






# BMJ Open Intersections of menstruation, gender-based violence and contraceptive use: qualitative insights from girls and young women's experiences in western Kenyan family planning clinics

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## ABSTRACT

**Objective** To examine how menstruation, contraceptive use and gender-based violence intersect to shape the sexual and reproductive health and autonomy of girls and young women in Kenya.

**Design** Qualitative study exploring girls and young women's experiences with contraceptive use and menstrual management, using in-depth interviews and focus group discussions analysed through a reflexive thematic approach.

**Setting** Four county-run family planning clinics in Uasin Gishu County, Kenya.

**Participants** 77 girls and young women aged 15–19 years (via 35 in-depth interviews and 7 focus group discussions) and 27 family planning clinic providers (via 5 focus group discussions).

**Results** Interviewees' contributions suggest that covert contraceptive use, when discovered through menstrual monitoring, provoked intimate partner violence. Heavy menstrual bleeding, whether related to contraceptive use or not, was viewed as a sexual restriction and also fuelled intimate partner violence. Furthermore, the inability to afford sanitary pads, combined with the stigma surrounding menstruation, drove some girls and young women into exploitative sexual relationships, often resulting in unwanted or unintended pregnancies.

**Conclusions** Menstrual bleeding and contraceptive use, both independently and in combination, affect girls and young women's reproductive autonomy and overall health and well-being, particularly in relation to gender-based violence. Improving menstrual hygiene management, challenging the stigma and harmful norms tied to menstruation and contraception and ensuring safe contraceptive use are integral to improving sexual and reproductive health and autonomy and are requisite for preventing and eradicating gender-based violence.

## INTRODUCTION

For girls and young women, particularly those living in low- and middle-income countries (LMICs), menstruation is far more

## STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ The study was collaboratively designed with local healthcare providers and stakeholders, enhancing contextual relevance and acceptability.
- ⇒ An exploratory qualitative design was used, using in-depth interviews and focus group discussions with girls, young women and family planning providers.
- ⇒ Data were collaboratively analysed using reflexive thematic analysis, enhancing rigour and reflexivity.
- ⇒ Participants' and providers' accounts may have been affected by recall or social desirability bias.

than a biological process—it is intricately linked to their dignity, survival and broader sexual and reproductive health (SRH) and rights.<sup>1</sup> Yet, in regions like East Africa, their experiences managing their menstruation remain underexplored,<sup>1–4</sup> especially as their bleeding and hygiene relate to transactional sex<sup>4 5</sup> and impact gender-based violence (GBV) against them and their contraceptive use.<sup>6–11</sup> This critical gap in understanding endures despite growing recognition that inadequate menstrual hygiene and the absence of menstrual dignity profoundly affect educational attainment, reproductive health, intimate relationships and overall well-being.<sup>1 12–14</sup>

Ending period poverty and promoting menstrual dignity is an urgent but neglected global public health priority.<sup>15–17</sup> Period poverty refers to the inability to manage menstruation hygienically and with dignity. Adequate menstrual management includes the ability to safely and privately collect menstrual blood, clean with soap and water and dispose of used products appropriately. It also requires having basic knowledge about

the menstrual cycle and the ability to navigate menstruation without discomfort, fear or stigma.<sup>15 16 18</sup> Despite global efforts, many girls and young women still rely on traditional materials like cloths or tissues during menstruation or depend on transactional sex or intimate partners for sanitary pads.<sup>5 19–27</sup>

Menstrual stigma and restrictive gender norms significantly shape girls and young women's experiences of menstruation.<sup>1 28 29</sup> Menstruation can be perceived as shameful, dirty and smelly, leading to social exclusion, school disruptions and limits on intimacy.<sup>1 12–14</sup> In Kenya, girls reported feeling unprepared for menarche, equating menstruation with illness and fearing the risk of menstrual leaking.<sup>2</sup>

Concurrently, girls and young women face high rates of intimate partner violence (IPV). Globally, nearly a quarter (24%) of ever-partnered girls and young women aged 15–19 years old have experienced IPV in their lifetime, and 16% have in the past year.<sup>30</sup> Kenya's IPV incidence is higher than the global average: 29% of ever-partnered girls and young women, aged 15–19 years old, reported a lifetime experience of IPV.<sup>31</sup>

Especially in high-fertility settings, where girls and young women face unique pressures to bear children, IPV—manifesting in pregnancy coercion and contraceptive sabotage—is a significant driver of unwanted and unintended pregnancies and poor SRH outcomes.<sup>6 11 32–35</sup>

While some girls and young women adopt discreet contraceptive methods to resist partner coercion, the discovery of covert contraceptive use can heighten their risk of IPV.<sup>36–40</sup>

This study, conducted in Uasin Gishu County, Kenya, examines these critical intersections by exploring menstrual hygiene practices, access to family planning services and contraceptive use among girls and young women aged 15–19 years. By uncovering how menstruation, violence and contraception interact in their lives, we aim to inform policies and programmes that address period poverty, advance reproductive autonomy and combat violence against girls and young women.

## METHODS

### Study design

We conducted a qualitative study to examine the beliefs, behaviours, motivations and histories of girls and young women.<sup>41</sup> This study was collaboratively designed with local family planning providers, county health leaders and our local research partner, Population Council Kenya. In June 2021, EAH facilitated meetings to align research objectives with county priorities and to collaboratively identify and plan for appropriate data generation.

The study included 35 in-depth interviews (IDIs) with girls and young women, aged 15–19 years, and seven focus group discussions (FGDs), involving 42 girls and young women. IDIs lasted an average of 70 min (range: 34–121 min) and FGDs lasted an average of 112 min (range: 85–134 min). Additionally, we conducted five

FGDs with 27 family planning clinic providers, which lasted an average of 99 min (range: 62–120 min).

We conducted both IDIs and FGDs with girls and young women, although no participant took part in both. IDIs were designed to elicit detailed accounts of personal experiences in a confidential manner, while FGDs aimed to explore collective perspectives on county-level services and social norms.<sup>41</sup> In practice, FGD participants also shared personal stories, resulting in complementary and overlapping insights, which were subsequently analysed together.

Throughout this paper, we refer to the girls and young women as 'participants', family planning clinic providers as 'providers', and collectively use the term 'interviewees' to encompass both groups.

The research team (EAH, FT, WO and EA) also organised a stakeholder workshop in Eldoret, the capital of Uasin Gishu County. The 48 participating stakeholders, recruited by the County Health Management Team, included county health and education leaders, providers and their supervisors. We translated preliminary findings into research outputs and policy recommendations, incorporating stakeholders' contributions, some of which we include in this paper.

This study was part of the first author EAH's PhD research; she is a registered nurse from the United States. EA, WO and FT are bilingual, female Kenyan researchers with extensive expertise in qualitative research on SRH and violence. None of the researchers were involved in service provision in the county, and we had no prior contact with participants before the study.

### Study setting

This study took place in Uasin Gishu County, Kenya, in the North Rift Valley. We chose Uasin Gishu for its urban-rural mix and Population Council Kenya's local partnerships, enabling a collaborative design and clinic access.

Data from the 2022 Kenya Demographic and Health Survey showed that 11% of girls in Uasin Gishu became pregnant before their 18th birthday. Among married women and girls (15–49 years old), 63% used a modern method of contraception, 13% had an unmet contraceptive need and only 39% reported being able to make their own informed decisions about sexual relations, contraceptive use or reproductive healthcare.<sup>42</sup>

In the county, among women and girls (married and unmarried), aged 15–49 years old with a menstrual period in the last year, 97% reported being able to wash and change in privacy and use appropriate materials during their last menstruation (ie, reusable sanitary pads, disposable sanitary pads, tampons, menstrual cup, cloth and/or cotton wool), and 95.5% reported using disposable sanitary pads. Almost half (41.9%) had experienced physical violence in their

**Table 1** Girls and young women’s demographics (from both in-depth interviews and focus group discussions)

All participants (n=77)	
	Frequency: N (%)
Age (in years)	
15	4 (5%)
16	6 (8%)
17	6 (8%)
18	15 (20%)
19	46 (60%)
Marital status	
Currently unmarried	51 (66%)
Currently married	26 (34%)
Parity	
Nulliparous	27 (35%)
Primiparous or multiparous	50 (65%)

lifetime, and 10% had experienced sexual violence since the age of 15 years old.<sup>42</sup>

### Sampling, recruitment, enrolment and participant demographics

With support from the county health management team, the research team (EAH, EA, WO and FT) selected four county-run clinics providing family planning, maternal and newborn and child health services. These clinics, selected for having the highest number of clients aged 15–19 years in January and February 2022 among all county clinics, served diverse populations, including those from urban, peri-urban and rural areas, as well as one of the largest informal settlements.

Given the limited number of girls and young women in our target age group who had regularly been visiting each clinic, we used convenience sampling of only current or recent clients (ie, those listed in clinic service logs with active phone numbers). We did not sample for any particular participant traits other than age. Despite this constraint, we successfully recruited a diverse participant pool, including married and unmarried girls and young women, mothers and those without children and participants across the specified age range. No approached participants refused, but some were out of the age range. **Table 1** summarises the demographics of IDI and FGD girls and young women, while **table 2** provides additional details on just those who participated in IDIs.

Nurses assisted with participant recruitment, inviting clients in person or via phone. For one FGD, a local charity supporting families living in the local informal settlement facilitated recruitment. All participants provided informed consent prior to participation. In accordance with Kenyan regulations, girls aged 15 years and older are legally permitted to provide independent consent for reproductive health services and research participation.<sup>43</sup>

**Table 2** Girls and young women’s information (from in-depth interviews only)

In-depth interview participants (n=35)	
	Frequency: N (%)
First-time clinic attendees	21 (60%)
Contraceptive method received at current visit	
Implant (ie, Levoplant, Nexplanon, Jadelle)	21 (60%)
Injection (ie, Depo-Provera)	9 (26%)
Intrauterine device (IUD) (ie, non-hormonal copper T)	0 (0%)
No method	5 (14%)
Occupation	
Student	12 (34%)
Paid work, outside home	6 (17%)
Unpaid work or not working	17 (49%)
Highest level of education	
None	1 (3%)
Primary school completed	11 (31%)
Secondary school completed	18 (51%)
In tertiary school, college or university	5 (14%)

FT, WO and EA explained the study in Kiswahili, emphasising voluntary participation without service impact. After reviewing the information sheet, all invited participants agreed to take part and provided written informed consent. Travel expenses were reimbursed, and we gave each participant 500 Kenyan Shillings (about £3.00 GBP) as a token of appreciation.

EAH recruited providers from the same four clinics, many of whom had previously assisted with participant recruitment, while others were invited by their supervisors. EAH introduced the study in English, provided information sheets and reassured providers of the voluntary nature of their involvement and that it would not affect their employment. All invited providers agreed to participate and gave their written informed consent. The FGDs included three nurse supervisors, 15 women’s health, perinatal and paediatric nurses, six nursing students, two community health workers and one GBV psychologist.

The research team held daily debriefings and ceased recruitment after 35 IDIs and 12 FGDs, once thematic saturation was achieved and minimal new information was emerging. Recruitment also ensured coverage of all clinics, with at least one FGD with providers conducted per site.<sup>44 45</sup>

### Data generation and research tools

EA, WO and FT conducted IDIs and FGDs with participants in empty clinic rooms using a mix of Kiswahili and

English. Participants were asked about their experiences accessing and using family planning services, challenges in preventing or achieving pregnancy and barriers they faced. We piloted the topic guides during the first round of IDIs and FGDs and then reviewed transcripts to assess their effectiveness. Our team evaluated cultural and age appropriateness, noted questions that caused discomfort or silence and subsequently refined the guides by broadening, simplifying and adjusting the language.

To facilitate discussion, especially when participants were uncomfortable sharing personal stories, vignettes—fictional scenarios of local girls and young women facing family planning challenges—were introduced.<sup>41 46</sup> Discussions also explored the experiences of participants' sisters, friends and peers. The topic guide is available in online supplemental Annex A.

FGDs, conducted in Kiswahili and English by EA, WO and FT, followed a similar approach to IDIs and took place in empty clinic rooms. To encourage broader discussions on girls and young women's experiences, FGDs began with vignettes as prompts. Participants frequently shared personal stories and engaged with one another throughout the discussions. The FGD topic guide is provided in online supplemental Annex B.

FGDs with providers took place after hours or during downtime in clinics. Conducted in English, EAH explored providers' experiences caring for girls and young women (topic guide in online supplemental Annex C). Providers also shared client stories and reflected on their own teenage experiences.

### Data management and analysis

All discussions were audio-recorded. EA, WO and FT transcribed all IDIs and FGDs verbatim and translated them into English, where necessary, cross-checking each other's translations for consistency.

All transcripts were uploaded to NVivo 17<sup>47</sup> and analysed using a reflexive thematic approach<sup>48 49</sup> by EAH. She familiarised herself with the data by reading and re-reading transcripts, coding quotes both deductively (aligned with topic guides) and inductively (as new themes emerged). In this process, two overarching themes were created: 'bleeding and IPV' and 'sex for sanitary pads'. EAH shared these interpretative codes and overarching themes with her supervisory team, CM, MC, NSS, and AMB, throughout this analytical process.

In February 2024, EAH, EA, WO and FT met in Nairobi to collaboratively review all transcripts, refine interpretative codes and organise overarching themes across each research output.

## RESULTS

Contributions from 77 girls and young women, 27 providers and 48 stakeholders revealed complex intersections between menstruation, violence and contraceptive use. We organise our findings into two central themes.

The first theme explores how fear of retaliation linked to family planning services and contraceptive use drove covert contraceptive practices, often in the context of menstrual monitoring. Our two sub-themes further unpack this dynamic and connect it to IPV: (a) how intimate partners responded to information gathered through menstrual monitoring and (b) how menstruation was perceived to be an obstacle to sexual activity.

The second theme investigates the stigma surrounding menstruation and the challenges of period poverty faced by girls and young women, highlighting how these factors drove transactional sex for sanitary pads. Our sub-theme examines how these sexual exchanges linked to deception, necessity, sexual exploitation and adverse reproductive health outcomes.

### Fear of retaliation, covert contraception and menstrual monitoring

Interviewees described how the risk of violent retaliation—if discovered visiting a family planning clinic or using contraception—compelled girls and young women to visit clinics in secret and to use methods covertly.

Participants shared their fears about potential consequences if partners or parents discovered their contraceptive use, including violence, abandonment, condemnation and, as one young woman put it, "war (Aged 18–19, FGD 5, Participant 6)."

I started having spotting within my periods, like weekly, and he [my partner] started questioning [if I am using contraception]. He asked, and I just kept quiet. [...] I see that he is not okay. [...] It might cause violence if he knows I am on another [contraceptive] method. (Young Woman aged 18–19, IDI 13)

To avoid detection, participants said they used various strategies to conceal their visits to family planning clinics, such as pretending to go to the market. They hid pills in the kitchen or in their shoes, covered implant insertion sites or chose injectable methods for added secrecy.

Providers said they maintained clients' discretion by storing appointment cards, administering undetectable methods or writing fake prescriptions.

You will be forced to write a fake prescription for some sickness, so that when they go home and the husband asks her, 'Where are you from?' She would have that paper to show to the husband. 'I am from the hospital; you can even see the prescription.' (Nurse, FGD 1, Provider 8)

Interviewees' accounts also revealed a vulnerability of secretive contraception: the monitoring of menstrual cycles. Participants said their partners tracked their periods. Hence, in their efforts to conceal their contraceptive use, they also said they had to lie about or hide their menstrual bleeding.

There was a time he asked me why I have not conceived again, yet our last born is now 2 years old. I told

him the doctor said, 'A woman cannot get pregnant after delivery, until her monthly periods re-appear.' I lied [that] mine has not come yet. (Young Woman aged 18–19, FGD 2, Participant 1)

### Menstrual bleeding, discovery of contraceptive use and intimate IPV

Interviewees said that because partners were monitoring girls and young women's menstruation, they detected secret contraceptive use. This, in turn, led to violence.

Girls and young women shared that their partners had reacted violently on noticing their regular menstrual cycles. They explained that their partners interpreted the presence of menstrual blood as proof that they were not pregnant, which some partners viewed as a waste of time – as “just fill[ing] the toilets for no benefit.” (Girl aged 15–17, FGD 4, Participant 2)

Anyway, for me, the man found me already using FP [contraception], and he did not know. He waited for me to get pregnant, but I did not. So, he began to quarrel me saying I am consuming his money for nothing. Yet, I cannot get pregnant with his baby. (Young Woman aged 18–19, FGD 7, Participant 1)

Participants recalled having experienced or hearing stories about various forms of IPV driven, at least in part, by partners' anger over secretive contraceptive use. The accounts included controlling behaviours (eg, demands to have a contraceptive method removed), emotional abuse (eg, threats of abandonment) and physical violence.

[My friend's] man kept wondering why she wasn't conceiving. One day, he touched her hand and felt the implant. He waited until she was asleep, took a razor, and cut open her arm and removed the implant. (Girl aged 15–17, IDI 19)

Additionally, providers said that any heavy or 'irregular' menstrual bleeding also raised partners' suspicions of contraceptive use, resulting in violence.

[My clients tell me] if your periods become irregular, and you begin to bleed weekly or daily, your husband will ask you, 'What's not happening? Why are you bleeding? What has changed?' So, you will have to tell him the truth [about using contraception], and that is when the violence begins. (Community Health Worker, FGD 4, Provider 4)

### Menstruation's 'sexual restriction' and IPV

Interviewees explained that menstruation was perceived by partners to be a 'sexual restriction' (Nurse Supervisor, FGD 3) because it was seen as unclean and something to be avoided. This framing of menstrual bleeding indicates that menstruation itself may function as an independent risk factor for IPV.

In Africa, when a lady is bleeding, you are not supposed to have sexual intercourse with her until she

becomes clean. So, with a kind of [contraceptive method] where the lady bleeds most of the time, there is no sexual intercourse, and the man is supposed to stay away from this kind of blood. (Nurse Supervisor, FGD 3)

Participants shared that their partners used this supposed barrier to sexual activity as a pretext for physical or sexual assault. In some cases, as below, partners told girls and young women that they would seek out other women, presumably those not menstruating as much, to fulfil their sexual expectations.

Like maybe you have gone for the injectable, and then your menses starts prolonging. He will feel that you are denying him 'conjugal rights [rights of marriage].' At some point, he might even force you into having sex, because he cannot be patient with you anymore. Or he will ask you if you want him to start going for other women. (Young Woman aged 18–19, IDI 18)

Providers noted that their clients reported to them that refusing sex during their periods triggered violence:

If you bleed every time, when your periods become too irregular, the husband will ask, 'What's happening?' A husband may want sexual activity, and you are bleeding every other time. That is when violence begins. You will tell him, 'Today I am bleeding,' and tomorrow, you are still bleeding, and he wants the act. So that is where they start fighting. (Nurse, FGD 4, Provider 3)

Providers also said that some partners had forced clients to remove contraceptives, claiming that the side effect of increased bleeding interfered with their 'sexual satisfaction':

With this kind of 'sexual restriction,' because of the bleeding, the husband becomes angry at some point. 'Every other time I want to do my things, I want to enjoy myself, this blood is bringing issues. Go and remove that method.' So, they come [to the clinic] and remove the method because it is a hindrance to the husband's sexual satisfaction. (Nurse Supervisor, FGD 3)

### Period shame, period poverty and transactional sex for sanitary pads

Interviewees linked the stigma surrounding menstruation and the challenges of period poverty to the exchange of sex for essentials, including sanitary pads, among girls and young women in Uasin Gishu. Participants said they were concerned about menstrual leaks, particularly in public spaces, fearing judgement from their community. One young woman reflected, "What if it [your period] starts in public, how will others perceive you?" (Aged 18–19, IDI 10) Participants also described feeling ashamed when

they were unable to afford sanitary pads or when their parents were unable to provide them:

A parent can even tell you [a girl] to use pieces of clothes as pads during your menstruation, and you feel that is shameful. That is a challenge using pieces of clothes, when your friends buy pads. (Young Woman aged 18–19, FGD 1, Participant 4)

Interviewees said that the shame associated with menstruation and its management, combined with the challenges of period poverty, drove girls and young women to engage in sex-for-essentials exchanges, including for menstrual hygiene supplies.

I once worked in a dispensary, and I used to see so many teenage pregnancies. So, I took an initiative, and I wanted to know what is happening. The girls said, ‘You see, we don’t have money to buy pads, slippers... you go to school barefoot. You have to do that thing [to have sex] so that the *Boda Boda* [motorcycle driver] guy or boyfriend gives you money to buy pads and other things.’ (Nurse Supervisor, FGD 3)

During our workshop, stakeholders expressed concern about the widespread occurrence of transactional sex for sanitary pads in the county, attributing it to worsening financial hardships faced by Uasin Gishu families. They noted that the situation had worsened during and after the COVID-19 pandemic, particularly for girls who had relied on receiving pads at school, which remained closed for 8 months.

Additionally, we learnt that the Kenyan Finance Bill 2024 proposed reintroducing value-added tax on imported sanitary pads and other essentials, sparking nationwide protests. One stakeholder said that she tried to initiate a programme to provide free sanitary pads, only to discover that some young girls lacked even the undergarments necessary to attach pads.

#### Transactional sex for sanitary pads and poor health outcomes

Interviewees linked sex-for-essentials exchanges to experiences of violence (eg, manipulation, exploitation) and framed them as acts of necessity driven by a lack of options. They said these exchanges often resulted in unwanted and unintended pregnancies.

A young woman succinctly captured the interconnectedness of period poverty, transactional sex, deception and pregnancy:

Most of us come from poor backgrounds, we cannot afford pads. Most of us are lied to by men and that is how we end up getting pregnant. (Aged 18–19, IDI 9)

Participants said sometimes these transactions were not honoured, and some told us they often had viewed this sex as their only available option. One stakeholder revealed that many present at the workshop, themselves, had felt compelled to trade sex for pads in their youth.

Further, a young woman explained that “some are only having sex so they can get these necessities. If they

abstain, there will be no need to come for family planning [contraception]” (Aged 18–19, IDI 34). Participants suggested that transactional sex for essentials led to pregnancy, which, in some cases, resulted in abandonment:

I met a friend while at my grandmother’s. He would provide me with anything I asked for, but he said that I should first sleep with him, so that he can really help me. At that time when I had nothing, didn’t even have pads to use, and my periods are usually heavy and last over a week. I would ask him for the pads, and he would ask me to go to his house first [to have sex] so that he can buy me what I want. That is how I got pregnant. [...] He accepted responsibility for the pregnancy and even visited the baby at my grandmother’s place where I was. The baby at that time was two months, but after that visit he completely disappeared to date. He has never even called me. (Girl aged 15–17, IDI 14)

Providers highlighted patterns of age and power imbalances in these exchanges, expressing concern that girls and young women had been exploited. They told us they observed that clients’ sex-for-necessities transactions often involved individuals in positions of authority or influence, including family members, *Boda Boda* (motorcycle) drivers, shopkeepers and teachers:

Just imagine, a 40-year-old man against a 15-year-old girl. (Nurse FGD 4, Provider 2)

Further, providers pointed out that barriers to contraceptive use such as stigma, fear and lack of knowledge contributed to these sex exchanges being unprotected, resulting in pregnancy and, in some instances (as below), abandonment. As one provider summarised: “If these girls knew, ‘I can get FP [contraception] and stop the pregnancy, because I am there, in this relationship, to get money,’ they would not get pregnant.” (GBV Counsellor, FGD 4, Provider 5)

Where I was working, a girl came for ANC [Antenatal Care]. She was pregnant, so I asked her what happened. She narrated that one day she soiled her clothes with menses blood. Then a man told her, ‘If you don’t have these things [pads] another day, you just come, and I will show you how to get them.’ So, she went and slept with him for some days, and she became pregnant. But that man just disappeared, and she cannot trace him. (Nurse Supervisor, FGD 3)

Providers also explained how contraception impacted menstrual hygiene management. They said that clients tended to choose methods that reduced menstrual bleeding, because “no periods [equals] no costs for sanitary towels.” (Nurse, FGD 2, Provider 2)

## DISCUSSION

This study brings to the fore the intersection between menstrual management, GBV and contraceptive use.

While previous research has examined contraceptive use amidst IPV,<sup>11 34 50</sup> documented sex in exchange for sanitary pads<sup>2 26 51</sup> and discussed transactional sex's risks of violence and poor health outcomes,<sup>52</sup> this study builds on this knowledge by exploring how menstruation, GBV and contraception interact and intersect in the lives of girls and young women.

We could not identify other studies conducted in LMICs that specifically captured providers' perspectives on the strategies they employed to facilitate covert contraceptive use. In this study, providers described administering injections covertly or issuing fake prescriptions stating alternate reasons for clinic visits. These actions reveal providers' intentionality in circumventing clinic protocols and community norms to support their clients. While such facilitation has been documented in North America and Australia,<sup>53 54</sup> in LMICs, providers' resistance has primarily been discussed in the context of developing and evaluating clinical interventions to address contraceptive sabotage and pregnancy coercion.<sup>55 56</sup>

This research enhances our understanding of girls and young women's menstrual experiences, reinforcing findings that menstrual blood is seen as unclean, that leaks cause shame and distress and that periods can further strain intimate relationships where men already feel entitled to sex without limitations.<sup>1 13</sup> Our findings illustrate how harmful beliefs (eg, that menstrual blood must be avoided) can grow legs (ie, become a sexual restriction), which in turn are used to justify violence. Interviewees' contributions additionally reveal that partners' perceptions of menstruation as a sexual hindrance are rooted in their perceived entitlement to unrestricted sex in relationships. This underscores the urgent need for interventions that address menstrual stigma and challenge the normalisation of sexual entitlement and sexual violence.

Given the high prevalence of IPV in Uasin Gishu<sup>11 42</sup> and evidence that women and girls experiencing IPV often conceal contraceptive use,<sup>35–38</sup> it is unsurprising that many of our participants described using contraception covertly and detailed their strategies for doing so. Participants explained that this secrecy was driven by a fear of retaliation, which often materialised, as many recounted experiencing physical, sexual and psychological IPV when their contraceptive use was discovered.

Prior studies have highlighted the connection between covert contraceptive use and IPV. In Bangladesh, for example, researchers found that simply receiving text messages that provided contraceptive education could escalate to IPV.<sup>39</sup> In sub-Saharan Africa, the discovery of covert contraceptive use has been linked to physical violence, accusations of infidelity or marital and financial abandonment.<sup>38 40</sup> Interviewees described how the very effectiveness of these methods (ie, in preventing pregnancy) and their routine side effects (eg, increased bleeding) drew partners' attention, leading to IPV. This frames menstrual monitoring not only as a potential pathway between covert contraceptive use and IPV but also as a unique threat to bodily autonomy. Given that

many girls and young women already use contraception secretly, further research is crucial to unravel the dynamics and timing of covert use and IPV, including its mediation via menstrual surveillance, in order to develop effective interventions in spite of these risks.<sup>32 33</sup>

All the girls and young women whose stories we discussed in our sub-theme "Menstruation's 'sexual restriction' and IPV" were using contraception. However, their partners seemed to use the mere presence of menstrual blood—rather than what the presence of bleeding or changes in bleeding signified (ie, contraceptive use and not being pregnant)—as justification for their violent behaviour. This suggests that menstruation itself may function as an independent risk factor for IPV.

Overall, our findings suggest that menstrual bleeding—a universal and unavoidable experience—profoundly undermines girls and young women's sexual and reproductive autonomy. Partners punish them for menstruation's sexual limitations, while periods complicate covert contraceptive use, hindering pregnancy prevention. Stigma around menstruation, compounded by limited access to sanitary pads, leads many into transactional sex to obtain basic hygiene products.

This study is not without limitations. While providers discussed supporting clients in concealing contraceptive use, our broader findings in this study revealed that providers also created significant barriers to contraceptive access for girls and young women. This highlights the need for a holistic understanding of providers' roles, encompassing both their supportive actions and the challenges they may impose.

Additionally, we relied on interviewees' accounts of their partners' beliefs about menstruation and contraception, without the opportunity to gather men's and boys' own perspectives. This limits our ability to explore the roots of, and justifications for, violence from their point of view.

Further, we acknowledge that data generation in clinic settings may have influenced participants' willingness to share critical views, as some girls and young women might have been concerned that their responses could affect their access to services or relationships with providers, despite clear assurances during the informed consent process that their views would not be shared with providers and participation would not influence their care. However, many participants did share concerns and negative experiences regarding the services, and we found no clear indications that they were reluctant to express their views.

We acknowledge that using a convenience approach to sampling may have limited the diversity of perspectives represented. Given the small eligible population, it was not feasible to apply purposive sampling to ensure broader representation, and thus some voices or experiences may not have been captured.

The well-documented barriers to contraception access—shame, poverty and resource scarcity, as other researchers have discussed<sup>57–59</sup>—seem to contribute to

the way that sex for sanitary pads is often unprotected, and thus results in unwanted and unintended pregnancies. Participants and providers revealed that many girls and young women who become pregnant within these transactional relationships are left to navigate their pregnancies alone, profoundly worsening their situation.

Stakeholders highlighted the link between unmet need for sanitary pads and broader systemic issues in Kenya, including the discontinuation of pad provision in schools and recent tax reforms.<sup>20 25</sup> By pointing to these structural forces, stakeholders frame transactional sex for pads as a coping mechanism, reflecting girls and young women's resourcefulness in the face of economic hardship.

However, participants and providers described how girls and young women involved in such exchanges are often deceived and, if they become pregnant, abandoned to face the consequences alone. These accounts shed light on the complex dynamics of transactional sex, highlighting the interplay between agency and exploitation. They reveal not only the factors driving girls and young women into these exchanges but also the realities they experience during these transactions and their resulting impacts.<sup>4 52 60</sup>

## CONCLUSION

Contextualised by the stigma and fear surrounding both menstruation and contraceptive use, our study sheds light on the critical intersections between menstruation, GBV and pregnancy prevention among girls and young women. It reveals how contraceptive use and menstrual bleeding, both independently and interdependently, undermine reproductive autonomy and heighten the risks of GBV and unwanted and unintended pregnancies.

Advancing SRH and rights for girls and young women will require sustained investigations into the interplay between menstruation, GBV and contraceptive use. For example, by examining the chronology of covert contraceptive use and IPV, framing menstrual monitoring as a form of reproductive control and considering period poverty's risk for exploitation.

In both policy and practice, integrating safety planning into family planning services is essential. Providers must address potential risks, such as the consequences of discovering contraceptive use. Efforts to dismantle harmful gender norms that stigmatise menstruation, normalise violence and condemn contraceptive use are also crucial. Furthermore, interventions targeting period poverty must account for hygiene management's risk of violence to ensure holistic support for girls and young women.

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## REFERENCES

- Hennegan J, Shannon AK, Rubli J, *et al*. Women's and girls' experiences of menstruation in low- and middle-income countries: A systematic review and qualitative metasynthesis. *PLoS Med* 2019;16:e1002803.

- 2 Mason L, Nyothach E, Alexander K, *et al.* We keep it secret so no one should know'--a qualitative study to explore young schoolgirls attitudes and experiences with menstruation in rural western Kenya. *PLoS ONE* 2013;8:e79132.
- 3 Plesons M, Torondel B, Caruso BA, *et al.* Research priorities for improving menstrual health across the life-course in low- and middle-income countries. *Glob Health Action* 2023;16:2279396.
- 4 Thiaw Y, Nyothach E, Zulaika G, *et al.* He'll come with some sugar." A qualitative study exploring the drivers and consequences of schoolgirls transactional sex behaviours. *Front Reprod Health* 2024.
- 5 Phillips-Howard PA, Caruso B, Torondel B, *et al.* Menstrual hygiene management among adolescent schoolgirls in low- and middle-income countries: research priorities. *Glob Health Action* 2016;9.
- 6 Grace KT, Anderson JC. Reproductive Coercion: A Systematic Review. *Trauma Violence Abuse* 2018;19:371–90.
- 7 Mitchell E, Bennett LR. Pressure and Persuasion: Young Fijian Women's Experiences of Sexual and Reproductive Coercion in Romantic Relationships. *Violence Against Women* 2020;26:1555–73.
- 8 Skracic I, Lewin AB, Steinberg JR. Types of Lifetime Reproductive Coercion and Current Contraceptive Use. *J Womens Health (Larchmt)* 2021;30:1078–85.
- 9 Tarzia L, Srinivasan S, Marino J, *et al.* Exploring the gray areas between "stealth" and reproductive coercion and abuse. *Women Health* 2020;60:1174–84.
- 10 Tarzia L, Hegarty K. A conceptual re-evaluation of reproductive coercion: centring intent, fear and control. *Reprod Health* 2021;18:87.
- 11 Wood SN, Kennedy SR, Akumu I, *et al.* Correlates and contributors of reproductive coercion across the socioecological framework among intimate partner violence survivors in Nairobi, Kenya. *J Fam Viol* 2023;38:25–38.
- 12 Betsu BD, Medhanyie AA, Gebrehiwet TG, *et al.* Menstrual hygiene management interventions and their effects on schoolgirls' menstrual hygiene experiences in low and middle countries: A systematic review. *PLoS One* 2024;19:e0302523.
- 13 Duby Z, Katz A, Musara P, *et al.* "The state of mind tells me it's dirty": menstrual shame amongst women using a vaginal ring in Sub Saharan Africa. *Women Health* 2020;60:72–86.
- 14 Zulaika G, Bulbarelli M, Nyothach E, *et al.* Impact of COVID-19 lockdowns on adolescent pregnancy and school dropout among secondary schoolgirls in Kenya. *BMJ Glob Health* 2022;7:e007666.
- 15 Jaafar H, Ismail SY, Azzeri A. Period Poverty: A Neglected Public Health Issue. *Korean J Fam Med* 2023;44:183–8.
- 16 Michel J, Mettler A, Schönenberger S, *et al.* Period poverty: why it should be everybody's business. *J Glob Health Rep* 2022;6:e2022009.
- 17 Sommer M, Torondel B, Hennegan J, *et al.* How addressing menstrual health and hygiene may enable progress across the Sustainable Development Goals. *Glob Health Action* 2021;14:1920315.
- 18 Arora A. Drinking water, sanitation and hygiene in schools: global baseline report 2018. UNICEF DATA; 2018. Available: <https://data.unicef.org/resources/wash-in-schools/> [Accessed 2 Sep 2024].
- 19 Aluoch C. World menstrual hygiene day: Kenyan women call for an end to period poverty. The Star; 2024. Available: <https://www.the-star.co.ke/news/realtime/2024-05-28-world-menstrual-hygiene-day-kenyan-women-call-for-an-end-to-period-poverty/> [Accessed 3 Sep 2024].
- 20 Baptista D, Bhalla N, Foundation LT Thomson Reuters. Long read-how the fight against the tampon tax failed to fix period poverty. Reuters; 2023.
- 21 Etyang P. Lobby raises concern over surge in sex for sanitary pads vice. The Star; 2024. Available: <https://www.the-star.co.ke/news/realtime/2024-05-28-lobby-raises-concern-over-surge-in-sex-for-sanitary-pads-vice/> [accessed 3 Sep 2024]
- 22 Muiruri P. Sex for sanitary pads': how Kenya's lockdown led to a rise in teenage pregnancy. The Guardian 2020.
- 23 Munene D. Ministry of health commits to improve menstrual health and hygiene. The Star; 2024. Available: <https://www.the-star.co.ke/news/realtime/2024-05-28-ministry-of-health-commits-to-improve-menstrual-health-and-hygiene/> [Accessed 3 Sep 2024].
- 24 Olingo A. East Africa's finance bills deal heavy blow to women's wallets. The Fuller Project; 2024. Available: <https://fullerproject.org/story/east-africas-finance-bills-deal-heavy-blow-to-womens-wallets/> [Accessed 3 Sep 2024].
- 25 Omondi D. After bread, ruto now targets milk, unga and sanitary towels. Nation; 2024. Available: <https://nation.africa/kenya/business/after-bread-ruto-now-targets-milk-unga-and-sanitary-towels-4658658> [Accessed 3 Sep 2024].
- 26 Phillips-Howard PA, Otieno G, Burmen B, *et al.* Menstrual Needs and Associations with Sexual and Reproductive Risks in Rural Kenyan Females: A Cross-Sectional Behavioral Survey Linked with HIV Prevalence. *J Womens Health (Larchmt)* 2015;24:801–11.
- 27 Rukanga B. What are Kenya's controversial tax proposals? BBC News; 2024. Available: <https://www.bbc.com/news/articles/cv22g359mq9o> [Accessed 3 Sep 2024].
- 28 Hennegan J, Winkler IT, Bobel C, *et al.* Menstrual health: a definition for policy, practice, and research. *Sexual and Reproductive Health Matters* 2021;29:31–8.
- 29 Sommer M, Hirsch JS, Nathanson C, *et al.* Comfortably, Safely, and Without Shame: Defining Menstrual Hygiene Management as a Public Health Issue. *Am J Public Health* 2015;105:1302–11.
- 30 World Health Organization. Violence against women prevalence estimates. 2021. Available: <https://www.who.int/publications/i/item/9789240022256> [Accessed 27 Jun 2024].
- 31 Sardinha L, Yüksel-Kaptanoğlu I, Maheu-Giroux M, *et al.* Intimate partner violence against adolescent girls: regional and national prevalence estimates and associated country-level factors. *The Lancet Child & Adolescent Health* 2024;8:636–46.
- 32 Lévesque S, Rousseau C. Young Women's Acknowledgment of Reproductive Coercion: A Qualitative Analysis. *J Interpers Violence* 2021;36:NP8200–23.
- 33 Silverman JG, Boyce SC, Dehingia N, *et al.* Reproductive coercion in Uttar Pradesh, India: Prevalence and associations with partner violence and reproductive health. *SSM Popul Health* 2019;9:100484.
- 34 Silverman JG, Raj A. Intimate Partner Violence and Reproductive Coercion: Global Barriers to Women's Reproductive Control. *PLoS Med* 2014;11:e1001723.
- 35 Wood SN, Thomas HL, Thiongo M, *et al.* Intersection of reproductive coercion and intimate partner violence: cross-sectional influences on women's contraceptive use in Burkina Faso, Côte d'Ivoire and Kenya. *BMJ Open* 2023;13:e065697.
- 36 Akoth C, Oguta JO, Gatimu SM. Prevalence and factors associated with covert contraceptive use in Kenya: a cross-sectional study. *BMC Public Health* 2021;21:1316.
- 37 Heck CJ, Grilo SA, Song X, *et al.* "It is my business": A Mixed-Methods Analysis of Covert Contraceptive Use among Women in Rakai, Uganda. *Contraception* 2018;98:41–6.
- 38 Kibira SPS, Karp C, Wood SN, *et al.* Covert use of contraception in three sub-Saharan African countries: a qualitative exploration of motivations and challenges. *BMC Public Health* 2020;20:865.
- 39 Reiss K, Andersen K, Pearson E, *et al.* Unintended Consequences of mHealth Interactive Voice Messages Promoting Contraceptive Use After Menstrual Regulation in Bangladesh: Intimate Partner Violence Results From a Randomized Controlled Trial. *Glob Health Sci Pract* 2019;7:386–403.
- 40 Sarnak DO, Gummerson E, Wood SN, *et al.* Prevalence and characteristics of covert contraceptive use in the Performance Monitoring for Action multi-country study. *Contraception: X* 2022;4:100077.
- 41 Ellsberg M, Heise L. Researching Violence Against Women: A Practical Guide for Researchers and Activists. 2005.
- 42 Kenya National Bureau of Statistics. Kenya demographic and health survey - 2022. 2023.
- 43 National AIDS and STI Control Programme (NAS COP), Kenya Medical Research Institute (KEMRI). Guidelines for conducting adolescent hiv sexual and reproductive health research in Kenya. 2015. Available: <https://www.icop.or.ke/research-document/guidelines-for-conducting-adolescent-hiv-sexual-and-reproductive-health-research-in-kenya/> [Accessed 26 Jul 2024].
- 44 Saunders B, Sim J, Kingstone T, *et al.* Saturation in qualitative research: exploring its conceptualization and operationalization. *Qual Quant* 2018;52:1893–907.
- 45 Hennink M, Kaiser BN. Sample sizes for saturation in qualitative research: A systematic review of empirical tests. *Social Science & Medicine* 2022;292:114523.
- 46 Aujla W. Using a Vignette in Qualitative Research to Explore Police Perspectives of a Sensitive Topic: "Honor"-Based Crimes and Forced Marriages. *Int J Qual Methods* 2020;19:160940691989835.
- 47 NVivo. Lumivero. 2017.
- 48 Braun V. Should I not use TA? Comparing reflexive thematic analysis and other pattern-based qualitative analytic approaches. *Couns Psychother Res* 2021;21:37–47.
- 49 Braun V, Clarke V. Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health* 2019;11:589–97.
- 50 Miller E, Decker MR, McCauley HL, *et al.* Pregnancy coercion, intimate partner violence and unintended pregnancy. *Contraception* 2010;81:316–22.
- 51 Oruko K, Nyothach E, Zielinski-Gutierrez E, *et al.* He is the one who is providing you with everything so whatever he says is what you do': A Qualitative Study on Factors Affecting Secondary Schoolgirls' Dropout in Rural Western Kenya. *PLoS One* 2015;10:e0144321.



- 52 Wamoyi J, Heise L, Meiksin R, *et al.* Is transactional sex exploitative? A social norms perspective, with implications for interventions with adolescent girls and young women in Tanzania. *PLOS ONE* 2019;14:e0214366.
- 53 Cheng Y, Rogers C, Boerma CJ, *et al.* Clinician views and experiences with reproductive coercion screening in a family planning service. *Sex Health* 2023;20:71–9.
- 54 Lévesque S, Rousseau C, Raynault-Rioux L, *et al.* Canadian service providers' perspectives on reproductive coercion and abuse: a participatory action research to address their needs and support their actions. *Reprod Health* 2023;20:100.
- 55 Grace KT, Miller E. Future directions for reproductive coercion and abuse research. *Reprod Health* 2023;20:5.
- 56 Miller E, McCauley HL, Decker MR, *et al.* Implementation of a Family Planning Clinic–Based Partner Violence and Reproductive Coercion Intervention: Provider and Patient Perspectives. *Perspect Sex Reprod Health* 2017;49:85–93.
- 57 Bain LE, Amu H, Tarkang EE. Barriers and motivators of contraceptive use among young people in Sub-Saharan Africa: A systematic review of qualitative studies. *PLoS ONE* 2021;16:e0252745.
- 58 Harrington EK, Casmir E, Kithao P, *et al.* “Spoiled” girls: Understanding social influences on adolescent contraceptive decision-making in Kenya. *PLoS ONE* 2021;16:e0255954.
- 59 Ochako R, Mbondo M, Aloo S, *et al.* Barriers to modern contraceptive methods uptake among young women in Kenya: a qualitative study. *BMC Public Health* 2015;15:118.
- 60 Kyegombe N, Meiksin R, Namakula S, *et al.* Community perspectives on the extent to which transactional sex is viewed as sexual exploitation in Central Uganda. *BMC Int Health Hum Rights* 2020;20:11.