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ORIGINAL ARTICLE

Systemic Powers, Institutionalized Thinking and Situated Knowledge: A Qualitative Exploration on the Meanings of 'Menstruation' and 'Menstrual Health' in Spain

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Abstract

Menstrual imagery and embodied menstrual experiences are greatly modulated by androcentric biomedical systems. Given that menstruating is not only a biological phenomenon but also a sociocultural and political action, women and people who menstruate (PWM) must actively participate in redefining how menstruation and menstrual health are understood and addressed. Taking a situated knowledge perspective, this study aims to investigate how women and PWM conceptualize menstruation and menstrual health in the Barcelona area (Spain), to offer a critical reflection on how social meanings of menstruation and menstrual health may be embodied and shape the menstrual experiences of women and PWM in our context. A qualitative study with 31 women and 3 PWM was conducted, using semi-structured photo-elicitation interviews and framework analysis. Menstruation was often perceived and experienced as a burden, as it was seen as intrinsically linked to identity and stereotyped femininity. Menstrual health was strongly framed within a biomedical and androcentric lens. At the same time, some participants took a critical stance, highlighting the importance of body literacy and self-care. Definitions of menstruation and menstrual health should take into account how women and PWM experience and embody menstruation, to promote menstrual education and health in a way that responds to the needs of women and PWM. Challenging institutionalized ideas about menstruation could also support community-based actions and transform menstrual policymaking into participatory processes.

Keywords Menstruation · Menstrual health · Gender socialization · Institutionalized thinking · Biomedical androcentrism · Qualitative research · Framework analysis · Photo-elicitation · Situated knowledge

Conceptual maps and internal storytelling represent discourse that can greatly determine how we relate not only to ourselves (and our bodies) but to our social and structural environment. Discourse is a tool that represents and modulates knowledge and experience within a sociohistorical context (Foucault, 1972). The Foucauldian concept of "discursive formations" refers to how "objects, types of statement, concepts, or thematic choices" (Foucault, 1972) are organized with respect to each other and invoke particular ways of thinking. From a Foucauldian perspective, discursive formations can be used to institutionalize social thinking, so to direct the creation of meanings and social

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practices based on the needs and desires of institutional powers (Foucault, 1972, 1979). This concept sets a foundation to critically enquire, reflect on, and transgress how can one form and associate certain concepts together (e.g., blood and pain). Given discursive formations are understood as functions, discourse can then become a practice (Garrity, 2010) where authorities, for example, such as medicine, form discourse (e.g., medical doctors can make statements on menstruation as menstruation is deemed to fall under the authority of medicine) (Foucault, 1972; Garrity, 2010). The current study uses an innovative qualitative approach to investigate how women and people who menstruate (PWM) conceptualize *menstruation* and *menstrual health* in the Barcelona area of Spain, to offer a critical reflection on how institutionalized social meanings of *menstruation* and *menstrual health* may be embodied and shape menstrual experiences among women and PWM in context.

Institutionalization of Menstruation

Androcentric systems and internalized misogyny have greatly modulated how women and PWM construct their own conceptualizations and experiences of menstruation (Esteban Galarza, 2001; Holst et al., 2022). Indeed, the institutionalization of menstrual symbolism and social imagery have already been theorized as means to the social surveillance and regulation of women (Erchull, 2020; Ussher, 2004, 2011). For instance, menstrual suppression through the generalized commercialization and prescription of hormonal contraception, meant a challenge to gender norms and embodiment, hence leading to an institutionalized redefinition of menstruation (Hasson, 2020; Valls-Llobet, 2009). Then, both the menstrual cycle and menstruation became "controllable" through the generalized medicalization of menstruating bodies (Blázquez Rodríguez & Bolaños Gallardo, 2017). This institutionalization of meanings can intersect with menstrual self-policing practices to avoid violating social norms of stereotypical femininity (Ussher, 2004) and the internalization of menstrual stigma (Johnston-Robledo & Chrisler, 2020) and self-objectification (Johnston-Robledo et al., 2007; Roberts, 2004, 2020a). For instance, framing the menstrual cycle as a "controllable phenomenon" offers an opportunity for women and PWM to "avoid" emotional fluctuations throughout the menstrual cycle. This may be understood as a form of policing one's lived experience and expression of emotion (and especially of anger), which is often perceived as "unfeminine" and "undesirable" (Ussher, 2004, 2006, 2011). In turn, this perpetuates menstrual stigma and gender discrimination.

The sexual objectification of women has been robustly theorized as a consequence of heteropatriarchal societal systems (de Miguel, 2015), which contribute to "colonizing the minds of many girls and women who, as a consequence, (…) [self-objectify] as a way of anticipating rewards and punishments likely to come from a culture that values their physical appearance above all else" (Roberts, 2020a, p.55). Likewise, conventional conceptualizations of menstruation and menstrual health, which often reduce the menstrual experience to sex, reproduction and bodily functions (and "disfunctions"; Blázquez Rodríguez & Bolaños Gallardo, 2017), may infantilize, objectify, and reduce women and PWM (i.e., gender non-conforming menstruators) to "childbearers," limiting their personhood and social value to their potential reproductive capacity. This idea is closely tied to sex-segregated social constructions, in which women are seen as dominated by their physiology and their capacity to reproduce and bear children (Blázquez Rodríguez & Bolaños Gallardo, 2017; Martin, 1987). It is also embedded within discourses of menstruation as a sign of reproductive failure (Martin, 1987).

Situated Knowledges in Menstrual Research

This discussion undoubtably requires arguing for *situated knowledges,* a concept coined by Donna Haraway (Haraway, 1988). In this text, Haraway questions objectivity in knowledge, arguing that the production and nature of knowledge can never be neutral. Based on Haraway's work, it is crucial to acknowledge subjectivity and be transparent in which subjectivities influence the practice of knowledge creation. Therefore, this perspective assumes and accepts subjectivity in research and other knowledge-generating practices. It encourages the contextualization of what may constitute knowledge and "concept formation." Haraway referred to situated knowledges as "(…a doctrine of embodied objectivity that accommodates paradoxical and critical feminist science projects" (1988, p. 581). Sociohistorical and geopolitical contexts should be also acknowledged, assuming that social meanings and practices are not only socially, but also historically constructed. Similarly, conceptualizations of phenomena cannot be framed as disconnected from their geographical and political context (Cruz et al., 2012). For instance, menarche needs to be understood as situated in a particular sociocultural, historical, and political context. A situated knowledge approach means rejecting a homogenization of lived menstrual (and menarcheal) experiences (Blázquez Rodríguez & Bolaños Gallardo, 2017), and accounting for situated and diverse ones. Thus, menarche may not necessarily be a shocking and traumatizing experience that is a "natural transition to womanhood." On the contrary, menarche may be a valuable learning experience that may strengthen ties with other women and menstruating people in one's community.

Assuming a situated knowledge perspective also entails accepting individuals as active (rather than passive) agents

(Cruz et al., 2012) who may "continuously (re)interpret and (re)negotiate bodies, meanings, and positions…)" (García Selgas, 2001, p. 371). Research in menstrual health and equity should serve as an amplifier of the voices of women and PWM, committing to make processes such as menstruation, pregnancy, breastfeeding, and/or menopause more visible and less taboo. Hence, research should commit to helping women reclaim their bodies and embodied experiences. As such, institutionalized ideas of menstrual experience (e.g., those related to the intrinsic association of menstruation with pain) can be reframed and challenged so that, for instance, menstruation can also be framed as involving pleasure (Guilló Arakistain, 2022).

In fact, shifting societal systems to debunk taboos, stigma, and discrimination surrounding menstruation and promoting structural changes to address menstrual inequities, inherently implies that women and PWM exercise their power (Guilló Arakistain, 2022; Holst et al., 2022; Johnston-Robledo & Chrisler, 2020). It is necessary to challenge the power structures in the institutionalization of social meaning to redistribute and share the exercise of power, particularly with those who hold the lived experiences of such meanings (e.g., women and PWM). Furthermore, integrating intersectionality (Crenshaw, 1989) and a social inequities perspective (Whitehead, 1992) could be crucial to incorporate diversity in menstrual realities, and the complexity of interrelations of social vulnerabilities and the distribution of privilege and power. While the conceptualization of the meanings of health has been appropriated by the medical professions (Esteban Galarza, 2001; Foucault, 1989; Menéndez, 2020), calls for a broader and therefore less restrictive perspective on what health means, focusing on integrative, socially constructed, and critically meaning-making processes (Blázquez Rodríguez & Bolaños Gallardo, 2017; Valls-Llobet, 2009).

Thus, disseminating, through research, women's and PWM's own meanings of *menstruation* and *menstrual health* could nurture and support agentic community-based actions. These constructed meanings should be considered by academics and professionals, to critically question and redefine systemic powers that shape research, healthcare services, educational settings, and other societal institutions (Foucault, 1989; Haraway, 1988; Menéndez, 2020). This transformation needs to include processes of insightful reflection to restructure privileges and the technologies of domination (i.e., systemic disciplinary methods) (Foucault, 1979, 1989; Haraway, 1988). For instance, in healthcare systems, this would involve questioning how (by whom and in what context) *menstruation* and *menstrual health* are conceptualized. This could inherently impact how menstrual health related concerns are addressed in practice (Mertz et al., 2023), allowing women and PWM to be at the center of healthcare encounters.

A recent publication has offered a definition of menstrual health (Hennegan et al., 2021), recognized as a human rights and public health issue (Babbar et al., 2022; Winkler, 2019). This definition is rooted in the World Health Organization's understanding of "health" and the Lancet-Guttmacher Commission's definition of Sexual and Reproductive Health and Rights (Starrs et al., 2018). However, there is a lack of research on how women and PWM conceptualize and embody their own meanings of menstrual health, and how they may internalize institutionalized menstrual meanings. This current research aims to address the following questions: (1) How do women and PWM conceptualize menstruation and menstrual health? (2) How do they incorporate institutionalized meanings of menstruation and menstrual health? (3) How do other meanings of menstruation and menstrual health emerge?

Method

In this qualitative study, we conducted photo-elicitation semi-structured individual interviews with 31 women and 3 PWM aged 18–47 who lived in the Barcelona area (Spain) (see Table 1 for details on participant characteristics). Using photo-elicitation techniques was particularly useful in eliciting responses about stigma and discrimination, as well as attitudes and beliefs on menstrual activism and policymaking, such as menstrual poverty (Collier, 1957; Harper, 2002). This study is part of a larger project in Spain (Equity and Menstrual Health project), which employs a mixed-methodology and a critical feminist perspective to assess and explore experiences of menstrual inequity and menstrual health in Spain among women and PWM aged 18 to 55 (Holst et al., 2022). The research team was led and almost exclusively comprised of women researchers, including social scientists, public health and primary healthcare researchers, and clinicians. We specialize in menstrual, sexual, and reproductive health. We are committed to conducting gender-based and feminist research, thus adopting a critical and reflexive perspective on health (and health systems) through the lens of a social inequities of health perspective. More details on the qualitative methods have already been published and are openly accessible (Holst et al., 2022). Ethical approvals were obtained from the IDIAPJGol Ethical Committee on November 21, 2020 (Ref 19/178-P). All participants received enough information to give their oral and written consent to participate. Data have been managed and stored safely to maintain the anonymity and confidentiality of participants.

Table 1 Participants' Sociodemographic Characteristics ($N = 34$)

ID	Age	Gender	Identified as trans	Country of birth	Administrative status	Completed education	Employment status
P1	27	Woman	No	Spain	Spanish nationality	Primary education	No employment/ income
P2	40	Woman	No	Spain	Spanish nationality	Secondary education	Employed full-time
P3	23	Woman	No	Spain	Spanish nationality	Professional education	Maternity leave
P4	24	Woman	No	Spain	Spanish nationality	University studies	Employed full-time
P5	25	Woman	No	Spain	Spanish nationality	University studies	Employed full-time
P6	29	Not sure	Not sure	Spain	Spanish nationality	University studies	Self-employed
P7	33	Woman	No	Spain	Spanish nationality	University studies	Employed full-time
P8	35	Woman	No	Spain	Spanish nationality	University studies	Employed full-time
P9	24	Woman	No	Spain	Spanish nationality	University studies	Employed full-time
P10	33	Woman	No	Spain	Spanish nationality	University studies	Employed full-time
P11	33	Woman	No	Spain	Spanish nationality	University studies	Employed full-time
P12	25	Woman	No	Spain	Spanish nationality	University studies	Employed full-time; Studies part-time
P13	25	Woman	No	Spain	Spanish nationality	University studies	Employed full-time
P14	26	Woman	No	Spain	Spanish nationality	University studies	Studies full-time
P15	25	Woman	No	Spain	Spanish nationality	University studies	Employed full-time
P16	47	Woman	No	Spain	Spanish nationality	Professional education	Employed full-time
P17	34	Woman	No	Spain	Spanish nationality	University education	Employed full-time
P18	23	Woman and non-binary	Not sure	Spain	Spanish nationality	Professional education	Medical leave; Studies part-time
P19	25	Woman	No	Spain	Spanish nationality	Secondary education	Employed part-time; Studies full-time
P20	20	Woman	No	Spain	Spanish nationality	Secondary education	Studies full-time
P21	35	Woman	No	Spain	Spanish nationality	University studies	Self-employed; Studies part-time; Unpaid care work
P22	18	Woman	No	Spain	Spanish nationality	Secondary education	Studies full-time; Unpaid care work
P23	28	Woman	No	Spain	Spanish nationality	University education	Employed full-time
P24	20	Non-binary	Yes	Spain	Spanish nationality	Secondary education	Studies full-time
P25	37	Woman	No	Morocco	Permanent residence	Professional education	Employed full-time
P26	24	Woman	No	Spain	Spanish nationality	Professional education	Employed part-time
P27	35	Woman	No	Columbia	Spanish nationality	University studies	Unemployed
P28	37	Woman	No	Spain	Spanish nationality	University studies	Employed full-time
P29	23	Woman	No	Argentina	Refugee status	Secondary education	No income
P30	22	Woman	No	Spain	Permanent residence	Professional education	Employed full-time
P31	25	Woman	No	Pakistan	Permanent residence	Professional education	Employed full-time
P32	29	Woman	No	Spain	Spanish residence	University studies	Employed full-time
P33	28	Woman	No	Spain	Spanish nationality	University studies	Employed full-time
P34	38	Woman	No	Brazil	Spanish nationality	Professional education	Unemployed

Recruitment and Data Collection

Sampling was purposive and selective. Participants were recruited using different strategies, including social media platforms (i.e., Instagram, Twitter, WhatsApp), key individuals and organizations (e.g., sexual and reproductive health centers (ASSIRs), primary healthcare centers, non-governmental organizations, and other local organizations), and snowballing techniques. The researchers paid special attention to recruiting women and PWM with barriers to accessing social media platforms and lived in social and/or economic vulnerable contexts. We ensured discourse diversity throughout the recruitment process by considering participants' diversity in terms of age, socio-economic context, country of birth, administrative status, and gender identity. These characteristics were considered as they could represent the variability in in socioeconomic status of the population, and the embodiment of social systems of oppression.

Qualitative interviews were conducted in ASSIRs ($n=6$), public spaces ($n=5$) or via telephone ($n=23$; due to COVID-19 restrictions) from December 2020 to February 2021. A topic guide and two photographs were used during the interviews (see Supplementary Material 1). The first photograph was used to explore menstrual stigma and discrimination. The second one was used to elicit discussions around menstrual policies. In the telephone interviews, photographs were shared with participants via email (with their consent) at the start of the interviews. Participants were asked to look at each photograph separately once photographs were needed during data collection. The interviews lasted between 40 and 85 min and were audio-recorded and transcribed verbatim. Participants received a 10€ voucher for their participation in the interviews. Quality and rigor for the qualitative study were ensured by following the Yardley's criteria (Yardley, 2000, 2015) and through the Critical Appraisal Skills Programme (CASP) tool (O'Donoghue et al., 2018).

Data Analysis

Data for this article were analyzed using framework analysis (Gale et al., 2013; Ritchie & Spencer, 1994), which organizes data based on a hierarchical thematic framework. Framework analysis is particularly useful to ensure transparency throughout the analysis process as it summarizes "raw" data and facilitates a clear link between the findings and the original data. Framework analysis consists of five steps:1) familiarization with the data, for instance by reading transcripts; 2) developing a hierarchical thematic framework (including themes and sub-themes) based on the first step, a review of previous evidence, and the aims of the study; 3) indexing which consists of linking text extracts to the thematic framework; 4) charting, which consists of creating charts for each theme within the thematic framework where raw data are indexed and a narrative analysis is conducted for each theme/subtheme; and 5) mapping and interpreting where researchers build up a final process of analysis considering data from all participants and across themes/subthemes (Gale et al., 2013; Ritchie & Spencer, 1994).

Once the interviews were transcribed verbatim, LMP and ASH read the transcripts independently and took notes on potential hierarchical thematic frameworks (including major themes and sub-themes) that could be derived from the data (Step 1). Then, several meetings were held between LMP and ASH to discuss and agree on the hierarchical thematic framework. Disagreements were resolved through reviewing the transcripts and discussions on data interpretation. Unresolved disagreements were also discussed with CJA in triangulation meetings. These meetings led to the final hierarchical thematic framework (Step 2). Indexing was carried out by LMP and ASH. This process consisted of reviewing all transcripts and incorporating data extracts in each theme and subtheme within the hierarchical thematic framework. Triangulation meetings between LMP, ASH and CJA were held to discuss any doubts on where to place data extracts within the framework (Step 3 and 4). To end the analysis process, LMP, ASH and CJA met to have a preliminary discussion on the interpretation of the thematic framework. A second meeting was held involving all authors to have a final discussion on how themes and sub-themes interconnected. A few changes were made to the framework at this stage—the fundamentals of the hierarchical thematic framework were not changed, however, some indexed and mapped data were reorganized (Step 5). Based on the aims of this study, the thematic framework was constructed in two broad themes: 1) conceptualizations of menstruation; and 2) conceptualizations of menstrual health. The sub-themes were identified inductively and interpretatively, not to constrain the analytical process, and following the analysis procedure detailed above. The hierarchical thematic framework, including the definitions of themes and sub-themes, and examples of indexed data are available in Table 2.

Results

The results section is structured around two main themes: participants' conceptualization of menstruation and menstrual health (see Fig. 1).

Conceptualizations of Menstruation

Menstruation was generally conceptualized as a burden (especially when experiencing pain and other symptoms), often perceived and experienced negatively. At the same

Table 2 Definitions and Examples of the Themes and Subthemes that Construct the Hierarchical Thematic Framework Theme

Theme	*Definition*	Subtheme	*Definition*	*Example Quote*
Conceptualizations of menstruation	Participants accounts on their perceptions and views on what "menstruations" meant socially and to them	**Menstruation as a functional burden**	Participants accounts on viewing menstruation as a burden and a bodily function, especially associated to reproduction	*"I see it* (menstruation) *as a burden (…) that I see that my body spends a lot of energy and a lot of resources in this, that if I think about it like… so in comparison with people who do not menstruate, so I think that all this energy they can dedicate it to themselves and their things, instead of losing it menstruating (…) it's a preparation that allows you to have children"* (P7)
		Menstruation as identity	Participants accounts on menstruation defining identity and socially constructing "womanhood" and hegemonizing identities amongst menstruators	*"It's like, I am a woman. It* (menstruation) *is the privilege of being a woman, the femininity (…) It's something totally natural, it is the process of being a woman (…)"* (P17)
Conceptualizations of menstrual health	Participants accounts on their own understandings of what menstrual health is	**Menstrual health as having "regular" menstrual patterns and the absence of ill-health**	Participants accounts on menstrual health being defined by biological patterns and a medical/medicalized perspective	*"It's having a regular menstruation, and the days, for example, the adequate days, that doesn't last for example more than 5* (days) *and that it's not less than… (…) let's say and adequate duration. And it's regular"* (P25)
		Menstrual health as a sign of health and a tool for health promotion	Participants accounts on menstrual health being defined as a sign of health. Participants associated menstrual health with general health, and menstruation and the menstrual cycle as useful to promote one's health	*"I guess that having a good relationship with menstruation, so that if there is some sort of imbalance it can be treated, having access to… so to the elements* (products) *that each person wants, having… also, I guess that there has to be some sort of social wellbeing component, not having to hide yourself or things like that"* (P18)
		Menstrual health requires from an equitable access to menstrual resources, services, and care	Participants' accounts on menstrual health being defined by having access to menstrual products, adequate spaces for menstrual management, services (e.g., healthcare services) and resources for menstrual care	*"Menstrual health… is somehow the hygiene. Let's say…self-care (…) changing and using products maybe (…) and if it's the* (menstrual) *cup, cleaning it well and things like that"* (P22)
		Menstrual health as inevitably linked to menstrual knowledge and menstrual experiences that are free from taboo and stigma	Participants' accounts on menstrual health being defined by having timely and accurate menstrual information, and having lived experiences of menstruation that are free from menstrual taboo and stigma	*"I feel that is very important* (referring to relevant factors for menstrual health) *that the diversity amongst people with bodies that menstruate are made visible. Because (…) there are a lot of generalizations, talking about women or talking about a certain type of… women that menstruate in a certain way"* (P24)

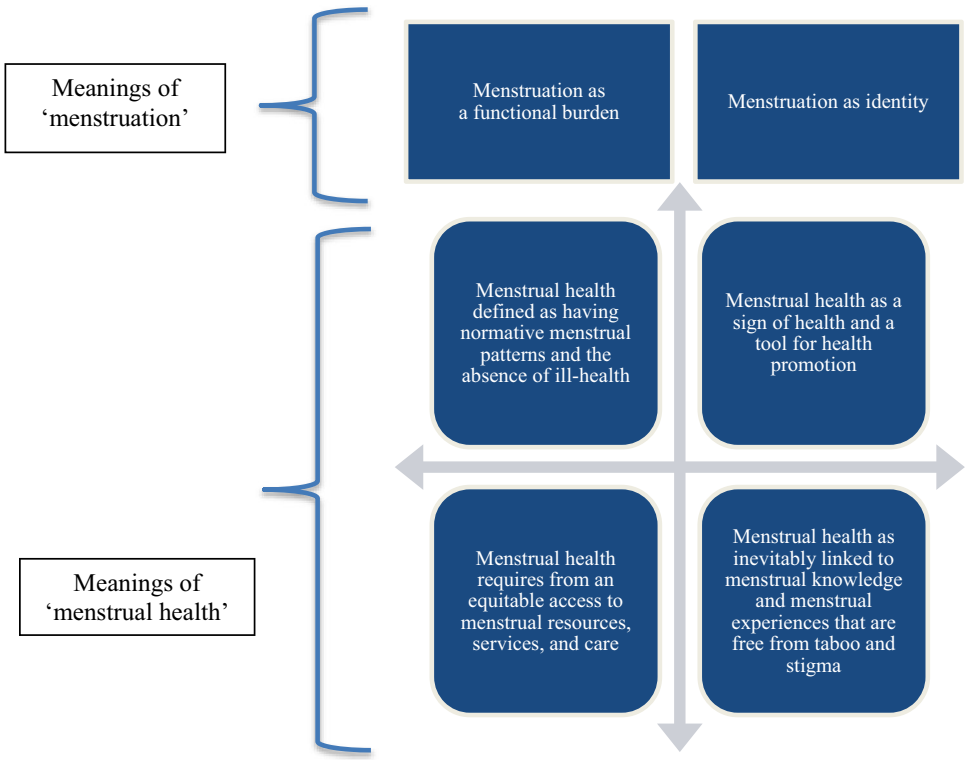

Fig. 1 Participants' Conceptualization of Menstruation and Menstrual Health

time, menstruation was conceptualized as a sign of womanhood and hegemonic femininity. While menstruating was generally perceived as a sign of "good health", it could also be triggering for gender non-conforming participants. Furthermore, it seemed that menstruation was intrinsically linked to the identity of women and PWM, although identity accounts related to menstruation appeared to be stereotypical and limiting. Two sub-themes were identified: 1) menstruation as functional burden; and 2) menstruation as identity.

Menstruation as Functional Burden

Although participants' relationship with menstruation had changed overtime, becoming more positive, it was generally perceived negatively by most participants. Many participants shared that their initial reaction to menarche (first menstruation) was not positive, even traumatic for some. For instance, one participant, who identified as part of the Roma community, feared she had lost her virginity and had "ruined" herself when she started menstruating. She explained how important virginity was in her family context and not having known what menstruation was and entailed made her feel shocked and confused at the time of menarche. Participants implied that the messages conveyed to children even before they start menstruating is that menstruation is a burden, as illustrated when P4 talks about her menarche: "Oh, a stain, wait, how can it be? Ah, okay, it could be that (menstruation), hmm, what a pain" (P4). In turn, P33 explained how she perceived menstruation as a sign of youth and, at the same time, as a barrier to staying active since menstruation could be a burden to continue with daily life chores.

Various forms and words were used to describe menstruation, especially as "not clean," "(un)hygienic," "smelly," "a disease," "uncomfortable," "private," "intimate," among others: "Well, my menstruation has been a bitch for me my whole life" (P2). Most of these adjectives are negative, but "private" and "intimate" are more indicative of a menstrual taboo. Negative menstrual experiences were commonly related to experiencing menstrual pain and health conditions such as endometriosis: "There have been times in my life when it has been very negative, at times when the first two or three days of bleeding the pain made it impossible for me to do anything" (P6).

High menstrual bleeding, particularly when it led to anemia, was another aspect of negative menstrual experiences, as it was associated with poor health. Even emotional fluctuations throughout the menstrual cycle, and especially during the premenstrual period, were perceived as a disorder: "The emotional impact is the one that, that disorder, right? Because it is a bit like a disorder!" (P16). For P21, poor menstrual education (and therefore lacking the resources and body literacy for menstrual self-care) could make menstruation a disadvantage compared to men and non-menstruating people. As P7 and P31 explained, not only menstruation, but the menstrual cycle, involved bodily energetic resources that non-menstruating individuals do not need to expend

cyclically. Participants further explained that tiredness and feeling less active during menstruation was a constraint for them and that menstrual management was another negative aspect of menstruating, especially in public spaces. Further, P13 described how difficulties in conceptualizing menstruation in a more positive light were associated with the fact that these conceptualizations were conditioned by gender: "And also, if the world was maybe…, it was a girl's world, maybe this would not happen, and it would become more natural." (P13).

For some participants, menstruation meant feeling more uncomfortable with their own bodies. P18, who was unsure of their gender identity and whether they identified as trans, shared that they thought about taking hormones to avoid menstruation, explaining that they preferred not to menstruate: "I am starting to think, I have not decided yet, about the idea of taking hormones, but taking microdoses of testosterone, I mean, it's not something that I have decided yet but it's there as an option and, to be honest, let's say that on the contrary I have never thought about taking hormones [referring to hormonal contraception]*"* (P18). This participant's experience describes another way of seeing menstruation as undesirable.

There were also positive accounts of menstruation, especially related to a perception of menstruation as a sign of "hegemonic femininity," "feminine strength," and part of identity as a "woman": *"*[Menstruation is] the art of being a woman" (P19). Participants also understood femininity as being empathetic and caring for others, and for some, menstruation was seen positively as a time for "internal cleansing." For most participants, associating menstruation with being able to bear children, was the only positive aspect of it: "Well, I can have children, that's kind of cool (laughing a bit) but right now I don't… I won't lie, because the truth is that I don't see many advantages (to menstruating) (P4). Many also mentioned that menstruation was a sign that everything was "fine" (not pregnant) in the context of heterosexual relationships, again underlining a functional and biological conceptualization of menstruation: "If you have a partner, it (menstruation) is also relief, right?" (P30). In relation to reproduction, P7 and P14 mentioned that menstrual pain was positive because it helped to prepare for reproduction.

Besides, some participants understood the menstrual cycle and menstruation as signs of health and as a way to be more self-aware and in touch with their emotions, bodies, and even with nature: Inevitably it also means listening to yourself and learning about yourself, given that it is something cyclical and it comes with emotional changes, it is like it forces you to know yourself a little bit (…) It is not just something biological (P10). In this line and considering her experience of prevalent amenorrhea for years, P28 expressed feeling happy to be able to menstruate naturally. Menstruation was also described as part of the feminist agenda, enabling women and PWM to self-care and express their emotions and needs while "making women more resilient than men" (P27).

Menstruation as Identity

Menarche was often referred to as a moment of transformation ["the change" (P3)] and "becoming a woman," an idea that was reinforced by people around the participants and closely linked to hegemonic gender roles [e.g., that "women are designed to be mothers" (P33), or that menstruation can "prepare you to care for children" (P7)]. This notion of transformation to women through menstruation had been integrated into their own identity: "They all became women at 13–14 years old, and I did it at 9 years old" (P1). Some remember they felt uncomfortable with this notion since they did not feel different, and P12 even recalled a conversation with her father when he had told her she had become a woman and could have children at the time of menarche: Years later I told him 'Dad, that was not appropriate…' I mean, that's not being empathetic with the girl, you know? (…). I didn't even know how children were made, I didn't even know that the period was linked to [getting pregnant], I didn't know anything, and of course, at that moment, it was like 'I don't know what my father is saying? (P12).

The emotional and physical changes that happened not only around menstruation, but during the whole menstrual cycle were generally perceived as if happening externally to participants. They felt a lack of control, as if their emotional and physical experiences throughout the menstrual cycle were not "real": "And I am aware of, hey, you're not really so angry, you are not so sad, or you are not so excited about things" (P4). For this participant, her "true self" was only apparent when she was not menstruating and she did not recognize herself when menstruating. This somehow implies that the non-menstruating body is the optimal and "normal" one. There is a similar narrative around the premenstrual phase: "I lose control of myself a bit" (P13). Menstruation was then seen as a way of taking control of the "real self" (P10), with a few participants understanding changes throughout the menstrual cycle as "not normal" (P32). However, another participant expressed feeling more like herself when she experienced emotional fluctuations during the menstrual cycle (P8). P16 wondered how her identity might change when she enters menopause: And you think, what will I be like when it goes away? …So, will I have an innate bad mood, or will I be like this? (laughs). Now I have an excuse [menstruation], but I will not have it then [when menopause starts] (P16).

On the other hand, P24, who identified as non-binary, found it difficult to relate his menstrual experiences to the

menstrual social symbolism in the media and advertising: I feel that they talk about menstruation as the experience… it's always very similar, right?…We have the typical person who does not have pain and, as in the ads for pads it's like, "wow, how fun life is, I have no pain, it is wonderful…In general, the pain is made invisible (P24). This was also reinforced for him when experiencing barriers to accessing bathrooms (for menstrual management or not) as a non-binary person.

Conceptualizations of Menstrual Health

When discussing menstrual health, participants often did not know what to answer, as in most cases they had never heard of it before: "…I've never in my life asked myself "what means to menstruate, right? …if it wasn't for this interview, I would have continued without asking myself that question" (P2). Despite this, participants' collective responses constructed a comprehensive understanding and definition of menstrual health, encompassing biomedical and sociostructural perspectives of menstrual health. When participants had not heard of menstrual health (as a concept) before, they could reflect on what it meant for them based on their lived experiences. In other cases, the information on menstrual equity and health that they had been exposed to through the media and social networks supported their arguments.

We identified four sub-themes: (1) menstrual health as having "regular" menstrual patterns and the absence of ill-health; (2) menstrual health as a sign of health and a tool for health promotion; (3) menstrual health requires equitable access to menstrual resources, services, and care; and (4) menstrual health as inevitably linked to menstrual knowledge and menstrual experiences that are free of taboo and stigma.

Menstrual Health as Having "Regular" Menstrual Patterns and the Absence of Ill-Health

Participants understood menstrual health as having a "regular" menstrual cycle, menstrual bleeding for a certain number of days and not very abundant or light bleeding. Although having a "regular" cycle was commonly understood as menstruating every 28 days, some participants were unsure or did not give an indication of what "regular" meant to them. A common view of menstrual health was not having a menstrual-related health condition, such as endometriosis or vulvar/vaginal infections. P4 also shared her beliefs on menstruation being harmful to the body: I don't know, that the body knew how to process it (menstruation) well. Well… I guess that there's people that… It's like the body has less, I don't know how it works to be honest, but the injuries that get generated because of the inflammation of the body, that the body knew how to heal them well and those things (P4). Not experiencing (severe) menstrual pain was another common element of what participants considered as menstrual health: "Menstruating should not hurt" (P28). When related to menstrual health, the conversation often revolved around the negative aspects of menstruation and in some cases, menstruation was referred to as causing diseases, especially when menstrual cycles were irregular: "…everything that can be diagnosed from a period. …Of all the health problems that can come from here" (P5).

Menstrual Health as a Sign of Health and a Tool for Health Promotion

Several participants shared the idea that menstrual health is a sign of overall health: *"Menstrual health for me is using menstruation as a tool to detect how I am health-wise"* (P8). Some also mentioned paying attention to menstrual characteristics (e.g., blood color and the presence or absence of clots) as a tool to know how their overall health was on that cycle. A few women also used this menstrual awareness and self-knowledge for health promotion: "This self-observation of whether these are days in which it is better for you to change your diet or exercise patters…I believe that being healthy has to do with the knowledge of how that cycle works on you" (P27). As P8 stated, there was a reciprocal relationship between caring for one's overall health and menstrual self-awareness and self-care: It's like me caring for my health I am also caring for my menstrual health at the same time. I mean, how can I have a healthier menstruation…how can that perspective include self-care as a whole, right? Not just as a part of the body but as a whole (P8). Participants mentioned healthy eating and sleeping habits, physical activity, and good emotional health, including being stress free, as the main pillars for good menstrual health. Emotional health and wellbeing, understood as feeling healthy and safe during menstruation, were also mentioned as part of menstrual health. This was also thought to be related to having a positive relationship with menstruation and not needing to conceal menstruation in public: "…being able to have a good relationship with menstruation…also, I guess it is somehow related to social wellbeing, of not having to hide yourself [when menstruating] or things like that" (P18).

Menstrual Health Requires Equitable Access to Menstrual Products, Resources, and Care

Participants also referred to having access to menstrual products and the use of reusable products (as healthier and more environmentally friendly) as menstrual health. Non-reusable tampons and pads were usually mentioned as being unhealthy, because of the materials they were made of and the fact that they could negatively affect vaginal

health. They also mentioned that access to menstrual products should be equitable, through the eradication of menstrual poverty. P23 defined this concept not only as having access to needed menstrual products but also deciding which one(s) to use: If you've got money, you can afford it (menstrual product), you can try or use all products that are… that can be commercialized…the economic differences can also lead to a difference in health levels, that you can self-care more or less (P23). She continued mentioning the inequities in the access to healthcare, based on socioeconomic inequities: "[If you've got money] you can access the doctor more, because you have fewer worries in relation to livelihood, of food and housing" (P23). Her view was not only focused on individual cases, but she also referred to the barriers to accessing gynecological healthcare due to financial cutbacks when the 2008 economic crisis stroke. Barriers to accessing healthcare, in terms of not being able to get an appointment timely, were also shared by P15, in relation to how she defined menstrual health. Most participants thought access to healthcare was essential for good menstrual health. Menstrual healthcare should go beyond prescribing hormonal contraception to superficially treat menstrual-related symptoms: …the only thing that they do is give you hormonal contraception to regulate menstruation. Menstruation should not be regulated…And then you talk to many women and many of them end up being found to have endometriosis or similar illnesses (P17). Also, P18 explained how menstrual consultations should focus on the needs and subjective experiences of each person. Regarding healthcare, some participants thought that menstrual health also involved having access to resources to manage menstruation, including menstrual pain, and changing menstrual products in appropriate spaces. They explained that menstrual management was particularly challenging in public spaces, for instance due to the limited availability of adequate facilities or exposure to stigma and discrimination. Overall, participants claimed that good menstrual health should encompass equitable and non-stigmatized access to menstrual self-care.

Menstrual Health as Menstrual Knowledge and Experiences Free of Taboo and Stigma

Menstrual knowledge was a key element of menstrual health for some participants. Participants referred to early menstrual education, knowledge of the wide range of menstrual products available, and access to equitable information catered to the needs of each woman and PWM: "I would say it's (menstrual health) your knowledge of what menstruation is… The information that girls have the first time" (P14). Menstrual knowledge was perceived as a powerful tool for menstrual self-care: "So I think that all of us (women and PWM) should have all the information we need to care for ourselves" (P23). Some participants also mentioned not knowing whether the menstrual pain they felt was "normal" or not: "I thought, so it would be normal for [menstruation] to hurt, I don't know if this is normal… intuitively I also understand that, I mean, I see that there is inflammation, so I understand that it hurts. What I don't know if so much pain is normal" (P7). Further, a few had accessed information during adulthood that challenged their beliefs around menstrual pain: "When I have started looking into [social] movements around…sexuality, gender and so on, and I started to inform myself about the fact that the period does not hurt, I said 'what do you mean that the period does not hurt?' …That's why I also [have] these doubts…that I don't know many things" (P6). In this context, a few participants explained how participation in social and work environments were necessary to ensure menstrual health. P15 further highlighted the barriers to balancing work and menstrual needs: At work… of course, if it (menstruation) requires you to be…, well…, pain or whatever it is, having to stay at home, of course, in the end you cannot justify not going to work every month. Well, you can justify it, but of course, it shouldn't happen. It (menstruation) should not limit you in this way (P15).

On the other hand, a few participants mentioned menstrual health should include learning about hormonal contraception. This idea made visible how engrained perceptions on menstruation being exclusively linked to reproduction were: "…menstrual health, I would also relate it to [family] planning, to the [family] planning decisions that you take…if you want to have family planning, to use, all those things" (P27). Another example was P20, who did not distinguish between contraceptive methods (e.g., intrauterine devices) and menstrual products.

Discussion

In our research, menstruation was commonly lived as a burden, and associated with a functionalist view of the body (mainly as a means for reproduction and childbearing). A few participants also understood menstruation as an experience related to body awareness and health promotion. Overall, menstruation was strongly linked to participants' identity as women, posing challenges for gender non-conforming participants. Participants often understood menstrual health as experiencing "normative" and "healthy" menstrual patterns. At the same time, some participants shared their views on menstruation and the menstrual cycle as signs of general health and tools for health promotion. Equitable access to menstrual products, menstrual care, and menstrual management, alongside

menstrual education, and experiences free of taboo and stigma, were also part of the conceptualizations of menstrual health.

Menstruation Institutionalized: Biomedical and Patriarchal Systems

Conceptualizations of menstruation appear to be strongly rooted in patriarchal, biomedical, and institutionalized meanings of menstruation, portraying menstruation in an instrumental, essentialist, and stigmatized way. As Roberts argues, "we experience menstruation in the body, which is always already embedded in particular interactional and sociocultural discourses" (2020b, p. 177). In our participants, sociocultural representations of menarche seemed to be linked to how women and PWM embodied menstruation. Based on the developmental theory of embodiment (Piran, 2017), menarche in patriarchal systems signifies the loss of physical engagement and freedom, with access to physical spaces and activities becoming associated with social privilege post-menarche. This "physical corseting" (Piran, 2020) also comes with physical vulnerability, as girls and young PWM are socialized to be entrusted with their own physical safety and integrity (e.g., to "prevent" pregnancy or experiencing sexual violence). The link between menstruation and reproductive potential appears to be unquestionable from a biomedical stance (Blázquez Rodríguez & Bolaños Gallardo, 2017; Esteban Galarza, 2001; Guilló-Arakistain, 2020; Martin, 1987), an idea that some of our participants shared and demonstrated an internalization of institutionalized discourses and menstrual imagery. However, limiting menstruation to its reproductive function can compromise positive embodiment, self-care, and health promotion. It ties women and PWM, already at an early age, to caregiving roles (Arruzza, 2016). It also contributes to menstruation being a central axis for a hegemonic and rigid social construction of "being a woman," as menstruation is used to argue for gender binarism (woman/man) (Guilló-Arakistain, 2020).

Menstruation and "womanhood": Essentialism and *Othering*

Understanding menarche as a rite of passage to "womanhood" (Jackson & Falmagne, 2013) can have significant emotional implications, especially among those who start menstruating at an early age. As apparent among our participants, menarche can commonly be experienced with fear and confusion, due to a lack of knowledge and the sociocultural implications of "becoming a woman," which quickly translates into occupying constrictive social and physical spaces (Piran, 2020). Overall, participants seemed to have incorporated institutionalized meanings of menarche, as a transitioning point toward "womanhood." The perceived inevitable association between menstruation and "womanhood" is, in fact, an act of reductionism, as one's identity gets socially restricted to a biomedical and instrumental perspective (Guilló-Arakistain, 2020). This essentialism has also led trans and gender non-conforming menstruators to be dehumanized, *othered* and made invisible (Frank, 2020; Rydström, 2020). Institutionalized meanings (in education, healthcare, politics, media, etc.) of menstruation do not account for the diversity of bodies and identities that menstruate (Blázquez Rodríguez & Bolaños Gallardo, 2017), greatly contributing to the stigmatization and discrimination of PWM (Frank, 2020; Rydström, 2020). In our research, these hegemonic meanings were apparent, as participants often had integrated an essentialist view on menstruation and their identity as "women." At the same time, menstruation and menstrual management were referred to as emotionally challenging for gender non-conforming participants. For one participant, menstrual suppression through hormone use was a potential option to deal with this discomfort, as has emerged in previous research (Chrisler et al., 2016), while another participant was critical of the media portraying and reinforcing cis-coded menstrual symbolism and patriarchal discourses on femininity (Del Saz-Rubio & Pennock-Speck, 2009; Przybylo & Fahs, 2020).

Menstrual Embodiment: *Monstrosity* and *Menstrunormativity*

Gendered discourses also shape menstrual embodiment (Piran, 2017, 2020). From the time of menarche, women and PWM internalize institutionalized discourses that objectify their bodies and personhood (Fredrickson & Roberts, 1997), such as those pathologizing the body (and menstruation) and emotional lived experiences (Piran, 2017, 2020; Ussher, 2011). Other gendered social discourses allude to stereotyped expectations of submission and demureness (Piran, 2017, 2020). In our study, menstruation (and women and PWM) were often perceived as "pathological" and non-normative, for instance in relation to emotional fluctuations during the menstrual cycle. This was apparent in participants' narratives as they shared not "feeling like themselves" at the pre-menstrual and/or menstrual phases of their menstrual cycles. This self-rejection, based on physical and emotional premenstrual (Chrisler et al., 2016; Ussher, 2011; Ussher & Perz, 2020) and menstrual (Chrisler, 2011) experiences, has been theorized to be rooted in (pre)menstrual experiences challenging ideals of femininity and linked to depictions of women and PWM as *monstruous* (Chrisler, 2011; Rydström, 2020; Ussher, 2006, 2011; Ussher & Perz, 2020) and *irrational* (King, 2020). This sociocultural construction of "the monstrous feminine" is associated with the (self-)

objectification and dehumanization of women and PWM (Ussher & Perz, 2020), as menstrual monstrosity means that women and PWM may be positioned as "abnormal, outsiders, deemed less human (more monstruous) than that which adheres to normative ideals" (i.e., non-menstruating people) (Persdotter, 2020, p. 357). Further, Ussher (2006, p. 4) argued that the menstrual body is considered "unruly" and women and PWM are "at risk of being considered mad or bad and subjected to discipline or punishment." As previous authors have argued, accounts of menstrual monstrosity are apparent in social imageries of women and PWM as "out of control," frenzied or having rapid mood swings in a way that they could even turn violent any time (Chrisler et al., 2006, 2016). This construction of monstrosity was reflected in our study when participants discussed menstruation and menstrual health in terms of ill-health, and when not recognizing themselves in the emotional fluctuations they experienced during the menstrual cycle. Also, when depicting menstruation as "a disease," "unhygienic," or "a bitch."

Some women and PWM in our study thought of menstrual pain as a means "to prepare for labor," which again reflects an instrumental, objectifying, and biomedical perspective of menstruation. It also alludes to the normalization and dismissal of the pain women and PWM experience (Malterud, 1999; Valls-Llobet, 2021; Young et al., 2015). Drawing from Persdotter's (2020) concept of *menstrunormativity,* "the hegemonic social system of multiple and contradictory normativities that order and stratify menstruation and menstruating…they position some menstrual subjectivities, some menstrual bodies, some menstrual behavior as ideal, correct and good, and some as abnormal, unhealthy, disgusting" (p. 358–359). The normative expectations of menstrual health observed in our participants reflected an understanding of menstrual health in terms of biomedical patterns of what may be considered "a normal menstrual cycle" (e.g., bleeding regularly every 28 days). We suggest that these accounts reflect a production of biomedical and institutionalized discourses of menstruation and menstrual health transmitted through (in)formal education and socialization processes and reinforced through media and marketing campaigns (Przybylo & Fahs, 2020). They can significantly restrict the experiences, embodiment, and agency of women and PWM, especially among those who do not fit within "menstrual normativity".

Menstruation as Sociocultural and Political: Menstrual Counterculture

Given that menstruating is not only a biological phenomenon but also a sociocultural and political one (Johnston-Robledo & Chrisler, 2020), we argue that menstruation and menstrual health need to be considered *outside* and *beyond* reproductive and sexual health. Emerging discourses around menstruation as a tool for health promotion, and the menstrual cycle as an enabler to body literacy, self-care and emotional expression, are indicative of a menstrual counterculture (Johnston-Robledo & Chrisler, 2020). However, a critical stance on conceptualizing the menstrual cycle and menstruation as signs of health needs to be considered, not to pathologize women and PWM who do not menstruate for various reasons (e.g., chronic illness, stress, or physical activity levels). Likewise, participants' perspectives on social inequities (e.g., access to menstrual products, menstrual education, healthcare, and self-care, and the need to debunk menstrual taboo and stigma) as barriers to menstrual health are indicative of the gap between embodied health and institutionalized meanings of health. This cultural shift comes with critically questioning structures of power and how knowledge is generated (Haraway, 1988) and shared, especially in biomedical institutions (Guilló-Arakistain, 2020). Current political agendas in Catalonia and Spain encompass actions to address menstrual inequity and promote menstrual health. Despite the risk of becoming tokenistic, they may be effective in enabling and supporting community-based feminist actions in our context (Holst et al., 2022; Weiss-Wolf, 2017). Our findings suggest a need to place care and self-care at the center of social and political exchanges (i.e., in social interactions and dynamics and in legislative processes) (Chatzidakis et al., 2020), and the liberation of bodies and identities (Bobel & Fahs, 2020; Guilló Arakistain, 2022; Guilló-Arakistain, 2020) in the context of menstruation and menstrual health.

Participants' narratives revealed women's and PWM's negotiations of institutionalized and essentialist conceptualizations of menstruation and menstrual health. Redefining the complexity of these conceptualizations may mean "offering alternative readings of women's bodies, with an emphasis on emotions and different ways of experiencing corporeality, highlighting the importance of self-care" (Guilló-Arakistain, 2020), which would support women and PWM to reappropriate their bodies and menstrual experiences, and engage communities in enhancing menstrual experiences of self-worth, agency, and positive embodiment (Guilló Arakistain, 2022; Piran, 2020), through challenging menstrual concealment, taboo and stigma (Johnston-Robledo & Chrisler, 2020; Wood, 2020). Creating inclusive and intercultural social (and physical) spaces to establish connections that support positive and agentic embodied menstrual experiences (e.g., celebrating and accompanying menarche) can be crucial to deconstruct how we relate to menstruation, to ourselves, and to other menstruators (Piran, 2020).

Limitations and Future Research Directions

We would like to acknowledge some limitations to our work. First, this study could have been enriched if women and PWM (and other agents) had been involved in the research process. The project was designed taking a Responsible Research and Innovation (RRI) perspective by meeting community agents and discussing research ideas. However, participants could have contributed to reviewing and reflecting on their own responses during the interviews by collaborating in the analysis and interpretation process. Another potential limitation is that most participants had completed university studies and could be considered socioeconomically privileged. Future menstrual research needs to ensure the participation of socioeconomically burdened and hard-to-reach populations. In addition, while non-binary menstruators were included in our research, other gender non-conforming groups were not represented in our sample, which should be addressed in future studies, and also be directed towards the experiences and needs of PWM. Finally, the broad diversity in our sampling criteria limited taking an intersectional approach to analyze and present our data. The research team is committed to conducting intersectional menstrual research in the future, to address this limitation and research gap. Therefore, this research could contribute to the field of critical menstruation studies (Bobel et al., 2020) and help encourage menstrual health and equity research to take a more critical perspective grounded in social and feminist theory (Blázquez Rodríguez & Bolaños Gallardo, 2017; Bobel, 2010; Esteban Galarza, 2001; Guilló Arakistain, 2022; Guilló-Arakistain, 2020; Martin, 1987) and intersectionality (Crenshaw, 1989).

Practice Implications

Several practice implications can be derived from the findings of this study. Our findings have highlighted how women and PWM have both integrated and challenged institutionalized conceptualizations of menstruation and menstrual health. Committing to participatory research practices can lead to community-based involvement and actions that, in turn, can be useful to transform policymaking (Guilló Arakistain, 2022), so that menstrual health and equity policies can challenge and go beyond institutionalized discourses. Acknowledging and understanding how *normativized* imagery and discourses on menstruation are incorporated in menstruators' discourses is a first step towards this transformative process. This research also supports making menstrual lived experiences visible, to support menstrual activism in their efforts to create spaces that promote women and PWM to live aligned with our menstrual needs.

This research can also support the start and continuation of dialogues in educational and health settings, to promote menstrual education and health in a way that responds to the needs of women and PWM. For instance, menstrual curricula could include participatory spaces in which to challenge the *hegemonization* of menstrual lived experiences, and menstrual taboo and stigma. This could engage young menstruators in defining their own discourses and imaginaries around menstruation, and equip them with a more affirming and inclusive model of menstrual health care. In parallel, biomedical approaches to menstrual health could be questioned and enriched to improve the access and experience of women and PWM to healthcare services for menstrual health. Recognizing the agency and legitimacy of healthcare users' lived experiences and perspectives could bridge the current disconnect between menstrual health needs and menstrual health services in Catalonia (Spain) (Holst et al., 2022).

Conclusion

Conceptualizations of *menstruation* and *menstrual health* among participants appeared to be strongly institutionalized and rooted in patriarchal and biomedical systems. Both concepts were understood through the lens of reproduction and sexuality and associated with constructions of womanhood and stereotyped ideals of femininity. Menstrual health was commonly framed as having normative menstrual patterns and the absence of ill-health. However, an alternative conception also emerged of menstruation and the menstrual cycle as signs of health and tools for health promotion, and how menstrual health is not attainable without addressing menstrual inequities (e.g., the access to menstrual products). Generally, participants were aware of menstrual taboos and stigma, and the important role of menstrual knowledge. While this is indicative of a menstrual counterculture, divergent discourses were often not incompatible with integrating institutionalized and hegemonic thinking. This study suggests challenging institutionalized meanings and practices on how menstrual knowledge is created and shared. Definitions of menstruation and menstrual health should consider how women and PWM experience and embody menstruation, beyond institutionalized meanings.

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analysis, Writing – review & editing; Carme Valls-Llobet: Investigation, Writing – review & editing; Diana Pinzón-Sanabria: Investigation, Writing – review & editing; Andrea García-Egea: Investigation, Writing – review & editing; Cristina Martínez-Bueno: Resources, Investigation, Writing – review & editing; Anna Berenguera: Funding acquisition, Investigation, Methodology, Resources, Supervision, Writing – review & editing.

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Data Availability Datasets are not publicly available to maintain participants' anonymity and confidentiality.

Declarations

Ethical Considerations and Informed Consent Ethical approvals were obtained from the IDIAPJGol Ethics Committee on 21st of November 2020 (Ref 19/178-P). All participants were given enough information to give their oral and written consent to participate. Data have been managed and stored safely to maintain participants' anonymity and confidentiality.

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