

The MATE survey: men's perceptions and attitudes towards menopause and their role in partners' menopausal transition

Sharon J. Parish, MD,¹ Stephanie S. Faubion, MD,² Marc Weinberg,³ Brian Bernick, MD,³ and Sebastian Mirkin, MD³

Abstract

Objective: The perceptions and attitudes of menopause shared by men are largely unknown. This analysis characterized men's awareness and their understanding of their partner's menopausal transition.

Methods: A 35-question, online survey was used to assess men's perceptions and attitudes toward menopause. Men were recruited from an online research marketplace and were eligible to participate if their female partners (45-64 years old) experienced ≥ 1 of the following symptoms: hot flashes, night sweats, sleepless nights, difficulty sleeping, low libido, mood swings, pain during sex, or vaginal dryness. Couples either lived together full time, or, if living separately, resided together regularly two or more times a week.

Results: Of the 1,356 surveys sent to eligible men, 450 (33%) were completed. Most men were between 50 and 69 years (80%), married and not separated (90%), and lived with their partner full time (97%). Men were aware of the symptoms regularly experienced by their partner, with difficulty sleeping (54%) and lack of energy (49%) being frequently identified; these symptoms were attributed to menopause (26%) and/or aging (22%). Of those who were affected by symptoms (63%), most men reported they negatively impacted them (77%), their partners (70%), and relationships (56%). Men engaged in discussions with their partners regarding menopausal symptoms (72%) and believed they were somewhat/very influential (75%) in their partner's decision to seek treatment or make lifestyle adjustments.

Conclusions: Overall, men are aware of their partner's menopausal transition and may influence decisions relating to symptom management. Educational interventions would further benefit men's awareness of menopause and available treatment options.

Key Words: Attitude – Awareness – Men – Menopause – Perception – Symptoms.

Video Summary: <http://links.lww.com/MENO/A424>.

Due to the increasing longevity of women in the United States, women may live up to 40% of their lifespan after menopause.¹ Menopausal women have marked declines in estrogen levels and increases in follicle-stimulating hormone and luteinizing hormone, and often have bothersome symptoms, such as vasomotor symptoms and dyspareunia due to vulvar vaginal atrophy (VVA).² Up to 75% of women are likely to be symptomatic during menopause.³⁻⁶

Traditionally, surveys have targeted menopausal women to assess their perceptions and attitudes regarding menopause, menopausal symptoms, and available treatment options.^{1,7-12} To date, very few surveys have targeted women's male partners to assess their understanding of menopause, and they have been limited in scope.¹²⁻¹⁴ The *Clarifying Vaginal Atrophy's Impact on Sex and Relationships* (CLOSER) online survey mainly explored the impact of VVA on sex, relationships, and intimacy for 1,000 couples, and reported that most

Received January 31, 2019; revised and accepted April 9, 2019.

From the ¹Weill Cornell Medical College, New York, NY; ²Women's Health Clinic, Division of General Internal Medicine, Mayo Clinic, Rochester, MN; and ³TherapeuticsMD, Boca Raton, FL.

Data presentation: An oral presentation will be presented at the 2019 Annual Clinical and Scientific Meeting for ACOG on May 3-6, 2019, in Nashville, TN.

Funding/support: TherapeuticsMD (Boca Raton, FL).

Financial disclosure/conflicts of interest: This survey was funded by TherapeuticsMD (Boca Raton, FL). Dr Parish is on the advisory board of AMAG; serves as a consultant for Dare, JDS Therapeutics, Sprout, Strategic Scientific Technologies (SST), TherapeuticsMD, and Procter & Gamble; and has received writing support from AMAG and TherapeuticsMD. Dr Faubion consults for or is on the advisory board of

AMAG, Mithra, and Procter & Gamble. Drs Bernick and Mirkin, and Mr Weinberg are employees of TherapeuticsMD with stock/stock options. Dr Bernick is also a Board member of TherapeuticsMD.

Supplemental digital content is available for this article. Direct URL citations appear in the printed text and are provided in the HTML and PDF versions of this article on the journal's Website (www.menopause.org).

Address correspondence to: Sharon J. Parish, MD, Weill Cornell Medicine, 21 Bloomingdale Road, White Plains, NY 10605. E-mail: shp9079@med.cornell.edu

This is an open access article distributed under the terms of the Creative Commons Attribution-Non Commercial-No Derivatives License 4.0 (CCBY-NC-ND), where it is permissible to download and share the work provided it is properly cited. The work cannot be changed in any way or used commercially without permission from the journal.

men believed vaginal discomfort caused their partners to avoid intimacy, experience loss of libido, and find sex painful.¹² A small Turkish survey of 33 married men reported that they knew very little about menopause and treatment options.¹³ Finally, another small Turkish study (n = 60) showed that men had positive attitudes toward menopause.¹⁴ Therefore, the awareness and attitudes of menopause shared by men are still largely unknown; yet, male partners may influence how women cope with and manage their menopausal symptoms.

The Men's perception and Attitudes Toward mEnopause (MATE) survey was designed to gauge men's awareness of menopausal symptoms and understanding of menopause and its treatment options, evaluate the impact of menopausal symptoms on men, and determine the influence of men on their partner's menopausal symptom management.

METHODS

MATE survey

A 35-question online survey was conducted by TherapeuticsMD (Boca Raton, FL) in May, 2018. The MATE survey was designed based on our clinical experience and captured

basic demographic information and men's perspectives on menopause and related symptoms; impact of menopausal symptoms on men, female partners, and relationships; interactions with partner regarding menopause and related symptoms; and treatment awareness. The survey questions are shown in Table 1. Multiple-choice and open-ended questions were included in the survey. Some multiple-choice questions (excluding demographic questions) allowed respondents to select more than one answer.

Screening criteria and data analysis

Men residing in the United States who were registered with an online global insight exchange marketplace (Cint) were invited to participate in the survey and had to double-opt in via e-mail. Men were eligible to participate if their female partners were between 45 and 64 years old and experienced one or more of the following symptoms: hot flashes, night sweats, sleepless nights/difficulty sleeping, low libido/less desire for sexual contact, mood swings, pain during sex, or vaginal dryness. In addition, men and their female partners were required to either live together full time, or live separately, but reside together regularly two or more times per

TABLE 1. Questions included in the Men's Attitudes Toward mEnopause (MATE) survey

Participant demographics
 Age, relationship status, living status, employment status, children living at home, annual household income

Partner symptoms
 Which of these symptoms do you feel your partner regularly experiences: hot flashes, night sweats, sleepless nights/difficulty sleeping, low libido/less desire for sexual contact, mood swings, feeling depressed, pain during sex, vaginal dryness, visible skin/hair changes, weight gain, tiredness/lack of energy, lack of focus/ forgetfulness?
 What do you feel are the reasons for your partner's symptoms you just told us about?^a
 Have the symptoms your partner is experiencing personally affected you in any way?
 How have these symptoms personally affected you?^a
 How did your partner's symptoms impact (very positive, positive, neutral, negative, very negative) you personally, your relationship, and your partner?
 How do you think your partner is dealing with her symptoms (extremely well, very well, fairly well, not too well, not well at all)?
 To what degree your relationship, family life, and your partner have been affected as a result of her symptoms (scale 1-5, where 1 is less and 5 is more) on the following: romantic/nurturing with me, involved/loving to our kids, likely to be patient vs abrupt, likely to be active/go out, upbeat/optimistic, forgetful, no mood swings, confidence, concerned about her appearance, make love

Knowledge of menopause and menopausal symptoms
 Which of these reasons account for your partner experiencing these symptoms: feeling emotionally down/depressed, having a specific condition/ problem/disease other than menopause, going through menopause, being pregnant, being overweight, going through some other personal crisis, something else?^b
 If a male friend asked you to describe/explain what menopause is, what would you tell him?^a
 What types of symptoms do you think women typically experience when they go through menopause?^a
 Is your partner currently going through menopause?
 Has your partner directly told you that she is going through menopause?
 Have you ever talked about the symptoms your partner is experiencing?
 Who initiated the conversation: yourself, your partner, someone else in your family, a friend, a medical professional, someone else?
 What specifically did you discuss in your talks?^a (data not shown)
 Which of the following best describes the tone of the conversation you had: relaxed, engaged, polite, stressful/uptight, somewhat angry, frustrated, uneasy, relieved, fun/upbeat, something else?
 Aside from talking to your partner, what, if anything, did you personally do regarding your partner's symptoms?^a

Knowledge of treatment options for menopausal symptoms
 Are you aware of any treatment options for symptoms related to menopause?
 List the treatment options you are aware of?^a
 Have you brought up any treatment options to your partner?
 Would you be comfortable bringing up and discussing treatment options with your partner?
 Is your partner currently using some type of treatment or made/added any type of lifestyle changes to help alleviate the symptoms she is experiencing?
 Has she reached out to any medical or health/wellness professionals for help with her symptoms?
 What type of medical or health/wellness professionals has she seen/spoken with (GP/internal medicine, gynecologist or OB/GYN, nurse practitioner/ physician assistant, dietician, other health and wellness professional, some other medical professional, don't know)?
 Which of the following is your partner using/taking/doing to alleviate her symptoms: hormone/estrogen therapy, medications other than hormone therapy, lubricant, OTC pain medication, healthier diet, consuming more organic/natural foods, exercising more at home/gym/playing sports, holistic activities like yoga or meditation, changing sheets/clothes often, fanning herself/ being near fan or air conditioning, something else?^b
 How influential would you say you were in getting your partner to seek treatment or begin to make lifestyle changes to address her symptoms?

GP, general practice; OB/GYN, obstetricians/gynecologists; OTC, over the counter.

^aOpen-ended question.

^bMore than one answer could be selected

week. Men were excluded from the study if they were never married and not dating, and/or not in a steady relationship with one woman, never married and dating for less than 1 year, or living in separate locations, but staying together only occasionally (once per week or less often). Another specification of the study was that the same number of surveys with female partners aged 45 to 54 and 55 to 64 years had to be included. Participants received a small rewards incentive for completing the survey. Completed surveys were checked, and those with a majority of incomplete or unclear responses were not included in the analysis. Data are reported numerically; no statistical comparisons were performed between subgroups.

RESULTS

Survey population

Invitations for the survey were sent to 1,356 potentially eligible men, and 450 completed the survey (33.2% response rate). The majority of respondents were between 50 and 69 years old (80%), married (not separated) to their partners (90%), and living together (97%; Table 2). Their female partners were either between 45 and 54 years (50%) or 55 and 64 years old (50%). Most couples had been in a relationship for more than 21 years (61%).

Men’s awareness of menopause and related symptoms

When men were provided with a list of symptoms their female partners could be experiencing (Fig. 1A), sleepless nights/difficulty sleeping (54%) was the most commonly identified symptom, followed by tiredness/lack of energy (49%), low libido/less desire for sexual contact (48%), mood swings (47%), and hot flashes (46%). Men attributed their partner’s symptoms to menopause (26%; including the change/hormonal changes), getting older (22%), and other medical (11%) and work-related issues (7%; stress/long hours); 24% of men did not know or did not answer the question. When prompted to specifically choose from a list of potential reasons, 55% of men believed menopause accounted for their partner’s symptoms. Other common reasons were feeling emotionally down/depressed (40%), being overweight (34%), and other health issues (28%). When asked how they would describe menopause to other men, the most common response described the irrational or emotional mood of their partners (22%). Men also used the terms hormonal change (21%) or physical/biological/chemical changes (10%), or noted the inability to bear children (13%), lack of menstrual cycles (12%), and change in sex drive (7%). When asked what types of symptoms women typically experience when going through menopause (Fig. 1B), the most common symptoms cited were hot flashes/sweating (55%) and mood swings (44%), followed by low libido (18%), irritability (14%), and depression/sadness (13%), weight gain/bloating (10%), night sweats (10%), low energy (8%), and trouble sleeping (7%).

Impact of menopausal symptoms on men, partners, and relationship

Menopausal symptoms impacted men, with 63% (284/450) of survey respondents reporting that their partner’s symptoms

TABLE 2. Demographics of survey population

Parameters, n (%)	Participants (N=450)
Age, y	
Under 40	1 (0.2)
40-49	90 (20.0)
50-59	231 (51.3)
60-69	128 (28.4)
Age of female partner, y	
45-54	225 (50.0)
55-64	225 (50.0)
Relationship status	
Married to a woman and not separated	407 (90.4)
Divorced/separated but dating/in a steady relationship with one woman	27 (6.0)
Never been married to a woman but dating/in a steady relationship with one woman	16 (3.6)
Living status with current partner	
Live together full time	435 (96.7)
Live in separate locations and stay together on a regular basis (≥4×/wk)	7 (1.6)
Live in separate locations and stay together often (2-3×/wk)	8 (1.8)
Length of relationship, y	
≤10	71 (16)
11-20	104 (23)
21-30	152 (34)
>30	123 (27)
Children at home ^a	
<18 y	113 (25.1)
18-24 y	71 (15.8)
≥25 y	90 (19.9)
No children at home	176 (39.1)
Employment status	
Employed full time	256 (56.9)
Employed part time	33 (7.3)
Unemployed but looking for employment	14 (3.1)
Retired	120 (26.7)
Other	27 (6.0)
Total annual household income (2017)	
Under \$30,000	49 (10.9)
\$30,000-\$49,999	81 (18.0)
\$50,000-\$74,999	86 (19.1)
\$75,000-\$99,999	86 (19.1)
\$100,000-\$149,000	88 (19.6)
\$150,000 or more	48 (10.7)
Prefer not to answer	12 (2.7)
US location	
Midwest	100 (22.2)
Northeast	85 (18.9)
South	161 (35.8)
West	104 (23.1)

^aCould pick more than one category.

had personally affected them. Specifically, men affected by menopausal symptoms noted that the symptoms put an emotional strain on their relationships (34%; arguments, unappreciated, tension, etc), reduced the frequency of sex/intimacy (33%), and contributed to trouble sleeping (10%). Some men (11%) noted that it was upsetting or frustrating to see their partners going through this transition. Most men affected by menopausal symptoms believed the symptoms had a very or somewhat negative impact on them (77%), their relationships (56%), or their partners (70%). Approximately 10% of men thought the symptoms had a positive influence on them, their relationships, and partners.

The majority of respondents believed that menopausal symptoms had a great or negative impact on their partners (Table 3), including an impact on love making (65%), mood

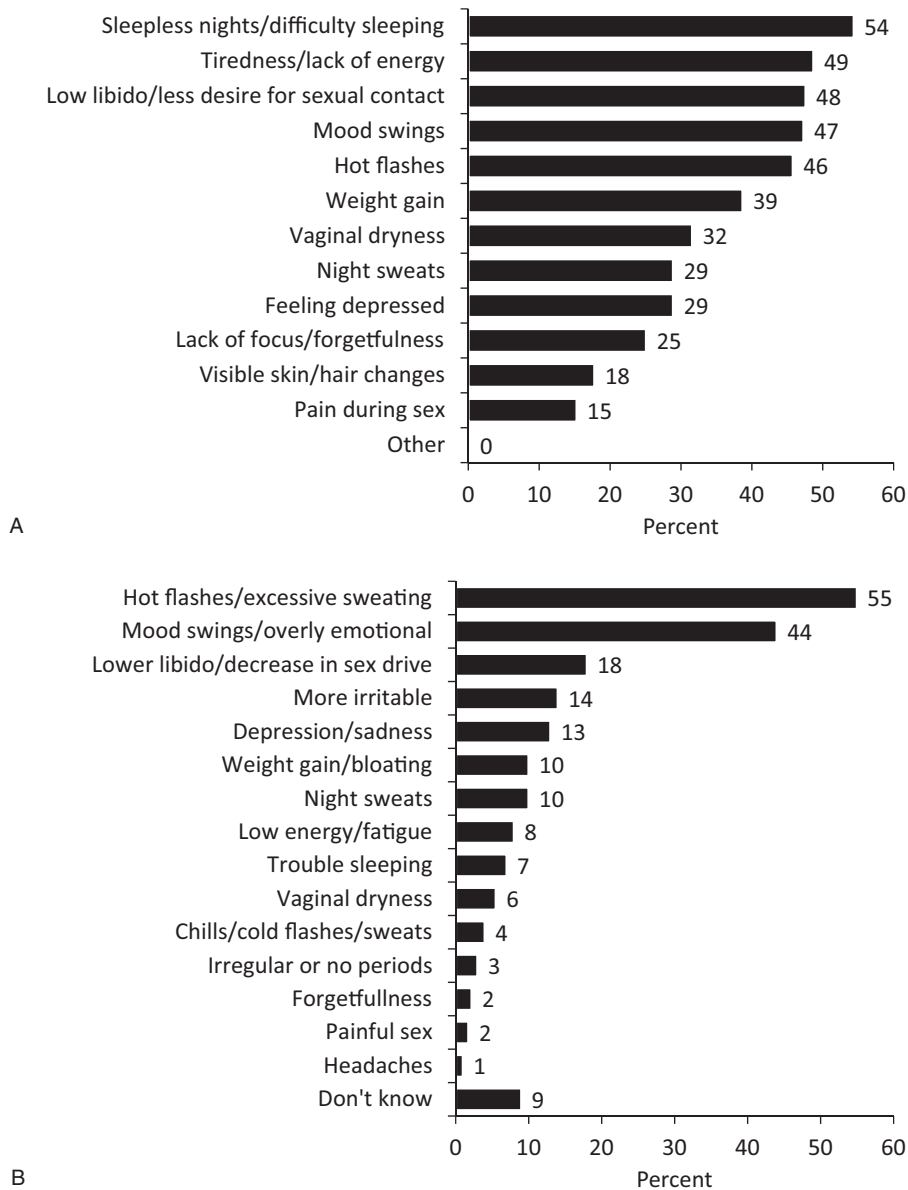


FIG. 1. Men's knowledge of menopausal symptoms. (A) Men chose from a list and were asked what symptoms are regularly experienced by your partner; (B) men answered the open-ended question: what do you think women typically experienced when going through menopause; multiple responses were allowed for both questions (N=450).

TABLE 3. Respondents (N=450) rated (great impact=1, less impact=5) to what degree their relationship, family life, and partner have been affected as a result of the symptoms their partner suffers?

Great impact or negative	1 or 2	3	4 or 5	Less impact or positive
Less likely to make love	65	22	13	More likely to make love
Less romantic/nurturing with me	58	25	17	More romantic/nurturing with me
Has mood swings	63	20	17	Doesn't have mood swings
Less likely to be patient	58	20	21	More likely to be patient
Emotionally down/depressed	50	31	20	Upbeat/optimistic
More forgetful	49	31	19	Less forgetful
Less confident	43	37	20	More confident
Less involved/loving to kids	18	47	36	More involved/loving to kids
Less likely to be active/go out	54	26	19	More likely to be active/go out
Less concerned about appearance	32	33	35	More concerned about appearance

Numbers do not add up to 100% due to rounding.

swings (63%), being romantic (58%), patience (58%), and activity level (54%). Most men (74%) thought that their partners were coping fairly to very well with their symptoms, and 22% responded that their partners were not coping too well; only 4% responded “not well at all.”

Interactions with partner regarding menopause and related symptoms

Nearly half of men surveyed (48%) thought that their partners were going through menopause, with 84% indicating their partners had told them this directly. The remainder either indicated that their partners were not going through menopause (31%) or that they were unsure (22%). Most men (72%) had talked with their partners about the symptoms they were experiencing; and of those who had discussed their symptoms, 72% of the men’s partners had initiated the conversation. Tones of the conversations were mostly relaxed (49%), engaged (40%), and polite (32%), but some were also stressful/uptight (19%), frustrated (21%), and uneasy (15%); 20% were relieved (data not all shown).

Of 357 men who answered whether they had taken additional actions in response to their partners’ symptoms, 31% reported trying to be more patient/supportive/compassionate toward their partners, 11% listed avoidance actions like giving their partners space or staying out of their way,

10% performed online research regarding menopause and treatment options, 8% asked how they could help their partners to make them feel better, and 8% recommended that their partners seek medical attention.

Men’s awareness of treatment options for menopause

Less than half of men surveyed (46%) were aware that there are treatment options for menopausal symptoms. The men cited options (Fig. 2) that included hormones/hormone therapy (35%), medications/pills (31%), herbal/natural supplements/remedies (5%), and dietary supplements/vitamins (5%). Of those aware of treatment, 41% said they had suggested these treatment options to their partners. In general, 65% indicated they would feel comfortable discussing treatment options with their partners, whereas 18% did not think they would be comfortable, and 16% were unsure.

Less than a third of men (28%; n = 126) reported that their partners were currently using some type of treatment or had made and/or added lifestyle changes to help alleviate the symptoms. Among those women who sought treatment, men reported that the majority (86%) had consulted with medical or health/wellness professionals (gynecologists/obstetrics-gynecologists [65%], general practitioners/internal medicine professionals [42%], nurse practitioners/physician assistants [24%], other health and wellness professionals [16%], and

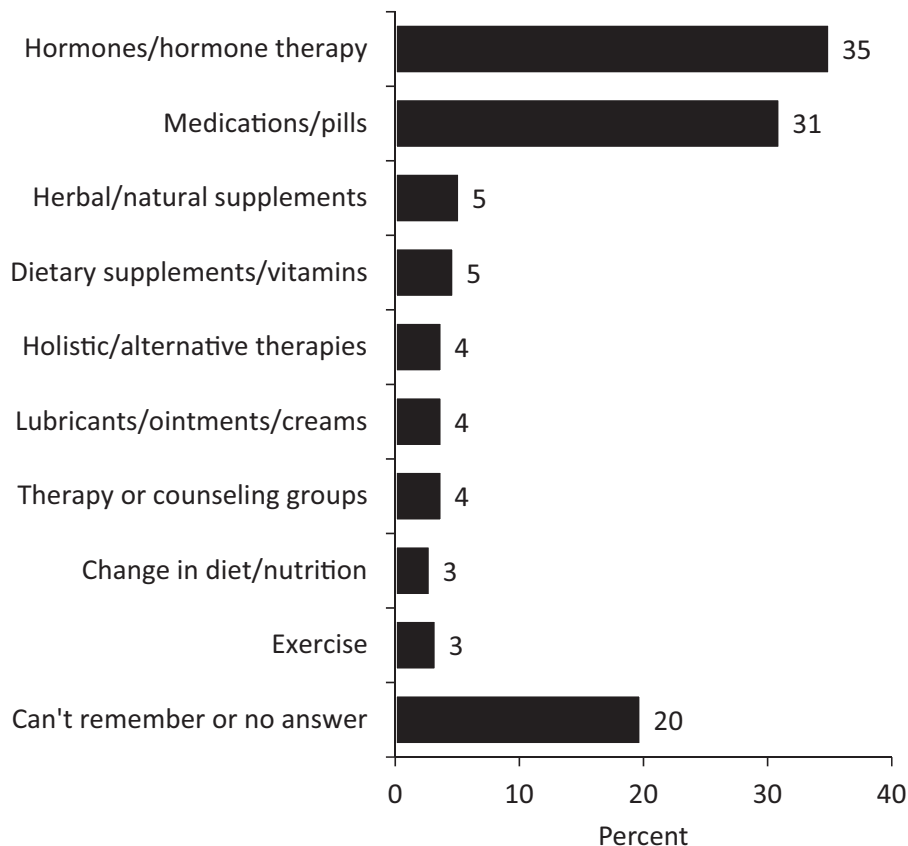


FIG. 2. Men’s knowledge of menopausal treatment options. Men answered the open-ended question: what types of treatment options are you aware of (n = 209).

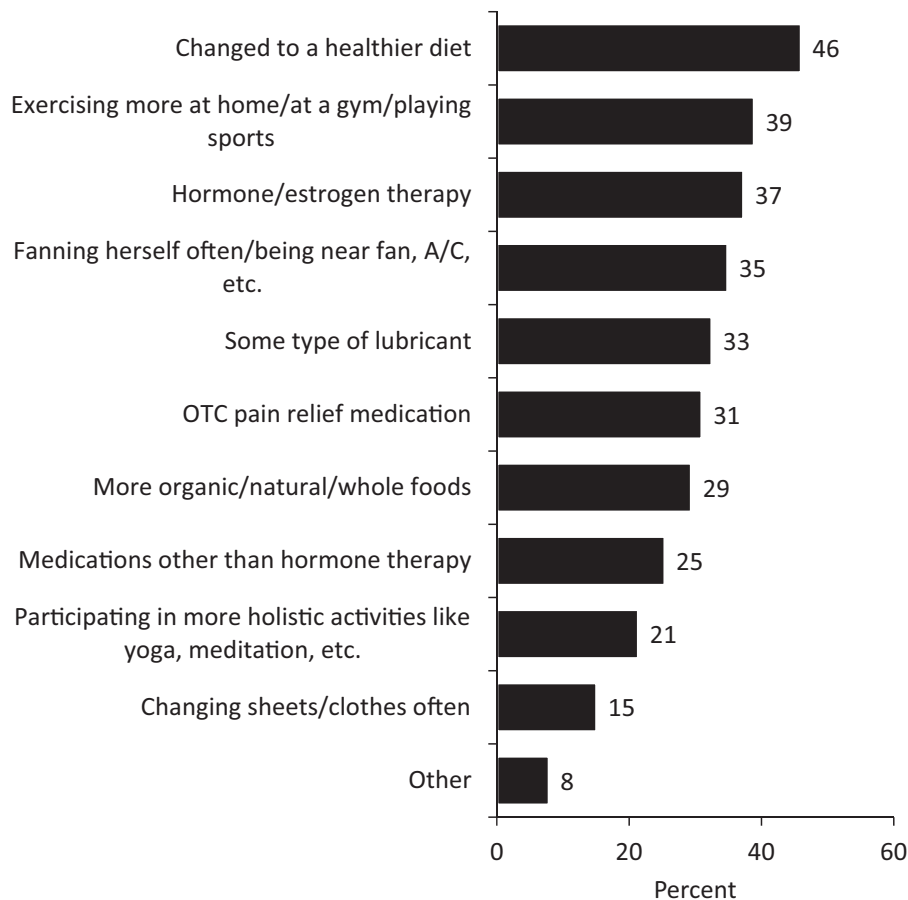


FIG. 3. Men's knowledge of partner's actions to alleviate symptoms. Men answered the open-ended question: what types of action is your partner doing to alleviate her symptoms ($n = 126$). A/C, air conditioning; OTC, over the counter.

dieticians [8%]) for help with their symptoms. In addition to seeking medical attention, men noted that their partners changed to a healthier diet (46%), began an exercise regimen (39%), and used hormone/estrogen therapy (37%) to alleviate their symptoms (Fig. 3). Most men (75%) believed they were somewhat or very influential in getting their partners to seek treatment or begin lifestyle changes to address menopausal symptoms; only 6% thought they had no influence at all.

DISCUSSION

In this study, we have characterized men's knowledge, attitudes, and perceptions of menopause. Our findings demonstrate that men were aware of their partners' symptoms, but did not consistently relate the symptoms to menopause. Just over half of men knew that treatments were available for menopausal symptoms, but their knowledge of specific treatment options was limited. Men realized the significant impact of menopausal symptoms on themselves, their partners, and their relationships, and understood their influence on their partners' menopausal symptom management. This is one of the first large surveys exclusively interviewing women's male partners with regard to their understanding of menopause.¹²⁻¹⁶

This may represent a unique opportunity to provide important health information about menopause to men, so that they

can better support their partners in the management of their menopausal symptoms. Educational interventions would further benefit men's awareness of menopause and available treatment options as suggested by other authors.^{12,13,15} In a recent study reported by Yoshany et al,¹⁵ men's knowledge of menopausal health (and also their female partners' marital satisfaction scores) significantly increased among those who participated in an educational program compared with men who did not participate in the program ($P < 0.001$). This further underscores the value of educational training for men to offer the best support to their partners during this transition period.

Overall, our survey findings corroborate previous reports that surveyed men about their perceptions regarding menopause and its associated symptoms. For instance, in the CLOSER survey, 39% of men reported a worse-than-expected impact of menopause on their intimate relationships.¹² The overall low uptake or use of certain therapies reported in the MATE survey may be due to lack of awareness of all available therapies as suggested by the responses of North American women in the CLOSER survey.¹² Another survey confirmed that men were not generally aware of treatment modalities for menopause and believed such therapies were related to conceiving children and sustaining the

woman's menstrual cycle.¹³ Unlike other studies, the current analysis did not focus on any particular menopausal symptom, for example, hot flashes or vaginal discomfort,¹² but rather assessed the impact of menopausal symptoms in totality on men and their partners, which may provide a more realistic perspective from men who may have had no prior experience with menopause before taking the survey.

As with other online surveys, this descriptive analysis was limited by aspects of the study design and administration. MATE survey recruitment was restricted to registered CINT members and thus was limited to men who had internet access. In addition, the MATE survey was designed to assess men's perceptions about their partners' menopause transition; female partners were not interviewed, thus, men's responses regarding their partners could not be confirmed or validated. Furthermore, men's biases toward treatment options (eg, alternative therapies, medications/hormones, exercise attitudes, behaviors) were unknown and may have affected their perceptions and suggestions made to their partners. Because limited demographic information was collected (eg, race, ethnicity, occupation data not collected) from the participants, these data may not be generalizable to all populations. Also, study participants received a small rewards incentive for completing the survey, which may have had an impact on how they answered the questions. Finally, there is a potential for recall bias due to the self-reported nature of the questionnaire. While a response rate of 33% appears low, the rate is similar or higher than other published online surveys, which have response rates ranging between 14% and 58%.^{7,17,18} Despite these limitations, this analysis is noted for its larger sample size compared with previous reports¹²⁻¹⁶ and for its ability to capture men's perceptions in key areas in which information was lacking: awareness and management of symptoms, understanding of menopause, impact of menopausal symptoms, and treatment awareness, and influence on menopausal symptom management.

CONCLUSIONS

Men are cognizant of changes experienced by women during their menopause transition; however, additional training and/or resources for men (eg, brochures, websites, materials at doctors' offices) could greatly benefit both menopausal women and their male partners in coping with menopause. Male partners may offer a unique opportunity to further disseminate information regarding menopause and treatment options for bothersome symptoms and improve midlife women's health and well-being.

Acknowledgments: Medical writing assistance was provided by Chastity Bradley, PhD and Dominique Verlaan, PhD of Precise Publications, LLC (Bedminster, NJ).

REFERENCES

1. Simon JA, Kokot-Kierepa M, Goldstein J, Nappi RE. Vaginal health in the United States: results from the Vaginal Health: Insights, Views and Attitudes survey. *Menopause* 2013;20:1043-1048.
2. Lobo RA. Menopause and Aging. In: Strauss JF, Barbieri RL, editors. *Yen and Jaffe's Reproductive Endocrinology: Physiology, Pathophysiology, and Clinical Management*, 6th ed. Philadelphia, PA: Saunders Elsevier; 2009. pp. 325-355.
3. Sturdee DW, Panay N. Recommendations for the management of postmenopausal vaginal atrophy. *Climacteric* 2010;13:509-522.
4. Santoro N, Komi J. Prevalence and impact of vaginal symptoms among postmenopausal women. *J Sex Med* 2009;6:2133-2142.
5. Mac Bride MB, Rhodes DJ, Shuster LT. Vulvovaginal atrophy. *Mayo Clin Proc* 2010;85:87-94.
6. Gold EB, Colvin A, Avis N, et al. Longitudinal analysis of the association between vasomotor symptoms and race/ethnicity across the menopausal transition: Study of Women's Health Across the Nation. *Am J Public Health* 2006;96:1226-1235.
7. Kingsberg S, Krychman M, Graham S, Bernick B, Mirkin S. The Women's EMPOWER Survey: identifying women's perceptions on vulvar and vaginal atrophy (VVA) and its treatment. *J Sex Med* 2017;14:413-424.
8. Constantine GD, Graham S, Clerinx C, et al. Behaviours and attitudes influencing treatment decisions for menopausal symptoms in five European countries. *Post Reprod Health* 2016;22:112-122.
9. Kingsberg SA, Wysocki S, Magnus L, Krychman ML. Vulvar and vaginal atrophy in postmenopausal women: findings from the REVIVE (REal Women's Views of Treatment Options for Menopausal Vaginal ChangEs) survey. *J Sex Med* 2013;10:1790-1799.
10. Nappi RE, Kokot-Kierepa M. Women's voices in the menopause: results from an international survey on vaginal atrophy. *Maturitas* 2010;67:233-238.
11. Nappi RE, Kokot-Kierepa M. Vaginal health: Insights, views & attitudes (VIVA): results from an international survey. *Climacteric* 2012;15:36-44.
12. Simon JA, Nappi RE, Kingsberg SA, Maamari R, Brown V. Clarifying Vaginal Atrophy's Impact on Sex and Relationships (CLOSER) survey: emotional and physical impact of vaginal discomfort on North American postmenopausal women and their partners. *Menopause* 2014;21:137-142.
13. Hidiröglu S, Tanriöver O, Ay P, Karavus M. A qualitative study on menopause described from the man's perspective. *J Pak Med Assoc* 2014;64:1031-1036.
14. Aksu H, Sevincok L, Kucuk M, Sezer SD, Ogurlu N. The attitudes of menopausal women and their spouses towards menopause. *Clin Exp Obstet Gynecol* 2011;38:251-255.
15. Yoshany N, Morowattisharifabad MA, Mihanpour H, Bahri N, Jadgal KM. The effect of husbands' education regarding menopausal health on marital satisfaction of their wives. *J Menopausal Med* 2017;23:15-24.
16. Smith MJ, Mann E, Mirza A, Hunter MS. Men and women's perceptions of hot flushes within social situations: are menopausal women's negative beliefs valid? *Maturitas* 2011;69:57-62.
17. Kingsberg SA, Larkin L, Krychman M, Parish SJ, Bernick B, Mirkin S. WISDOM Survey: attitudes and behaviors of physicians toward vulvar and vaginal atrophy (VVA) treatment in women including those with breast cancer history. *Menopause* 2019;26:124-131.
18. Nappi RE, Kingsberg S, Maamari R, Simon J. The CLOSER (CLarifying Vaginal Atrophy's Impact On Sex and Relationships) survey: implications of vaginal discomfort in postmenopausal women and in male partners. *J Sex Med* 2013;10:2232-2241.