status and attitudes regarding menopause and HT.

Results: Most women regarded menopause as a natural process characterized by both hormonal deficiency and aging and these views did not differ between 1999 and 2003. A majority of women thought that significant climacteric symptoms were a good reason to use HT, but not that women without symptoms should use HT. The fraction of women who supported HT use was, however, significantly lower in 2003 than in 1999. Most women agreed that menopause leads to increased freedom and that it is a relief not to have to think about contraception and pregnancies.

Conclusions: Most Swedish women had a mainly biological view on menopause but nevertheless they thought that only women with climacteric symptoms should use HT. Women's attitudes towards HT have changed after recent reports on risks from long-term use of HT whereas the attitudes towards the menopausal transition were stable. Other factors than attitudes towards menopause affect women's actual use of HT. Probably women's and health care provider's apprehension of the risk-benefit balance of HT use is one such factor.

INTRODUCTION

Vasomotor symptoms like hot flushes and sweating, local vaginal discomfort and urinary discomfort are classically associated with menopause (1,2). The use of estrogen combined with progestagens, hormone therapy (HT), has increased rapidly during the past twenty years. Only 7% of postmenopausal women from our area used HT in the early nineteen-eighties (1) compared to almost 50 % around 1998 (3). This increased use of HT in our area was similar as described in other countries (4,5). The increase was probably caused by women's and physician's knowledge and beliefs of beneficial effects from HT, e.g. on vasomotor symptoms (6), osteoporosis and risk for fractures, colon cancer and Alzheimer's disease (7), but may also have been affected by promotional activities from pharmaceutical companies (8). Evidently, side effects from HT did not attract the same attention, like the increased risk of thromboembolic disease and breast cancer.

Epidemiological data collected over more than a decade have indicated that HT prevents cardiovascular disease (9,10), but this has been suggested to be at least partly explained by selection bias. Women using HT may for example be more aware of other health factors than nonusers (9). Prospective, placebo-controlled studies have been unable to confirm these cardiovascular advantages in primary and secondary preventive studies like the WHI study (11) and the HERS study (12), which even reported an increased risk of cardiovascular events during the first year after initiation of HT. The preventive effects on Alzheimer's disease and impaired cognition have also been disproved in the older age group used in the WHI study (13). With these conflicting, and sometimes contradictory findings on risks and benefits from use of HT, it may be difficult for women to decide whether or not to use HT.

It is important that health care providers understand women's attitudes and expectations regarding menopause, in order to give optimal information and support to the individual woman. Recent publications about greater risks with HT than previously believed (11-14), make the situation more complicated and confusing for the help-seeking woman, and make it important that health care providers understand and are aware of women's beliefs and attitudes on menopause and HT.

It has been reported that women's conception of the menopause vary in relation to menopausal status and depending on the symptoms associated with her own menopausal transition (15-17). A Swedish study (18) found that it was a discrepancy between women's actual beliefs and attitudes and what their doctors believe about their patient's beliefs and attitudes about menopause and HT.

It has previously been demonstrated that women's attitudes towards menopause and their knowledge of benefits and risks of HT have a direct effect on their use of HT (19). In a Scottish survey from 1991, repeated 2000 (20), attitudes towards the menopausal transition remained relatively stable between 1991 and 2000. Only the statements saying that menopause should be viewed as a medical condition and that women feel less feminine after menopause had changed.

After publication of results from the WHI, HERS and Million Women Study a number of studies from various countries have been performed finding a dramatic decrease in the use of HT (4, 21-25). This decrease also appeared to coincide with changes in women's and doctor's attitudes to HT (24-27). There are few studies, however, regarding changes in attitudes towards the menopause transition, which might also have been affected by the media reports and should be clarified.

The objective of this study was to assess different attitudes and beliefs about the menopausal transition and HT and if these attitudes were different before and after

publication of the results from the WHI study and the HERS study. We also wanted to assess if these attitudes differed between peri- and postmenopausal women, and between users and nonusers of HT.

METHODS

A questionnaire was mailed to the total population of women (n = 1760 in 1999 and 1733 in 2003) aged 53 and 54 years living in the community of Linköping in 1999 and in 2003, respectively. The second questionnaire was sent during the second quarter of 2003, which was about nine months after the publication of the WHI study and the almost immediate articles in the general Swedish press, statements of the Swedish Medical Product Agency, and the professional societies. We turned to different women in 1999 and 2003, although women were of the same age at both instances. The local population authorities provided the names and addresses. The questionnaire asked about the women's menstrual history, use of HT as well as education, occupation, parity, and smoking habits. Women were also asked to give their views on 11 different statements about the menopausal transition and HT (Table 1). After each statement they were asked to tick a box in a five-graded Likert-scale ranging from "agree totally" to "disagree totally". Other parts from this questionnaire have been analysed and published separately (25). The questionnaire was validated in several steps. Three women between 49 and 56 years of age, having appointments at the outpatient clinic of gynecology at the University Hospital completed the first version of the questionnaire and were interviewed afterwards. After having modified some of the questions in order to clarify them, the new version of the questionnaire was sent to ten women, 50 to 59 years of age. Test-re-test stability was tested by letting the same ten women answer the questionnaire again two weeks later, without information beforehand that the questionnaire was to be answered twice. Seven of the ten women completed the questionnaire the second time. We analyzed the test-retest stability for the 11 questions on attitudes on menopause answered twice by the seven women (totally 77 duplicate questions). It appeared that 53 of the categorized responses were identical, 18 differed one

step, 5 differed two steps, and one woman had changed one answer three steps the second time. The median difference between first and second answer was 0 steps (25: th – 75: th percentiles: 0-1).

The face validity of the questionnaire was tested by means of a structured personal interview with the seven women who had answered the questionnaire twice. The women were also asked to give their spontaneous reaction to the questionnaire. A third slightly modified version, which had increased the clarity of two questions, was then sent to the 1760 women in 1999 and 1733 women in 2003.

The questionnaires were coded, which enabled us to send a reminder to those women who had not answered after four weeks. After the codes had been eliminated from the questionnaires, data were optically scanned into the computer and analyzed using SPSS for Windows (release 10.1.0). Optical scanning was checked manually and not until the first ten questionnaires had shown total agreement between optical and manual reading, the procedure was accepted.

After analyzing the questions concerning the menopausal status and the use of HT, the women were divided into three groups: perimenopausal (i.e. last spontaneous menstrual bleeding within 6 months, no matter if the bleedings were irregular or not), postmenopausal using HT and postmenopausal without HT use. We considered women with 6 months without menstrual bleedings as postmenopausal, which is not according to the WHO definition, but Kaufert et al showed that menstrual bleedings occur in less than 10% of women after six months of amenorrhea (28). These groups were then cross-tabulated with the answers to the questions concerning the attitudes and beliefs about the menopausal transition.

After one reminder we received 1298 of the 1760 (74 %) questionnaires in 1999 and 1339 of the 1733 (77%) questionnaires in 2003. A number of women were excluded because

they had not answered to a question concerning their own use of HT or who had answered inconsistently to two different questions concerning their menopausal status, making it impossible to know if they were postmenopausal or not. This left us with a final analyzable rate of 1180/1760 (67.0 %) of the questionnaires in 1999 and 1239/1733 (71.5 %) in 2003, i.e. on average a 70% rate of analyzable questionnaires. Some women did not answer every question, and the rate of missing answers varied between 1.6 % and 9.2 % in the different questions. The rate of missing answers was 5-6% for all questions about attitudes and beliefs about the menopausal transition.

Statistics: Pearson chi-square test was used when analyzing differences between groups. The p-value was set to <0.05 (two-tailed) to be considered significant.

Ethics: The local ethics committee at the Faculty of Health Sciences, Linköping University, approved the study design, including the questionnaire.

RESULTS

Of the 1180 women responding in 1999, 245 (20.8%) were perimenopausal and 935 (79.2%) were postmenopausal. In the 2003 cohort the corresponding percentages were 24.3% and 75.7% respectively, which was a slight difference compared with 1999 ($p<0.001$). Between 1999 and 2003 the current use of HT fell from 40.4% to 25.3%, whereas the percentage of previous users increased from 11.4% to 19.2% and never users from 48.1 to 55.6% ($p<0.001$). The current use of natural remedies or acupuncture because of climacteric symptoms increased from 1.7 % to 7.1 % ($p<0.01$) over the four years.
In both cohorts about 10% of the women had undergone hysterectomy and approximately 3% were oophorectomized. About one third of the women had 9 years of education, one third between 10 and 12 years and one third more than 12 years of education. HT use did not differ between these three groups.

Differences in attitudes to the menopausal transition between 1999 and 2003

The results of the questions on attitudes and beliefs about the menopausal transition are summarized in Table 2. Most of the women in both cohorts agreed upon that the menopausal transition is a natural process (96.9 % 1999 vs. 98.1 % 2003), characterized by both hormone deficiency and ageing. The women in the 2003 population agreed to a slightly, but significantly, higher extent than the 1999 population to these statements, usually by agreeing “totally” instead of “somewhat”.
Significantly fewer women (17.4 %) from the 2003 cohort agreed that all women should use HT compared with 37 % of the women from 1999 cohort ($p<0.001$). The percentage of women who totally disagreed that all women should use HT doubled from 1999 to 2003 (16 % vs. 33%). About 75 % in both cohorts (77.0 % 1999 vs. 73.5 % 2003) agreed totally

or somewhat that women with significant symptoms should use HT. In 1999, however, they agreed totally to a higher extent than in 2003. The response profiles on the statements concerning reproduction and contraception were almost identical in 1999 and 2003. The majority disagreed about the statements that their partners regarded women after menopause less attractive and that women feel less feminine after menopause, and again these attitudes were the same or very similar in 1999 and 2003. The opinion varied substantially among women as to whether psychological discomfort around menopause is caused by life changes or hormonal changes and there were no differences between 1999 and 2003.

Attitudes and beliefs to the menopausal transition in relation to menopause status

Since it appeared that differences between peri- and postmenopausal women were very similar in the cohorts from 1999 and 2003, they were combined and analyzed together. The postmenopausal group included both users and non-users of HT. Almost 30% of the postmenopausal women thought that all women should use HT, whereas significantly fewer (22.2 %) of the perimenopausal women supported that statement ($p=0.01$). Post- and perimenopausal women thought that menopause leads to increased freedom (59.5 % and 53.9 % respectively, $p=0.017$) and that it is a relief no longer to have to think about contraception (79.1 % and 76.0 % respectively, $p=0.019$). Differences between groups are considered clinically insignificant and depend on high statistical power. None of the other statements differed between the two cohorts.

Attitudes and beliefs to the menopausal transition in relation to use of HT

Attitudes and beliefs in relation to use of HT are summarized for the 2003 population in Table 3. Most HT users (91.9 %) agreed to at least some extent on the statement that

women with symptoms should use HT compared with 67.2 % of the nonusers ($p<0.001$). The trends were the same in 1999, albeit slightly more women agreed totally. About one third of the HT users in 2003 supported (totally or somewhat) that all women should use HT because menopause is a state characterized by hormonal deficiency, whereas only 11.3 % of the nonusers supported that statement. These figures had decreased from 1999 when more than half of the HT-users and 21.7 % of the non-users agreed on that statement. Although use of HT had changed substantially from 1999 to 2003 all trends and differences between users and non-users of HT were the same in the two cohorts but the percentages in some cases were slightly different. Almost all women using HT thought that menopause is characterized by a hormonal deficiency, whereas slightly, but significantly, fewer nonusers supported this statement ($p<0.001$). The HT-users and non-users had similar attitudes as measured in all other questions.

DISCUSSION

This population based questionnaire study performed before and after publication of the HERS, WHI and Million Women studies showed that the attitudes towards the menopausal transition remained relatively stable despite of the major media reports on risks and benefits of HT and a dramatic change in HT use. On the other hand, HT use deceased rapidly probably not only caused by the media reports but also due to the societal context including the popular press, regulatory authorities and health advocates (8). This is in agreement with the fact that attitudes, especially strong attitudes, are usually difficult to change (29). A majority of the women in both cohorts regarded menopause as a natural process characterized by both hormonal deficiency and aging. The women in 2003, however, were slightly more determined regarding these statements compared with the cohort from 1999. The fact that women in 2003 had a clearer standpoint than in 1999 could maybe be caused by an increased awareness over time of the climacteric and HT in the society. On the other hand there were more obvious and significant differences between the both cohorts regarding actual use of HT and regarding attitudes towards use of HT, especially the statement that all women should use HT. This is probably a result of the media reports on risks and benefits of HT use (11-12,14). Similar changes over time regarding attitudes towards HT are well documented since the first result from the Women's Health Initiative (WHI) and HERS studies were published (30), whereas it has not, to our knowledge, previously been studied whether the attitudes towards the menopause transition differed before and after publication of these studies. The change in attitudes towards HT seems to correlate well with both prescription and use of HT in our area (25). Women's perception that menopause is caused by hormonal deficiency, which

was more evident in 2003 than in 1999, seems to affect actual HT use less than other factors, like their knowledge and perception of risks and benefits.

A high response rate is important for a good questionnaire study. Our response rate of over 70% in both questionnaires, of which we analyzed 70% after omitting answers with inconsistent results, is in accordance with other previous Swedish questionnaire studies (1,3,31). The method to ask for HT use in several ways and to exclude the women who answered inconsistently is a way to strengthen the study by increasing its internal validity. Furthermore, we made a test-retest analysis of the questionnaire before start of the study, and found that for almost all attitude questions women ticked the same box or just moved one step in any direction the second time. This suggests that women did not just answer "at random". Furthermore, the response profiles to some of our questions were almost identical in 1999 and 2003 (Table 2, cf questions "MT leads to increased freedom…." and "It is a relief no longer to have to think about contraception"), which is also a strength. Sometimes very small and clinically insignificant, but statistically significant, differences were found between some of the statements when comparing the 1999 and 2003 cohorts. This is probably a result of a very high statistical power, which is expected in a large population-based study and makes it important to interpret the result from a clinical point of view. To get a deeper understanding of women's attitudes towards and knowledge about the menopausal transition a qualitative approach could be useful as a complement to quantitative studies.

A weakness in our study is the fact that it mainly involved Swedish born women. The studied community has a rather low number of immigrants in general, and especially among women who have reached postmenopausal age. Moreover the dropout rate due to linguistic problems was probably higher among women born outside Sweden than among Swedish women. Therefore our conclusions are mainly based on Swedish-born women.

There are several studies showing that attitudes to the menopausal transition differ between cultures (32,33). Women from Asian cultures often have a more positive attitude towards aging, and women's status is often higher after menopause than before (33), something that is less evident in most western cultures. In a previous study from our area, we found that postmenopausal immigrants from South-America had a very similar prevalence of menopausal symptoms but a much lower rate of HT-use than that of Swedish women (34), possibly due to lower access to the health care system.

Use of hormone therapy had decreased substantially between 1999 and 2003, which is similar to findings in other populations from the same period (4, 21-25). Recent data from Sweden showed that women's as well as physicians' risk perception of side effects from HT were dramatically changed over the same time period (25,35). It is probably dependent on updated information to both women and health care providers on risks and benefits of long-term use of HT.

The menopausal status may affect women's attitudes. Several longitudinal studies have shown that during the menopausal transition, women's attitudes change from a pessimistic view to a more neutral or optimistic one (15-17). In a cross-sectional Swedish study postmenopausal women described the menopausal transition as easier than expected compared to the attitudes put forward by premenopausal women (31). In line with these previous studies we found more optimistic views after menopause, e.g more post- than perimenopausal women agreed that menopause leads to increased freedom and relief from worries about contraception. Perhaps their own experience of the menopausal transition affected and changed their attitudes.

Women who were postmenopausal had a more positive attitude towards general use of HT for all women than perimenopausal women. Actually 39% of postmenopausal women from the 1999 population thought that all women should use HT, no matter if they had

symptoms or not. This trend was similar, but with lower percentages, in the 2003 cohort (data not shown).

Women currently using HT seemed to have a more “biological” view on the menopausal transition than non-users. Significantly more users than non-users of HT thought that the menopausal transition is characterized by hormone deficiency, and were positive to HT use, although most of them looked at menopause as a natural process and as a sign of aging. Of course attitudes have once affected women to start or abstain from HT, but probably their experience from use of HT has also affected their general opinions on such therapy. These attitudes, mainly those regarding HT use, were significantly different in the cohort responding after publication of, and extensive media discussions about, the WHI- and HERS-studies (Table 2) but surprisingly still about 35% of the HT-users inn the 2003 cohort think that all women should use HT.

The most difficult statement to either totally agree or disagree upon was the one about factors influencing psychological discomfort, which is in accordance with results from Lewin et al (20). Apparently most women did not agree that psychological discomfort is dependent on external factors or hormonal/biological changes only, but is probably a result of both.

In conclusion, attitudes to the menopausal transition have not changed substantially despite enormous media reports on risks and benefits with HT during the last years. On the other hand statements concerning attitudes to HT use in general, and especially for all women, have changed between 1999 and 2003. The majority of the women regarded menopause as a natural process characterized by both hormonal changes and aging. Most women, albeit fewer in the 2003 population, thought that significant climacteric symptoms are a good reason to use HT, but most did not agree with the statement that all women should use HT. Apparently women have received and understood recent medical information in a balanced

way. This has modified their attitudes to HT and most women do not support HT-use for all women even without symptoms after menopause but still consider that women with climacteric symptoms should use HT. Some attitudes were more positive in post- than perimenopausal women, indicating that the experience of the transition was more positive than expected.

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Table 1

The menopausal transition is a natural process

The menopausal transition is characterized by hormone deficiency

The menopausal transition is a sign of ageing

Women with significant climacteric symptoms should use hormone replacement therapy

The menopausal transition leads to increased freedom for the woman

Since the menopausal transition is associated with decreasing hormone levels all women should use hormone replacement therapy

The male partner of a woman in the menopausal transition regards her as less attractive

It is a relief to know that you may no longer become pregnant

A woman feels less feminine after menopause

It is a relief to no longer have to think about contraception

Psychological discomfort during the menopausal transition is caused more by a changing life situation (for example children leaving home) than by hormonal changes

Table 1 compiles the translated statements that women were asked to give their conception about, on a five-graded Likert scale.

Table 2 The distribution in percent of answers to questions about attitudes to the menopausal transition (MT) in peri- and postmenopausal women. (Figure for 1999 cohort is given above 2003 cohort). P-values denote difference between the 1999 and 2003 cohorts. N= 2315-2382

		Agree tot	Agree somewhat	Neither/nor	Disagree somewhat	Disagree totally	p-value
MT is a natural process	1999	85.8	11.1	1.9	0.9	0.3	< 0.001
	2003	92.0	6.1	1.3	0.2	0.3	
MT is characterized by hormone deficiency.		59.8	31.8	6.9	1.1	0.4	< 0.001
		67.0	22.7	7.7	1.3	1.3	
MT is a sign of ageing.		24.8	37.4	18.4	10.2	9.1	< 0.001
		34.1	37.7	12.5	8.0	7.8	
Women with significant symptoms should use HT		44.3	32.7	16.0	5.2	1.9	< 0.001
		35.7	37.8	15.9	6.9	3.6	
All women should use HT		9.2	27.8	30.5	16.6	15.8	< 0.001
		1.9	15.5	27.7	21.8	33.1	
MT leads to increased freedom….		23.2	35.2	31.5	3.8	6.3	NS
		23.4	35.3	31.3	3.7	6.3	
The male partner regards a woman in MT less attractive		2.0	12.6	25.7	19.5	40.2	0.010
		2.0	14.6	29.0	14.4	40.0	
A relief to know that you can no longer become pregnant		54.1	18.2	18.2	4.4	5.1	NS
		55.9	15.8	20.9	3.2	4.2	

A woman feels less feminine after MT	2.5	11.5	17.0	13.5	55.6	NS
	2.2	10.7	19.2	11.2	56.7	
It is a relief no longer to have to think about contraception	67.5	11.9	14.4	1.6	4.6	NS
	66.1	11.2	14.9	1.7	6.0	
Psychological discomfort during MT is caused more by	8.4	40.2	25.7	15.6	10.0	NS
a changing life situation than by hormonal changes.	8.5	38.7	25.5	15.2	12.1	

Table 3. Percentage of women in the 2003 cohort who agree and disagree according to their use of HT (figure for HT-users given above non-uses). P-values denote difference between HT-users and non-users. Number of valid answers for the different questions varied between 1192 - 1219.

		Agree tot	Agree somewhat	Neither/nor	Disagree somewhat	Disagree totally	p - value
MT* is a natural process	HT-user	90.9	6.8	1.3	0.3	0.6	NS
	Non-user	92.4	5.8	1.3	0.2	0.2	
MT is characterized by hormone deficiency.		79.2	15.6	3.9	1.0	0.3	< 0.001
		62.8	25.1	9.0	1.5	1.6	
MT is a sign of aging.		34.3	37.2	9.4	10.0	9.1	NS
		34.1	37.8	13.5	7.3	7.4	
Women with significant symptoms should use HT		61.9	30.0	6.8	0.3	1.0	< 0.001
		26.7	40.5	19.0	9.2	4.5	
MT leads to increased freedom….		25.5	34.3	29.1	4.6	6.5	NS
		22.5	35.5	32.3	3.5	6.3	
All women should use HT		5.2	30.4	34.6	13.3	16.5	< 0.001
		0.8	10.5	25.3	24.8	38.7	
The male partner regards a woman in MT less attractive		1.6	15.3	32.1	11.4	39.6	NS
		2.1	14.4	28.0	15.5	40.1	
A relief to know that you can no longer become pregnant		52.7	14.7	19.9	2.9	5.2	NS
		55.4	16.2	21.2	3.3	3.9	

A woman feels less feminine after MT	3.6	11.0	17.2	10.1	58.1	NS
	1.8	10.6	19.9	11.5	56.2	
It is a relief no longer to have to think about contraception	68.4	8.8	14.3	1.6	6.8	NS
	65.4	12.0	15.1	1.8	5.7	
Psychological discomfort during MT is caused more by a changing life situation than by hormonal changes.	6.2	39.5	22.5	18.3	13.4	NS
	9.3	38.5	26.5	14.1	11.6	

*MT = menopausal transition