



ISSN: 2329-3691 (Print) 2329-3713 (Online) Journal homepage: http://www.tandfonline.com/loi/uwrh20

# **Demystifying Menstrual Synchrony: Women's** Subjective Beliefs About Bleeding in Tandem With **Other Women**

**Breanne Fahs** 

To cite this article: Breanne Fahs (2016) Demystifying Menstrual Synchrony: Women's Subjective Beliefs About Bleeding in Tandem With Other Women, Women's Reproductive Health, 3:1, 1-15, DOI: 10.1080/23293691.2016.1150132

To link to this article: http://dx.doi.org/10.1080/23293691.2016.1150132



Published online: 25 Apr 2016.



🖉 Submit your article to this journal 🗗



View related articles



則 🛛 View Crossmark data 🗹

Full Terms & Conditions of access and use can be found at http://www.tandfonline.com/action/journalInformation?journalCode=uwrh20

### Routledge Taylor & Francis Group

## Demystifying Menstrual Synchrony: Women's Subjective Beliefs About Bleeding in Tandem With Other Women

#### Breanne Fahs

Women and Gender Studies Program, Arizona State University, Glendale, Arizona, USA

Despite the empirical uncertainty about the existence of menstrual synchrony (i.e., the phenomenon where some women's menstrual cycles synchronize when they live in close proximity with one another), the persistence of beliefs in its existence permeate popular and medical discourses. Although there is a substantial body of scientific work on whether or not menstrual synchrony exists, far less work has examined why women believe in menstrual synchrony and the reasons they attribute to its existence (or not). Qualitative data from semistructured interviews with a diverse community sample of 20 women (mean age = 35.35, SD = 12.01) living in a large Southwestern U.S. city from a range of age, race, class, and sexual orientation backgrounds (40% women of color, 20% lesbian, 20% bisexual) were collected to examine beliefs about menstrual synchrony. Results revealed that women overwhelmingly endorsed the occurrence of menstrual synchrony both for themselves (90%) and for other women (95%). Four themes were associated with women's beliefs in menstrual synchrony: (1) connection to and hierarchy among other women; (2) menstrual synchrony as "magical" or "mysterious"; (3) menstrual synchrony as biological and animal-like; (4) managing and overcoming negative experiences with menstruation. Tensions between connection and dominance-and the contradictions and complications in women's modes of bonding with other women-are discussed, particularly as women fluctuated between shame and solidarity about their menstrual cycles. Menstrual synchrony offers one possible avenue to feel collective anger, and it highlights women's feelings about mysticism, science, and close female relationships.

**Keywords** menstrual synchrony, menstruation, gendered solidarity, women's bodies, collectivism, evolutionary biology, feminist attitudes

Highly controversial and hotly debated, the literature on menstrual synchrony (i.e., that women's menstrual cycles may synchronize so that they menstruate at the same time) is rife with contradictions and conflict (McClintock, 1971; Schank, 2000, 2006). Biological and medical researchers disagree not only about how women's cycles might synchronize with one another, and with whom they might synchronize, but also about the very existence of menstrual synchrony in its entirety (McClintock, 1971, 1998; Schank, 2000, 2001; Strassmann, 1999; Weller & Weller, 1992, 1993a, 1993b, 1995a, 1995b, 1998; Weller, Weller, & Avinir, 1995; Weller, Weller, & Roizman, 1999). The methodological complexities of menstrual synchrony—how to measure it, the evolutionary reasons it may (or may not) happen, the complications of so many women on hormonal birth

Correspondence should be sent to Breanne Fahs, PhD, Women's and Gender Studies Program, Arizona State University, 4701 W. Thunderbird Road, Glendale, AZ 85306, USA. E-mail: breanne.fahs@asu.edu

control methods, and the pervasive sense that women may want to believe in menstrual synchrony (Fahs, Gonzalez, Coursey, & Robinson-Cestaro, 2014; Schank, 2000; Strassmann, 1997, 1999; Trevathan, Burleson, & Gregory, 1993)—have created a compelling basis for qualitative inquiry into women's subjective beliefs about menstrual synchrony.

To date, only three qualitative studies have asked women about menstrual synchrony, and each of these has stopped short of asking women why they think it occurs (Abbink, 2015; Arden, Dye, & Walker, 1999; Klebanoff & Keyser, 1996). My colleagues and I (Fahs et al., 2014) have posited that women may believe in menstrual synchrony as a way to reduce shame, establish sisterhood, mark a relationship to nature, or fight back against sexism, although we did not in that study, examine empirical evidence to evaluate these claims. To address the overlooked issue of why many women believe in menstrual synchrony and to build on my previous theoretical work, in the present study I examined qualitative narratives from semistructured interviews with 20 U.S. women with diverse backgrounds in order to examine women's beliefs about menstrual synchrony. The narratives illuminated four themes and showcased the powerful complexities of how women make sense of the myths and meanings of their menstrual cycles.

#### MENSTRUAL SYNCHRONY: MYTH OR REALITY?

Debate about the myth or reality of menstrual synchrony began as soon as Martha McClintock (1971) published the first study of it; her landmark study has inspired decades of research into menstrual synchrony. McClintock based her work on 135 women, ages 17-22, living together in a college dormitory; she found that pairs of friends and groups of female friends frequently menstruated at the same time. The results of the study spread rapidly in the media (particularly on television) and throughout the scientific community (Rosewarne, 2012). Ultimately, McClintock's (1971) study inspired a massive and highly controversial literature, mostly in the natural sciences, in which researchers sought to confirm or refute the existence of menstrual synchrony and the reasons for it (McClintock, 1971, 1998; Schank, 2000, 2001; Strassmann, 1999; Weller & Weller, 1992, 1993a, 1993b, 1995a, 1995b, 1998; Weller et al., 1995; Weller et al., 1999). The unusually large size of the literature on menstrual synchrony, the relative lack of certainty about it, and the repeated follow-up studies that continue to pervade the scientific literatures collectively suggest that menstrual synchrony tapped into something much larger than the biological intrigue of women's cycles synchronizing. Pettit and Vigor (2015) argued that menstrual synchrony became so compelling to researchers because it represented one of the first overlaps between feminist and evolutionary psychology, as it united affect-laden female friendships with biochemicals secreted from the body.

The first wave of sociobiological follow-up studies to McClintock's (1971) work examined who menstruated together and tested a variety of relational arrangements and contexts where women lived in close proximity. Researchers studied lesbian couples (Trevathan, Burleson, & Gregory, 1993; Weller & Weller, 1992), friends and roommates (Graham & McGrew, 1980; Jarett, 1984; Weller & Weller, 1993a; Weller et al., 1995; Wilson, Kiefhaber, & Gravel, 1991), sisters and mothers/daughters (Weller et al., 1999), coworkers (Matteo, 1987; Weller & Weller, 1995b; Weller, Weller, Koresh-Kamin, & Ben-Shoshan, 1999), athletes (Weller & Weller, 1995a), and women not using any birth control (Collett, Wertenberger, & Fiske, 1955; Strassmann, 1997). Researchers carefully teased apart relationships that seemed to inspire synchrony, and reported

that friends but not mothers/daughters synchronized (Weller & Weller, 1993b) or that closer friendships led to more menstrual synchrony (Weller & Weller, 1995b), whereas other researchers found that social factors, quality of the relationships, group size, age and age diversity, menstrual regularity, the environment, and contraceptive practices impacted menstrual synchrony (Little, Guzick, Malina, & Ferreira, 1989; Weller & Weller, 1995c; Weller & Weller, 1997).

The question of why women's cycles synchronized also appeared in the natural science literature, as some researchers found that friendship, common activities, cohabitating, and the amount of time spent together all correlated with more menstrual synchrony, just as exposure to women's ovarian-based pheromones (i.e., odorless compounds emitted from the body, especially the underarms) contributed to women's menstrual synchrony by accelerating or delaying the surge of luteinizing hormone responsible for menstrual cycle length (Goldman & Schneider, 1987; Stern & McClintock, 1998; Weller & Weller, 1993a). Evolutionary biologists theorized a variety of reasons for menstrual synchrony, including the higher likelihood of conception in societies where many women share one man (he would sense the pheromones, want to have sex with multiple women, and impregnation would become more likely, whereas unsynchronized cycles would "confuse" men; Burley, 1979). Menstrual synchrony has also been proposed to increase a man's interest in his female offspring (Knowlton, 1979; Turke, 1984) or provide a back-up wet nurse in times of high maternal mortality (Frisch, 1984).

#### CRITICS OF MENSTRUAL SYNCHRONY

As evidence seemed to mount to support the existence of menstrual synchrony, other medical and sociobiological researchers questioned its existence or refuted its existence entirely (Jarrett, 1984; Little et al., 1989; Schank, 2002; Strassmann, 1999; Trevathan, Burleson, & Gregory, 1993; Weller & Weller, 1998; Weller et al., 1995; Wilson et al., 1991; Yang & Schank, 2006; Ziomkiewicz, 2006). For example, Wilson (1992) argued that menstrual synchrony would be expected in one half of the women studied without any external manipulation or contextual factors influencing it, as some women have irregular cycles and others cycle regularly. He also cited three methodological errors that may have skewed earlier results in other studies: too short an observational period, incorrect methods for calculating the menstrual onset differences, and exclusion of certain women from the analysis.

Caution is clearly warranted in making scientific claims about menstrual synchrony (Harris & Vitzthum, 2013). When researchers looked at ovulation instead of menstruation, no studies showed that women ovulated together or had similar fertility periods while cohabitating (Kiltie, 1982; Strassmann, 1999; Yang & Schank, 2006; Ziomkiewicz, 2006), which further refuted evolutionary explanations for menstrual synchrony. Researchers have noted markedly different patterns of ovulation and menstruation in urbanized and non-urbanized societies, as women in urbanized societies have more menstrual cycles, fewer pregnancies, longer periods of nursing, and more years when they menstruated than do women in non-urbanized societies (Strassmann, 1997, 1999; Umeora & Egwuatu, 2008).

Methodological debates have also undermined the scientific "proof" of menstrual synchrony's existence, as "within" and "between" women differences have been difficult to determine. An array of methodological problems exist: women do not have consistent cycle lengths (e.g., the same woman can have a 27-day cycle one month and a 31-day cycle the next month); women

#### 4 FAHS

differ between one another in cycle lengths (e.g., one woman's average may be 28 days and another woman's average 31 days; Schank, 2000); no menstrual synchrony occurs for those using hormonal contraceptives (Strassmann, 1997, 1999); few studies have found that lesbian couples synchronize (Trevathan et al., 1993; Weller & Weller, 1998); the pheromone studies had serious methodological errors (Schank, 2006); and many methods for studying menstrual synchrony actually create it (Schank, 2000; Abbink, 2015), as women who filled out their own menstrual onset calendars might have slightly changed the dates because they wanted to be in sync with someone else (Schank, 2001).

#### WHAT DO WOMEN SAY ABOUT MENSTRUAL SYNCHRONY?

Surprisingly few studies have examined women's beliefs about menstrual synchrony. In only three studies were women asked about their beliefs in it (Abbink, 2015; Arden, Dye, & Walker, 1999; Klebanoff & Keyser, 1996), and no researchers have asked women why (rather than how) it occurs. One qualitative study (Klebanoff & Keyser, 1996) of 13 White highly educated women, ages 25–46, showed that all the women reported having experienced menstrual synchrony, and most thought that there were biological reasons (e.g., hormones or pheromones) rather than social reasons for its occurrence, but the study largely left out the complicated discussions of how and why biological mechanisms could produce menstrual synchrony.

Two other studies added more detail and nuance to the qualitative study of menstrual synchrony. One study (Arden et al., 1999) of 122 British women showed, after having presented menstrual synchrony as a fact rather than a controversy, that 84% were aware of menstrual synchrony, and 70% reported personal experiences with it. Women reported having experienced synchrony with close friends, roommates, mothers, and sisters, and 51% of them reported three or more episodes of synchrony with different women. The women in the study felt positively about menstrual synchrony (e.g., support, closeness, mysticism), and they said they knew about the timing of other women's menstrual cycles primarily through verbal communication and complaints about premenstrual symptoms. A more recent study (Abbink, 2015) of Ethiopian adolescent girls showed that girls living on rural farms asserted a belief in menstrual synchrony to maintain independence and personal agency (e.g., pregnancy does not just "happen to" them randomly but is determined by relationships to other women and control over with whom one spends time) in the face of cultural instability, conflict, and uncertainty.

#### MEDIA DEPICTIONS OF MENSTRUAL SYNCHRONY

Women's beliefs in menstrual synchrony might relate to the seemingly unequivocal belief in menstrual synchrony portrayed in popular culture. Television, magazines, films, blogs, and media outlets do not typically depict menstrual synchrony as a controversy; instead, they present it as an outright fact of women's menstrual lives (Clancy, 2011; Rosewarne, 2012). Within television shows and films, menstrual synchrony is depicted as both a bond between women and a source of horror or terror. Shows such as *Charmed*, *30 Rock*, *Big Bang Theory*, *Sex and the City*, *The Office*, and *Orange Is the New Black* have poked fun at menstrual synchrony and used it as a

punchline for women's emotional or "unstable" behavior in groups, and the film *A Tale of Two Sisters* (2013) showcased menstrual synchrony as strange and otherworldly (Rosewarne, 2012).

#### MENSTRUAL SYNCHRONY AS SOLIDARITY?

Menstrual synchrony could have important implications for feminist politics, as it both refuses to blame women for the stigmatized experience of menstruation and suggests that women are linked together unconsciously in biological sisterhood. My colleagues and I (Fahs et al., 2014) posited that, regardless of whether scientific evidence supports the actual existence of menstrual synchrony, women's overwhelming beliefs in menstrual synchrony relate to their need to feel solidarity with other women. Beliefs in menstrual synchrony might operate as a social tool that fosters a sense of common experiences among women. An increased sense of solidarity among women can connect to the acceptance of feminist identities, which in turn can lead to better mental health outcomes in women and more participation in feminist movements (Roberts, 2004; Saunders & Kashubeck-West, 2006). Evidence of solidarity and its importance in the fight against patriarchy and sexism appear frequently in a variety of literatures and disciplines, including psychological studies of women's collectivism (Gurin, Miller, & Gurin, 1980), menstrual activism and menstrual anarchy (Bobel, 2006, 2010; Fahs, 2016), and studies that show that girls' stories of menarche connect them to larger cultural, religious, and societal stories and give them a greater sense of solidarity with other girls and women (Jackson & Falmagne, 2013; Lee, 1994; Uskul, 2004). Affective solidarity based on emotions rather than identities may allow women to connect to each other and unite in their struggles against gender-based oppression (Hemmings, 2012).

My colleagues and I (Fahs et al., 2014) posited that menstrual synchrony might also serve as a means to reduce shame and taboo about menstruation, construct modern "sisterhood" during a time when sisterhood is typically frowned on or thought of as outdated, mark women's relationship to nature, or serve as a pathway to contest against sexism and sexist assumptions about menstruation and menstruating women. Menstrual synchrony may inspire feelings of solidarity with other women in an area sorely lacking in positive/affirmative communication, feeling, and community; it could also reduce hierarchies among women and help them to find common ground. However, empirical evidence has yet to show nuances of how women perceive the presence or absence of menstrual synchrony and menstrual solidarity with other women.

#### RESEARCH QUESTIONS

Given the controversies present in the literature about the existence of menstrual synchrony and the relative lack of subjective narratives in the literature about it, in the present study I posed several research questions to guide the analysis: First, what do women say about menstrual synchrony, and how does that connect to the previous research about women's beliefs in it? Second, how do women make sense of experiencing (or not) this phenomenon? Third, do women connect their beliefs in menstrual synchrony more to social forces or to biological forces, and how might these beliefs connect to ideas about "menstrual solidarity"? Finally, how does the belief (or not) in menstrual synchrony connect to larger power structures and ideas about the contemporary culture of menstruation?

#### METHOD

#### Participants

Oualitative data were collected from a sample of 20 adult women (mean age = 35.35, SD = 12.01) recruited in 2014 in a large metropolitan southwestern U.S. city. Participants were recruited through local entertainment and arts listings distributed free to the community as well as from the volunteers section of the local online version of Craigslist (for the benefits of using Craigslist to recruit participants, see Worthen, 2014). Both outlets reached wide audiences and were freely available to community residents. The advertisements asked for women ages 18–59 to participate in an interview study about their sexual behaviors, practices, and attitudes. Participants were selected only for their gender, racial/ethnic background, sexual identity, and age; no other pre-screening questions were asked. A purposive sample was selected to provide demographic diversity in the sample: sexual minority women and racial/ethnic minority women were intentionally oversampled, and a diverse range of ages was represented (35% or seven aged 18-31; 40% or eight aged 32-45; and 25% or five aged 46-59). The sample included 60% (12) white women and 40% (eight) women of color, including two African American women, four Mexican American women, and two Asian American women. The sample also included 60% (12) heterosexual women, 20% (four) bisexual women, and 20% (four) lesbian women (though women's reported sexual behavior often indicated far more same-sex eroticism than these selfcategorized labels suggest). All participants consented to have their interviews audiotaped and fully transcribed, and all received USD\$20.00 in compensation. Identifying data were removed from transcripts, and each participant was given a pseudonym to ensure anonymity. Participants directly reported a range of socioeconomic and educational backgrounds, employment histories, and parental and relationship statuses.

#### Procedure

Participants were interviewed using a semistructured interview protocol that lasted for approximately 1.5 to 2 hours, during which they responded to 32 questions about their sexual histories and practices, menstrual experiences, and feelings about and attitudes toward their sexuality and their bodies. This study and the specific interview protocol were both approved by the university's Institutional Review Board. All participants were interviewed by the author in a room that ensured privacy and confidentiality of responses. Questions included aspects of their best and worst sexual experiences, attitudes toward menstruation, feelings about their bodies and sexualities, and questions about body image. For the purposes of the present study, women were asked the question: "Some women have said that they are sometimes in sync with other women's menstrual cycles so that they menstruate together, while others have said that this does not happen to them. What are your experiences with this?" This question was scripted, but it served to open up other conversations and dialogue about related topics, as follow-up probing questions were free-flowing and conversational.

Responses were analyzed qualitatively using a phenomenologically oriented form of thematic analysis that draws from feminist theory and gender theory (Braun & Clarke, 2006). This type of analysis allowed for groupings of responses based on women's attitudes and feelings (e.g., menstrual synchrony as "magical"; hierarchy among other women). This method of analysis also supported an examination of the sometimes competing or contradictory beliefs women had about menstrual synchrony. To conduct the analysis, I familiarized myself with the data by reading all the transcripts thoroughly, and I then identified patterns for common interpretations posed by participants. In doing so, I reviewed lines, sentences, and paragraphs of the transcripts, looking for patterns in their ways of describing beliefs about menstrual synchrony (Braun & Clarke, 2006). I selected and generated themes through the process of identifying logical links and overlaps between participants. After creating these themes, I compared them to previous themes expressed by other participants to identify similarities, differences, and general patterns. After this initial reading, I asked four readers to repeat the same process. They read the transcripts independently and generated themes; then, in the course of a meeting together, we refined and reworked the themes until we arrived at a mutually agreed-upon list of four themes that reflected women's subjective beliefs about menstrual synchrony.

#### RESULTS

In response to the initial question about menstrual synchrony, an overwhelming 95% (19) of the women in the sample endorsed the belief that menstrual synchrony occurs. The one dissenting voice, Emma (42, White, heterosexual) said, "It's B.S. Everyone's cycle is in their own body. It doesn't have anything to do with anyone else's. It's either a 28 or a 30 day cycle." A full 90% (18) of the sample reported a personal experience with menstrual synchrony; one participant said that she believed it existed but that it had never happened to her. The analysis revealed four themes associated with women's beliefs in menstrual synchrony: (1) connection to and hierarchy among other women; (2) menstrual synchrony as "magical" or "mysterious"; (3) menstrual synchrony as biological and animal-like; (4) managing and overcoming negative experiences with menstruation. As evident in the descriptions below, some participants' responses overlapped between themes, and one participant's responses fit into multiple themes.

#### Theme 1: Connection to and Hierarchy Among Other Women

The theme of connecting to other women appeared in seven of the women's responses, though the type of connection diverged between closeness with other women (three women) and recognition of the "alpha" or dominant status of other women (four women). Two women imagined that menstrual synchrony allowed them to feel emotionally close to other women or that it showed their allegiance to female family members, peers, and coworkers. For example, Trish (19, White, lesbian) talked about her connection to her sister through menstrual synchrony: "My sister is one that I have consistently synced up with. Even when we lived in different towns and we'd not get to see each other for a month or two, as soon as we'd come into contact we'd both get it. It just couldn't be coincidence how often it was and it still pretty much is." Antonia (25, Mexican American, lesbian) also felt closeness and connection to her coworker friend with whom she synchronized: "I synced up with one of my coworkers at the time. She also later became a really good friend, so outside of work we definitely spent a lot of time together. I would say out of anyone I've ever known, that's probably the person I've been the most in sync with." Her sense

of evolving her friendship based on menstrual synchrony signals the way that women imagined connection to other women through synchronized periods and developed emotional bonds when their cycles became in sync.

In contrast to seeing menstrual synchrony as a sign of equality among women, four women discussed their beliefs that menstrual synchrony occurs in response to women sensing the dominant or "alpha" status of another woman; elaborate discussions of how certain women communicate their reigning power over other women also appeared in these narratives. For example, Rachel (39, White, bisexual) believed that alpha status related to the woman in the house with the most fertile status: "Oh my god, it *so* happens! Everyone follows the most alpha or the most fertile person. I can tell when it's gonna happen for my daughter. She'll say, 'I'm starting to feel grumpy,' and I'm like, 'Oh, I know what's coming for me!''' Rachel constructed herself as less fertile and thus less dominant in relation to her highly fertile 20-something daughter.

Belief in menstrual synchrony as an indicator of power between women also appeared in Gretchen's (42, White, heterosexual) construction of it as related to an outright hierarchy among women: "In college when I lived with my roommates, we would kind of joke about it. The idea was, 'Who's the alpha bitch? Whoever the alpha bitch is, that's the one who everybody else syncs to.' But I don't recall if we ever actually did." Bea (37, Filipina, heterosexual) also asserted her belief in the alpha female by saying, "They say it happens because of the alpha female, like somebody familiar and around them enough. It seems kind of weird but I don't know how it works." These tensions between closeness and dominance, connection and power, reveal the ways that menstrual synchrony can simultaneously evoke feelings of connection and competition.

#### Theme 2: Menstrual Synchrony as "Magical" or "Mysterious"

Six women described the belief that menstrual synchrony is magical or mysterious, something that cannot be explained by science or biology. Specifically, two women believed that menstrual synchrony represents a telepathic or a magical, nonverbal way of communicating between women, such as Sofia (42, Mexican American, heterosexual), who said: "Whenever I'm with a person, it's like, 'Oh, me too!' you know? Because we're connected and we socialize, we're gonna have the same cycle. Telepathically, you know, we're telling each other, 'Oh, it's time for us to go!'" Similarly, Veronica (49, African American, heterosexual) believed in menstrual synchrony as a mystical language of the body: "It's kind of magical, mystical. It's how people communicate to each other without words, sort of like a secret language women have for each other. I guess it's a mystery though."

Four women endorsed the idea that menstrual synchrony represents an invisible energy connection between women; one saw this as sinister, and three saw it as beneficial. Daphne (33, White, heterosexual) framed menstrual synchrony as an energy connection that hurt heterosexual women who sought male sexual attention:

It's an energy thing that's happening where we start to sync up more. In this case, the three of us friends were in close proximity. I think we synced up to the woman whose house it was, her cycle, because (this is going to sound so weird) but it was almost like we had an energy domination sort of thing. She was a lesbian. She had two straight girls with her. Somehow, energetically, this was kind of like cock-blocking because both of us girls were really looking to go see some guys.

In contrast, other women described menstrual synchrony as a sharing of positive energy connections, such as Kathleen (49, White, heterosexual), who saw synchrony as a mystical energy connection: "I feel like it is an energy, a synergy thing. Bodies are so much made of water and there are shifts in the universe. I don't know. I don't have a good answer for why it happens." These narratives, a reference to cultural feminism of the 1980s and beliefs in women's "natural" bonds, reveal how some women imagine their relationship to other women in relation to unconscious, unspoken mystical connections.

#### Theme 3: Menstrual Synchrony as Biological and Animal-Like

Seven women claimed that menstrual synchrony happens because of biological, animal-like, or hormonal reasons. For example, Gail (46, White, bisexual) viewed menstrual synchrony as a byproduct of evolutionary forces: "I think it's biological. I think that our history as a species in the animal kingdom means that all had the same timing for some sort of usefulness. Everybody was ready for childbearing at the same time, or it just made things easier if everybody was coordinated. It's biological." Naomi (18, White, bisexual) also believed that it reflects women's animal-like, bodily natures: "It's a proven thing. It's just like sex. You know, pheromones and hormones, they sense each other and stuff, so when you're around women, they see each other, or, I don't know, something happens." This insistence that synchronization of women's menstrual cycles is connected to their biology appeared in women's narratives even when women did not know how to explain the biological processes in any detail.

Several women also believed in a hormonal basis for menstrual synchrony and claimed that it occurs in response to unobservable pheromone communication. Felicity (20, White, heterosexual) believed that she and the women in her family communicate via their hormones: "My sisters and my mom will cycle up. I feel like that's kind of a group hormone thing, like the types of hormones we give off—because there are a lot of them—affect each other all the time." Martha (52, White, heterosexual), too, remembered her college days and her time parenting two menstruating daughters as times when menstrual synchrony resulted from pheromone release:

My freshman year in college, I was in a sorority. We had to call a plumber after about 6 months because we were all menstruating at the same time and it was an old house. And with my daughters I can tell that we all got our periods at the same time. It must be pheromones or something. We put off some kind of, I don't know, odor, so that when I always had my periods, my daughters did, too.

This endorsement of unconscious biological reasons for menstrual synchrony—and the largely hormonal or pheromonal basis for this—shows a belief in the scientific bases of menstrual synchrony.

#### Theme 4: Managing and Overcoming Negative Experiences With Menstruation

Five women discussed menstrual synchrony in relationship to the ways that they managed or overcame their negative experiences with menstruation, particularly as it allowed them to talk openly about menstrual symptoms to other women. Joyce (21, Filipina, bisexual) talked about

#### 10 FAHS

how menstrual synchrony allowed her to bond with her friends about not feeling well or having strong cravings:

I found that when I'm with my friends it's usually obvious if another person is on their period because they'll say something like, 'Oh, I want chocolate because I'm on my period,' or, like, 'Oh, I don't feel like going anywhere because I'm on my period' and I will have this moment where I say, 'I'm on my period too!' and it feels almost like a bond because we both don't want to do things and we both feel like we're on the same page. I feel close to them in that way.

This belief that menstrual distress was alleviated by menstrual synchrony provided a (rare) opportunity for women to commiserate explicitly over the shared negative feelings they had about menstruating.

Women also expressed that menstrual synchrony allowed them to express anger together with other women; anger served as a platform for solidarity as women by allowing them to be more demanding or forceful. Corinne (21, White, bisexual) believed that menstrual synchrony gave her permission to be angry and to express anger together in solidarity with her best friend: "I would hang out with my best friend and all of a sudden we would be on our period at the same time. I guess it could be coincidence but it also could not be I guess. When you have two really irritated, stressed-out women who are friends, don't get in their way. That's all I can say about that, 'cause we were security guards." Given that anger is often socially prohibited for women to feel and to express publicly, particularly as a group, menstrual synchrony also gave women the chance to feel and express anger without social stigma. Yvonne (41, Mexican American, heterosexual) reflected on solidarity with her coworkers and their collective menstrual anger: "It just happened not long ago, like last month, my coworkers and I were cramping at the same time and I just like, 'Oh good!' We could all be a bitch at the same time and have the rest of the time go well. It felt like a relief, you know, that we're all gonna be emotional at the same time and no one will say, 'Wow, what's wrong with her?" In this example, Yvonne recognized the social stigma of anger, framing it as a negative emotion to feel outside of menstruating, but she could overcome that stigma only in the context of menstrual synchrony with her coworkers.

#### DISCUSSION

The present study makes a unique contribution to the existing literature by examining women's subjective ideas about menstrual synchrony and the ways that these ideas either rebel against or conform to traditional scripts about gender, bodies, relationships, and power. Themes suggest that women believe in menstrual synchrony as a way to connect with other women, enact or experience hierarchies with other women, establish a connection to evolutionary or biological modes of communication, engage in unconscious or telepathic communication with each other, or establish a basis for solidarity and bonding over the negative aspects of menstruation. This diverse set of responses and the fruitful tensions produced within them raise some compelling issues and implications for women's ongoing belief in menstrual synchrony.

On the one hand, these results suggest that women's beliefs about menstrual synchrony can reproduce gender inequities because they sometimes reinforce traditional scripts about women and their relationships with each other, namely that women compete with each other (see Daphne and Gretchen's responses in particular), that women's closeness is threatening, and that anger is not allowed unless biology (i.e., menstruation) explains it. On the other hand, the results suggest that menstrual synchrony can allow women to break away from these traditional scripts as well, by imagining, for example, that women's closeness is positive, that women have special or telepathic relationships with one another, or that women's anger is not only valid but also real, funny, and lively if felt within a group of menstruating women.

The results powerfully showcase a series of gendered tensions worthy of more scholarly analysis and reflection-most notably, the tensions between connection and dominance (i.e., bonding with other women versus enacting power over or feeling dominated by other women); mysticism and science (i.e., beliefs in magical or special communication versus assertions that evolution, hormones, and pheromones dictate women's menstrual synchrony); and shame and solidarity (i.e., assumptions of menstruation as negative versus shared grievances, anger, and playfulness between women). Rather than merely contradictory or frustratingly inconsistent, these tensions direct attention to the sorts of experiences women have when they think about their bodies, particularly in relationship to shame and empowerment discourses. How, for example, can women feel positively about menstruation when they hear messages beginning early in their adolescence about the "disgusting" and "gross" qualities of menstrual blood? How can they imagine the positive possibilities of menstruation when they cannot even carry around tampons and pads openly? Women's belief in menstrual synchrony provides one possible venue for them to express positive emotions about their periods (e.g., bonding, closeness, connection to magical bodies of other women) even as they accept the assumptions that menstruation is negative (e.g., something to be "survived," as seen in theme four). Menstrual synchrony also serves as an avenue for women to leave tensions unresolved, to recognize what they do not know (in fact, many women said "I don't know" in their narratives in response to this question), and to process what they "have heard" about menstrual synchrony in relation to their own experiences. It thus becomes a wide-open target for projection about women, their bodies, and their emotions.

Although the literature on menstrual synchrony is far from conclusive, and signs point to the likelihood that it does not actually exist, the results of the present study help to explain why menstruation serves as an ideal site for myth-making, meaning-making, and projective assumptions about women and their relationships to each other. Women's narratives about menstrual synchrony help to explain why women continue to believe in something that has largely been discredited within the scientific literature and why the shift toward not believing in menstrual synchrony may be painful or difficult for women to embrace. I did not present menstrual synchrony as a fact to these women, and yet 95% of them responded as if menstrual synchrony was absolutely true (90% said it had happened to them). Taking menstrual synchrony away from women (i.e., encouraging them to believe that it does not actually exist) may result in a loss of something important, something women have far too few opportunities to have: solidarity, connection to other women, feelings of anger that can occur in a group, an understanding of themselves as mystical or magical, or beliefs in the sheer power of their hormones and pheromones. In short, menstrual synchrony may provide women with a framework within which to understand their relationships to other women, to value other women, to make sense of their relationships with other women, and to feel solidarity with them. There is much to be lost if the collective belief in menstrual synchrony disappears and much to be gained through the continued belief in its existence. (This irony, of course, is not lost on me, as writing this very article could be seen as going against the positive feminist outcomes of belief in menstrual synchrony.) Perhaps feminist scholars should try to move away from biological explanations for female solidarity and instead emphasize the more social reasons why women should fight against sexism and menstrual shame.

#### LIMITATIONS AND FUTURE DIRECTIONS

Certain research decisions might have affected this study's results, as the ways the interview questions were worded could have captured only some, but certainly not all, of the facets of women's ideas about menstrual synchrony. A future researcher could propose to women that menstrual synchrony remains explicitly controversial in the scientific literature; women's responses might then yield more skepticism and less affiliation with the concept (or, as mentioned earlier, women might construct menstrual synchrony as certain for them and largely ignore science). A larger sample size of women might yield new themes, and a quantitative approach and analysis could identify patterns along gender, race, class, and sexual identity lines. I kept wondering, for example, if women of color, whom Martin (2001) found to have constructed menstruation as a rite of passage rather than a medical experience, might be more likely to construct menstrual synchrony as magical or mysterious rather than scientific, hormonal, and animal-like. Similarly, might lesbian and bisexual women show patterns of valuing menstrual synchrony as solidarity with their partners as well as their friends and female family members? What attitudes might men have about menstrual synchrony, particularly in relation to the threat of women's bonds with each other, or men's (lack of) knowledge about the processes of menstrual cycles? Many open questions remain that researchers could examine through both quantitative and qualitative work.

The present study of women's beliefs about menstrual synchrony serves as a case study in how women's bodies, particularly their reproductive bodies, become social texts imprinted upon by culture, science, institutions, the media, schools, and the state. Menstrual synchrony has gone from being a "brand new" scientific discovery in 1971 to a seemingly incontrovertible fact of women's lives today. That flexibility in how women think about their menstrual cycles and the meanings they attach to those cycles reveals the power of the unions between science, social narratives and scripts, and media/popular culture. The results of this study also suggest room for feminist inroads to thinking critically about bodies, sexualities, and menstrual cycles. Knowledge about bodies and sexualities is flexible and open for new information and beliefs.

#### CONCLUSION

The results of the present study point to women's need for more social spaces to feel solidarity with each other, to express collective anger, to feel connected to the magical and scientific aspects of their bodily existence, and to reckon with the patriarchal scripts of women's competition and dominance over each other. Menstrual synchrony is one of the only spaces where women can claim "out loud" positive female-bonding experiences through menstruation; as such, women need more opportunities for this type of expression so that they do not need to rely on (debunked) science to feel that they have a common fate and common experiences with the other women in their lives.

#### ACKNOWLEDGMENTS

Special thanks to Crystal Zaragoza, Laura Martinez, Natali Blazevic, Elizabeth Wallace, Eric Swank, and the Feminist Research on Gender and Sexuality Group for their contributions to this article.

#### REFERENCES

Abbink, J. (2015). Menstrual synchrony claims among Suri girls (southwest Ethiopia): Between culture and biology. Cahiers d'Études Africaines, 55, 279–302.

- Bobel, C. (2006). "Our revolution has style": Contemporary menstrual product activists "doing feminism" in the third wave. Sex Roles, 54, 331–334.
- Bobel, C. (2010). New blood: Third wave feminism and the politics of menstruation. Camden, NJ: Rutgers University Press.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77–101.
- Burley, N. (1979). The evolution of concealed ovulation. American Naturalist, 114, 835–858.
- Clancy, K. (2011). Do women in groups bleed together? On menstrual synchrony. Scientific American Blog. Retrieved from http://blogs.scientificamerican.com/context-and-variation/2011/11/16/menstrual-synchrony/
- Collett, M. E., Wertenberger, G. E., & Fiske, V. M. (1955). The menstrual cycle. Obstetrical & Gynecological Survey, 10, 706–707.
- Fahs, B., Gonzalez, J., Coursey, R., & Robinson-Cestaro, S. (2014). Cycling together: Menstrual synchrony as a projection of gendered solidarity. Women's Reproductive Health, 1(2), 90–105.

Fahs, B. (2016). Out for blood: Essays on menstruation and resistance. Albany, NY: State University of New York Press. Frisch, R. E. (1984). Body fat, puberty, and fertility. *Biological Reviews*, 59, 161–188.

- Goldman, S. E., & Schneider, H. G. (1987). Menstrual synchrony: Social and personality factors. Journal of Social Behavior and Personality, 2, 243–250.
- Graham, C. A., & McGrew, W. C. (1980). Menstrual synchrony in female undergraduates living on a coeducational campus. *Psychoneuroendocrinology*, 5, 245–252.
- Gurin, P., Miller, A. R., & Gurin, G. (1980). Stratum identification and consciousness. Social Psychology Quarterly, 43, 30–47.
- Harris, A. L., & Vitzthum, V. J. (2013). Darwin's legacy: An evolutionary view of women's reproductive and sexual functioning. *Journal of Sex Research*, 50, 207–246.
- Hemmings, C. (2012). Affective solidarity: Feminist reflexivity and political transformation. *Feminist Theory*, 13, 147–161.
- Jackson, T. E., & Falmagne, R. J. (2013). Women wearing white: Discourses of menstruation and the experience of menarche. *Feminism & Psychology*, 23, 379–398.
- Jarett, L. R. (1984). Psychosocial and biological influences on menstruation: Synchrony, cycle length, and regularity. *Psychoneuroendocrinology*, 9, 21–28.
- Kiltie, R. A. (1982). On the significance of menstrual synchrony in closely associated women. American Naturalist, 119, 414–419.
- Klebanoff, N. A., & Keyser, P. K. (1996.) Menstrual synchronization: A qualitative study. *Journal of Holistic Nursing*, 14, 98–114.
- Knowlton, N. (1979). Reproductive synchrony, parental investment, and the evolutionary dynamics of sexual selection. *Animal Behavior*, 27, 1022–1033.
- Lee, J. (1994). Menarche and the (hetero)sexualization of the female body. Gender & Society, 8, 343-362.
- Little, B. B., Guzick, D. S., Malina, R. M., & Ferreira, M. D. R. (1989). Environmental influences cause menstrual synchrony, not pheromones. *American Journal of Human Biology*, 1, 53–57.

Arden, M. A., Dye, L., & Walker, A. (1999). Menstrual synchrony: Awareness and subjective experiences. Journal of Reproductive and Infant Psychology, 17, 255–265.

14 FAHS

Martin, E. (2001). The woman in the body: A cultural analysis of reproduction. Boston, MA: Beacon Press.

- Matteo, S. (1987). The effect of job stress and job interdependency on menstrual cycle length, regularity, and synchrony. *Psychoneuroendocrinology*, 12, 467–476.
- McClintock, M. K. (1971). Menstrual synchrony and suppression. Nature, 229, 244-245.
- McClintock, M. K. (1998). Whither menstrual synchrony? Annual Review of Sex Research, 9, 77-95.
- Pettit, M., & Vigor, J. (2015). Pheromones, feminism and the many lives of menstrual synchrony. *BioSocieties*, 10, 271–294.
- Roberts, T.-A. (2004). Female trouble: The menstrual self-evaluation scale in women's self-objectification. Psychology of Women Quarterly 28, 22–26.
- Rosewarne, L. (2012). Periods in pop culture: Menstruation in film and television. New York, NY: Lexington Books.
- Saunders, K. J., & Kashubeck-West, S. (2006). The relations among feminist identity development, gender-role orientation, and psychological well-being in women. *Psychology of Women Quarterly*, 30, 199–211.
- Schank, J. C. (2000). Menstrual-cycle variability and measurement: Further cause for doubt. *Psychoneuroendocrinology*, 25, 837–847.
- Schank, J. C. (2001). Menstrual-cycle synchrony: Problems and new directions for research. Journal of Comparative Psychology, 115, 3–15.
- Schank, J. C. (2002). A multitude of errors in menstrual-synchrony research: Replies to Weller and Weller (2002) and Graham (2002). Journal of Comparative Psychology, 116, 319–322.
- Schank, J. C. (2006). Do human menstrual-cycle pheromones exist? Human Nature, 17, 448-470.
- Strassmann, B. I. (1997). The biology of menstruation in Homo sapiens: Total lifetime menses, fecundity, and nonsynchrony in a natural-fertility population. *Current Anthropology*, 38, 123–129.
- Strassmann, B. I. (1999). Menstrual synchrony pheromones: Cause for doubt. Human Reproduction, 14, 579–580.
- Stern, K., & McClintock, M. K. (1998). Regulation of ovulation by human pheromones. Nature, 392, 177–179.
- Trevathan, W. R., Burleson, M. H., & Gregory, W. L. (1993). No evidence for menstrual synchrony in lesbian couples. *Psychoneuroendocrinology*, 18, 425–435.
- Turke, P. W. (1984). Effects of ovulatory concealment and synchrony on protohominid mating systems and parental roles. *Ethology and Sociobiology*, 5, 33–44.
- Umeora, O., & Egwuatu, V. (2008). Age at menarche and the menstrual pattern of Igbo women of southeast Nigeria. African Journal of Reproductive Health, 12, 90–95.
- Uskul, A. K. (2004). Women's menarche stories from a multicultural sample. Social Science & Medicine, 59, 667-679.

Weller, A., & Weller, L. (1992). Menstrual synchrony in female couples. Psychoneuroendocrinology, 17, 171–177.

- Weller, A., & Weller, L. (1993b). Menstrual synchrony between mothers and daughters and between roommates. *Physiology & Behavior*, 53, 943–949.
- Weller, A., & Weller, L. (1995a). Examination of menstrual synchrony among women basketball players. Psychoneuroendocrinology, 20, 613–622.
- Weller, A., & Weller, L. (1995b). The impact of social interaction factors on menstrual synchrony in the workplace. *Psychoneuroendocrinology*, 20, 21–31.
- Weller, A., & Weller, L. (1998). Prolonged and very intensive contact may not be conducive to menstrual synchrony." *Psychoneuroendocrinology*, 23, 19–32.
- Weller, L., & Weller, A. (1993a). Human menstrual synchrony: A critical assessment. Neuroscience & Biobehavioral Reviews, 17, 427–439.
- Weller, L., & Weller, A. (1995c). Menstrual synchrony: Agenda for future research. Psychoneuroendocrinology, 20, 377–383.
- Weller, L., & Weller, A. (1997). Menstrual variability and the measurement of menstrual synchrony. Psychoneuroendocrinology, 22, 115–128.
- Weller, L., Weller, A., & Avinir, O. (1995). Menstrual synchrony: Only in roommates who are close friends? *Physiology & Behavior*, 58, 883–889.
- Weller, L., Weller, A., & Roizman, S. (1999). Human menstrual synchrony in families and among close friends: Examining the importance of mutual exposure. *Journal of Comparative Psychology*, 113, 261–268.
- Weller, L., Weller, A., Koresh-Kamin, H., & Ben-Shoshan, R. (1999). Menstrual synchrony in a sample of working women. *Psychoneuroendocrinology*, 24, 449–459.
- Wilson, H. C., Kiefhaber, S. H., & Gravel, V. (1991). Two studies of menstrual synchrony: Negative results. Psychoneuroendocrinology, 16, 353–359.

Wilson, H. C. (1992). A critical review of menstrual synchrony research. *Psychoneuroendocrinology*, 17, 565–591.
Worthen, M. (2014). An invitation to use Craigslist ads to recruit respondents from stigmatized groups for qualitative interviews. *Qualitative Research*, 14, 371–383.

Yang, Z., & Schank, J. C. (2006). Women do not synchronize their menstrual cycles. *Human Nature*, *17*, 433–447. Ziomkiewicz, A. (2006). Menstrual synchrony: Fact or artifact? *Human Nature*, *17*, 419–432.

Submission received: 9-21-15; Revision received: 11-13-15; Accepted: 12-22-15