

# Femininity Concerns and Feelings About Menstruation Cessation Among Lesbian, Bisexual, and Heterosexual Women: Implications for Menopause

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## Abstract

**Background:** Women differ in how they psychologically respond to the end of menstruation and onset of menopause; however, little empirical evidence exists for understanding how sexual orientation and gendered dynamics contribute to menstrual experiences in middle-to-late adulthood. We investigated if women's attitudes toward the cessation of menstruation vary by their sexual orientation.

**Methods:** Using data from the Midlife in the United States Study (MIDUS,  $N=3471$ ), we examined the relationship between women's sexual orientation and attitudes toward menstruation cessation. We also assessed their femininity concerns, such as their worries about attractiveness and fertility in the context of aging.

**Results:** Sexual minority (SM) women, compared with their heterosexual counterparts, expressed less regret of their menstrual periods ending. SM women also expressed lower concerns about femininity compared with heterosexual women, and concerns about femininity mediated the relationship between sexual orientation and regret. That is, SM women felt less regret about menstrual periods ending than heterosexual women, and this finding was partially explained through SM women's lower concerns about femininity (attractiveness and fertility).

**Conclusions:** Our results contribute to a growing body of research on the psychological strengths of sexual minorities by highlighting SM women's potential strengths in an aging context. We propose implications for understanding aging stigma and women's health, and we discuss how menopause may be differently experienced by women based on sexual orientation.

**Keywords:** sexual orientation, aging, gender, attractiveness, fertility, menstruation

WOMEN WHO EMBRACE traditional femininity and gender ideals may perceive the end of menstruation (*e.g.*, menopause) as threatening, as the changing menopausal body can be viewed as conventionally undesirable (especially by heterosexual men); however, less is known about how menstruation cessation is perceived among women who tend to defy conventional gendered attitudes and behaviors.<sup>1-4</sup> Lesbian and bisexual women, for example, often display more relaxed gender prescriptions and proscriptions (*i.e.*, rules for what women should and should not be), embrace greater body size diversity, and take pride in their reputation for gender deviancy.<sup>5-8</sup> Although lesbian and bisexual women's perspectives have been studied in other gendered health domains (*e.g.*, eating disorders, abortion, and pregnancy<sup>9,10</sup>),

scant research has empirically examined how feelings about menstrual processes—in particular, menopause—vary by sexual orientation.

Sexual minority (SM) women encounter more health problems in midlife and older age than heterosexual women,<sup>11-13</sup> but they may also experience advantages in aging because they are less traditional in their beliefs about gender and thus may be less conflicted about the supposed loss of femininity.<sup>6-8</sup> We use the term “sexual minority” to refer to a broad group of women who commonly self-identify as lesbian or bisexual and/or express behaviors or attractions that are nonheterosexual. Although the broad category of SM women is heterogeneous and diverse in experiences (*e.g.*, lesbian women report higher rates of public discrimination than bisexual women<sup>14</sup>), we

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examined SM women as a group because they differ from heterosexual women on key measures of gender flexibility, which we identify as critical to the study of menstruation cessation.<sup>15,16</sup> In addition, we refer to such women specifically as SMs and not as other appropriate terms (*i.e.*, queer) to emphasize that they are numerically underrepresented and culturally minoritized. In this research, we aim to explain women's diverse responses to the loss of menstruation, identify strengths of SM women, and highlight the unique social location of older SM women. We review the medical and social construction of menstruation and menopause, and we theorize how sexual orientation plays a role in feelings about menstruation cessation.

### Meaning of Menstruation and Menopause

Patriarchal medical science has constructed the cessation of menstruation as a time of failure of reproductive organs, discomfort in need of a cure, and the end of femininity.<sup>2,3,17,18</sup> The notion that menopause reliably triggers psychological and physical discomfort derives from medical studies in the 1960s and 1970s drawn from small, clinical samples, using Freudian theories about the psychological effect of the end of women's reproductive lives.<sup>18</sup> However, previous research demonstrates menopause is neither universally negative (some women find menopause to be inconsequential or even positive<sup>3,17,19–21</sup>) nor stable across time and place.<sup>18</sup> "Local biologies," a concept developed from research on menopausal women in Canada and Japan, describes how biological responses vary by culture and location.<sup>22</sup> For example, Japanese menopausal women rarely report "hot flashes" and instead most commonly complain of shoulder stiffness<sup>18</sup>—a symptom seldom associated with menopause in Western contexts. Disparate biological reactions to menopause reflect how social positions (*e.g.*, cultural backgrounds) shape women's biological experiences, such that there is an "inseparable relationship between biology and culture" (p. 495).<sup>18</sup>

We thus assert that menopause can be analyzed through a sociocultural lens.<sup>22</sup> Western culture socially understands the end of menstruation *via* menopause as a time of loss of beauty and reproductive capacity.<sup>3</sup> Indeed, scholars theorize that much of women's distress surrounding menopause is an artifact of culturally created definitions of ideal womanhood, such that the ideal woman is deemed as attractive, nurturing, reproductively capable, and desirable to men.<sup>4</sup> The end of menstruation *via* menopause can be distressing because women who near menopause are viewed as being less aligned with the characteristics of ideal womanhood.<sup>2,4</sup> For example, people rate women as less attractive and desirable as they age, and people identify women as peaking in desirability much earlier than men.<sup>23,24</sup> Furthermore, evolutionary perspectives position nonmenstruating women as biological anomalies and evolutionarily meaningless because they survive beyond their reproductive usefulness.<sup>25</sup> Menstruation cessation thus appears to be not only biologically challenging, but psychologically difficult given the cultural importance placed on youth, beauty, and reproductivity.

If some women are more liberated from these pressures stereotypically associated with femininity than others—for example, if they have fewer worries about their attractiveness or experience less disappointment regarding the loss of pregnancy opportunities—they may psychologically ap-

proach menopause differently. We predict SM women experience fewer of these "femininity concerns" (*i.e.*, worries about attractiveness and fertility) and thus express less regret about menstruation ending than heterosexual women. In the current research, we investigate the role of a conventional and essentialized definition of femininity—one that is physically presented, biologically driven, and often directed toward men. That is, although femininity is a broad and evolving construct, we focus on only two of many aspects of conventional femininity concerns: concerns about attractiveness and concerns about reproductive potential.

### Women's Sexual Orientation and Femininity Concerns in the Context of Aging

Medical and psychological research positions older SM women at an invisible intersection of gender, age, and sexuality.<sup>26</sup> Research on gender and health prioritizes youth,<sup>27</sup> the aging literature largely focuses on heterosexual people,<sup>12</sup> and scholarship on sexuality and health evidences a gender bias such that SM women are underrepresented relative to men.<sup>28</sup> These patterns omit midlife and older SM women in discussions of women's health, aging, and SM health—casting SMs as an understudied and neglected population in midlife and beyond. We aimed to highlight midlife and older women's perspectives as they vary by sexual orientation (*i.e.*, a central aspect of women's individual, interpersonal, and political selves). In this research, we investigated women's attitudes in the context of aging. We focused on their attitudes and beliefs about femininity to understand how such attitudes relate to feelings about menstruation cessation. We examined two areas associated with traditional femininity and aging: attractiveness and fertility. Femininity concerns could encompass a range of feelings, beliefs, and behaviors in terms of gendered expectations for women, but for the purpose of this research, we focused on two aspects of conventional femininity that seem to be at risk of declining during aging and are identified by women as stressors while aging.<sup>2,20</sup> We thus refer to the combination of worries about attractiveness and fertility as "femininity concerns," although we emphasize that this is not a comprehensive operationalization of multifaceted psychological and behavioral definitions of femininity.

#### Attractiveness concerns

Given youth and beauty are synonymous in Western cultures, and menopause is associated with "old," menopause became construed as an undesired time of ugliness.<sup>29</sup> Women are encouraged to seek treatments that emphasize the desire to recapture youthful beauty (*e.g.*, hormones to ameliorate unwanted hair loss/growth<sup>29</sup>). Indeed, much of women's distress associated with menopause centers around beliefs that bodily changes make it difficult to uphold beauty ideals, leading Dillaway (p. 4)<sup>2</sup> to conclude that "to maintain a feminine/gendered body is to maintain an unchanging body." The end of menstruation and the onset of menopause thus present a challenge to women who aim to uphold traditional femininity (*e.g.*, attractiveness). For example, in a qualitative study,<sup>2</sup> menopausal women described efforts they put into their appearance to maintain heterosexual men's attention: Heterosexual women reported spending substantial time on grooming, makeup, and other esthetics to enhance their

appearances while aging.<sup>2</sup> Thus, a distressing aspect of approaching menopause seems to be maintaining a degree of femininity acceptable to heterosexual men.

Because SM women are a diverse group with a variety of relations to and expressions of femininity, they may also experience concerns over loss of femininity while aging. Compared with heterosexual individuals, SM women are more likely to engage in gender nonconforming dress and behavior,<sup>30,31</sup> yet some SM women may perform gender in ways that seem more stereotypically linked with femininity. For example, some SM women identify as “femme” and behave in traditionally feminine manners.<sup>32</sup> However, the relationship between femme identities and traditional femininity is not straightforward: SM women note that a feminine appearance does not dictate if one is femme, that “femininity” in and of itself signals heterosexuality, and that femme identities do not align with gendered roles in the same way as for heterosexual women.<sup>32</sup> For these reasons, femme SM women likely have different pressures to adhere to traditional (heterosexual) femininity and more freedom to make femininity mean what they want it to mean; indeed, SM women are less likely than heterosexual women to internalize traditional beauty norms.<sup>33</sup>

As noted in previous research, women’s concerns over loss of femininity tend to be in relation to *heterosexual men’s* perception of their attractiveness,<sup>2</sup> whereas SM women may embrace aging as they increasingly inhabit bodies that are no longer as targeted by objectification.<sup>3</sup> Although SM women can be attracted to men, SM women as a whole are likely less concerned with heterosexual men’s perception of their attractiveness than heterosexual women. Therefore, we expect that SM women are relatively lower in attractiveness concerns compared with heterosexual women. We expect this makes menopause less difficult for SM women because SM women may feel less impacted by the side effects of aging associated with loss of traditional femininity (*e.g.*, hair growth/loss, weight gain).

### Fertility concerns

In addition to concerns about attractiveness, older women may grapple with feelings about infertility. We expect that SM women are relatively less concerned with losing fertility as they age compared with heterosexual women owing to the sociocultural contexts in which their relationship to fertility takes place. Living in heteronormative culture conditions SM women to view themselves as women who should not become mothers. For example, SM women have been denied custody of biological children,<sup>34–36</sup> viewed as less maternally capable than heterosexual women,<sup>34,36,37</sup> lacked opportunities for having children (*e.g.*, denied reproductive technologies and the right to adopt/foster children<sup>38,39</sup>), and may have rejected motherhood roles as a larger rejection of gendered roles.<sup>40,41</sup> Together, these factors may position fertility as less central to SM women’s identity compared with heterosexual women, who are often pressured to become (birth) mothers.<sup>40,42,43</sup> Indeed, Hyde found that while heterosexual women grieved not being able to give birth again during menopause, lesbian women were unlikely to express such grief.<sup>20</sup> Moreover, SM women may be less concerned with the loss of pregnancy and birthing opportunities because they are less likely to be mothers<sup>44,45</sup> and are more open to diverse

methods of having children (*e.g.*, adoption<sup>46</sup>). However, we acknowledge that “SM women” is a large umbrella term describing a diverse group of women. Our expectation that SM women have relatively lower fertility concerns with age is informed by the history of SM women’s roles in motherhood and research on lesbian women’s experience with menopause, but this reasoning does not imply a complete lack of fertility concern among SM women. Rather, based on the evidence reviewed, we suggest that fertility concerns among SM women will be lower than among heterosexual women.

### Study Overview

Using data from the Midlife in the United States Study (MIDUS), we examined the relationship between sexual orientation and feelings about menstruation cessation among middle-to-older-aged women, and we tested whether “femininity concerns” mediated the relationship. We defined “femininity concerns” as worry about one becoming less attractive as a woman and less fertile as they age. We hypothesized the following:

Hypothesis 1 (H1): Women’s feelings about menstruation cessation (*i.e.*, regret) would vary by their sexual orientation, such that SM women would experience less regret about their periods stopping than heterosexual women.

Hypothesis 2 (H2): Femininity concerns (*i.e.*, women’s worries about attractiveness and fertility in the context of aging) would mediate the relationship between sexual orientation and feelings of regret, such that SM women, compared with heterosexual women, would experience less regret about their periods stopping and these differences would be (at least partially) explained by SM women’s lower femininity concerns compared with heterosexual women.

### Methods

#### Data and analytic sample

Data are from a sample of 5522 women, ages 20–75 ( $M = 48.51$ ) who participated in MIDUS.<sup>47</sup> MIDUS is a national probability sample of noninstitutionalized, English-speaking adults recruited through random digit dialing and designed to examine health across adulthood. Participants were first interviewed in 1995–1996 (MIDUS-1), followed up a second time in 2004–2006 (MIDUS-2), and for a third time in 2013–2014 (MIDUS-3). In 2011–2014, MIDUS was augmented with a newly recruited national sample, known as the MIDUS Refresher (MIDUS-R). Data collections for MIDUS were approved by Institutional Review Boards at each participating site, and all participants provided informed consent.

In this study, we used data obtained from adults who participated in MIDUS-1 ( $n = 3666$ ) and MIDUS-R ( $n = 1856$ ) and identified their sex as female. MIDUS-1 has the largest sample of SM women (because of attrition in MIDUS-2 and MIDUS-3) and MIDUS-R was designed to augment MIDUS-1 and increase sample size. Of the women who participated in MIDUS-1 and MIDUS-R, we restricted the present analysis to women who reported their sexual orientation and feelings about menstruation cessation. These criteria were met by a final sample of 3471 women. We present descriptive statistics for the current sample in Table 1.

TABLE 1. SAMPLE DESCRIPTIVE STATISTICS BY SEXUAL ORIENTATION: MEAN (STANDARD DEVIATION) OR *N* (VALID %)

	<i>Heterosexual</i>	<i>SM</i>	<i>Total</i>
<i>N</i>	3377 (97.3%)	94 (2.7%)	3471 (100.0%)
Age (years)	48.15 (13.07) <sup>a</sup>	45.39 (13.49) <sup>b</sup>	48.08 (13.09)
Race			
White	2947 (87.9%)	84 (89.4%)	3031 (88.0%)
Black/African American	225 (6.7%)	3 (3.2%)	228 (6.6%)
Native American	29 (0.9%)	3 (3.2%)	32 (0.9%)
Asian	27 (0.8%)	0 (0.0%)	27 (0.8%)
Other	124 (3.7%)	4 (4.2%)	128 (3.7%)
Education			
High school or less	1177 (34.9%)	30 (31.9%)	1207 (34.8%)
Some college or more	2194 (65.1%)	64 (68.1%)	2258 (65.2%)
Menstrual period stopped			
No	1738 (51.5%)	58 (61.7%)	1796 (51.7%)
Yes	1639 (48.5%)	36 (38.3%)	1675 (48.3%)
Sample			
MIDUS-1 (1995–1996)	2361 (69.9%) <sup>a</sup>	55 (58.5%) <sup>b</sup>	2416 (69.6%)
MIDUS-R (2011–2014)	1016 (30.1%) <sup>a</sup>	39 (41.5%) <sup>b</sup>	1055 (30.4%)
Married or cohabitating			
No	1133 (33.6%) <sup>a</sup>	46 (48.9%) <sup>b</sup>	1179 (34.0%)
Yes	2244 (66.4%) <sup>a</sup>	48 (51.1%) <sup>b</sup>	2292 (66.0%)
Children			
No	523 (15.5%) <sup>a</sup>	54 (57.4%) <sup>b</sup>	577 (16.6%)
Yes	2851 (84.5%) <sup>a</sup>	40 (42.6%) <sup>b</sup>	2891 (83.4%)
Relationship quality	3.14 (0.62)	3.16 (0.57)	3.14 (0.62)
Menstruation cessation feelings	1.87 (0.98)	1.70 (0.93)	1.86 (0.98)
Femininity concerns	1.70 (0.68)	1.68 (0.76)	1.70 (0.68)

Higher values of relationship quality, feelings about menstruation cessation, and femininity concerns indicate higher relationship quality, more regret (less relief), and more worry about attractiveness and fertility, respectively. Subscripts indicate instances in which *a* differs from *b* at  $p < 0.05$  in independent-samples *t*-tests and chi-square tests.

MIDUS, Midlife in the United States Study; MIDUS-R, MIDUS Refresher; SM, sexual minority.

### Measures

**Sexual orientation.** A single item measured sexual orientation: “How would you define your sexual orientation? Would you say you are heterosexual (sexually attracted only to the opposite sex), homosexual (sexually attracted only to your own sex), or bisexual (sexually attracted to both men and women)?” Women identified as heterosexual ( $n = 3377$ ), lesbian ( $n = 52$ ), or bisexual ( $n = 42$ ), and were coded as [0] heterosexual or [1] SM (*i.e.*, lesbian or bisexual).

**Feelings about menstruation cessation.** Participants reported their feelings about menstruation cessation in response to the question: “Women have different feelings about the time when their menstrual periods stop altogether. Which one of the statements below best describes your feelings about this? Please answer, whether or not your periods have already stopped.” Women responded on a 5-point scale (1 = *great relief*, 2 = *some relief*, 3 = *mixed feelings of both relief and regret*, 4 = *some regret*, 5 = *great regret*). Greater scores indicated greater regret, whereas lower scores reflected greater relief.

This item had one additional response option (“no particular feeling”) that was outside the 5-point relief-regret continuum. Participants who responded with the “no particular feeling” answer choice ( $n = 996$ ) were not included in the original analytical sample because the aim of our research was to examine women’s feelings of relief and/or regret about menstruation cessation (*e.g.*, positive and negative reactions). However, we conducted a *post hoc* analysis and found

that women who responded with “no particular feeling” were comparable with women who responded on the 5-point relief-regret continuum in terms of age,  $t(4465) = -1.32$ ,  $p = 0.186$ , sexual orientation,  $\chi^2(1, N = 4467) = 0.12$ ,  $p = 0.742$ , percentage of non-White individuals,  $\chi^2(1, N = 4425) = 1.85$ ,  $p = 0.186$ , education,  $\chi^2(1, N = 4459) = 0.33$ ,  $p = 0.572$ , percentage who lost their period,  $\chi^2(1, N = 4401) = 0.18$ ,  $p = 0.685$ , married or cohabitating,  $\chi^2(1, N = 4467) = 0.08$ ,  $p = 0.791$ , and relationship quality,  $t(3030) = -1.96$ ,  $p = 0.050$ . This sample was less likely to have children,  $\chi^2(1, N = 4464) = 13.50$ ,  $p < 0.001$ , more likely to have participated in MIDUS-1,  $\chi^2(1, N = 4467) = 8.22$ ,  $p = 0.004$ , and had less concern about attractiveness and fertility in the context of aging,  $t(4398) = 7.65$ ,  $p < 0.001$ .

**Femininity concerns:** worrying about attractiveness and fertility. Participants indicated the extent to which they worried about attractiveness while aging by responding to the question: “Women sometimes worry about the future and getting older. How much do you worry about being less attractive as a woman?” Participants also indicated the extent to which they worried about their fertility while aging by responding to the question: “Women sometimes worry about the future and getting older. How much do you worry about being too old to have children?” Participants responded using a 4-point scale (1 = *a lot*, 2 = *some*, 3 = *a little*, 4 = *not at all*). We reverse-scored responses such that greater scores reflected greater worry about attractiveness and fertility. Using the two questions about attractiveness and fertility, we

averaged participants' responses and computed a two-item scale to assess women's concerns about femininity in the context of aging. Greater scores indicated more worry about attractiveness and fertility.

**Covariates.** We selected sociodemographic covariates based on their potential for confounding the association between sexual orientation and feelings about menstruation cessation. Covariates were age (centered at 48.08 years), menstrual period stopped (coded as [0] no, [1] yes), MIDUS sample (year of data collection; coded as [0] MIDUS-1 (1995–1996), [1] MIDUS-R (2011–2014)), married or cohabitating (coded as [0] no, [1] yes), and children (coded as [0] no, [1] yes). These variables have been dichotomized similarly in previous MIDUS studies.<sup>48–50</sup> Relationship quality was assessed with the Partner Affectual Solidarity Scale.<sup>51–53</sup> It included six items that measured partner support (e.g., “How much can you open up to your partner if you need to talk about your worries?”) on a scale of 1 (*not at all*) to 4 (*a lot*), as well as six items that measured partner strain (e.g., “How often does your partner make too many demands on you?”) on a scale of 1 (*often*) to 4 (*never*). Relationship quality was calculated by averaging the 12 items. Greater scores indicated higher relationship quality (higher support and lower strain).

## Results

Table 1 presents descriptive statistics by sexual orientation. We found that heterosexual women were older than SM women on average,  $t(3469)=2.02$ ,  $p=0.044$ , and a greater percentage of heterosexual women compared with SM women participated in MIDUS-1,  $\chi^2(1, N=3471)=5.62$ ,  $p=0.018$ , were married or cohabitating,  $\chi^2(1, N=3471)=9.65$ ,  $p=0.002$ , and had children,  $\chi^2(1, N=3468)=116.01$ ,  $p<0.001$ . Heterosexual and SM women were similar in race, education, percentage of women who lost their menstrual period, and relationship quality ( $p>0.05$ ).

### *Sexual orientation and feelings about menstruation cessation*

We examined whether feelings about menstruation cessation differed by sexual orientation (Table 1). Feelings about menstruation cessation did not differ between heterosexual and SM women before controlling for other sociodemographic factors that may also influence women's feelings about menstruation cessation, such as sample characteristics (i.e., age, whether menstrual period had stopped, MIDUS-1 versus MIDUS-R) and interpersonal characteristics (i.e., married or cohabitating, children, relationship quality<sup>2,21</sup>). We then conducted linear regression predicting women's feelings about menstruation cessation (Table 2). Predictors in the model were entered together and included sexual orientation, age, menstrual period stopped, MIDUS sample, married or cohabitating, children, and relationship quality. We found that women who reported less regret (more relief) about menstrual period cessation tended to be older, to have lost their menstrual period, and to have children ( $p<0.03$ ). Feelings about menstruation cessation did not differ by MIDUS sample, marriage or cohabitation, or relationship quality ( $p>0.05$ ). In support of our hypothesis (H1), when accounting for age,

TABLE 2. UNSTANDARDIZED COEFFICIENTS FROM REGRESSION ANALYSES PREDICTING WOMEN'S FEELINGS ABOUT MENSTRUATION CESSATION

<i>Predictor (reference category)</i>	<i>Feelings about menstruation cessation B (95% CI)</i>
Intercept	2.23 (1.942 to 2.510)***
Sexual orientation (ref: heterosexual)	-0.453 (-0.717 to -0.189)***
Age (mean centered at 48.08 years)	-0.009 (-0.013 to -0.004)***
Menstrual period stopped (ref: no)	-0.349 (-0.457 to -0.241)***
MIDUS sample (ref: MIDUS-1)	-0.009 (-0.094 to 0.076)
Married or cohabitating (ref: no)	0.006 (-0.193 to 0.205)
Children (ref: no)	-0.145 (-0.276 to -0.015)*
Relationship quality	-0.022 (-0.084 to 0.040)
R Square	0.081

$F(7, 2357)=29.69$ ,  $p<0.001$ . Sexual orientation (0=heterosexual, 1=SM); menstrual period stopped (0=no, 1=yes); MIDUS sample (0=MIDUS-1, 1=MIDUS-R); married or cohabitating (0=no, 1=yes); children (0=no, 1=yes). Greater values of relationship quality indicate higher relationship support or lower strain. Greater values of feelings about menstruation cessation indicate more regret or less relief. Age, menstrual period stopped, MIDUS sample, married or cohabitating, children, and relationship quality were entered as covariates.

\* $p<0.05$ .

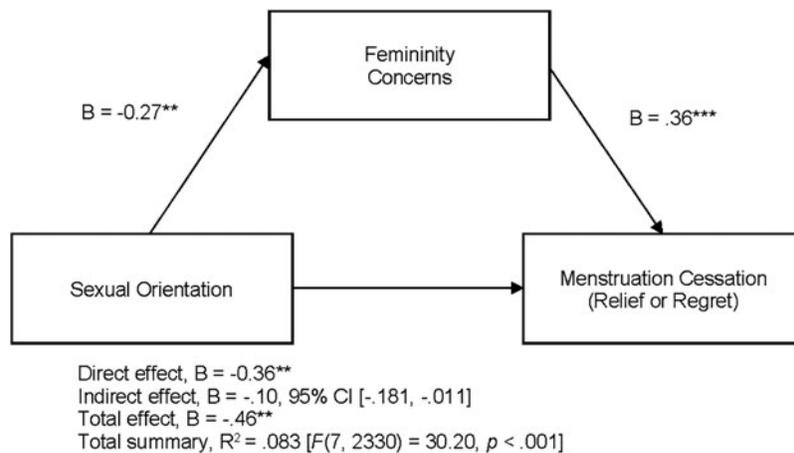
\*\*\* $p\leq 0.001$ .

CI, confidence interval.

menstrual period stopped, MIDUS sample, married or cohabitating, children, and relationship quality, sexual orientation significantly predicted feelings about menstruation cessation ( $p\leq 0.001$ ). SM women expressed lower levels of regret (higher levels of relief) about menstruation cessation compared with heterosexual women.

### *Femininity concerns, sexual orientation, and feelings about menstruation cessation*

We proposed that femininity concerns would explain (at least partially) the relationship between sexual orientation and feelings about menstruation cessation. We used bootstrapped mediation analysis with PROCESS<sup>54</sup> (version 3.4) for SPSS (Model 4) to test the indirect effect of sexual orientation on feelings about menstruation cessation through femininity concerns. The two items were positively correlated,  $r(3431)=0.27$ ,  $p<0.001$ . We used bias-corrected bootstrapping techniques with 5000 samples; this method is effective with small sample sizes so that the analyses are less susceptible to the influence of outliers. The distribution of the effects was used to obtain 95% confidence intervals for the size of the indirect effect of femininity concerns. With the obtained confidence intervals, we interpreted whether the indirect effect was significant if the confidence interval excluded zero. Analyses were conducted with age, menstrual period stopped, MIDUS sample, married or cohabitating, children, and relationship quality as covariates. The mediation model is given in Figure 1. Sexual orientation predicted femininity concerns ( $B=-0.27$ ,  $p=0.002$ ):



**FIG. 1.** Mediating role of femininity concerns between sexual orientation and feelings about menstruation cessation. Unstandardized regression coefficients represent the relationship between sexual orientation, femininity concerns, and feelings about menstruation cessation (relief or regret). Sexual orientation (0 = heterosexual, 1 = lesbian or bisexual). Higher values of femininity concerns indicate more concern about attractiveness and fertility while aging. Higher values of feelings about menstruation cessation indicate more regret or less relief. Age, menstrual period stopped, MIDUS sample, married or cohabitating, children, and relationship quality were entered as covariates.  $**p < 0.01$ ,  $***p < 0.001$ . MIDUS, Midlife in the United States Study.

SM women were less likely than heterosexual women to worry about attractiveness and fertility with age. Furthermore, femininity concerns predicted feelings about menstruation cessation ( $B = 0.36, p < 0.001$ ), and these results suggested that as women's concerns about femininity increased, regret about menstruation cessation also increased. Consistent with our hypothesis (H2), femininity concerns mediated the association between sexual orientation and feelings about menstruation cessation ( $B = -0.10$ ). The significant indirect effect indicated that the relationship between sexual orientation and feelings about menstruation cessation at least partially operate through an increase in concerns about femininity.

## General Discussion

In the current research, we assessed women's feelings about menstruation stopping. We found support for our hypotheses: After controlling for age, whether menstrual period stopped, MIDUS sample, children, and relationship status and quality, our sample of (majority White) SM women felt less regret than heterosexual women, and this finding was explained through SM women's lower concerns about femininity (attractiveness and fertility). Our results contribute to a growing body of research highlighting the psychological strengths of SMs<sup>55–58</sup>; in particular, our results illuminate SM women's potential strengths in an aging context. Drawing from previous research,<sup>59,60</sup> we suggest that SM women experience greater gender flexibility, and thus may be less vulnerable to pressures to conform to traditional feminine standards. In other words, given SM women have likely defied gendered expectations for most of their lives, they may be more comfortable with not meeting the demands of traditional womanhood (*e.g.*, youthfulness, attractiveness, fertility) while aging than heterosexual women. We conclude that despite experiencing sexual stigma when aging and evidencing more negative health problems compared with their

heterosexual peers,<sup>61–63</sup> SM women may have some psychological protections that benefit them. Of importance, the SM women in our sample were mostly White, potentially limiting the generalizability of these findings (a point we return to later in Future Directions and Limitations).

The end of menstruation, and menopause in particular, presents a psychologically challenging time for some women.<sup>2,29</sup> However, our research further supports the notion that negative psychological responses are not universal.<sup>3,17</sup> Through MIDUS data, we conceptualized feelings about menstruation cessation as a continuum of relief-to-regret in this study, providing variance and individuality in how women approach this milestone. Our results also echo the psychosocial aspects of menstruation and menopause posited by the social constructionist perspective.<sup>22</sup> Women's feelings about femininity were linked to feelings about menstruation and menopause, and femininity thus helps to explain why women have different experiences with menstruation cessation based on their sexual orientation. The social construction of menstruation and menopause as the respective start and end of womanhood not only provides theoretical merit, but empirical and clinical value for understanding individual differences in aging.

## Future directions and limitations

Our research was limited by secondary data analysis, specifically the predetermined format and wording of the variables of interest. First, there are multiple ways of identifying sexual orientation beyond heterosexual, homosexual, and bisexual categories, although we were constrained by these response options in our assessment. In addition, although MIDUS prompted participants to identify their sex (rather than gender), we cannot be sure that our participants are all cisgender women; however, all 3471 women in our study responded to items about their menstrual period and identified themselves as female. Not all menstruating people identify as women—transgender and gender nonconforming

individuals may also menstruate—therefore, these results are only generalizable to women who identify themselves as female, have menstruated before, and identify within the three sexual orientation categories assessed. A promising future direction would be to examine how menstruating people who do not identify as women (*e.g.*, trans men) psychologically respond to menopause and make sense of menstruation cessation as linked to other psychosocial experiences (*e.g.*, beliefs about femininity and masculinity while aging). Second, our sample had a smaller proportion of SM women ( $n = 94$ ; 2.7%) as compared with the U.S. national average (4.4% of adult women identify as LGBT<sup>64</sup>). This may be attributable to participants underreporting their SM status owing to social stigma and disclosure concerns, especially given MIDUS-1 was collected in 1995. That is, it is possible that more women in MIDUS-1 were lesbian or bisexual but reported themselves as heterosexual to avoid stigmatizing responses from researchers.

Another limitation of secondary data analysis was our choice to combine lesbian and bisexual women into one analytical category for the purpose of retaining power. We recognize the limitations of collapsing SMs across sexual orientation (*i.e.*, coding women as “SMs” rather than as distinctly lesbian or bisexual) and of defining sexuality in a sexual binary (*i.e.*, “heterosexual” or “not heterosexual”). Generalizing across SM women may erase important differences in attitudes and experiences and defining sexuality in a sexual binary can serve to center heterosexual experiences, wherein SMs are only examined in relation to a heterosexual “baseline.” We acknowledge these limitations and appreciate the importance of studying groups by stratification. However, conceptually, the coding of lesbian and bisexual women as one group follows previous research on gender flexibility among SM women. For example, bisexual women and lesbian women similarly report higher levels of body image satisfaction than heterosexual women<sup>15</sup> and a “freedom” from heterosexual women’s appearance standards<sup>19</sup>; thus, in this research, we suggested that identifying SM women as a group, compared with heterosexual women as a group, was statistically and conceptually advantageous. When coding sexuality in the binary is necessary, as it was in this work, we encourage researchers to center and examine *strengths* of SMs, rather than conceptually defining SMs as deficient in comparison with heterosexual individuals.

Our research provides an incremental step to understanding how SM and heterosexual women navigate the gendered dynamics of aging. Unfortunately, given research often neglects SM women who are midlife or older and menstruation and menopause questions are often omitted from general social surveys, researchers in this area must contend with imperfect sampling and methods. For example, in this research, not all participants had their periods stop at the time of their participation in this study; therefore, some participants engaged in affective forecasting (*i.e.*, reflecting on their expectations of menstruation cessation), whereas others reflected on actual experiences. Although we controlled for this variable, we recognize this limitation given the two groups of women are different in their actual experiences. To our knowledge, there is no other nationally representative dataset that adequately includes SM midlife women *and* inquires about menstrual processes. We thus encourage future researchers to incorporate women’s health into the study of SM health and vice versa.

Future research could also consider individual difference variables among women and other various reasons (*e.g.*, hormonal therapies) for periods ending. Our interpretation of these data assume that participants imagined menstruation cessation as a byproduct of aging but we cannot guarantee all participants had menopause in mind when reporting on their regret, although the context of aging was made explicit in the questions about femininity concerns. Likewise, there may be other individual difference variables that influence regret of menstruation cessation, such as previous menstrual experiences (*e.g.*, pain and irregularity), gender of relationship partners, and aging-related support from partners, that cannot be assessed with the current data. Bisexual women, in particular, are a unique group to examine in the future study of women’s menopausal experiences because of their variation in partner gender (*e.g.*, same-gender versus different-gender partners). Do bisexual menopausal women partnered with men experience the same psychological stress that heterosexual menopausal women do, especially surrounding partnered sex? For example, some heterosexual women receive complaints from male partners about vaginal dryness, contend with their reliance on intercourse as “real sex,” and avoid talking about sex openly with partners.<sup>2,21</sup> In contrast, menopausal lesbian women—who have broader definitions of sex and more open dialogue about sexuality and women’s bodies—had better experiences with partners.<sup>21</sup> Determining if bisexual menopausal women partnered with women have better outcomes compared with bisexual menopausal women partnered with men could help determine if *partner gender* is equally important as sexual orientation in menopausal women’s experiences. Contextual and interpersonal factors linked to relationship status may contribute to more positive experiences of menopause.

Another promising area of future inquiry involves revisiting femininity in the context of aging for SM women of color. Our results suggest that SM women’s lower femininity concerns (*i.e.*, worries about attractiveness and fertility in the context of aging) are associated with less regret about menopause. However, as previously noted, our majority White sample (87.9%) may have influenced the results given differing historical relationships to femininity between SM women of color and White SM women. Whereas White SM women of the 1970s lesbian rights movement rejected strong femininity (and masculinity) in favor of androgynous presentation, SM women of color *resisted* this rejection of strong femininity (and masculinity).<sup>31,65–67</sup> Continuing today, the Black lesbian community is accepting of both highly feminine and masculine presentations.<sup>65,67,68</sup> It thus seems reasonable that femininity’s role in aging could be differently stressful for different groups of women.

### Conclusion: Implications of Sexuality and Gender for the Study of Midlife and Beyond

The current results demonstrate the importance of expanding who is prioritized in the study of women’s health. Intersectional invisibility refers to the failure to recognize and account for people with multiple marginalized identities and emerges from the themes of androcentrism (centering men), ethnocentrism (centering White people), and heterocentrism (centering heterosexual individuals) in the research process.<sup>26</sup> These processes render nonprototypical members

of marginalized groups as invisible. Intersectional invisibility thus serves as a theoretical framework that can elucidate gaps in research by identifying who is most vulnerable to being understudied.

We draw from intersectional invisibility to articulate how midlife and older SM women are positioned as atypical and socially invisible in most research across the social and health sciences.<sup>26</sup> SM older women are neither the prototype for their gender group in the study of menstruation or menopause because they are not heterosexual, nor are they the prototype for their sexual orientation group in the study of health disparities because they are not young and are not gay men.<sup>28</sup> We call upon researchers to address this inclusion gap in the study of women's health, aging, and SM health. As indicated by our findings, SM women evidence unique social strengths that could be harnessed for improving their health and even could be adopted by heterosexual women. Such information would be impossible to ascertain without midlife and older SM women's data. Furthermore, our results speak to a potential connection between societal change and women's health. Feminist activists and scholars have long called for increasing body size diversity, rejecting the narrow definitions of ideal beauty standards, and denouncing the essentialism attached to women's roles as child bearers. Challenges to traditional beliefs about femininity present not only a pathway for enhancing the social benefits for women but, as our results suggest, can improve women's experiences of health too. The findings from the current research support the notion that establishing gender flexibility (*i.e.*, expectations for femininity and womanhood) will assist women with the psychosocial challenges of menstruation cessation and menopause. By relaxing society's expectations for femininity, we hope that all women approach aging as not an obstruction to their femininity or betrayal of their bodies but as a new chapter and opportunity.

#### Author Contribution Statement

All authors contributed uniquely to this research. M.K. organized and reviewed the literature and supporting evidence. J.L.M. conceived the idea and article structure with support from M.K. and B.M.W. B.M.W. developed the dataset for analysis and conducted analyses. All authors wrote the article and provided critical feedback that helped shape the research and analysis.

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