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DOI:

[10.1016/j.rpth.2023.100136](https://doi.org/10.1016/j.rpth.2023.100136)

Document Version

Publisher's PDF, also known as Version of record

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Citation for published version (APA):

Sheikh, U., Ding, A., Nzelu, O., Roberts, L., Johns, J., Ross, J., Arya, R., & Patel, J. (2023). The "lived" experience of menstruating women commencing anticoagulants. *Research and practice in thrombosis and haemostasis*, 7(3), Article 100136. Advance online publication. <https://doi.org/10.1016/j.rpth.2023.100136>

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ORIGINAL ARTICLE

The “lived” experience of menstruating women commencing anticoagulants

Umber Sheikh MSc¹  | Amally Ding PhD¹  | Obianuju Nzelu MBBS² |
Lara N. Roberts MD(Res)³   | Jemma Johns MD² | Jackie Ross MBBS² |
Roopen Arya PhD³   | Jignesh P. Patel PhD^{1,3} 

¹Institute of Pharmaceutical Science, Faculty of Life Sciences and Medicine, King's College London, London, UK

²Department of Women's Health, King's College Hospital Foundation NHS Trust, London, UK

³King's Thrombosis Centre, Department of Haematological Medicine, King's College Hospital Foundation NHS Trust, London, UK

Correspondence

Jignesh P. Patel, Institute of Pharmaceutical Science, Franklin-Wilkins Building, Stamford Street, London SE1 5RS, UK.
Email: jjg.patel@kcl.ac.uk

Handling Editor: Dr Mary Cushman

Abstract

Background: Although there is increased recognition that many menstruating women commenced on anticoagulants experience heavy menstrual bleeding, little research has been published describing what women go through and actually experience.

Objectives: The aim of this study was to understand the “lived” experience of menstruating women commencing anticoagulants.

Methods: We undertook a qualitative study using semistructured interviews. Women who had taken part in the parent PERIOD study and expressed an interest in an in-depth interview were recruited. Interviews were conducted online, and transcripts were generated through MS Teams. Data were analyzed using thematic analysis. Ethics committee approval: REC reference: 19/SW/0211.

Results: A total of 15 participants were interviewed. The median age of the participants was 36 years (range, 20-49 years). The following 7 primary themes emerged from the interviews: (1) information received when commencing anticoagulation, (2) mood, (3) strategies used to manage heavy bleeding, (4) social/family life, (5) work life, (6) finances, and (7) multiple health issues—with saturation of themes achieved following 9 interviews. Women affected by heavy menstrual bleeding experienced a negative change in their work/social life and mood.

Conclusion: Heavy menstrual bleeding experienced by women commencing anticoagulants has a significant impact on their lives. Recognized measures should be employed to support and minimize the problem for menstruating people.

KEYWORDS

anticoagulants, heavy menstrual bleeding, menorrhagia, qualitative, quality of life, venous thromboembolism, women

Essentials

- This research explored menstrual bleeding and women's experiences after starting anticoagulants.
- Fifteen women were interviewed to understand their "lived" experience.
- In total, 7 themes emerged, including significant impacts on participant's social/work life and mood.
- Recognized measures should be adopted to help minimize this problem for menstruating people.

1 | INTRODUCTION

There is increased recognition that anticoagulation therapy can lead to heavy menstrual bleeding (HMB) in women. This issue has gained more attention in the direct oral anticoagulants (DOAC) era, with 2 recent studies independently reporting on this: the TEAM VTE study and the PERIOD study. The TEAM VTE study [1] recruited 98 newly diagnosed venous thromboembolism (VTE) patients. With patients acting as their own control, the authors report that two-thirds of women newly prescribed anticoagulation therapy experienced HMB, which significantly affected their quality of life. These findings are replicated by the PERIOD study [2], which recruited 57 women commencing anticoagulation therapy and compared their experience with that of 109 women who acted as controls.

Both the TEAM VTE and the PERIOD studies used the menstrual bleeding questionnaire [3] to explore the burden of HMB precipitated by anticoagulation therapy on women's quality of life. This validated questionnaire is a bleeding-specific symptom and quality-of-life instrument that measures the impact of HMB and comprises 20 items. The responses are summed to obtain a total score and multiplied by 1.32 to scale, with a score of 0 indicating the least impact possible and 100, the worst impact possible. Although the questionnaire provides a robust measure of the relevant quality-of-life issues for academic purposes, it is not apparent from the score generated what women experience, when affected by HMB.

Understanding the lived experience of women affected by anticoagulation-related HMB is important. If this issue is not fully appreciated, then there is a risk of patients omitting the doses of anticoagulation to manage the bleeding, which is less than ideal in the context of an acute VTE event [4].

To date, little research has been conducted to convey this lived experience of women affected by anticoagulation-related HMB to the clinical community. The objective of this study was to describe the experiences of menstruating women commencing anticoagulation therapy.

2 | METHODS

We conducted a qualitative descriptive interview study.

Women, aged 18 to 50 years, commencing anticoagulant therapy who had taken part in the parent PERIOD study [2] and had indicated in their returned questionnaire for the PERIOD study that they would

be interested in taking part in an in-depth interview were approached to take part. Following informed written consent, a date was arranged with each volunteer to conduct the interview with the lead researcher (U.S.).

Details of the PERIOD study and its findings have been published elsewhere [2]; subjects were recruited from the anticoagulation clinics at King's College Hospital NHS Foundation Trust, a 1500-bedded teaching hospital in Southeast London, United Kingdom.

A topic guide for the interviews was developed by the research team ([Supplementary Information](#)), with flexibility built in to allow women to convey any experience not covered by the guide. The semi-structured interviews were conducted using Microsoft Teams. All interviews were recorded with permission from the volunteers. Transcriptions were generated through MS Teams, which were checked for any inaccuracies after interview and corrected where necessary.

The transcripts were then analyzed using descriptive qualitative analysis. A thematic coding process was used in NVivo v12. All transcripts were initially coded by the lead researcher (U.S.) and then double-checked by 2 members of the research team (A.D. and J.P.P.). An initial coding scheme was developed by analyzing 3 interviews and modified where necessary, following discussion and agreement among U.S., A.D., and J.P.P. This scheme was then used for analysis of the remainder of the interviews.

The PERIOD study received ethics committee approval from the South-West Bristol ethics committee. REC reference: 19/SW/0211.

3 | RESULTS

Fifty-seven women completed the questionnaire components of the parent PERIOD study, of which 16 indicated an interest in doing an in-depth interview. After approaching all 16 women, 15 women consented and were interviewed for this sub-study. The participants' ages ranged from 20 to 49 years, with 13 participants in full-time work ([Table](#)). All volunteers interviewed were commenced on anticoagulation for the management of DVT or PE.

Thematic analysis of the interviews revealed 7 overarching themes with a range of sub-themes. These 7 overarching themes are summarized in [Figure](#). Saturation of themes and sub-themes was reached following 9 interviews.

Representative quotes of all themes and sub-themes are available in [Supplementary Tables 1 to 7](#).

TABLE Background information on the women participating in the interviews.

Participant	Age (y)	Ethnicity	Indication	Agent
1	39	White	Distal DVT	Rivaroxaban
2	41	White	Proximal DVT	Rivaroxaban
3	27	White	Proximal DVT	Warfarin (2-3)
4	32	White	PE	Edoxaban
5	36	White	PE	Enoxaparin
6	30	White	Distal DVT	Apixaban
7	32	Black	PE	Rivaroxaban
8	49	White	PE	Apixaban
9	45	Southeast Asian	Distal DVT	Edoxaban
10	48	South Asian	PE	Rivaroxaban
11	34	Mixed	Distal DVT	Rivaroxaban
12	38	White	PE	Apixaban
13	20	Black	PE	Apixaban
14	32	Black	Distal DVT	Rivaroxaban
15	41	Black	PE	Apixaban

DVT, deep vein thrombosis; PE, pulmonary embolism.

3.1 | Theme 1: Information received at the time of commencing anticoagulation

At the time of anticoagulation initiation, most women were informed by their healthcare team or the anticoagulation information pack that their menstrual bleeding could be heavier than normal.

“I spoke to an amazing nurse who talked to me through everything, and he was really, like really thorough.”

– Participant 1

Women felt the information packs did not prepare them for the bleeding

Although some women found the initial information they received to be reassuring and allowed them to mentally prepare for their upcoming period, some women felt as if the potential for heavy bleeding was not emphasized enough, and it was more of a passing comment.

Interviewer: “So, you received information that the bleeding can be heavier. Did this information help you prepare mentally?”

Participant: “No, it didn’t, it didn’t. I mean it did a bit, but I guess seeing it was quite different than hearing it.”

– Participant 13

Participant’s thought the bleeding would not affect them

On probing, some women thought that HMB would not affect them, and thus, the HMB came as a surprise, despite being discussed.

“I think when you read the side-effects, you always think: ‘Oh it won’t be me’. UM, I was quite shocked the first time.”

– Participant 2

Women did not seek support

Despite significant bleeding, most women did not seek medical support. Most women reported receiving a call from the anti-coagulation clinic where they could discuss their concerns, but outside those phone appointments, women managed their heavy bleeding at home by themselves.

“I mean, no (participant did not reach out for support) because I think I’ve been pretty well warned.”

– Participant 6

3.2 | Theme 2: Mood

The experience of HMB had a significant impact on a group of women interviewed in this study. Some participants experienced low mood and anxiety and felt isolated from their friends and family because of their experience.

“I think I’m more irritated at the fact that I am losing so much blood, like I had to go to the toilet every 5 minutes and, you are not going to go out. You don’t want any accidents on the road. So yeah, there’s more of an annoyance.”

– Participant 15

Participants’ thoughts

Many women in the interviews reported that the HMB consumed their thoughts. Constant self-reminders about changing sanitary products occupied their minds.

“It (the bleeding) is always just at the back of my head like ‘When did I last change my tampon?’ ‘Do I need to change my tampon?’ ‘Am I bleeding through or is it OK?’ ‘Do I need to go to the toilet?’ ‘Where can I go to the toilet?’ All those sorts of things.”

– Participant 12

Participants’ feelings

Some women reported feelings of anxiety and annoyance while experiencing HMB. These feelings stemmed from uncertainty regarding how long the HMB would last. Some participants felt

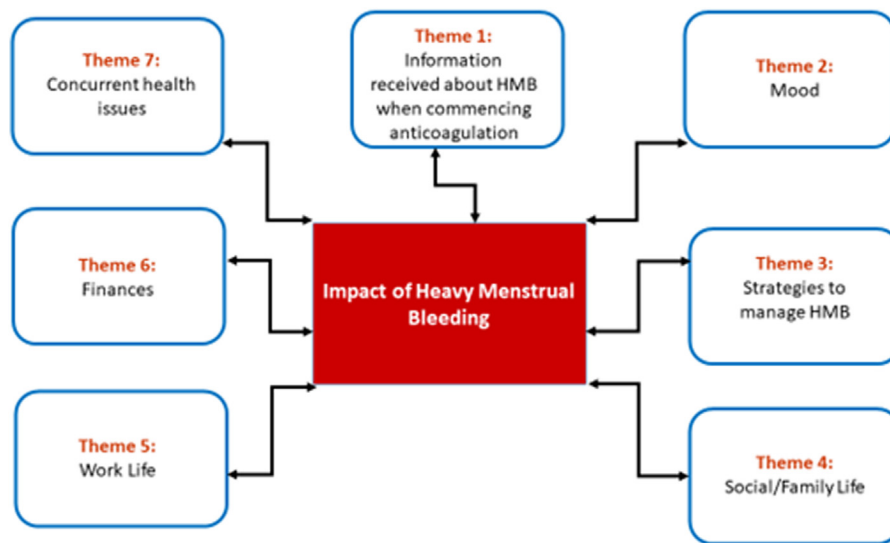


FIGURE 1 The seven overarching themes identified.

annoyed because they were experiencing heavy bleeding through no fault of their own.

“I was miserable that I couldn’t leave the house, and I was nervous every time a period was going to come because I knew I was going to have the same issue.”

– Participant 8

The heavy bleeding was concerning

The sudden increase in blood loss during menstruation was reported as concerning for many women interviewed in the study.

“It (the bleeding) was concerning like by the third month, when I was like really, really bleeding quite heavily. I started to feel really dizzy. I started to feel really faint.”

– Participant 11

Bleeding came as a shock

Some women reported feeling shocked as to how much blood loss they were experiencing. The heavier periods were unexpected, and some women felt unprepared to deal with the increased volume of bleeding they were experiencing.

“I didn’t have a period until I think 2 weeks later (after starting medication), and then, it was a shock.”

– Participant 2

Not feeling clean

Because of the constant changing of sanitary products and interaction with blood, women reported feeling unclean. Spending significantly more time in the bathroom also meant that one participant reported feeling *dirty*.

“I know it sounds strange, but it made me feel like not clean because you’re permanently just on the toilet.”

– Participant 15

Fear of leaking

Many women reported that they were afraid that they would leak through their clothes and that this would be a source of embarrassment. Some women commented that moving in a certain way increased their chances of leaking and thus had to adjust how they were sitting. For example, bending or lying down would often cause sanitary towels to move.

“I thought I was going to leak which hasn’t really been a fear for me probably since I was a teenager.”

– Participant 1

Confidence affected

The heavy bleeding did affect some women’s confidence. Women felt that their pad may be noticeable or someone would pick up on how many trips they made to the bathroom. Additionally, the fear of leaking added to the lack of confidence. One participant commented that she did not feel sexy while she experienced HMB.

“Yeah, it (the bleeding) affects your confidence.”

– Participant 15

Changes in the week leading up to period

The week leading up to the period was anxiety driven for some women who took part in the study because of the uncertainty on the degree of bleeding they would face and how hard it would be to manage.

"I was miserable and I couldn't leave the house and I was nervous every time a period was going to come because I knew I was going to have the same issue."

– Participant 8

Passing blood clots

Passing blood clots was a common occurrence reported by women in the study. One woman reported taking photographic evidence of the blood clots she passed to convey the seriousness of her situation to the healthcare staff in A & E.

"I felt like 3 things fall out of me, and I was like 'What is this?' So, it's really disgusting, but I put on gloves as I would like to see what this is, so when I took it out and laid it on the tissue, practically all 3 of them (clots), were about the same size as my hand, it was really disturbing. So, I took a picture because I said I'm going to end up going A&E, so I want to have some sort of photo evidence. When you say something to people, they kind of brush it off."

When the participant showed the picture:

"I said 'Hold on a minute (to the doctor), let me show you what is coming out of me... Remember I said I took a picture... I showed the doctor and said: 'This is what's coming out of me every time I go to the toilet, plus I need to change every single time' and he's now looking at me going: 'Oh OK'."

– Participant 15

Loss of sleep

Some women reported difficulty falling and staying asleep due to the HMB being experienced.

"In the middle of the night, I couldn't sleep... I knew that if I slept even for like an hour or 2, it would just be disastrous."

– Participant 11

3.3 | Theme 3: Strategies to manage heavy bleeding

The women who took part in the study developed strategies to help manage their HMB. These ranged from carrying extra sanitary products to limiting socializing.

Wearing extra clothes or altering the types of clothes worn for protection

A common strategy that women engaged in to avoid leaks was adjusting their clothing style. Depending on the flow of the blood and what day the women were in their cycle, some women would wear pads, tampons, period underwear, and shorts to ensure that they were covered and protected from leaks.

"I think I wore like extra clothes. Yeah, I think I had shorts as well as and like joggers or pyjama bottoms on."

– Participant 1

"I just wear the oldest things that wouldn't matter if it got stained during my period."

– Participant 8

"I do just try and wear dark knickers on those days."

– Participant 5

"I started wearing slightly baggier trousers so there was a bit of a gap and I also started making sure I had like a longer coat with me as well just in case."

– Participant 6

Putting down towels on the bed/surface

Leaking on surfaces was a concern for a lot of women interviewed. To avoid soiling the bed/chair, some women would sit or lie down on towels and jumpers to protect against a leak.

"I didn't leave the house and I had towels around to sit on."

– Participant 8

Double checking for leaks when standing up

A further strategy that women engaged in was changing the way they stood up. To reassure themselves and check whether they had leaked, some women would up slowly, checking the surface they had been occupying.

"I was just checking everything (when the participant stood up)."

– Participant 6

Pain management

Women made use of both pharmacological and non-pharmacological methods to manage period pain.

"I had to request a different pain relief because I couldn't use my naproxen which was my number one go to, so that was really disturbing because now I was suffering with more pain."

– Participant 15

Avoid sitting down

Despite being uncomfortable at times, women preferred to stand instead of sitting, as sitting posed increased risk of leaking through sanitary products.

"At that time when he (the doctor) was talking to me (in the hospital), I'm standing up and everybody knows

when you're standing up, it means you don't want to sit down because if you sit down, there's going to be a massacre. So, I'm standing up and he's like: 'You can sit down 'and I was like: 'I can't sit down'."

– Participant 15

Increased use of sanitary products

Most women reported that they were changing their tampons every half an hour to an hour because of being flooded with blood. Before commencing anticoagulation therapy, the interval between changes was significantly longer.

"I was having to change a tampon every hour, sometimes even more."

– Participant 2

Increased toilet visits

The volunteers interviewed reported making frequent visits to the toilet. This often meant that they had to disrupt the work they were doing or cut a visit short to ensure that they had access to a toilet in time before they experienced any leaking.

"It was a worry of mine; I did think you know: 'Is my boss going to mention anything about me going to the toilet a little bit too often'."

– Participant 3

3.4 | Theme 4: Social/family life

A group of women interviewed in the study reported that their social life was significantly affected. Some women felt unable to go out due to the fear of leaking coupled with period pains. In addition, the HMB experienced left many women feeling fatigued and tired, leading to the avoidance of social activities.

"I was just kind of planning work and social activities around my period."

– Participant 4

Feeling isolated

Women affected by the HMB often felt isolated at a time they needed support the most. Some women did desire companionship and someone to talk to, but the heavy bleeding meant they were unable to go out and socialize to fulfill that need.

"I pretty much didn't see anyone for about 6 months during the period after the blood clot."

– Participant 8

Locating a bathroom was a priority

Most women commented on the necessity of having a bathroom nearby when going out, planning their trips accordingly.

"I needed to make sure that there is toilet nearby because I have to go and obviously change."

– Participant 2

Women planned their trips out depending on whether they are on their period or not

Some women avoided making plans if they were on their period. Some women used apps to track their period and thus would know when they are due on their period and plan around this.

"I got a period calendar so I would work out roughly if it's day 1 to 3 of my period, if it is then I won't go out."

– Participant 14

Women did not like being so far away from home while menstruating

Being in a familiar environment was a priority for some women, with easy access to a bathroom instead of venturing out while menstruating.

"I have avoided gatherings. Say for example, there is a family gathering on a certain day, I just haven't attended if I'm bleeding heavily. Just because I don't want to travel and then not have access to a toilet."

– Participant 4

Women did not want to worry those around them

Many women did not disclose their heavy bleeding to their friends and family because they did not want to worry them.

"I don't think I necessarily told anybody else at the time unless it just came up."

– Participant 1

Women did not let the bleeding affect those around them

Some women in the study stated that they did not let their bleeding control their life, and they tried to get on with things.

"I just got on with it because when you have children, I don't want to miss out on a day with my children because of this."

– Participant 2

"I don't really share information like that with my friends just because I feel like I don't really need to."

– Participant 3

3.5 | Theme 5: Work life

Many women interviewed in the study were unable to go to work, not because of the HMB experienced but because of the ongoing difficulties associated with the VTE diagnosis. Women reported feelings of breathlessness, lethargy, and fatigue and were signed off by their occupational health team or their managers for 6 to 12 weeks.

Support received at work

Generally, participants who were back at work in the study reported feeling supported by their managers and colleagues and did not feel the pressure to work because of their blood clots. Managers appeared to be sensitive to the women's needs and allowed them time to recover at home.

"My boss at work was like checking in with me a lot."

– Participant 6

Reluctance to discuss heavy bleeding with male supervisors

Some participant's had male supervisors and felt uncomfortable discussing their heavy periods with them. Notably, women often felt comfortable enough to discuss their heavy periods with female colleagues/managers.

"You know normally when I'm on my period, it's not something I really talk about, but also most of my colleagues are actually guys, UM, the ones that I work closely with anyway."

– Participant 7

3.6 | Theme 6: Finances

All participants reported that they were using more sanitary products, whether that be the moon cup, tampons, or pads. Most women also doubled up on sanitary products and wore a tampon and pad at the same time, thus adding to the cost of financing a period.

"You just kind of go down to statutory sick pay, so it had a huge impact in terms of finances."

– Participant 4

Increased spending is inconvenient

Although most women reported being in a financially stable position and thus were able to manage the increasing costs, some women did report that the increased spending on sanitary towels and underwear did cause them an inconvenience. One participant reported that she received sick pay and was signed-off work when she was diagnosed with blood clots. This reduced pay meant she found it increasingly difficult to make ends meet and buying sanitary products.

"The spending is inconvenient, I know I'm not working and I'm spending a lot of money. There's no

income going into my bank account, it's just going out."

– Participant 13

Difficulty in finding desired sanitary products

Some women reported that it was not always easy to find their preferred sanitary product because not all pharmacies and supermarkets stock what they required. This often-produced unnecessary stress and meant women bought in bulk to avoid running out of sanitary products.

"It's just hard to find them (tampons) because as I said, you have to go to very large supermarkets. Chemists don't necessarily stock them, and you have to go to the larger supermarkets and that's not always an easy thing to do for people."

– Participant 12

3.7 | Theme 7: Concurrent health issues

For some women in the study, being diagnosed with a blood clot was in addition to an existing health issue, eg, sickle cell anemia. The added HMB took a toll on some women's physical and mental health.

"Having a DVT is not a lot of fun and I seem to have like a constant barrage of health issues as well.... I would say it probably made me a bit more anxious just knowing I have to be bit more careful with things."

– Participant 6

Post-traumatic stress disorder

A previous pregnancy complication meant that the HMB precipitated by the anticoagulation therapy was triggering for one participant. She was reminded of the difficulty she experienced 20 years ago and needed psychological support to cope with the trauma of the heavy bleeding experienced.

"I've got quite bad PTSD from a pregnancy-related issue from when I was very young and it brought back a lot of bad memories and challenges. It wasn't until the third month where I had like a really bad period that was really, really heavy that it actually distressed me."

– Participant 11

Concern about anemia

Owing to the excessive blood loss that some women experienced, some participants were concerned about or were diagnosed with anemia.

I'm currently anemic at the moment. I'm on medication, and there were some times where I was supposed to go into the office, but I just was so physically drained.

– Participant 3

4 | DISCUSSION

Our study reports on the lived experience of menstruating women who have recently commenced anticoagulant therapy, providing granular detail on the specific experiences of this group of women.

Most of the volunteers interviewed in this study experienced some change in their menstrual cycle with respect to bleeding. The most notable change was the increase in heavy bleeding, which was characterized by frequent changes of pads, tampons, or both. Women reported experiencing heavier periods that caused a level of discomfort and required them to make significant changes to their day-to-day lives to adapt, affecting their quality of life. Only 3 women in our study reported not being affected by HMB. Our findings echo findings from other work on women suffering from abnormal uterine bleeding (AUB) unrelated to anticoagulation therapy [5].

The results from our study provide real insights into what women experience. Women in the present study reported that the ability to plan a day out becomes confounded with factors that need to be taken into account, eg, multiple women in the study stressed the importance of having access to a toilet if they were to go out. Most women lived in constant fear of leaking and would invest a lot of time, energy, and money to ensure that they protected themselves from leaking into clothes or onto surfaces. For some, the experience of heavier bleeding was embarrassing. Research from the AUB field suggests that women often normalize their symptoms and do not seek help [6]; for example, in a European study, 46% of women sought no treatment or did not consult their doctor about their bleeding [7]. Interestingly, a recent survey of nearly 100 000 women focused on women's health issues in the United Kingdom found that despite seeking help, 84% of women believed that there were times their concerns were not listened too by healthcare professionals [8].

Despite the difficult experiences many women reported in our study, many did not seek help. Research from sociological settings has shown that in Western societies, menstruation should be concealed. Studies of teenage girls and young women show that the message they have received is to “live as if they are not menstruating.” [9–11] Many of the participants interviewed in the present study did not share the HMB experience with their family, friends, and work. This may in part be because of the aforementioned doctrine. However, this is changing because the women's health agenda is gaining wider recognition and more women are talking about their experiences [8]. Women affected by anticoagulation-precipitated HMB should be encouraged by clinical staff to seek help if affected by HMB and that it is not normal to be changing their sanitary protection every 30 minutes.

Our findings chime with work previously conducted in women with HMB, with or without a bleeding disorder, with similar themes emerging from the interviews. Parker et al's [12] study of adolescent girls with a bleeding disorder and HMB identified the following

themes: anxiety and embarrassment, isolation, increased cautiousness, and planning. Dutton and Kai [13] reported on women's experiences of HMB and their medical treatment up to 10 years after the initial management in general practice. They interviewed 36 women and reported that women's experiences of HMB were debilitating with wide-ranging impacts on their lives, relationships, and well-being. Kayhan et al. [14] previously investigated the prevalence of mood and anxiety disorders in women with AUB and showed a frequent prevalence in women with AUB. Our findings validate previous studies and serve as an important reminder to clinicians on why it is important to recognize and try to prevent this problem from the outset.

All of the women in the present study were commenced on anticoagulation in the context of VTE. Previous research on VTE has demonstrated that patients are significantly affected by the diagnosis itself. Rolving et al's [15] qualitative study involving 16 individuals diagnosed with PE, reported that all participants experienced their daily life and well-being negatively affected by fatigue, anxious thoughts, and bodily hypervigilance. Furthermore, a recently completed scoping review aiming to understand the physical, psychological, and emotional impact of VTE from patients' perspectives identified 7 major themes, including those of sustained psychological distress and negative experiences with the medical system [16]. If in addition to this, women are impacted by HMB, then of course, this would be distressing.

For most women interviewed in the study, financing a heavier period was a significant concern because of stable financial backgrounds. However, one participant in the study was a student who reported feeling difficulty in financing her periods. Additionally, all women reported that the cost of financing their period was evident, and they recognized that they were spending more money on sanitary products and period underwear. Money was also spent on having appropriate clothes to manage the situation. This finding highlights the important issue of period poverty, referring to the inability to access safe and hygienic menstrual products due to financial concerns. Therefore, one might anticipate that if a patient is affected by period poverty, then this issue would be amplified and once again highlights the reason for trying to prevent the problem in the first place.

5 | STRENGTHS AND LIMITATIONS

A key strength of this study is the granular detail describing and highlighting the difficulties that many women face while menstruating on anticoagulant therapy and underscores to clinicians the importance of this issue. The main limitation of the current study is the number of women interviewed, although the numbers taking part did represent >25% of the parent PERIOD study population. Furthermore, saturation of themes was reached, following 9 interviews.

5.1 | Suggestions for clinical practice

Several changes could be made in clinical practice to support women better. First, tailored information at the time of commencing

anticoagulants should be provided. Current written information provided to women has a sentence or 2 on this issue buried in a general information leaflet. It seems sensible to have a bespoke leaflet or information source, outlining the issues and that support is available, should they be impacted by this. Women should be safety-netted with anticoagulation clinic numbers; hence, they know they have a support structure in place, if required. Finally, the wider healthcare team, particularly those not working in the anticoagulation sphere, should be made aware of the potential HMB women may experience on anticoagulation medication; hence, when women seek help, for example, from emergency care settings with this problem, the HMB is not dismissed and patients are appropriately supported.

6 | CONCLUSION

Our study describes the lived experience and challenges of menstruating women who have recently commenced anticoagulation therapy. Current management strategies and support delivered by healthcare providers need improvement to help minimize this problem and its consequences for menstruating people.

ACKNOWLEDGMENTS

We would like to thank the patients in our clinics, who shared their experience, volunteered, and participated in the interviews. This work is dedicated to Chandrika Patel.

FUNDING

The PERIOD study was funded by the Department of Haematological Medicine, King's College Hospital.

ETHICS STATEMENT

The PERIOD study received ethics committee approval from the South-West Bristol ethics committee. REC reference: 19/SW/0211.

AUTHOR CONTRIBUTIONS

U.S. conducted the interviewed, conducted the analysis, and drafted the manuscript. A.D. conducted the analysis and drafted the manuscript. O.N. contributed to the study design and reviewed and edited the manuscript. L.N.R. contributed to study design and reviewed and edited the manuscript. J.J. contributed to study design and reviewed and edited the manuscript. J.R. contributed to the study design and reviewed and edited the manuscript. R.A. contributed to the study design and reviewed and edited the manuscript. J.P.P. contributed to the study design, recruited participants, contributed to analysis, and drafted the manuscript. All authors read and approved the final version of the manuscript.

RELATIONSHIP DISCLOSURE

L.N.R. has received speaker fees and travel grant from Bayer and an investigator-initiated research grant and travel grant from Sanofi. R.A.

reports grants from Bayer, personal fees from Bayer and Sanofi, and nonfinancial support from Bayer and Sanofi.

ORCID

Umber Sheikh  <https://orcid.org/0000-0003-0804-3286>

Amally Ding  <https://orcid.org/0000-0002-9034-8232>

Lara N. Roberts  <https://orcid.org/0000-0003-3871-8491>

Roopen Arya  <https://orcid.org/0000-0001-5630-7990>

Jignesh P. Patel  <https://orcid.org/0000-0003-4197-8294>

TWITTER

Lara N. Roberts  @LaraNRoberts1

Roopen Arya  @AryaRoopen

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