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Review

A scoping review of the biopsychosocial factors influencing sexual desire in menopause

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Abstract

Introduction: Declining sexual desire is one of the most common and distressing symptoms of menopause and has significant implications on sexual satisfaction and overall well-being. Though declining ovarian function and sex hormone levels characteristic of menopause may contribute to low desire, some menopausal women report stable or even increased desire since the onset of menopause, suggesting that biological, psychological, and social factors are also relevant.

Objectives: This scoping review synthesized existing research examining these biopsychosocial factors associated with desire in menopause.

Methods: Following best practices for scoping reviews, comprehensive searches were conducted in PubMed and PsycINFO in July 2025, for articles examining sexual desire in menopause. Quantitative studies were included if they examined peri- or postmenopausal women, measured sexual desire as a distinct construct, and examined desire in relation to a biological, psychological, or social construct. A total of 818 articles were reviewed, with 31 meeting inclusion criteria. Data were extracted and thematically synthesized across the three biopsychosocial domains.

Results: Biological factors most relevant to sexual desire include other domains of sexual dysfunction, as well as genitourinary syndrome of menopause, particularly pain with intercourse and vaginal dryness. Other symptoms of menopause, namely sleep disruptions and poor general health are also associated with declines in desire. Psychological factors, especially anxiety and depression, strongly predicted decreased desire. Although less researched, poor body image and negative attitudes about sex appear to impact desire. Social factors such as relationship dissatisfaction and relationship length tend to correlate with declines in desire.

Conclusions: Sexual desire in menopause reflects a complex interplay of biological, hormonal, and social influences that extend beyond declining ovarian function and hormones. A biopsychosocial framework is essential for advancing research and holistic care to support menopausal women with low desire.

Keywords: menopause; postmenopause; sexual dysfunction; psychological; sexual dysfunction; physiological; biopsychosocial; sexual desire.

Declines in sexual desire are among the most common and distressing symptoms of menopause.[1,2] Such distress is understandable considering that sexual desire—interest or motivation to pursue sexual activity[3]—is a key contributor to sexual satisfaction and overall well-being.[4] The decline in hormones levels and ovarian function characteristic of menopause often contribute to decreases in sexual desire.[5] However, the fact that some women report no change and even increases in desire during this period,[5,6] suggests that factors beyond age and hormonal decline play a role in shaping sexual desire across the menopause transition. This review therefore aims to provide a comprehensive, biopsychosocial understanding of sexual desire in menopause by summarizing existing research and highlighting key gaps in the literature.

Cross-sectional and longitudinal studies demonstrate high rates of declining desire. For instance, low desire ranges from 26% to 48% among menopausal women from France, Germany, Italy, and the United Kingdom[7] and desire tends to decline from perimenopause to late postmenopause [Postmenopause (also referred to as menopause) is defined as the period following the absence of menses for at least 12 consecutive months, whereas perimenopause is a transitional period characterized by increasing variability in one's cycle length and regularity that occurs between pre-menopause (characterized by regular, cyclical menstruation) and postmenopause.][8] While declines in estrogen and testosterone can contribute to reduced desire, hormone levels alone—particularly testosterone and androgens—do not consistently predict sexual function.[9,10] Multiple studies have shown weak or inconsistent associations between circulating sex hormones and self-reported sexual desire.[10-12] Women can be diagnosed with Hypoactive Sexual Desire Disorder (HSDD; experiencing distress or impairment in response to low desire)[3] prior to menopause, suggesting that hormonal decline is not the sole cause.[13] Moreover, restoring hormones through Menopause Hormone Therapy (MHT) may increase but often does not fully restore sexual desire, with many users continuing to report low desire despite treatment.[8,12,14]

Such inconsistent findings suggest it is not merely hormonal decline contributing to low sexual desire. Menopausal symptoms—such as sleep disruptions, hot flashes, and anxiety—may indirectly lower desire by making sex less enjoyable, in turn decreasing motivation to engage in sex. Relationship satisfaction has a particularly strong impact on desire across

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the lifespan,[15] and remains relevant during menopause as well.[8,16] Attitudes and expectations about sex also play a major role.[17,18] One study revealed that the only significant predictor of low desire at age 51 was women's beliefs at age 40 that menopause would reduce their desire.[19] Despite the evident impact of biopsychosocial factors on desire, few studies have synthesized these findings, prompting this scoping review – an effort to clarify what is known and identify directions for future work.

Materials and methods

The goal of this scoping review was to capture existing literature on the biopsychosocial factors contributing to desire in menopause, following best practices for scoping reviews[20] and the PRISMA-ScR guidelines.[21] Because our aim was to identify factors beyond fluctuating hormones, studies focusing solely on hormone levels were largely excluded (see references 22 and 23 for reviews).

Eligibility criteria

Studies were eligible if they: (1) directly measured menopausal status and reported the proportion of menopausal women in the sample; (2) explicitly measured sexual desire as a separate construct (excluding composite sexual function scores); and (3) statistically examined associations between desire and at least one biopsychosocial variable. Samples had to include peri- or postmenopausal women, and if premenopausal participants were included, analyses must have stratified or tested interactions by menopause status. Women with natural or surgical menopause were eligible; hysterectomy-only participants were included only if menopause was confirmed.

We excluded qualitative and single case studies, reviews, and theoretical papers or on samples entirely of those with specific physical illnesses (eg, cancer, human immunodeficiency virus, kidney disease). Studies examining pharmaceutical or illicit drugs, herbs, and supplements were excluded, though such articles were reviewed and included if the authors reported baseline (pre-intervention/treatment) associations between desire and a biopsychosocial factor. Studies without explicit data on menopausal status or sample size were excluded from extraction but were cited in the interpretation sections when relevant.

Search strategy

A comprehensive search was conducted in July 2025 in PubMed and PsycINFO using the terms: (*menopause, menopausal, perimenopause perimenopausal,* or *climacteric*) with (*sexual desire, libido, sex drive,* or *psychological arousal)*. The search yielded 949 hits—218 from PsycINFO and 713 from PubMed. PubMed was selected to capture the biomedical and physiological aspects of sexual desire and menopause, including hormone changes and genitourinary syndrome of menopause (GSM), while PsycINFO was selected to capture psychological, relational, and psychosocial contributors to sexual desire. After removing duplicates, 818 unique articles remained. Titles and abstracts were screened, and full texts were reviewed when eligibility was unclear. This process resulted in 31 articles included in the review (Figure 1).

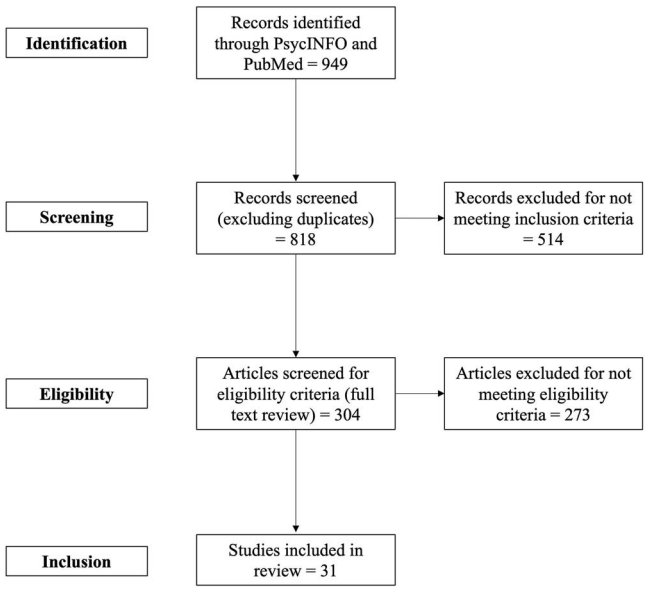

Figure 1 PRISMA flowchart providing an overview of the study selection process.

Article coding and synthesis

Extracted data included sample size, subject characteristics (including menopause status), study design, measures and analyses, and results. One reviewer extracted the data; a second reviewer verified accuracy. Findings were synthesized descriptively and thematically into three categories—biological, psychological, and social—and further divided into themes. To prioritize brevity, we summarized the most relevant findings in the following narrative review, while relevant methodology and findings of studies are presented in Table 1. Each domain section concludes with an integrative interpretation.

Results & discussion

After data extraction, findings were classified into three domains—biological, psychological, and social. Each section summarizes predominant results and concludes with an integrative interpretation.

Biological factors

Sexual function

Twelve studies examined sexual desire in relation to other facets of sexual function, namely orgasm, satisfaction, and GSM. Numerous studies revealed associations between low sexual desire and reduced physiological arousal[24,25] as well as less sexual satisfaction.[16,24-27] Menopausal women's retrospective evaluations of their sexual desire prior to menopause significantly predicted their current levels of sexual desire, particularly if they reported poor or absent desire premenopause.[2]

Both surgically menopausal[24,25] and naturally menopausal women[25,27] with low sexual desire, compared to those with normal desire, reported significantly more orgasm difficulties. One small study found no association between desire and orgasm, likely due to limited power; significance emerged

Table 1 Overview of studies included in the scoping review.

Study	*N*	Menopause status	Age[a]	Study design[b]	Findings
Bachmann & Leiblum, 1991[69]	59	59 post-m (NS)	60–70	USA; cross-sectional survey; psychologist interview assessing desire	Those engaging in sexual intercourse within past month (66%) reported higher desire than those reporting sexual inactivity (34%).
Bachmann et al., 1985[26]	22	22 post-m (NS)	55.3 ± 1	USA (treatment seeking, though not for sexual complaints); cross-sectional survey; self-reported change in desire since menopause	Sense of femininity, sexual initiation (self or male partner), and rated importance of sexual satisfaction not associated with desire. Marital adjustment, sexual satisfaction, sexual frequency, and less vaginal dryness positively associated with desire.
Biddle et al., 2009[39]	1189	552 post-m (natural) 637 post-m (surgical)	30–70	USA; cross-sectional, nationally representative telephone interviews; PFSF Desire	Fatigue/vitality and bodily pain/discomfort higher among those with HSDD than without. Those with HSDD ages 35–54 reported worse physical health compared to US age-matched norms, but not those aged 55–64. Those with HSDD reported lower quality of life, more anxiety, depression and memory problems, and lower overall mental wellbeing. Those with HSDD reported more dissatisfaction with physical and emotional relationship with sexual partner, and home life. No differences in rates of insomnia (approaching significance), ability to move around, and engage in usual activities/self-care between groups.
Bıldırcın et al., 2020[43]	694	186 peri-m 357 post-m (natural) 151 post-m (surgical)	43–62	Turkey (treatment seeking); cross-sectional survey; experimenter-modified and abbreviated version of FSFI Desire	In mixed sample of peri- and post-m women, more frequent desire associated with higher education levels. Less frequent desire associated with higher BMI and older age of partner.
Birnbaum et al., 2007[16]	93	33 pre-m 29 peri-m 31 post-m (NS)	24–60	Israel; cross-sectional survey; ISBI Desire	Feeling distracted during sex and greater shame/guilt associated with lower desire in a mixed sample of pre-m, peri-m, and post-m women but not in the stratified sample of post-m women. Relationship satisfaction and a caring partner associated with more desire across the mixed sample, with effect being stronger among the post-m compared to pre-m group. Sexual intimacy (talking about sex, feeling connected) also associated with greater desire (mixed sample only). Relationship length associated with lower desire.
Channon & Ballinger, 1986[6]	274	274 peri-m	51.2 ± 5.38	Australia (treatment seeking); cross-sectional survey; self-reported change in desire since menopause	Vaginal lubrication difficulties and more sexual pain associated with lower desire. General vaginal dryness, changes in vaginal discharge, vaginal itch/irritation, and bleeding after sex not associated with desire. Nor was importance of sex to one's partner. Low desire associated with less sexual frequency.
Chiechi et al., 1997[31]	421	186 peri-m 169 post-m (natural) 66 post-m (surgical)	50.45 ± NS	Italy (treatment seeking); cross-sectional survey; gynecologist administered structured interview about desire	Desire was lower among those with self-reported profession being a housewife. Pain during sex greater among those with low desire.
Dennerstein et al., 2006[25]	1356	610 pre-m 427 post-m (surgical) 319 post-m (natural)	20–70	France, Germany, Italy, UK; cross-sectional survey; PFSF Desire	Across all menopausal statuses, those with low desire, and their partners, initiate sex less frequently than those with normal desire. Low desire associated with reduced arousal, satisfaction, and orgasm. Older age predicted lower desire; HSDD more prevalent among surgically post-m participants than pre-m and naturally post-m.
Donati Sarti et al., 2010[2]	2138	283 post-m (surgical) 1855 post-m (natural; of natural participants, 63 had a monolateral oophorectomy)	54.2 ± NS	Italy (treatment seeking); cross-sectional survey; self-reported desire	Retrospective rating of pre-m desire predicted current desire, especially if pre-m desire rated as poor/absent. Intense, distressing menopause symptoms associated with low desire. GSM symptoms (dryness, painful intercourse, itching/burning, urinary incontinence/burning, constipation) predicted poor/absent desire. Better rated physical and mental health associated with more desire. Low partner health associated with low desire. Diabetes, higher BMI, hypertension, and older age correlated with low desire.

(*Continued*)

Table 1 Continued

Study	*N*	Menopause status	Age[a]	Study design[b]	Findings
Graziottin et al., 2009[24]	427	427 post-m (surgical)	20–70	France, Germany, Italy, UK; cross-sectional survey; PFSF Desire	Desire associated with decreased arousal, satisfaction, and orgasm. While 40% of participants reported low desire, only 14% also reported distress and therefore qualified for HSDD diagnosis. Those with HSDD, and their partners, initiated sex less than those without HSDD. Those with HSDD reported concerns over disappointing partner.
Hashemi et al., 2013[57]	225	225 post-m (natural)	45–65	Iran; cross-sectional survey; desire composite (experimenter-derived)	Negative attitudes toward menopause predicted severe decreases; positive attitudes associated with no or moderate declines in desire.
Jalali et al., 2021[38]	558	558 post-m (natural)	41–60	Iran; cross-sectional survey; SSE Desire	Composite measure of vasomotor symptoms not related to desire. More physical symptoms of menopause and lower mental wellbeing associated with decreased desire.
Javadpour et al., 2021[42]	132	66 pre-m 66 premature menopause (NS)	36.45 ± 2.61	Iran (treatment seeking); case control survey; FSFI Desire	Desire lower among premature menopausal compared to age-matched pre-m participants. Self-rated health positively related to desire.
Jonusiene et al., 2012[14]	246	246 post-m (NS)	46–65	Lithuania (treatment seeking); cross-sectional survey; FSFI Desire	Age negatively associated with desire.
Malaijerdi et al., 2023[18]	200	200 post-m (natural)	59.5 ± 4.41	Iran (treatment seeking); cross-sectional survey; FSFI Desire	Health anxiety and general health concerns negatively associated with desire. Positive attitudes about menopause associated with greater desire.
Medina-Polo et al., 2025[36]	543	158 post-m (NS) 385 pre-m	40.2 ± 12.45	Spain; case–control study; FSFI Desire	In both pre- and post-m samples, women with recurrent UTIs reported lower desire than matched controls.
Nappi et al., 2001[52]	80	80 peri-m	46–52	Italy (treatment seeking); cross-sectional survey; experimenter-derived questionnaire	Those with HSDD (compared to arousal & pain disorders) more likely to report psychological symptoms, including depression.
Nappi et al., 2009[33]	568	568 post-m (surgical)	35–69	Italy (treatment seeking); cross-sectional survey; self-reported decline in desire after bilateral oophorectomy	Vaginal dryness associated with lower desire.
Nappi et al., 2010[50]	138	73 peri-m 65 post-m (NS)	40–60	Italy (treatment seeking; all with hot flashes); cross-sectional survey; FSFI Desire	Higher state and trait anxiety associated with lower desire in both peri- and post-m women. Dyadic cohesion associated with greater desire especially in late peri-m.
Nazarpour et al., 2016[71]	405	405 post-m (natural)	40–65	Iran; cross-sectional survey; FSFI Desire	Exercise was not significantly associated with desire.
Omu & Al-Qattan, 1997[28]	261	261 post-m (NS – some premature, before age 40)	NS	Kuwait (treatment seeking); cross-sectional survey; Self-reported change in desire	More conflict with one's partner associated with lower desire. Low desire most common reported cause of sexual cessation among partnered participants, followed by partner's disinterest. Reduced vaginal lubrication, pain during sex, and older age associated with low desire.
Peixoto et al., 2019[41]	36	36 post-m (NS)	45–65	Brazil (treatment seeking); cross-sectional survey; FSFI Desire	Desire showed positive correlation with vitality, social support, general health status, and mental health. No significant correlations with functional ability or limitations due to physical or emotional reasons, nor bodily pain.
Reed et al., 2007[27]	341	181 post-m (NS) 160 peri-m	45–55	USA (women with hot flashes); cross-sectional survey; IFSF Desire	Low desire and HSDD predicted lower sexual frequency, reduced sexual satisfaction, orgasm difficulties, reduced lubrication during intercourse, and more sexual pain. Desire was not associated with hot flashes, but low desire associated with more night sweats and poor sleep. Depression was negatively linked with desire. Nulliparity was higher among participants with low desire. Self-rated health, exercise frequency, education, household income, and BMI not related to desire.

(*Continued*)

Table 1 Continued

Study	*N*	Menopause status	Age[a]	Study design[b]	Findings
Rosen et al., 2012[40]	1574	1088 pre-m 486 post-m (NS)	42.9 ± 11.9	USA (Recruited from the Hypoactive Sexual Desire Disorder Registry for women); cross-sectional comparison study; FSFI Desire, all diagnosed with HSDD diagnosis by clinical assessment	Post-m women often attributed cause of HSDD to menopausal symptoms. Body image dissatisfaction often cited as another reason for HSDD. Post-m with HSDD less frequently reported liking their appearance naked than pre-m. Post-m reported less frequent distress over low desire than pre-m. Post-m more likely to indicate partner's sexual desire, other sexual issues, and dissatisfaction with partner's technique contributed to their HSDD. No differences between pre- and post-m participants' levels of relationship satisfaction, though both groups reported their HSDD impacted their relationship or upset their partner.
Schnatz et al., 2010[49]	102	Mixed peri- and post-m (NS)	52.9 ± 6.8	USA (treatment seeking for menopause symptoms); cross-sectional survey; self-reported decrease in desire since menopause	Both anxiety and depression associated with lower desire.
Tabatabaeichehr et al., 2018[35]	210	210 post-m (natural)	50–70	Iran (treatment seeking); cross-sectional survey; SDI	Relationship length, age, and number of children negatively related to desire. Perceived health and education level positively related to desire. Employment status, and household income not related to desire. Hypertension, heart disease, diabetes, chronic pain, gastrointestinal problems, bladder/intestinal problems, chronic ulcers, and joint/bone issues associated with lower desire. No associations between desire and urinary tract infections.
Tungphaisal et al., 1991[68]	100	100 post-m (natural)	56.8 ± NS	Thailand (treatment seeking); cross-sectional survey; frequency of desire in past month, decrease in desire since menopause	Only 8/100 women reported poor marital satisfaction, and it was not significantly associated with low desire.
West et al., 2008[1]	1944	755 pre-m 552 post-m (natural) 637 post-m (surgical)	30–70	USA; cross-sectional nationally representative telephone interviews; PFSF Desire	HSDD associated with lower sexual frequency. Depression and antidepressant use both associated with HSDD across a mixed sample of pre- and post-m women, but menopausal status did not appear to moderate the associations between depression, antidepressant use, and HSDD.
Woods et al., 2007[32]	41	41 post-m (natural)	NS	USA; cross-sectional survey; self-reported presence of decreased desire	Decreased desire correlated weakly with difficulty concentrating, general vaginal dryness, depression, and waking during the night, but not with forgetfulness, hot flashes, and early wakening.
Woods et al., 2010[8]	286	195 pre-m 272 peri-m 65 post-m (NS) *Totals exceed sample size as longitudinal study; some transitioned between menopausal stages*	At baseline: 41.4 ± 4.3	USA (excluded after 5 years post-m); longitudinal study (1990–2005); self-reported sexual desire	Older age associated with lower desire and was accounted for in all analyses. Number of children, education, sexual abuse, and vaginal dryness did not predict desire. Anxiety, depression, stress, hot flashes, night and early morning awakenings, and fatigue associated with low desire. Self-rated health and engagement in daily exercise positively associated with desire. Married women reported more declines in desire than single/unmarried women. Note that perceived health, stress, depression, fatigue, and difficulty sleeping were strongest predictors of lower desire in a model including all significant variables.
Zhuo et al., 2021[37]	252	252 peri-m	45–55	China (treatment seeking); cross-sectional survey; FSFI Desire	Women with nonfunctional pelvic floor muscles more likely to report hypoactive desire. Correlational analyses showed desire positively associated with pelvic floor muscle strength.

[a]Mean and SD are included only if authors do not report age range. [b]Study design includes the country study occurred (with notable details about sample in brackets, if applicable), study type, and how authors measured sexual desire. Premenopausal participants (pre-m); Perimenopausal participants (peri-m); Postmenopausal participants (post-m). Not specified in article (NS).

when pre- and perimenopausal women were included in analyses.[16]

Another sexual function component is vaginal lubrication. Few studies directly studied the association between diminished desire and lubrication difficulties during intercourse, though an association appears likely.[6,28] For example, Reed et al.[27] found peri- and postmenopausal women with diminished desire reported significantly greater lubrication difficulties during intercourse.

GSM: GSM, affecting over half of menopausal women, often contributes to sexual dysfunction.[29] GSM results from declining estrogen and androgen levels, causing symptoms impacting the vagina, vulva, and lower urinary tract (eg, bleeding after sex, vaginal dryness, itching, irritation, and burning, recurrent urinary infections, and painful urination, urgency, or incontinence).[30] Pain with intercourse is especially common and a major contributor to low desire, as all studies found that pain during sex reduces desire.[6,27,28,31] Notably, pain nearly doubled the odds of poor or absent desire among 2138 Italian menopausal women.[2]

General vaginal dryness, even outside sexual activity, was associated with low desire in two studies.[26,32] Vaginal dryness was also more frequent among surgically menopausal women with declining desire than those with normal desire.[33] However, two studies found no association, possibly due to limited inclusion of late-stage postmenopausal women, as one included perimenopausal women[6] and the other excluded women after 5 years postmenopause.[8] Capturing women who have been postmenopausal for longer may reveal stronger links, since GSM symptoms often worsen over time.[34]

Findings for other GSM symptoms are mixed but lean toward an association. One study found no relationship between low desire and changes in vaginal itch or irritation, vaginal discharge, or bleeding after sex among 274 perimenopausal women.[6] Yet, a larger study of 2138 Italian menopausal women revealed that dryness, itching/burning, urinary incontinence/burning, and constipation increased the odds of low desire.[2] Both samples sought menopause treatment, so differences in results may reflect differences in sample size, menopausal stage, or measurement method. Bladder and intestinal problems (reported as a broad category without further specification) were higher among those with low desire, but urinary tract infections (UTIs) were not.[35] In contrast, a case control study found that post-menopausal women with recurrent UTIs reported lower desire than a matched control group without recurrent UTIs.[36] Notably, the impact of recurrent UTIs on desire was also present among pre-menopausal women.[36] Another study classified perimenopausal participants as having either functional or dysfunctional pelvic floor muscle strength based on digital vaginal palpation during gynecological examinations.[37] Sexual desire was found to be lower among women with pelvic floor dysfunction compared to those with functional pelvic floor muscle strength.[37]

Menopause symptoms

Seven studies assessed general menopausal symptoms. Although vasomotor symptoms (ie, hot flashes, night sweats, sweating) are common in menopause, most studies found no link between them and sexual desire.[27,32,38] For example, Woods et al.[8] found hot flashes no longer predicted lower desire once sleep disruptions were accounted for. Only one study found women with diminished desire experienced more frequent night sweats,[27] suggesting vasomotor symptoms, and specifically night sweats, may act indirectly by impairing sleep quality. That is, sleep disruptions and fatigue may be more influential on desire. Low desire is higher among women reporting poor sleep, insomnia, frequent night awakenings, early waking, and fatigue.[8,27,32,39] However, no significant differences in insomnia rates were found between menopausal women with and without HSDD.[39]

Greater intensity and distress from overall menopausal symptoms also predicted lower desire.[2] For example, lower sexual desire was associated with a composite measure of menopausal symptoms including flatulence, difficulty sleeping, muscle and joint pain, fatigue, drying skin, weight gain, and increased facial hair.[38] When asked to list perceived causes of their HSDD, menopausal women most often cited menopausal symptoms.[40]

General health

Six studies examined associations between sexual desire and general health, not specific to menopausal symptoms. Physical health (ie, perceived overall health, pain, strength, and stamina) was positively linked to desire among 2138 Italian women.[2] However, no physical health differences were found between 1189 U.S. postmenopausal women ages 30-70 with and without HSDD.[39] That said, the menopausal women in the sample aged 35–54 with HSDD had lower health scores than U.S age-matched norms, but this difference was not observed among those 55–64,[39] suggesting possible age interactions. Subscale analyses of the same scale revealed that women with HSDD reported more bodily pain and lower vitality, but no differences in physical or occupational activity limitations.[35,39,41] Having more health comorbidities, including hypertension, heart disease, back pain, and gastrointestinal problems was associated with lower desire.[2,35,39] Perceived health also correlated with greater desire.[8,35,39,42] Only one study found no difference in self-rated health, possibly due to restricted sample variability, since the authors reported that beyond hot flashes, participants were relatively healthy.[27]

Body mass index

Conflicting results emerge between the three studies examining body mass index (BMI) and desire: one found no association,[27] while two studies reported a significant negative link.[2,43] Of note, BMI is influenced by numerous psychosocial factors,[44] but is categorized under biological factors in this review as it is derived from physical measurements.

Age

Seven studies support a robust association between aging and declining sexual desire.[2,14,25,28,35] One caveat is that menopause typically coincides with aging, making it difficult to disentangle their respective effects. However, evidence suggests that both aging and menopause contribute to declining desire, with menopause exerting a more specific influence. In a longitudinal study, sexual desire declined slightly with age, but stronger predictors included progression from perimenopause to early postmenopause, lower perceived health, higher stress, fatigue, sleep disruption, and depressed mood.[8] Furthermore, women who experienced menopause before age 40 due to premature ovarian insufficiency, reported lower desire than to age-matched premenopausal women.[42] Similarly, HSDD

was more prevalent among surgically menopausal than premenopausal women ages 20–49,[25] indicating that even in young women, menopause independently impacts desire.

Biological interpretation

Low desire consistently co-occurs with reduced arousal, orgasm, lubrication, and pain. Evaluating GSM and all sexual function domains is crucial, as few menopausal women experience hypoactive desire without other sexual impairments.[27] Estrogen decline during menopause may indirectly reduce desire by impairing genital blood flow and lubrication,[45] diminishing sensations signaling arousal.[46] Women who rely heavily on genital sensations may therefore find sex less satisfying and motivating.[47]

Sexual pain—often due to thinning vaginal tissue and reduced lubrication as a consequence of decreasing estrogen[23,45]—was linked to declines in every study. Such pain naturally reduces motivation for sex and may lead women to engage out of obligation rather than pleasure.[48] Treating GSM-related pain is thus a key target for improving desire.[30]

Sleep disruptions, poor health, and the burden of menopause symptoms further reduce desire, though it remains unclear whether these associations are physiological or stem from feeling unwell, stressed about one's symptoms, or less desirable. These findings highlight the overlap between biological and psychological mechanisms.

Psychological factors

Anxiety

Five studies revealed associations between anxiety and declines in desire among menopausal women.[8,49] Nappi et al.[50] found that higher state and trait anxiety were linked to lower desire across all peri- and postmenopausal stages. Health anxiety was also associated with reduced desire among 200 Iranian women.[18] Biddle et al.[39] reported that women with HSDD, compared to those without, had greater combined anxiety and depression scores.

Depression

Five studies examined the role of depression in diminished desire with all pointing to an association. Biddle et al.[39] showed that menopausal women with HSDD were nearly twice as likely to report depression. Women with low desire also had higher depression scores and were more likely to be classified as having moderate to severe depression.[27,32,49]

A limitation is that hypoactive desire is often a symptom of depression and often related to antidepressant medication use.[51] It is therefore unclear whether the link between depression and low desire is amplified by menopause or simply reflects the general impact of depression and antidepressants on sexual function. That said, a large cross-sectional study of 750 pre- and 1186 postmenopausal women found both depression and antidepressant use increased HSDD likelihood, but menopausal status did not moderate this association – suggesting menopause neither amplifies nor buffers these effects.[1]

Emotional well-being

Five studies linked overall mental well-being with desire. Women with low desire tended to report more bothersome symptoms on a composite measure of anxiety, depression, memory difficulties, wanting to be alone, and life dissatisfaction.[38] Lower perceived mental well-being correlated with reduced desire.[2,39,41] Menopausal women with a primary diagnosis of HSDD, compared to those with sexual arousal and pain disorders, were more likely to report psychological symptoms including depression.[52] Greater stress also predicted lower desire.[8] Only one study examined sexual abuse history and found no significant associations,[8] though given known links between abuse and impaired desire,[53] this warrants further study.

Memory and attention

Three studies evaluated changes in memory and attention, which can occur as a symptom of menopause.[54] Those with HSDD were more likely to report memory problems compared to those without.[39] Decreased desire was weakly correlated with difficulty concentrating, though not with forgetfulness, among a sample of 41 postmenopausal women.[32] Feeling distracted during sex (intrusive or wandering thoughts[55]) predicted lower desire, even after controlling for relationship length, in a sample of pre-, peri, and postmenopausal women.[16] Stratified analyses found no significant link among postmenopausal women, though possibly due to small samples.[16]

Body image

Only two studies addressed body image and sexual desire. Rosen et al.[40] studied 1088 pre- and 486 postmenopausal women with HSDD. Postmenopausal women were significantly more likely to dislike how they looked naked (though differences were small) and 46% rated their bodies as sexually undesirable, often citing body image dissatisfaction as a contributing factor to their HSDD.[40] Viewing oneself as less feminine or less sexual was a common reason for seeking treatment.[40] However, Bachmann et al.[26] found no link between feelings of femininity and desire. Despite few studies, broader literature suggests body image correlates with hypoactive desire in premenopausal women,[56] therefore warranting future exploration in postmenopausal women.

Attitudes

Four studies connected attitudes about sex and menopause with desire. Iranian women who held positive attitudes toward menopause reported little to moderate declines in desire, whereas negative attitudes predicted steep drops.[18,57] Greater guilt and shame (eg, viewing sex as sinful, impure, or morally wrong[55]) over sexual activity also predicted lower desire.[16] However, one study found no association between partner's valuation of sex and women's desire.[6]

Sexual distress

A diagnosis of HSDD requires distress or impairment.[3] However, not all menopausal women with low desire experience distress and therefore do not qualify for a diagnosis of HSDD. For example, Graziottin et al. found that while 40% of surgically menopausal women reported low sexual desire, only 14% of participants qualified for an HSDD diagnosis.[24] Both pre- and postmenopausal women reported distress levels consistent with an HSDD diagnosis, although postmenopausal women experienced this distress less frequently.[40] Of note, Graziottin[7] observed that although desire tends to decline with age, distress about this decline also lessens, resulting in a relatively stable likelihood of acquiring HSDD across the

lifespan, with only a slight increase in older age (this study was ineligible for inclusion but is noted here due to its relevance).

Psychological interpretation

Across psychological factors, anxiety and depression are the most robust predictors of low desire. Anxiety, often heightened around menopause,[58] can preoccupy attention and reduce enjoyment of sex. Depression symptoms—fatigue, anhedonia, low self-esteem, and impaired concentration—can similarly blunt desire,[59] compounded by antidepressant effects.[51] Self-deprecating beliefs common in depression can intensify body image concerns.[60] Hormonal changes and weight gain may further worsen body dissatisfaction,[61] reinforcing negative self-perceptions and sexual withdrawal.

Other psychological factors include distraction or other cognitive difficulties, which may interfere by reducing attention, making the encounter less satisfying and future encounters less motivating. Negative attitudes about sex, menopause, and aging can also impair desire.[19,62] Those who rate sex as important also report greater sexual function, including desire, and more frequent sex.[17] How one view's themselves as a sexual being—their sexual schema—particularly if negative, can impair sexual function.[63,64] Women may struggle to feel sexually desirable as they age if they internalize beauty standards that equate youthfulness with attractiveness and worth.[65,66]

In sum, psychological factors are important to desire in menopause. Encouragingly, psychological interventions help: sex therapy led to significant improvements in desire, arousal, and satisfaction after just four sessions in a randomized controlled trial, though pain related symptoms remained unchanged.[67] This suggests that GSM likely requires separate treatment, though pain may nonetheless shape psychological processes such as avoidance and distress about sex that then further decrease desire.

Social factors

Relationship satisfaction

Nine studies examined the impact of relationship satisfaction. Higher relationship satisfaction and perceiving one's partner as caring is associated with greater sexual desire, with this association being stronger among postmenopausal than premenopausal women.[16] Relationship satisfaction, particularly dyadic cohesion, also predicts greater desire in the late perimenopause transition[50] and overall satisfaction and harmony (ie, marital adjustment), was positively associated with sexual desire among naturally menopausal women.[26] Conversely, women who reported partner conflict or dissatisfaction showed lower desire.[28] Surgically menopausal women with normal desire reported greater relationship satisfaction than those with HSDD, who often expressed concern about disappointing their partner.[24] Women with HSDD were also more likely to report being dissatisfied with their emotional relationship and home life in general.[39]

However, not all women with low desire report relationship problems[68] and relationship dissatisfaction is not unique to menopause. For example, most pre- and postmenopausal women diagnosed with HSDD reported relatively high relationship happiness and good partner communication, with no differences between the two groups.[40] Birnbaum et al.[16] also compared pre and postmenopausal women, finding that levels of sexual intimacy (ie, feeling emotionally and physically connected, talking about sex) did not differ between groups, but was positively associated with sexual desire. That said, both pre and postmenopausal women were equally likely to report (at a high percentage) seeking treatment because their HSDD began to impair their relationship or that it was troubling to their partner.[40] Thus, relationship satisfaction clearly interacts with desire across the lifespan.

Relationship length

Three studies found that relationship or marriage length was negatively related to sexual desire.[16,35] Married women also reported more declines in desire than single or unmarried women.[8] Age of one's partner may also influence these associations; in a mixed sample of peri- and postmenopausal heterosexual women, having an older partner was associated with less frequent sexual desire, even after excluding cases in which male partners reported sexual dysfunction.[43]

Sexual frequency

As expected, menopausal women with low desire engage in sex less frequently than those with normal desire.[1,6,26,27,69] Most studies also found that they and their partners initiate sex less often,[24,25] with the exception of one small study from 1985, which found no association for women or their male partners,[26] possibly reflecting different sexual norms at the time. Poor partner health was also associated with lower desire and reduced or ceased sexual activity.[2,28] Another small study revealed that one's perceived importance of sexual satisfaction was not related to desire levels.[26] It is important to note here that even though sexual frequency is often positively correlated with sexual satisfaction,[4] it is not synonymous. For example, pharmaceutical trials aimed at treating low sexual desire (eg, flibanserin) have highlighted that improvements in sexual desire do not necessarily translate into clinically meaningful improvements in the number of satisfying sexual events.[70]

Exercise

The influence of exercise was evaluated in three studies, with one study suggesting greater daily exercise was associated with increased sexual desire.[8] The other two studies showed no effect.[27,71]

Education, occupation, parenting

Five studies examined the influence of role responsibilities on desire. Education level was unrelated to desire in U.S. samples[8,27] but was positively associated with desire among Iranian[35] and Turkish[43] women. Neither employment status[8,35] nor household income[27,35] was linked to desire, although women with spouses employed full time, rather than unemployed, reported higher desire.[35] Desire was lower among Italian women who did not work (operationalized in the study as being a "housewife").[31] Findings regarding parenting are mixed: having more children was associated with lower desire in a sample of Iranian women[35] but not among U.S. women.[8] Conversely, another U.S. study found that nulliparity was more common among women with low desire.[27] Given the limited research and inconsistent findings, it remains difficult to draw conclusions about the influence of role responsibilities, though country and culture may play a role.

Social interpretation

Partnered sex inherently involves another person, and the dynamics within that interaction are central to desire, and in turn, sexual frequency and satisfaction. Women with higher relationship satisfaction tend to report better sexual outcomes[4]; however, it remains unclear whether low desire leads to dissatisfaction, or vice-versa. When asked, most women attributed declines to menopause and aging rather than relationship problems.[62] Notably, the majority described a neutral impact of declining desire, with only 20% citing a negative impact on their relationship.[62]

Relationship length often predicts lower desire. Some menopausal women attribute their sexual inactivity to lack of available partners.[17,72] Yet, this reveals a paradox: partnered women are more likely to engage in sex—and thus notice desire changes—while unpartnered women may not. In long-term relationships, habituation and unmet expectations can also dull desire, especially when routine replaces novelty.[15] Menopause introduces new sexual adjustments (eg, managing dryness or pain). Couples with better communication may adapt by modifying sexual routines or exploring non-penetrative intimacy. In contrast, unresolved pain or desire discrepancies can heighten conflict and lower satisfaction. Interventions like couples or sex therapy targeting relational adjustment can improve desire – especially when GSM or pain is minimal.[67]

Broader social and cultural contexts also shape the experience of menopause and sexual desire. Although studies from a range of countries were represented in this review, direct cross-country comparisons are limited by substantial differences in study design and methodology. Nonetheless, culture, ethnicity, and country of origin likely influence the experience of menopause, sexual desire, and treatment seeking for sexual dysfunction and menopause symptoms. Moreover, the literature in this review largely focuses on cis-gender women (typically individuals assigned female at birth), with little work examining how gendered socialization and gender identity shape sexuality and aging. These gaps underscore the need for cross-cultural and international research, as well as more inclusive sampling strategies.

Relatedly, most of the studies included in this review focused on heterosexual couples. Sexual and gender minority populations face distinct menopause-related challenges, such as medical bias and under recognition of their sexual needs.[73] The stereotype of "lesbian bed death," or the assumed rapid reduction in sexual activity among lesbian women, may deter providers from addressing sexual health.[74] While partnered genital activity often declines with relationship length and age among lesbian women, non-genital intimacy (hugging, cuddling, and kissing) does not.[74] Because sexual-minoritized folks often define sex more broadly, they may adapt better to physical changes like pain or lubrication issues and experience less distress when desire declines, especially if desire declines mutually.[75]

Conclusions

Sexual desire during menopause is shaped by biological, psychological, and social forces that interact dynamically. Desire correlates with sexual function and GSM (pain), psychological factors (depression and anxiety), and social dimensions (relationship satisfaction and length). Sleep and general health also play roles. Although discussed by domain, these processes are deeply intertwined in practice. Declining hormones can affect genital tissue and arousal. Yet the emotional interpretation and the relational context in which changes to sexual function occur largely determines their impact. For example, pain may lead to avoidance of sex and reduce intimacy and closeness, which in turn diminishes desire. Sleep disruption or anxiety can heighten irritability and distractibility, further impairing sexual motivation. Ultimately, desire in menopause emerges from interdependent interactions among biology, psychology, and relationship context. There is no single cause of declining desire in menopause.

Of 818 studies screened, only 31 met inclusion criteria, underscoring the need for more rigorous, inclusive research. It is possible that broader multidisciplinary databases may index additional age-related literature, however, this review prioritized studies focusing on sexual desire related to menopause specifically, rather than aging more broadly. Moreover, many studies were excluded for grouping women across menopausal statuses in analyses, therefore underscoring the need to report results by menopausal status. Research should also examine specific domains of sexual function. Less work captures partner perspectives and diverse populations and therefore warrants future study. Clinically, effective treatment should pair physiological care (eg, GSM management) with psychological and relational interventions (eg, sex or couples' therapy). Advancing integrative biopsychosocial models will help clinicians and researchers better support menopausal women in achieving meaningful, satisfying sexual lives.

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Conflicts of interest

Dr. Cindy Meston has a professional affiliation with Stripes Beauty. This relationship is unrelated to the current study. Kate Metcalfe has no conflicts of interests to disclose.

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