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The Medicalization of Female Fertility – Points of Significance for the Study of Menopause

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A B S T R A C T

This paper illustrates the need for human biologists to take into account the far-reaching influences of biomedicine in the study of reproductive aging. Data were drawn from western Massachusetts and Puebla, Mexico, to illustrate the effects of hysterectomy rates, tubal ligations and hormone replacement therapy (HRT) on studies of age and symptom experience at menopause. First, in examining age at natural menopause in relation to level of education, a country-specific, non-random pattern of participant exclusion due to hysterectomies was encountered. Second, in examining symptom frequency in relation to late childbearing, sample sizes were very small in part due to a high frequency of tubal ligations (43%) in Puebla, Mexico. Third, hot flash frequency during the two weeks prior to interview was, unexpectedly, not lower among women who used HRT. Human biologists who study the biological process of reproductive aging must also attend to the cultural influences of biomedicine.

***Key words**: menopause, aging, fertility, hormone replacement therapy, Mexico*

Introduction

The broad aim of this paper is to call attention to ways in which human biologists who study the biological process of reproductive aging must also attend to the cultural influences of biomedicine. The focus of this paper is on the study of age and symptom experience at menopause and how the ability to ask or answer questions is potentially affected by three common and culturally appropriate medical interventions in the lives of study participants: hysterectomies, tubal ligation, and hormone replacement therapy (HRT). First, age at menopause is examined in relation to level of education. In doing so, a non-random pattern of participant exclusion due to hysterectomies is encountered. Second, symptom fre-

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quency is examined in relation to late childbearing, and unexpectedly high frequencies of tubal ligation decrease sample sizes. Third, symptom frequency is examined in relation to use of hormone replacement therapy, with unexpected results.

Menopause is generally defined as the cessation of menstruation followed by twelve months of amenorrhea[1]. The cessation of menstruation is the result of the exhaustion of ovarian follicles[2] to a point below which menstrual cycles cannot be maintained[3,4]. Loss of fertility precedes the last menstrual period[4–6]; however, for many women, menopause functions as the first and final visible confirmation of fertility's end. Thinking about menopause as the cessation of both menstruation and fertility allows for a fuller examination of the effects of medicalization on studies of age and symptom experience at menopause.

The concept of medicalization refers to the process whereby aspects of everyday life come under medicine's supervision and influence[7,8]. Through medicalization, the labels 'healthy' and 'ill' are applied to aspects of human experiences that had previously been outside of medicine's domain[9]. Medicalization extends the boundaries of medicine by defining experiences in medical terms and by »treating« conditions through medical intervention[10]. Examples of medicalization include the medical management of universal, non-disease events (birth, menopause), deviant behavior (compulsive gambling, hyperactivity), social problems (child abuse, domestic violence), physical changes associated with maturation (teenage acne), aging (hair loss), and hormonal cycles (premenstrual syndrome).

The medicalization of female fertility is a broad topic of concern, blanketing the medicalization of pre-pregnancy[11], infertility[12,13], reproductive decision-making[14], prenatal care[15], and childbirth[16,17]. The medical management of menopause has been a particularly common focus of the critiques of medicalization[18–32].

In general, the process of medicalization has not been of academic concern to human biologists. Nonetheless, the medicalization of female fertility does affect the ability of human biologists to ask or answer questions about variability in age and symptom experience at menopause. Hysterectomies, tubal ligation, and HRT are all means by which aspects of female fertility are medically managed.

Hysterectomies are biomedical treatments for leiomyoma (fibroids), abnormal uterine bleeding, endometriosis, uterine prolapse, and gynecological malignancies. Unnecessary hysterectomies are, at times, carried out when women seek medical advice for heavy bleeding that could be managed by other, less invasive, treatments. The evidence for this includes cross-country differences in rates of hysterectomies[33], variation in hysterectomy rates across geographic regions within the United States[34–36], and elevated rates of hysterectomy among women with lower levels of education, occupational status and income levels[37–41], previous tubal ligation[42,43], insurance coverage[35,44], and the ability to speak English[45].

Medicalization, an interactive process in which patients participate[10,20,46,47], can explain part of the variation in hysterectomy rates. The treatment of heavy bleeding by hysterectomy demonstrates the extent to which women are willing to go along with a surgical solution. In Mexico, women and their physicians have also used hysterectomies as a method of birth control[45]. Another aspect of medicalization is the definition of the uterus as unnecessary once childbearing is complete. As expressed by a study participant in Puebla, »When he took out my uterus, the doctor told me »*sirve para la vida, pero despues no sirve para nada* (it gives life, but afterwards does nothing).« This atti-

tude may, in part, explain why women with a history of tubal ligation are more likely to undergo a hysterectomy[42,43].

Rates of hysterectomies are of interest to human biologists because the exclusion of women with hysterectomies from analyses of age at natural menopause reduces sample sizes. To demonstrate this effect, the first aim of this paper is test the hypothesis that age at menopause differs by level of education in western Massachusetts and Puebla. One point that immediately becomes apparent is that, with respect to level of education, hysterectomies are not random[39].

In Mexico, the rate of tubal ligation (*ligadura de trompas*) among women who use birth control is 41.3%[48]. Tubal ligation is a medicalized form of birth control because only a physician can perform a tubal ligation. Although ostensibly a birth control choice, the choice of tubal ligation is complicated by cultural, political and economic contexts. For example, Lopez[14] points out that, »Puerto Rican women became predisposed to sterilization because of its widespread availability and convenience, social acceptance, and overall lack of viable options« (p.243). Among its advantages in Mexico, the method allows women and their physicians to limit fertility without a husband's knowledge.

Rates of tubal ligation are of interest to human biologists who study menopause because tubal ligations, like natural menopause, bring about the permanent cessation of fertility. Tubal ligations can be understood to be a form of »cultural menopause«[49,50]. Of concern to this paper, the curtailment of fertility before the onset of natural menopause limits some of the questions that can be asked about symptom experience. One of the original aims of the Puebla study was to test the hypothesis that hot flashes are less frequently reported by women who give birth and lactate into the early years of peri-menopause. This hypothesis was derived from the argument that, when menopause occurs within the hormonal context of lactation, unpleasant symptoms caused by fluctuations in circulating hormones may be masked or modified by the continuous presence of prolactin and oxytocin[51]. The point that became obvious in preliminary analyses was that, in part because of the high frequency of tubal ligations in Mexico, few women gave birth after 35 years of age.

HRT has become increasingly common in the United States[29,52], as well as in parts of Europe[53] and Latin America. Much has been written about the medicalization of menopause since the widespread availability of HRT[20,26,29,32]. In addition to decreasing the risk of osteoporosis[18,27,32], HRT decreases the severity of hot flashes[54]. Therefore, to demonstrate the effect of HRT on the study of menopause, the third aim of this paper is simply to test the hypothesis that women who use HRT report fewer hot flashes in western Massachusetts and Puebla.

Sample and Methods

In western Massachusetts, the sample of women aged 40–60 was recruited over a period of seven years (1994–2001) from school districts, a shopping mall, community groups, a chiropractic office, a Breast Health Project, and an OB/GYN office. Site of recruitment was not significantly associated with symptom frequency and, in contrast to conventional wisdom, women recruited from the OB/GYN office (n=50) reported fewer hot flashes compared to women recruited from community sites[55]. A total of 349 women participated in the initial interviews. Of these, 299 participated in anthropometric measures at interview and 257 (74%) returned an additional survey by mail. Fifty continue to participate in follow-up interviews. In the city of Puebla, data were collected from June 1999 through August

2000. Women aged 40–60 were recruited for interviews from public parks, on the streets outside of their homes, in open markets, at bus stops, in small shops, and in front of large public buildings such as the Social Security hospital. Interviews and anthropometric measures conducted on the spot or at a later appointment, lasted from 30 minutes to more than one hour. The entire city was canvassed to achieve a sample (n=755) with representation from all social classes (see Table 1 for sample characteristics).

To test the hypothesis that age at menopause differs by level of education in western Massachusetts and Puebla, education was divided into three categories (low, medium, and high). Mean level of education was almost twice as high in Massachusetts (15.2 years, SD=2.5) as in Puebla (8.1 yrs., SD=4.4). Therefore, levels of education in Massachusetts were divided into population-specific categories of 8–12 years (n=50), 13–16 years (n=133), and 17–22 years (n=73). Levels of education in Puebla, were divided into population-specific categories of 0–6 years (n=381), 7–12 years (n=295), and 13–25 years (n=76).

Age at menopause was determined as age at last menstrual period (followed by 12 months of amenorrhea). To avoid including women who experienced a premature ovarian failure, and to follow the convention applied most frequently in developed countries, only women with a natural menopause over age 39 were included in the analyses that follow. This excluded three women from the Massachusetts sample and 21 women from the Mexican sample. Analysis of variance was applied to evaluate differences in mean ages at menopause among education categories (low/medium/high).

To test the hypothesis that women who were older at their last pregnancy less frequently report hot flashes, age at last pregnancy was divided into three categories (<36, 36–39.9, >39.9 years) in both data sets. Period of breast feeding was not asked in western Massachusetts. In Mexico, women older than 35 at their last birth were further divided into categories based on the length of breast feeding of their last child (<12 months, >11.9 months).

Symptom frequency was measured with the symptom questionnaire developed and used in Canada, Japan, and Massachusetts[56–58]. Symptoms associated with the menopause (e.g. hot flashes) are embedded in a list of everyday complaints[59]. The introductory question reads, »Thinking back over the past two weeks, have you been bothered by any of the following?« Chi-square analyses were applied to evaluate symptom differences during the two weeks prior to interview (yes/no) in relation to age at last childbirth (<36, 36–39.9, >39.9 years) and, in Mexico, length of breast feeding (<12 months, >11.9 months).

HRT use and length of time of HRT use were queried in both western Massachusetts and Puebla. In addition, women in Mexico were asked if they had ever used HRT. Chi-square analyses were applied to evaluate symptom difference during the two weeks prior to interview (yes/no) in relation to use of HRT at interview (yes/no).

Results

As shown in Table 1, median age at natural menopause (i.e. hysterectomies excluded) using probit analysis was 52.5 years in western Massachusetts and 49.7 years in Puebla. In western Massachusetts, rate of hysterectomy was 19%. As shown in Table 2, rates of hysterectomy differed significantly by level of education. Those with the most education (17–22 years) had the lowest rates of hysterectomy (6%) compared to those with 13–16 years of education (19%) and those

TABLE 1
SAMPLE CHARACTERISTICS

	Puebla (Mexico) N=755	Western Massachusetts N=349[1]
Mean age (yrs.)	50.0 (±6.3)	49.1 (±5.6)
Mean level of education (yrs.)	8.1 (±4.4)	15.2 (±2.5)[1]
Employed outside of the home	63%	84%[1]
Marital status	66% married 13% single 11% widowed 10% other	53% married[1] 17% single 2% widowed 28% other
Mean number of live births	3.6 (±2.3)	2.0 (±1.4)[1]
Frequency of hysterectomy	174/755 (23.0%)	65/349 (18.7%)
Mean age at hysterectomy	41.8 (±6.2) (range 25–58)	42.3 (±7.2) (range 26–57)
Naturally post-menopausal	277/755	75/349
Mean recalled age at natural menopause (yrs.) (range 40–58)	47.6 (±3.8) (range 41–57)	49.6 (±3.4)
Median age at natural menopause (yrs.) (probit analysis)	49.7 (range 49.2–50–3) range limit 40–60	52.5 (range 51.6–53.7) range limit 40–60

[1] completed surveys: N=257

with less than 13 years of education (24%, $p<0.05$).

In Puebla, rate of hysterectomy was 23%. As in Massachusetts, rates of hysterectomy differed significantly by level of education. However, the direction of the relationship between hysterectomy and education was the opposite of that seen in western Massachusetts. In Mexico, those with the least education (0–6 years) had the lowest rates of hysterectomy (18%) compared to those with 6–12 years of education (29%), and those with more than 12 years of education (27%, $p<0.01$).

Does age at natural menopause differ by level of education? As Table 2 shows, in western Massachusetts mean ages at menopause did not differ in relation to levels of education (low 48.9, medium 50.1, high 49.9 years). Of note, 25 of 75 post-menopausal women who returned their questionnaires were excluded from the analyses due to a history of hysterectomy and these exclusions were not randomly distributed in relation to category of education level – eight were excluded from the category of low education (50% of post-menopausal women), 14 from the middle (38%), and three from the highest (14%).

Similarly, in Puebla, mean age at natural menopause did not vary by level of education (low 47.5, middle 47.6, high 47.7). Those excluded from analyses due to hysterectomies numbered 160 of 426 post-menopausal women – 63 from the category of low education (31% of post-menopausal women), 78 from the middle (49%), and 19 from the highest (44%). As in Massachusetts, the exclusion from analyses was not random in relation to level of education.

TABLE 2
AGE AT MENOPAUSE IN RELATION TO LEVEL OF EDUCATION

	Rate of hysterectomies	Hysterectomies excluded (N)	Mean age at menopause	N
Western Massachusetts				
Low (8–12 yrs.)	24%	8	48.9 (2.9)	8
Medium (13–16 yrs.)	19%	14	50.1 (3.5)	23
High (17–22 yrs.)	6%	3	49.9 (3.9)	19
	p<0.01			
Puebla (Mexico)				
Low (0–6 yrs.)	18%	63	47.5 (3.7)	140
Medium (7–12 yrs.)	29%	78	47.6 (4.0)	81
High (13–25 yrs.)	27%	19	47.7 (3.8)	24
	p<0.05			

In western Massachusetts, frequency of hot flashes during the two weeks prior to interview was 32%. Women with hot flashes were older (50.2 vs. 48.8 years, p<0.05) and more likely to be post-menopausal (p<0.05). They did not differ by number of children. In Puebla, rate of hot flashes during the two weeks prior to interview was 49.6%. Women with hot flashes were older (50.6 vs. 49.4 years, p=0.01); were more likely to be post-menopausal, (p<0.01); and had more children (3.8 vs. 3.4, p=0.01). Did women with a history of late childbearing have fewer hot flashes? This question was one of the original hypotheses of the Mexico study, before the investigators encountered the high incidence of tubal ligation.

In Massachusetts, rate of tubal ligation was 30% (see Table 3), with an average age at tubal ligation of 33.9 years (SD=4.8, range 23–44). Average age at first birth was 25.4 years (SD=5.2, range 14.4–41.0) and average age at last birth was 30.5 years (SD=5.5, range 16.5–44, n=199). Of the 199 mothers, 32 (16%) reported a last birth within the ages of 36.0 and 39.9, seven (4%) reported a last birth at the age of 40 or older. Because of the low number of births among women of older ages, it is difficult to adequately test the hypothesis that late childbearing is associated with a lower symptom frequency. As Table 4 demonstrates, there

TABLE 3
FREQUENCY OF WOMEN EVER TO HAVE USED A PARTICULAR METHOD OF BIRTH CONTROL

	Western Massachusetts (N=236)	Puebla (Mexico) (N=737)
Pills	78%	32%
Diaphragm	43%	0%
Condom	34%	8%
IUD	31%	23%
Tubal ligation	30%	43%
Vasectomy	25%	0%
Rhythm	15%	15%
Injection	–	17%
Other	8%	3%[1]

[1] Includes »*esposo cuida*« (coitus interruptus), foam, Ovulos (vaginal suppositories), douche, hysterectomy, and tea

TABLE 4
PERCENT OF WOMEN REPORTING A SYMPTOM DURING THE TWO WEEKS PRIOR TO INTERVIEW IN RELATION TO AGE AT LAST CHILDBIRTH

	Western Massachusetts			Puebla (Mexico)		
Age at last birth	<36	36–39.9	>39.9	<36	36–39.9	>39.9
N	156	31	7	561	93	43
Feeling blue (%)	38	42	43	52	54	63
Back pain (%)	47	47	86	57	48	63
Cold sweats (%)	11	10	0	32	28	33
Joint aches (%)	65	58	71	56	59	56
Hot flashes (%)	33	35	29	50	54	56
Trouble sleeping (%)	49	61	57	50	59	56
Nervousness (%)	46	42	57	65	71	79
Vaginal dryness (%)	24	29	0	21	25	30

TABLE 5
PERCENT OF WOMEN REPORTING A SYMPTOM DURING THE TWO WEEKS PRIOR TO INTERVIEW IN RELATION TO USE OF HRT AT INTERVIEW

	Western Massachusetts		Puebla (Mexico)	
Use HRT	Yes	No	Yes	No
N	66	185	88	663
Feeling blue (%)	36	39	57	52
Back pain (%)	44	49	63	55
Cold sweats (%)	6	12	31	31
Joint aches (%)	61	64	60	55
Hot flashes (%)	34	31	67	47**
Trouble sleeping (%)	49	49	56	52
Nervousness (%)	37	52*	72	66
Vaginal dryness (%)	28	21	31	21*

* $p<0.05$; ** $p<0.01$

were no significant differences in symptom frequency, even though women who gave birth after 39 years of age were almost twice as likely to complain of back pain. The symptoms associated with a decline in estrogen (cold sweats, hot flashes, and vaginal dryness) were less frequently reported among women with births after 39. However, as noted, the sample size (seven) is extremely small.

In Puebla, 42.5% of participants reported sterilization by tubal ligation, with an average age of tubal ligation of 32.9 years (SD=5.4, range 18–50). Average age at first birth was 22.7 years (SD= 5.0, range 11.4–41.6) and average age at last birth was 30.9 years (SD=5.7, range 16.0–46.6, n=697). Of the 697 mothers, 93 (13%) reported a last birth from 36.0–39.9 years, 43 (6%) reported a last birth

at the age of 40 or older. Symptom frequency did not significantly vary in relation to age at last birth, although older mothers more frequently reported six of the eight symptoms listed in Table 4, including hot flashes.

In Puebla, women nursed their last child for an average of 7.2 months (SD= 8.0, range 0–96). Women with a last birth at 35 years or later, who breast fed their last child for 12 months or longer, were just as likely to report hot flashes (53%) during the two weeks prior to interview than were those women who had given birth to their last child prior to age 35 or who did not breast feed for an entire year (51%).

In Massachusetts, 28.5% of participants were using HRT at time of interview. Among users, HRT had been taken for an average of 4.0 years (SD=4.9, range 0.01–23 years). Eight percent had been using HRT for less than one year. As Table 5 shows, women using HRT were less likely to report nervousness ($p<0.05$), but there were no differences in reported frequency of hot flashes or vaginal dryness.

In Mexico, 11.7% were using HRT at time of interview; 24.9% had ever used HRT for an average of 1.8 years (SD=3.0). Among those using HRT at time of interview, 41% had been using HRT for less than one year. Surprisingly, women using HRT were more likely to report hot flashes ($p<0.01$) and vaginal dryness ($p<0.05$) compared to women not using HRT.

Discussion

Certainly more could be written about variation in age and symptom experience at menopause within and between these two populations. However, the purpose of this paper was to consider how the medical management of female fertility affects studies of menopause. Very briefly, hysterectomies reduce sample sizes in a nonrandom way, tubal ligations bring about a permanent end to fertility well before the age of natural menopause, and HRT has the potential to affect survey results for symptom frequencies.

It is not the purpose of this paper to oppose medical care in instances where hysterectomies save lives, where tubal ligations are the best choice for fertility control, and where the use of HRT allows women beset by hot flashes to sleep through the night. However, it is important to point out that there is a medical culture that, with women's cooperation[20,47], considers the post-reproductive uterus to be unnecessary and encourages hysterectomies for conditions that could be treated with less invasive measures. In addition, this medical culture provides permanent sterilization for women in countries where other options are less available or less effective due to political, economic, or cultural constraints[14]. This same medical culture also supports the widespread use of HRT, although recent studies have challenged the safety and necessity of HRT[60–62].

Female biology, more so than male biology, is aggressively »treated« by medicine[47,63]. Hysterectomies, most methods of birth control, and the use of HRT are part of a larger context of biomedicine's attention to female bodies and, it is important to point out, these treatments are interconnected. A history of tubal ligation increases the risk of hysterectomy[42,43], a history of hysterectomy increases the use of HRT[22,30,52]. Relatedly, the use of estrogen replacement therapy (ERT) in countries such as Finland increases the risk of hysterectomies[64], as it did in the United States prior to the use of HRT (estrogen in combination with progestin)[65].

Another aspect of medicalization, mentioned briefly in the Methods section, is the arbitrary division between menopause (after age 39) and premature ovarian failure (before age 40). This division between normality and pathology breaks

apart the study of the continuum of reproductive senescence. Additionally, this division may not be equally valid in all populations, particularly in populations such as Mexico where the average age of natural menopause is relatively young. This division between menopause and premature ovarian failure truncates the left side of the sample, inflates the average age at menopause, and places constraints on some interesting questions having to do with age at menopause as an aspect of human variation.

In relation to age at menopause and level of education, did the nonrandom exclusion of study participants due to hysterectomies mask significant differences that might exist? Probably not. Within the education categories, the exclusion of women by hysterectomy was most likely random. Both samples were relatively homogeneous. The western Massachusetts sample was >95% non-Hispanic white. In Puebla, only 3% of the sample spoke an indigenous dialect. Therefore, there were few population differences to consider when explaining hysterectomy risk within education levels. Nonetheless, had there been significant differences between education categories in mean ages at menopause, this difference, combined with a disproportionate number of hysterectomies, could affect the overall sample mean age at menopause. In general, women with hysterectomies are excluded from studies of age at menopause as if hysterectomies were random[39]; however, hysterectomies are not random and this can affect study results.

In agreement with other studies[42,43], women in western Massachusetts who underwent a tubal ligation were more likely to undergo a hysterectomy compared to women who had not undergone a tubal ligation (17% vs. 13%, ns). However, the opposite was true in Mexico, where only 20% of women who underwent a hysterectomy had undergone a tubal ligation compared to 26% who never had a tubal ligation. It is not unreasonable to propose that, in the case of Mexico, women used hysterectomies as a form of birth control instead of tubal ligation. One participant did give »hysterectomy« as a form of birth control in her interview (Table 3).

With respect to symptom experience at menopause and age at last childbirth, Lancaster and Lancaster[66] observed that hunting-gathering mothers often gave birth to their last child in their late thirties or early forties. This birth was often followed by a long period of lactation lasting from four to nine years. Often, menstrual cycling never resumed. »The long lactation period for the last child of a hunter-gatherer mother may have important effects in regulating or masking some of the more unpleasant symptoms of menopause reported by modern women« (p.49). Later, Lancaster and King[51] were more specific, arguing that »for many women in time past menopause occurred within the hormonal context of lactation. Unpleasant symptoms caused by abrupt fluctuations in circulating hormones may have been masked or regulated by the continuous presence of prolactin and oxytocin« (p.12).

In considering a relationship between breast feeding and hot flashes among women in Puebla, it was hypothesized that late pregnancy and long lactation would be associated with fewer hot flashes. However, only 7% of women gave birth after the age of 39. One reason for this was a tubal ligation rate of 43%, with a mean age at tubal ligation of 32.9 years (SD=5.4 years). In other words, this sample of urban women drawn from the city of Puebla did not allow for the testing of the hypothesis formulated by Lancaster and King with respect to »women in time past«[51].

Finally, symptom frequency in relation to the use of HRT demonstrated so-

me surprising results. Women take HRT to relieve immediate short-term physical or emotional symptoms, including hot flashes[18,54], therefore it was expected that women taking HRT would report fewer symptoms. However, in western Massachusetts, only nervousness was decreased among women taking HRT. In Puebla, women taking HRT at interview were more likely to report hot flashes compared to those who were not taking HRT (67 vs. 47%, ns). It may be that women did not answer the question with respect to the two weeks prior to interview, but instead treated the question as »Have you *ever* had hot flashes?« Alternatively, since so many of the women in Puebla were new to the use of HRT (41%), perhaps the treatment was not yet adjusted to reduce symptom frequency.

The medical management of menopause by HRT is promoted through the popular media[18], self-help books[28], epidemiology, medical journals, advertising[23], professional medical societies, the medical profession and a pharmaceutical industry beholden to global markets, profits, and corporate stocks[29]. The result of this promotion of HRT is the creation of a mind set in which menopause is linked not only to an option but also to an obligation to prescribe HRT[29]. However, women themselves are active consumers and have a role to play in limiting the medicalization of their lives[20]. In Puebla, for example, women have embraced the use of tubal ligations as a way to limit family size. In contrast, more than half of these women who had tried HRT stopped using it. In the United States, recent evidence for the deleterious effects associated with prolonged use of HRT[60–62] has resulted in a drop in HRT sales[67]. In other words, the medicalization of reproductive aging is a dynamic process, not a steady state.

While investigators do debate the exclusion or inclusion of hysterectomies in computing median ages at menopause[68,69], human biologists who study menopause have less frequently been explicit about the effects of tubal ligations and HRT on study results. The goal of this paper was not to bemoan medical advances, but to call attention to how medicine, as an aspect of culture, can affect studies of menopausal biology.

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MEDIKALIZACIJA ŽENSKE PLODNOSTI – NEKI PUTOKAZI ZA STUDIJ MENOPAUZE

S A Ž E T A K

Ovaj rad ilustrira potrebu humanih biologa da se u istraživanjima reproduktivnog starenja čovjeka u obzir uzmu dalekosežni utjecaji biomedicine. Prikazani su podaci iz zapadnog Massachusettsa (SAD) te iz Puebla (Meksiko), kako bi se ilustrirali učinci stopa histerektomije, podvezivanja jajovoda te hormonalne nadomjesne terapije na studije dobi menopauze i simptoma koji se doživljavaju prilikom perioda menopauze. Prvo, u istraživanju dobi prirodne menopauze u odnosu na razinu obrazovanja, podaci su poravnani u odnosu na neslučajnost uzorka prouzrokovanu isključivanjem histerektomiziranih žena (uz stopu koja je specifična za određenu zemlju). Drugo, prilikom istraživanja učestalosti simptoma u odnosu na trudnoće u kasnijoj dobi, veličine uzorka bile su vrlo male, dijelom i zbog visoke učestalosti podvezivanja jajovoda (43%) u Puebla (Meksiko). Konačno, učestalost »valunga« tijekom dva tjedna prije intervjua, neočekivano, nije bila niže među ženama koje su koristile hormonalno zamjensko liječenje. Humani biolozi koji istražuju biološki proces reproduktivnog starenje moraju također posvetiti pažnju i kulturalnim utjecajima biomedicine.