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Vasomotor and sexual symptoms in older Australian women: a cross-sectional study

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Objectives: To determine the prevalence and severity of vasomotor symptoms (VMS) and sexual symptoms in community-dwelling older women, and to explore factors associated with VMS.
Design: Population-based cross-sectional study.
Setting: Not applicable.
Participant(s): A total of 1,548 women aged 65–79 years.
Intervention(s): None.
Main Outcomes Measure(s): The presence and self-rated severity of VMS (hot flashes, night sweats, or sweating), and sexual symptoms (intimacy, desire, and vaginal dryness) were determined with the use of the Menopause Quality of Life (MenQOL) questionnaire.
Result(s): All items of the vasomotor and the sexual MenQOL domains were completed by 1,532 and 1,361 of the study participants, respectively. Menopausal hormone therapy (MHT) use was reported by 6.2% of the women, and 6.9% reported using vaginal estrogen. Among the 1,426 women not using MHT, at least 1 VMS was reported by 32.8%. The prevalence of VMS rated as moderately to severely bothersome was 3.4%. A total of 54.4% of currently partnered women had sexual symptoms, and 32.5% reported vaginal dryness during intercourse in the past month. In the multivariate analysis, factors significantly associated with VMS were age, obesity, being a caregiver for another person, and bilateral oophorectomy.
Conclusion(s): VMS and vaginal atrophy symptoms are common in community-dwelling older women, but they are predominantly untreated. The degree of distress caused by sexual symptoms among older women needs further exploration. (Fertil Steril® 2015;■:■–■. ©2015 by American Society for Reproductive Medicine.)
Key Words: Vasomotor symptoms, older women, menopause

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With the increase in life expectancy in developed countries (1), most women can expect to live one-third of their lives after menopause. Vasomotor symptoms (VMS), or hot flashes and night sweats, the cardinal symptoms of postmenopausal estrogen deficiency, are experienced by most women during perimenopause and early postmenopause (2, 3) and can significantly affect quality of life (4, 5). Although mounting evidence suggests that VMS last longer than originally presumed, current estimates of the prevalence and severity of VMS are primarily based on studies of women at midlife (6–8). Avis et al. reported the median duration of menopausal symptoms following the final menstrual period to be 4.5 years (6). In a recent study, 42% of women aged 60–65 years reported hot flashes and/or night sweats, with 6.5% of those women being moderately-severely bothered by the symptoms (7).

Little attention has been given to the persistence of VMS in older women, although the limited available data suggest that the proportion of older

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women with ongoing estrogen deficiency symptoms is not small (8–10). Earlier studies are limited by their small size (9, 11), inclusion of a narrow birth cohort (12), or being restricted to women presenting for medical care (9, 10). We therefore investigated the prevalence and severity of VMS and sexual symptoms in a representative sample of older community-dwelling Australian women and explored factors associated with VMS.

METHODS

Study Design

This was a questionnaire-based cross-sectional population-based study designed to identify the extent to which older women are bothered by estrogen deficiency symptoms usually associated with menopause.

Study Population

Recruitment was from an Australian database based on the electoral roll (Roy Morgan Research Single Source). In Australia, where voting is compulsory, every Australian is registered on this roll. The dynamic database covers all metropolitan and nonmetropolitan electoral areas across Australia. It is continually refreshed, with 50,000 new contacts each year, which remain on the database for ~2 years. To be eligible for the database, women need to be community dwelling, that is, living at a private residential address and not be in any form of institutionalized care. For recruitment from this database to our study, women aged 65–79 years were invited by telephone to participate in a study. If verbal consent was obtained, a copy of the questionnaire and the study explanatory statement were posted with a reply-paid envelope. Return of a completed study questionnaire was taken as written consent. Participants were asked to provide permission to be recontacted by telephone for essential data clarification. The study was approved by the Monash University Human Research Ethics Committee.

Study Questionnaire

Data collected included self-reported height and weight, level of education, employment status, partnership status, smoking and alcohol use, and general medical history. Systemic menopausal hormone therapy (MHT) included prescription estrogen and/or estrogen plus progestogen (including compounded hormones) and tibolone.

Menopausal symptoms were assessed with the use of the Menopause-Specific Quality of Life (MenQOL) questionnaire, a validated self-administered instrument consisting of 29 questions grouped into four domains: vasomotor (three items: hot flashes, night sweats, and sweating), sexual (three items: change in sexual desire, vaginal dryness, and avoiding intimacy), psychosocial (seven items), and physical (16 items) (13). All items begin with a yes or no question regarding the presence of the symptom over the past 4 weeks. If the symptom is present (yes), the respondent then rates the degree of bother caused by the symptom using a 7-point scale. The results from both questions (presence of symptoms and degree of bother) provide the final score, ranging from 1 (symptom not present) to 8 (symptom is present and extremely bothersome). VMS and sexual symptoms were considered to be moderately to severely bothersome if the score was above the halfway score of the 7-point scale (>5 to 8 in the total score). Similarly, the overall VMS or sexual domain scores (the mean of the scores of the three questions in each domain) were categorized as none (score = 1) or "any VMS" or "any sexual symptom" (score >1 to ≤8). "Any VMS" or "any sexual symptom" were subsequently categorized as mildly (score >1 to ≤5), or moderately to severely bothersome (score >5 to 8).

Women who answered "yes" to a symptom and did not provide a degree of bother were treated as missing data.

Statistical Analysis

The sample size was determined on the basis of the precision of the estimate of the prevalence of moderate to severe VMS. The total sample size of 1,511 was based on a 95% confidence interval of ±1.8% around a percentage prevalence estimate of 15% for moderate to severe VMS (14, 15). We purposefully sampled women so that the age distribution of our sample population mimicked the age distribution of the Australian female population in the age range of 65–79 years as of November 2011 (16).

After data entry, a random sample (n = 30) of the SPSS (Statistical Packages for Social Sciences) database was audited for accuracy. Descriptive statistics were used to present data by means of tables and graphs.

MenQOL domain scores, by age group, were presented for each of the items under the vasomotor and the sexual domains. The main outcome variable, VMS, was defined in two ways: "any VMS" versus "no VMS," or "moderately to severely bothersome VMS" versus "mild or no VMS." Women using systemic MHT were excluded from the analysis of the MenQOL domain scores and tests of association with VMS. Women using vaginal estrogen were excluded from the analysis of the MenQOL sexual domain score. Associations between the outcome variable and other factors were tested with the use of multivariable logistic regression. The variables included in the multivariable analysis were chosen because they have been identified in previous studies as either associated with VMS or potentially confounding an association with VMS. All selected variables (age, body mass index [BMI], residence, current marital status, education, employment, being a caregiver for another person, history of any cancer, surgery including hysterectomy with and without bilateral oophorectomy, housing financial security, and smoking and alcohol consumption) were fitted into the multivariable logistic regression model simultaneously (with the use of the enter method). We also checked for effect modification between the variables of being a caregiver for another person, housing financial security, education, and employment. We excluded underweight (BMI <18.5 kg/m^2) women (n = 37) from the logistic regression analysis, because we considered that they may be unwell. Adjusted and unadjusted odds ratios with 95% confidence intervals (CIs) were calculated. A P value of <.05 was considered to be statistically significant. All analyses were performed with the use of Stata version 13.1 (Statacorp).