This overview details the persistence of negative characterizations of the menstrual cycle as a feature of the current cultural context in which girls begin menstrual life in the United States. In addition, research on girls’ current menstrual attitudes and experiences within this context are reviewed. Current research suggests that girls are not very knowledgeable about menstruation, and that menstrual education continues to provide girls with mixed messages, such as: menstruation is a normal, natural event, but it should be hidden. Girls’ attitudes and expectations about menstruation are negatively biased and have been found to contribute to self-objectification, body shame, and lack of agency in sexual decision-making. Although preparation has been found to be associated with more positive menarcheal and menstrual experiences, specificity about what constitutes “good” preparation has not been well articulated. Implications for promoting the menstrual cycle among young girls as a vital sign in service of monitoring their health are discussed.

Key words: culture; girls’ menstrual attitudes and experience; menarche; adolescent menstruation

Overview of Past Research

Menstruation can be described as a Jekyll and Hyde phenomenon: It carries both a good and a bad reputation. Its “good reputation” can be found in the many anthropological accounts that highlight the importance of menarche as a sign of physical maturity and fertility. But its “bad reputation” as physically and psychologically problematic has persisted and overshadowed positive perceptions throughout history and in many cultures including our own.

Until well into the 1980s, this negative characterization was supported in our own culture by psychodynamic theorists who believed that menarche was a traumatic intrapsychic event, provoking anxiety and reflecting a loss of freedom and control, as well as diminished self-esteem. Hormonal fluctuation was believed to be the most important variable within menstrual cycle research, which focused primarily on the cycle’s debilitating effects. In this climate, menstrual cycle research did not really provide an accurate picture of menstrual experience.

From the late 1970s into the early 1990s, developmental researchers broadened the scope of work by investigating menarche and menstruation as complex biopsychosocial events, and by designing and applying new research instruments and methodologies. An important improvement was the development of Brooks-Gunn and Ruble’s Menstrual Attitude Questionnaire (MAQ) as an alternative to the Moos Menstrual Distress Questionnaire (MDQ), until then the measurement tool of choice in menstrual cycle research. The MDQ asked respondents to indicate the occurrence of negative physical or psychological menstruation-related symptoms, while the MAQ probed for positive as well as negative attitudes concerning five distinct aspects of menstrual experience. Later, Chrisler and colleagues further explored positive aspects of the cycle with the Menstrual Joy Questionnaire. The exploration of menstruation as multifaceted, socially constructed, and possibly a positive event, was no small task at a time when menstruation was taken for granted as a negative experience.

The findings from studies grounded in this broader perspective at last revealed more accurate information about girls’ experiences of menarche and menstruation. First, along with women (and men) who subscribed to mostly negative beliefs about menstruation, and associated it with unpleasant physical symptoms, negative moods, and debilitated performance pre- and early postmenarcheal girls (and boys) were found to share negative attitudes and expectations about menstruation. The similarity in responses across all three
groups, who differed with respect to menstrual experience, suggested that cultural beliefs were readily accessible at an early age. Clarke and Ruble also noted that girls tended to rate symptoms as more severe for others than for themselves. In other research, girls’ negative reactions included being “hassled” (inconvenienced), limited in activities, and discomforted physically, as well as scared, upset, embarrassed, and worried about menstruation. Concern about early maturers, who obviously had limited or in some cases no time for preparation, prompted research into how well prepared girls were for menstruation. Girls who reported themselves as more prepared for menstruation had a more positive reaction to menstruation. What actually constituted “good” preparation was not directly articulated. However, some aspects of preparation were explored with more specificity. With respect to important sources of information about menstruation, most girls named their mothers as very important, and rated them as generally helpful. However, it was also acknowledged that mothers provided minimal information and recognized their own lack of information as a barrier to educating their daughters.

Scrutiny of formal menstrual education materials, another important source of girls’ information about menstruation, found them wanting. Whisnant, Brett, and Zegans found that most commercially prepared educational materials and advertisements perpetuated negative stereotypes about menstruation by focusing on it as a hygienic crisis; this provided girls with confusing mixed messages, for instance, that menstruation is normal, but must be hidden at all costs. In addition, these materials were criticized for being impersonal and abstract in that they neglected to address emotional reactions and the psychosocial meaning of menstruation.

A taboo against communicating with males about menstruation was not systematically studied, although several researchers mentioned it in discussion of their work. Brooks-Gunn and Ruble, however, found that learning from males (fathers, brothers, male friends) was rated as a negative and low informational source. And, although this was a rare response, at least some girls were found to express an interest in their father’s reactions to menstruation in, for example, how they handled a girlfriend’s needs, if at all, when they were younger and dating.

Interestingly, although research did not focus much on role of health care providers as sources of information for girls, one study found that learning about menstruation from health classes in school was a high source of information for girls, and that learning from more impersonal sources (e.g., the media) increased from elementary to high school, while learning from doctors (and parents) decreased with each advancing grade.

And what did girls know about menstruation? Studies revealed that it was not much. What girls did know about the physiology of menstruation, its
characteristics (e.g., the duration and amount of menstrual flow), and related physical and affective changes, was often wholly or partially incorrect and, as mentioned, negatively biased.\textsuperscript{27,32,33}

In sum, towards the end of the 20th century, girls’ expectations and attitudes, especially those of early maturers, were largely negative, although they did reference some positive aspects of menstruation. Girls who were more prepared were more positive than girls who were not prepared. Mothers were considered to be the most important source of information about menstruation, though not consistently knowledgeable, and fathers the least. Menstrual education materials were found to be inadequate and to a large extent perpetuated negative views of menstruation.

**Current Data**

Approximately 15 years later, negative perceptions of menstruation still characterize the cultural context in which girls begin menstrual life in the United States. In her update of earlier commentary about how menstruation is portrayed in the culture at large,\textsuperscript{3,35} Houppert demonstrated that the menstrual taboo has remained alive and well in popular culture, that is, as expressed in product advertisements, industry-produced educational films, movies, books, and women’s magazines.\textsuperscript{36} In an even more recent analysis, Kissling focuses specifically on how the business of menstruation, or the feminine hygiene industry, has grown and continues to shape the public discourse on menstruation as a hygienic problem in need of solutions that promote secrecy.\textsuperscript{37} In combination with the pharmaceutical industry, which has and is developing products to “treat” menstruation, Kissling argues that “shame, secrecy, pollution, and Otherness lurk just below the surface even in seemingly progressive messages.”

At the same time, some alternative presentations of menstrual have surfaced. Kissling notes that the presence of a “menstrual counterculture” is now at least somewhat evident. She reports that two websites serve as “museums”—Finley’s Museum of Menstruation (www.mum.org) and Kachman’s Museum of the Menovulatory Lifetime (www.moltex.org).\textsuperscript{37} Both increase the visibility of the cycle, at least online, although, as with all online sources of information, one cannot take for granted the accuracy of the information provided. Kachman in particular emphasizes a celebratory perspective on the cycle. A more celebratory view of the cycle is also being promoted by organizations such as the Red Web Foundation (www.redwebfoundation.org), which promotes the use of special rituals to honor the first menstruation. Current research suggests that few girls have experienced such celebrations and are not likely to request one or are embarrassed by them.\textsuperscript{38,39}

In addition, alternative products for the management of menstruation, such as reusable cloth pads made of organic cotton and reusable collection devices such as the Keeper, or the Diva cup, are achieving more visibility, especially online. Kissling points out that while these products may not yet be widely available, they are being promoted offline in some mainstream health food stores.\textsuperscript{37} In addition, some entrepreneurs are trying to promote “stylish” menstrual management products or accessories. Kissling mentions Vinnie’s Tampon Cases and Dittie tampons as examples, which in addition to style, emphasize a more nonchalant, pragmatic attitude towards managing supplies as opposed to the secrecy and shame associated with supplies in the past.\textsuperscript{37}

Promoting alternative products for managing menstruation is also a goal of some Third Wave women’s health activists.\textsuperscript{40} These young “menstrual activists” are following in the footsteps of the Second Wave women’s health advocates who lobbied for product safety as well as other health reforms.\textsuperscript{41} But today’s menstrual activists are more pointed in their critique of the menstrual product manufacturers (the FEMCARE industry) by emphasizing both their environmental disregard and the profit motive. However, the extent to which young girls are aware of these commentaries is unknown.

But in spite of these alternative presentations of the cycle, current studies indicate that social stigma still attaches to menstruation. In one study, women who were made aware that others knew that they were menstruating perceived themselves to be stigmatized and their motivation to engage in “compensatory self-enhancement that would have allowed them to ‘save face’ was inhibited.\textsuperscript{42} Similarly, Roberts and colleagues found that observers actually do think less of menstruating women.\textsuperscript{43} In their study, both men and women had negative reactions to a woman who dropped a wrapped tampon out of her bag. Observers viewed her as less competent and likeable compared to another who dropped a barrette, and also physically distanced themselves from her.

Roberts and Waters argue that the secrecy with which women are motivated to manage menstruation, even to the point of eliminating periods altogether, distances them from their physical bodies and contributes to self-objectification, or the constant scrutiny of oneself from an internalized outsider’s standard of
physical appearance. They explain that in a culture that objectifies women and denigrates menstruation, as well as other bodily processes unique to women, such as lactation and even childbearing, girls and women might participate in practices that transform the physical body into the ideal body as a kind of survival strategy. By coming as close as possible to an externalized standard of beauty, females can achieve an advantaged position in such a culture. Pointing to empirical evidence that women make less use of bodily cues than men in determining their subjective feeling states, Roberts and Waters explain that women who are more attuned to how the body looks from an external, outside perspective have limited resources for attending to inner body experience. Other research bears them out: Fredrickson and colleagues demonstrated that self-objectification disrupts a female’s connection to her subjective experience and divides her attention to the point of limiting cognitive resources for application in other areas. In the same vein, other research points to the cycle as source of disconnection for girls, not only from their own bodies, but from other girls and woman, especially when menstrual experience differs among females.

Within this context, how have girls’ attitudes and experiences changed, if at all? Some of the current research on early menstrual attitudes and experience involves young girls. Other research relies on the retrospective accounts and/or current experiences of older adolescent or emerging adult females. As well, a number of studies from outside of the United States offer interesting insights into girls’ experiences from a multicultural prospect. Finally, while some of this literature is standard psychological research employing either a quantitative or qualitative methodology, menarche and menstruation is drawing the attention of discourse analysts among media scholars and sociologists.

In spite of the increased visibility of menstruation in the culture, the increased number of products for managing menstruation, and increased opportunities for menstrual education, girls still report mixed feelings about menstruation, including a good deal of negativity. Both pre- and postmenarcheal girls believe that changes, notably negative changes, occur with menstruation, confirming the findings of earlier studies. Girls report embarrassment about menstruation as well as surprise and fear in response to menarche. Retrospective accounts of menarche reveal the same themes of negativity.

With respect to positive attitudes, girls continue to affirm menstruation as a normal and natural event, part of being a woman, something that puts you in touch with your body, and a sign of growing up. However, researchers now question whether self-identification as a woman is of real importance to girls at the beginning of menstrual life. For example, when Koff and Rierdan asked postmenarcheal girls who had been menstruating for 3 years how preparation for menstruation could be improved, no respondents brought up the notion that “now you are a woman.” This concept may be too abstract to have an impact on young girls, who are for the most part concrete thinkers.

Some researchers have explored how girls’ positive attitudes are or might be sustained. For example, Frank and Williams found the level of worry decreased for girls who talked with someone about menstruation, indicating that making use of a supportive person can have a positive impact on attitudes. In addition, Rembeck and Gunnarsson, working with a Swedish sample, tested an “active” intervention designed to counteract body objectification against a standard curricular approach to teach young girls about puberty and the reproductive organs. Girls who experienced their periods over the course of the study showed improved attitudes in comparison to those learning through the standard curriculum. However, the attitudes of neither the early-maturing girls (already menstruating at the beginning of the study) nor those of late-maturing girls (still premenarcheal at the end of the study) showed improvement. Nevertheless, the results suggest that menstrual attitudes can be improved, especially if an active intervention is offered to girls just prior to menarche.

Some discourse analysts who have studied how young girls talk about menstruation point to additional positive aspects of early menstrual experience that have not been noted in traditional social science research. For example, Fingerson notes that although girls’ bodies are still constructed as negative and passive, within this constraint, girls are creative about how they construct their bodies, and draw on menstruation to exert social agency. She explains that especially when males are present, girls use a kind of secret code, to which boys are not privy, so that they can continue talking about menstruation. She argues that this use of code is an example of girls’ agency, in contrast to past researchers who focused on the secrecy and shame conveyed by euphemisms for menstruation. Fingerson also argues that managing menstruation builds important skills in actively taking responsibility for one’s body, which she calls agency over the body. She suggests further that menstruation builds community among girls as they share management strategies and look out for one another.

Polak adds another note on girls’ increased comfort with menstruation. In her investigation of online
discussions of menstruation, she notes that girls are very candid and specific in both asking and answering questions of one another. Whereas the subjective experience of menstruation may have been given short shift in the past in more formal presentations of information, girls’ current discussions include detailed descriptions of their menstrual experience. Although the accuracy of the information exchanged is admittedly an issue, Polak’s point is that girls are using online space to talk very openly and directly about menstruation.

It is obvious that Internet sites have become an important location for discussions of menstruation and that girls themselves are acting more as their own sources of information. In fact, after mothers, girl-friends are now noted as the second most important source of information about the cycle. Corroborating results of past research, few girls talk to their fathers about menstruation, and think that fathers don’t know very much about it. In studying girls living in single-father-headed households, Kalman found that girls felt that although they rated their relationships with their fathers as very close, they nevertheless felt distanced from them after beginning to menstruate. Kalman urges more support for fathers in helping their daughters adjust to menstrual life.

Menstrual education materials from health classes and health providers are the third most important source of menstruation-related information among young girls. But recent study of these materials indicates that in comparison to earlier materials, while there is adequate information on hygiene, there is only vague information about physiology, and not much more information on puberty in general than in earlier materials. Urchull and colleagues conclude that the ideal of a neat, clean, fresh body that doesn’t “leak” is still being perpetuated. Charlesworth adds that materials present readers with two paradoxical views: first, that menstruation is important, and second, that one should ignore it and behave as one would on any other day. The latter message is particular problematic in that it explicitly advises diverting attention away from one’s body, reinforcing the self-objectifying stance that Roberts and Waters find of concern. Simes and Berg note that product advertising emphasizes heightened security so as not get “caught menstruating” by participating as usual in activities so no one will know, and of course by buying the right products to disguise odor and prevent leaking. Simes and Berg found that in some product information, applicators are promoted as an alternative to having to touch menstrual fluid. Finally, Kalman finds negative messages that promote shame and embarrassment in articles in teen magazines. In addition to providing materials to schools and advertising in magazines aimed at young girls, product manufacturers now also post “educational” material on sponsored websites. Targeting young girls as consumers is important to these companies. They know that once brand loyalty is established, it is less common for females to choose alternatives.

With respect to advice from health care professionals, some research from Europe finds that columns authored by medical experts in magazines address the needs of girls (and women) who do not have other sources of information. Like Fingerson and Polak, Oinas finds it heartening that females are actively seeking information within the context of cultural silence about menstruation. Nevertheless she is concerned that responses directing women to seek and rely on medical advice on the menstrual cycle reinforce medicalization of women’s normative physical functioning. She is also concerned that experts give arbitrary advice (for example, about whether one can swim during menses) when there is no definitive medical literature on the topic. She worries that in the absence of other sources, these columns do women a disservice by underscoring the role of the professional in managing a woman’s body.

Studying the relationship between early experience and later menstrual attitudes, McPherson and Korfine found that, as in previous research, women with more positive early experiences and good preparation held more positive attitudes than those with early negative menstrual experiences. In addition, women with more positive early experiences were more satisfied with their bodies than women with more negative early experiences. Acknowledging that their data do not provide evidence for a causal link between early experience and current menstrual attitudes or body satisfaction, McPherson and Korfine suggest that negative menarcheal experiences may influence how a woman perceives her periods for years to come.

Other researchers have studied the relationship between negative menstrual attitudes, body shame, and sexual decision-making. Schooler and colleagues found that women who reported more shame about menstruation and their bodies were uneasy about sexual encounters and had more difficulty asserting themselves in sexual encounters. There is much to be considered in addressing how to educate girls for healthy sexuality, but suffice it to say that in menstrual education, the topic is only tangentially mentioned. Most certainly, girls are told that menstruation results when an egg is not fertilized, but there is little or no further detail about that process. Koff and Rierdan suggest that the lack of specific information about menstruation and
reproductive capacity can contribute to girls’ confusion about healthy sexuality.57 This is an area that deserves much more study.

Unfortunately, not much more information is now available on what constitutes good preparation than there was in the past. And, even though girls describe themselves as well prepared for menstruation, they still report feeling disgust, shame and apprehension about menstruating, which is not surprising, given that girls’ knowledge of menstruation is still largely inaccurate, incomplete, and negatively biased.56 Clearly, the gap between self-perception of preparation and actual preparation needs further study and should be guided by an acknowledgment that receiving information is not necessarily the same as preparation.39 Asked how to improve preparation for menstruation, girls themselves indicate that it is most important to stress that menstruation is normal.57 Next, they advise addressing subjective experience/emotions in the context of a calm, supportive, and reassuring environment. They also mention that it would be helpful to know more specifics about menstrual hygiene so that a girl would know exactly what to do when menstruation occurs.

**Promoting Menstruation as a Vital Sign**

In spite of some resistance to the menstrual taboo, the cycle’s greater visibility in the culture at large, and girls’ frank discussions about menstruation among themselves, girls are still largely uninformed and quite negative about menstruation. Negative views of menstruation currently outweigh alternative, that is, more positive, presentations of menstrual experience. As a result, it will be a challenge to promote menstruation as a vital sign of healthy functioning, especially among girls themselves. Fueling today’s version of the menstrual taboo is the promotion of birth control methods drawing attention to negative aspects of the cycle, and promising instead short periods, reduced PMS, and/or no periods. Some of these products are promoted as a matter of convenience with the potential to improve the quality of life of all females.77

There are several troublesome aspects about this kind of advertising. First, in the rationale offered in promotions of these products, there has been a complete reversal in the description of the withdrawal bleeding as a part of hormonal contraception. As Gladwell recounts, when the pill first came on the market, manufacturers thought that women, believing that menstruation was a natural process, would reject eliminating a periodic bleed altogether.78 In addition, there was opposition to the pill from the Catholic Church. To overcome these obstacles, marketers built a withdrawal bleed into the method. Many women, especially younger women, were then, and are not now, aware that hormonal birth control is actually cycle-stopping, and that the withdrawal bleed is not a menstrual period. Now, co-opting the language of women’s rights by stressing freedom and flexibility, the marketers of Seasonale® (which reduced the number of withdrawal bleeds to four a year) are driving home the message that menstruation is not necessary, even unhealthy, as well as messy, inconvenient, and bothersome77 while the marketers of other hormonal contraceptives, for example Yaz®, are following suit by promoting their products as a way to shorten periods and associated symptoms.

It is and has been readily acknowledged that women’s attitudes about what is normal and healthy influence contraceptive choice.79–81 That said, it is reasonable to assume that if the view of menstruation as unnecessary (and worse, unhealthy) prevails, more females will be likely to choose cycle-shortening or cycle-stopping methods. Marketing campaigns to enhance this outcome will not be lost on young girls, who avidly read magazines and have online access to material for older females.82

Indeed, according to a recent report that reads more like market than health research, younger women, and by association adolescents, are being specifically targeted along with low-income women, women already on the pill, and women with severe symptoms, as “particularly receptive to menstrual suppression and [they] make particularly desirable targets for efforts of messaging and education.”83 The report, summarizing research funded by a pharmaceutical company, begins by mentioning a “tremendous opportunity to educate women about menstrual suppression,” based on the finding that “women show surprising little knowledge about the effects that hormonal contraceptives have on their bodies. Women believe it is natural for a woman to have her period while on the pill and most remain wedded to the notion of a 28-eight day cycle.”83 The implication is transparent: girls and women should be disabused of this idea. The report also noted that negative attitudes about menstruation, such as preferring not to have a period at all, and believing that men have a real advantage because they do not have periods, are widespread. However, as reported, no positive aspects of menstruation were investigated, a format reminiscent of earlier, negatively biased research on the cycle.8 Interestingly, and not referenced, some of the questions in the survey come from Brook-Gunn and Ruble’s MAQ,7 originally intended to broaden, not
narrow the scope of research into women’s experiences. Finally, barriers to greater acceptance of suppression were also identified in the report, one assumes to inspire efforts to overcome them.

Although suppression may provide health benefits for females with severe menstruation-related symptoms, one wonders what health benefits, if any, will extend to the other groups of women named as targets, especially young women. During puberty, adolescence, and into emerging adulthood, young females are concerned about body image and engage in social comparison. In that context young females are especially susceptible to cultural messages about self-presentation. Menstrual product manufacturers make use of adolescent girls’ and young women’s self-consciousness when they advise females to act normal and promote their products as the best for keeping menstruation hidden. Advertisements for contraceptives that promote the notion that menstruation is unimportant, unnatural, unhealthy, and a generally negative experience, do the same thing. In a culture that objectifies women, who wouldn’t want to avoid such an experience?

The extent to which young girls will actually opt for these products is, of course, not known. And what harm might result if they do? Cycle-stopping distances young women from their bodies and from authentic agency in taking responsibility for their own health. Cycle-stopping prevents young females from noticing and learning over time what “normal” menstruation is for them, and denies them the opportunity to use the cycle as a vital sign to monitor general health. Of course, cycle stopping is an effective method of birth control. And therein lies a very important rub. If we are serious about promoting menstruation as a vital sign, complex cultural forces to the contrary will have to be addressed in the effort.

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Conflicts of Interest

The author declares no conflicts of interest.

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Menstruation is a cultural as well as scientific phenomenon as many societies have specific rituals and cultural norms associated with it. These rituals typically begin at menarche and some are enacted during each menstruation cycle. The rituals are important in determining a status change for girls. Upon menarche and completion of the ritual, they have become a woman as defined by their culture. For young women in many cultures, the first menstruation is a marker that signifies a change in status. Post-menarche, the young woman enters a stage called maidenhood, the stage between menarche and Adolescent girls in LMIC are often uninformed and unprepared for menarche. Using a structured search strategy, articles that investigate young girls’ preparedness for menarche, knowledge of menstruation and practices surrounding menstrual hygiene in LMIC were identified. Reported bathing practices in India ranged from all 200 rural-living girls in one state abstaining during menstruation [29] to nearly all 3,443 girls in urban areas of another state bathing daily [73]. Among the included countries and across all LMIC is great cultural variation, and the results presented here should be considered in light of these unique perspectives. Despite these limitations, the evidence presented allows for the following conclusions.