

برآورد ناپارامتری الگوی سن یائسگی طبیعی زنان شهرستان گرمسار

سید مهدی سادات هاشمی^۱ (Ph.D)، راهب قربانی^{۱*} (Ph.D)، بهروز کاوه‌پوی^۲ (Ph.D)، حسام‌الدین عسکری مجدآبادی^۳ (M.Sc)،
عبدالکریم شادمهر^۴ (M.Sc)

-
-
-
-

چکیده

سابقه و هدف: یائسگی طبیعی طبق تعریف سازمان بهداشت جهانی عبارت است از قطع عادت ماهیانه در خانم‌ها که به دلیل توقف فعالیت فولیکولار تخمدان در طی ۱۲ ماه متوالی (بدون هیچ‌گونه علت پاتولوژیکی و فیزیولوژیکی) روی می‌دهد و به پایان یافتن دوران باروری در زن می‌انجامد. یائسگی آغاز دوره‌ای از تغییرات جسمانی و متابولیکی است که بر کیفیت زندگی زن تاثیر می‌گذارد و می‌تواند باعث بروز مشکلاتی همچون پوکی استخوان و بیماری‌های قلبی نیز شود. بنابراین با افزایش سالانه تعداد زنانی که دوران پس از یائسگی را طی می‌کنند، چنین به نظر می‌رسد که مطالعه بر روی الگوی سنی بروز یائسگی ضرورت داشته باشد.

مواد و روش‌ها: برآورد الگوی سن یائسگی طبیعی به روش ناپارامتری با استفاده از شیوع یائسگی در هر گروه سنی معرفی و به عنوان مثال کاربردی از اطلاعات بررسی سن یائسگی زنان شهرستان گرمسار استفاده شد که مطالعه مذکور به صورت مقطعی بر روی ۵۸۱ زن ۳۰ ساله و بالاتر شهری و روستایی طی سال ۱۳۸۵ انجام و الگوی سن یائسگی آن‌ها با استفاده از شیوع یائسگی در هر گروه سنی برآورد شد.

یافته‌ها: میانگین (\pm انحراف معیار) و میانه سن یائسگی برای شهرستان گرمسار به ترتیب $51/9 \pm 3/6$ و $52/2$ سال برآورد شد. یائسگی از سن ۳۰ تا تقریباً ۴۳ سالگی به آرامی افزایش می‌یافت، اما پس از آن تا سن تقریباً ۵۵ سالگی سرعت آن رو به افزایش گذاشته و سپس به سرعت رو به کاهش می‌گذاشت.

نتیجه‌گیری: به نظر می‌رسد میانگین سن یائسگی شهر گرمسار در مقایسه با سایر مناطق کشور بالاتر و از این لحاظ از وضعیت مطلوب‌تری برخوردار است.

واژه‌های کلیدی: سن یائسگی طبیعی، برآورد ناپارامتری، الگو، شیوع، مطالعه مقطعی، گرمسار

مقدمه

)
(

[-] .

[-]

$$(i) \quad = (i) \quad :$$

[]

$$= \sum_i (i \times i) \quad [-]$$

$$(i -) \quad = \sum_i i$$

[]

[]

$$= \quad + ((/$$

مواد و روش‌ها

[]

[-]

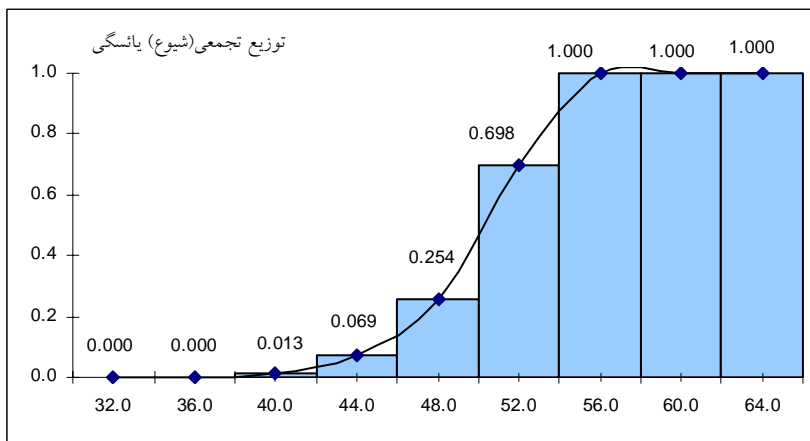
نتایج

(±)

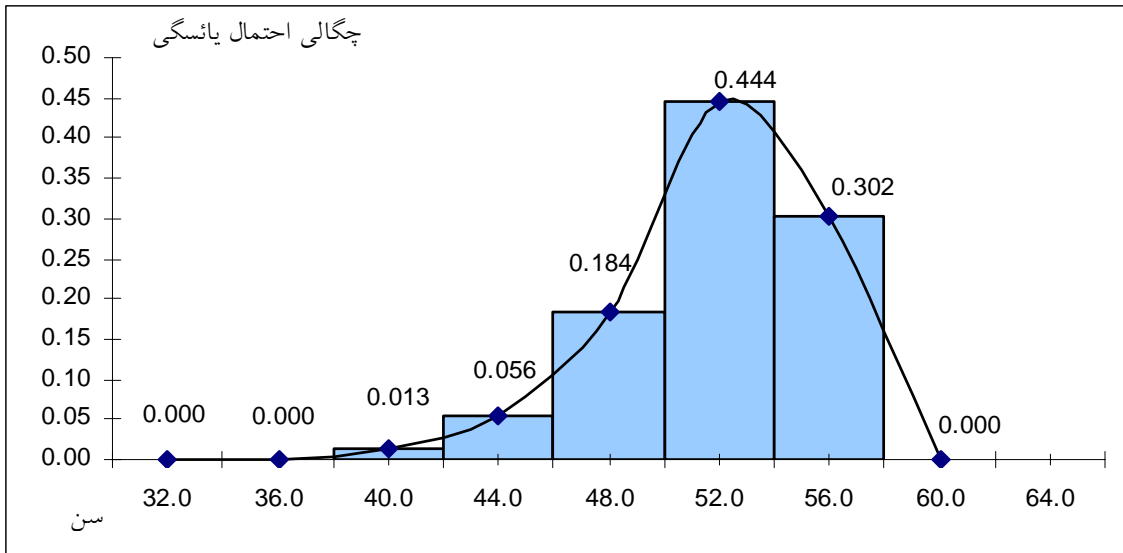
/ ± /

/

/	/				-
/	/				-
/	/				-
/	/				-
/	/				-
/	/				-
/	/				-
/	/				-
/	/				+
/	/				جمع



()



بحث و نتیجه گیری

/

[]

[]

[]

)

.(

()

)

(

/

[]

[-]

/

(±)

/ ± /

. []

/

/ / /

)

(

()

. [-]

پیشنهاد:

. [-]

تشکر و قدردانی

)

(

[21] Ayatollahi SMT, Ghaem H, Ayatollahi SAR. Age at natural menopause and socio-demographic determinants in Shiraz. *Journal of Mazandaran University of Medical Sciences* 2004; 14: 51-59 (Persian)

[22] Fallahzadeh H. Age at natural menopause in Yazd, Islamic Republic of Iran. *Menopause* 2007; 14: 900-904.

[23] Population Reference Bureau. The first international workshop on integrated approach to reproductive health and family planning in the Islamic Republic of Iran. *Population Data Sheet*. UNFPA; 2000.

[24] Mohammad K, Malekafzali H, Nahapetian V. Statistical methods and health indices, Eblagh, Tehran: 32 (Persian).

[25] Sadat-Hashemi SM, Ghorbani R, Kavehie B. Analyzing receiver operating characteristic curves to compare medical diagnostic. *Journal of Semnan University of Medical Sciences (Koomesh)*; 6: 145-149 (Persian).

[26] Garrido-Latorre F, Lazcano-Ponce EC, Lopez-Carrillo L, Herandez-Avila M. Age of natural menopause among women in Mexico City. *Int J Gynaecol Obstet* 1996; 53: 159-166.

[27] Carda SN, Bilge SA, Ozturk TN, Oya G, Ece O, Hamiyet B. The menopausal age, related factors and climacteric symptoms in Turkish women. *Maturitas* 1998; 30: 37-40.

[28] Kato I, Toniolo P, Akhmedkhanov A, Koenig KL, Shore R, Zeleniuch-Jacquotte A. Prospective study of factors influencing the onset of natural menopause. *J Clin Epidemiol* 1998; 51: 1271-1276.

[29] MacMahon B, Worcester J. Age at menopause, United States 1960-1962. Washington DC: National Center for Health Statistics, 1966. (Vital and health statistics, Series II: Data from the National Health Survey, no. 19) (DHEW publication no. (HSM) 1-19).

[30] Morabia A, Flandre P. Misclassification bias related to definition of menopausal status in case-control studies of breast cancer. *Int J Epidemiol* 1992; 21: 222-228.

[31] Hahn RA, Eaker E, Rolka H. Reliability of reported age at menopause. *Am J Epidemiol* 1997; 146: 771-775.

[32] Colditz GA, Stampfer MJ, Willett WC, Stason WB, Rosner B, Hennekens CH and et al. Reproducibility and validity of self-reported menopausal status in a prospective cohort study. *Am J Epidemiol* 1987; 126: 319-325.

[33] Kroke A, Schulz M, Hoffmann K, Bergmann MM, Boeing H. Assignment to menopausal status and estimation of age at menopause for women with missing or invalid data- a probabilistic approach with weighting factors in a large-scale epidemiological study. *Maturitas* 2001; 40: 39-46

[34] Paganini-Hill A, Krailo MD, Pike MC. Age at natural menopause and breast cancer risk: the effect of errors in recall. *Am J Epidemiol* 1984; 119: 81-85.

[35] Sievert LL. Recalling age at menopause. *Menopause* 2005; 12: 248-249.

[36] Clavel-Chapelon F, Dormoy-Mortier N. A validation study on status age of natural menopause reported in the E3N cohort. *Maturitas* 1998; 29: 99-103.

[37] Sowers MF, Crawford SL, Stevnfeld B, Morganstein D, Gold EB, Greendal GA and et al. SWAN: a multi-center, multiethnic, community based cohort study of women and the menopausal transition. *Menopause: Biol. Pathobiol.* 2000; Academic Press. Chapter 11, 175-188.

[38] Cramer DW, Xu H. Predicting age at menopause. *Maturitas* 1996; 23: 319-326.

[39] Do KA, Treloar SA, Pandeya N, Purdie D, Green AC, Heath AC, Martin NG. Predictive factors of age at menopause in a large Australian twins study. *Hum Biol* 1998; 70: 1073-1091.

[40] Bromberger JT, Matthews KA, Kuller LH, Wing RR, Meilahn EN, Plantinga P. Prospective study of the determinants of age at menopause. *Am J Epidemiol* 1997; 145: 124-133.

[41] Brambilla DJ, McKinlay SM. A prospective study of factors affecting age at menopause. *J Clin Epidemiol* 1998; 42: 1031-1039.

[42] Brambilla DJ, McKinlay SM, Johannes CB. Defining the perimenopause for application in the epidemiologic investigations. *Am J Epidemiol* 1994; 140: 1091-1095.

[43] Hardy R, Kuh D, Wadsworth M. Smoking, body mass index, socioeconomic status and the menopausal transition in a British national cohort. *Int J Epidemiol* 2000; 29: 845-851.

منابع

[1] Scientific group. Research on the menopause in the 1990's. World Health Organization Technical Report Series 1996; 866: 1-107.

[2] American Menopause Society. Internet communication: <http://www.menopause.org>

[3] Jahanfar Sh, Ramazani Tehrani F, Hashemi M. Early complications of menopause among women in Tehran. *Medical Journal of Reproduction & Infertility* 2002;3: 31-40 (Persian).

[4] Jahanfar S, Sadat-Hashemi SM. Bone densitometry of menopausal women in Tehran. *Medical Journal of Republic of Iran* 2000; 14: 231-235.

[5] Jahanfar S, Ramezani Tehrani F, Sadat-Hashemi SM. Iranian menopausal women's life style and osteoporosis. *Gerontology* 2001; 47(supple 1): 140.

[6] Tavasoli F, Sharifian J, Vahedian M. Study of the average menopausal age and a comparison of the prevalence of its complications before and after treatment. *Journal of Sabzevar School of Medical Sciences (Asrar)* 2001; 8:10-16 (Persian).

[7] Cendars MI, Evans M. Menopause. In: Scott JR, Gibbs RS, Karlan B, Haney AF, Editors. *Danforth's Obstetrics and Gynecology*, 9th ed. Philadelphia: Lipincott Williams & Wilkins; 2003. 721-738.

[8] Snowers MR, La Pietra MT. Menopause. Its epidemiology and potential association with chronic disease. *Epidemiol Rev* 1995; 17: 287-302.

[9] Yousef Zadeh S, Jafar Zadeh S. Survey on average age and prevalence of menopausal period disorders in catamenial women of the city of Sabzevar. *Journal of Sabzevar School of Medical Sciences (Asrar)* 1999; 6:58-67 (Persian).

[10] Mohammad K, Sadat-Hashemi SM, Farahani FK. Age at natural menopause in Iran. *Maturitas* 2004; 49: 321-326

[11] Ayatollahi SMT, Ghaem H, Ayatollahi SAR. Menstrual-reproductive factors and age at natural menopause in Iran. *Int J Gynecol Obstet* 2003; 80: 311-313.

[12] Ayatollahi SMT, Ghaem H, Ayatollahi SAR. Sociodemographic factors and age at natural menopause in Shiraz, Islamic Republic of Iran. *East Mediterr Health J* 2005; 11: 146-154.

[13] Shahgheibi Sh, Arianejad A. Determine the average of menopause and relative factors in Sanandaj in 1999. *Scientific Journal of Kurdistan University of Medical Sciences* 2000; 4: 19-23 (Persian).

[14] Afshari Saleh A, Dastfan F, Omid Beigi J. Study of menopausal age in Mashhad, in 1997. *Teb Va Tazkiyeh* 1999; 29: 41-45 (Persian).

[15] Kamyabi Z, Aflatonian MR, Bahrampour A. Determination of the mean age of menopause and its distribution in terms of known variables in Kerman. *Journal of Kerman University Medical Sciences* 1998; 5: 178-185 (Persian).

[16] Mortazavi Moghadam SGH.R, Khazaii Z, Izad Panah AM. Menopausal age and its influencing factors, Birjand (2001). *Sharekord University of Medical Journal* 2003; 5: 53-61 (Persian).

[17] Akbarian A, Mehdizadeh A, Bibiamin E, Malekafzali H. Age of onset of menopause and effective factors on it in the women of Rey town during the year 1993. *Kashan University of Medical Sciences and Health Service Journal (Feyz)* 1999; 3: 46-52 (Persian).

[18] Ebrahimian M, Kazemi B. Exercise and the occurrence of menopause; *Journal of the Iranian Institute for Health Sciences Research (Payesh)* 2003; 2: 11-15 (Persian).

[19] Allameh TS, Khashavi Z, Adibi P. Mean age of menopause and factors affecting it in Isfahan (1997). *Journal of Research in Medical Sciences* 1999; 4: 12-15 (Persian).

[20] Abdollahi F, Shabankhani B, Zarghani M. Study of menopausal age in women living in Mazandaran province in 2002. *Journal of Mazandaran University of Medical Sciences* 2004; 14: 61-68 (Persian).

[46] Greer W, Sandridge AL, Chehabeddine RS. The frequency distribution of age at natural menopause among Saudi Arabian women. *Maturitas* 2003; 46: 263-272.

[47] Boldsen JL, Jeune B. Distribution of age at menopause in two Danish samples. *Hum Biol* 1990; 62: 291-300.

[44] Whelan EA, Sandler DP, McConaughy SD, Weinberg CR. Menstrual and reproductive characteristic and age at natural menopause. *Am J Epidemiol* 1990; 131: 625-632.

[45] Greer W. Preprocessing histograms of age at menopause using the fast Fourier transformation. *Maturitas* 2003; 44: 267-277.