

CONFERENCE BOOK

4M Conference 2024



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Welcome

A very warm welcome to the Menarche, Menstruation, Menopause and Mental Health (4M) Consortium Conference 2024!

We're excited to be hosting our first conference and to be joined by so many 4M members and partner organisations. Whether you've been a member of the consortium for a while, or you found out about it very recently, we're so glad that you've been able to attend.

This conference brings together around 150 people interested in the 4Ms. Many of us are researchers from diverse academic disciplines including psychology, medicine, policy studies, law, humanities, and more. We're also joined by non-academics including representatives from menstrual or women's health advocacy groups, charities, healthcare providers, and FemTech companies.

With this conference, we aim to provide a platform for these diverse groups to share their work. It's an opportunity for us to form and build the connections that will help to ensure that research on the 4Ms is innovative, of the highest quality, aligned with needs and priorities, and impactful.

We sincerely hope that you have an enjoyable, informative, and valuable couple of days here in Exeter!

Warmest wishes,

The 4M Conference Committee

Gemma Sharp, Luana De Giorgio, Hat Porter, Deepthi Lavu, Tigist Grieve, Julie Riddell, Sarah Walker



About 4M

The Menarche, Menstruation, Menopause and Mental Health (4M) consortium was established in 2021, led by Dr Gemma Sharp. We are a network to facilitate collaborative interdisciplinary research into how menstruation and menopause interact with mental health.

Our vision

The overarching vision of 4M is a world in which menstrual experiences, including events around menarche and menopause, do not adversely affect mental health and social wellbeing.

Our mission

We believe that decisions and practices about individuals' menstrual and mental health should be informed by scientific and lived experience knowledge. Therefore, our mission is to facilitate interdisciplinary, stakeholder-informed, impact-focused, inclusive research at the intersection of menstrual and mental health.

The research we facilitate aims to develop a better understanding of:

- The biological, psychological, social, and environmental mechanisms that link menstrual and mental health;
- How interventions can effectively target these mechanisms to improve the relationship between menstrual and mental health;
- How these mechanisms and interventions affect menstrual and mental health differently in different contexts and at different stages of the life course, from menarche to menopause.

Our approach

We connect academic researchers from and across multiple disciplines. This includes early career researchers, who we support to develop and sustain their careers in the field. We also facilitate partnerships with non-academics and organisations, who can provide a unique insight into research priorities, approaches, and help ensure our research can inform ways to improve the experiences of people who menstruate.



What to expect

The 4M conference has a variety of activities to help us share our work, connect, and socialise with each other.

Keynote speakers: thirty minute presentations from internationally recognised leaders in menstrual health research, followed by Q&A.

Oral presentations: short presentations selected from abstract submissions, followed by a group Q&A.

Panel discussions: short introductions from panelists, either selected from abstract submissions or invited stakeholders, followed by a themed discussion between panelists and the audience.

Posters: posters from abstract submissions and/or presenters. Posters are up all day, but presenters will be available to discuss their posters during lunch times.

Stalls: some non-academic partners will exhibit information, resources, or products.

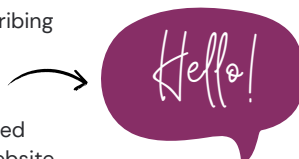
Early Career Researcher (ECR) prizes: our independent judges will award certificates and Amazon vouchers for the best poster and oral presentation from an ECR.

Catered breaks: refreshments and pastries are available in all breaks, and a light lunch is served each day.

Social event: we are excited to be hosting a social from 18:00 in Reed Hall, featuring a barbecue, face painting, a craft stall, and comedy.

Zine: a collection of poetry, illustration, collage and more, describing contributors' experiences of menstrual and mental health.

Padlet: please introduce yourselves, and find each other, [here](#).



Live scribe: the entire conference will be live scribed by talented illustrator, Laura Sorvala. The images will be uploaded to our website.

Filmographer: a filmographer will be filming for a couple of hours each day and will make a short film about the conference. (You can opt out of being filmed/any footage of you being used during registration).



Conference considerations

The 4M conference provides a platform for diverse groups to share their work, and for these groups to form new collaborations with people working towards a common goal of improving the lives of those who menstruate. We want this to be a comfortable and safe place to discuss relevant issues.

There are a few ways we can all help to ensure these aims are met:

- We come from diverse professional backgrounds and won't all have the same baseline knowledge. Please be mindful of this by avoiding jargon and explaining any concepts that might not be immediately understandable to a lay audience. We have also provided a glossary on our website (www.4mhealth.uk/glossary).
- If you're presenting, please keep to time. This shows respect for the audience, the other speakers, and the conference organisers.
- Equally, if you are presenting and you *do* go over time, please forgive the chairs for stepping in and asking you to stop. It is certainly not a reflection on the importance or interest of your presentation.
- When asking questions during a Q&A or panel discussion, please keep your questions brief. If you have 'more of a comment than a question', consider whether it might be better shared with the presenter during the next break.
- We're delighted to be joined by so many early career researchers (ECRs). For some, this will be their first conference. Please help to make it a positive experience by ensuring any criticism of their hard work is constructive.
- More generally, please keep all comments polite and friendly. If you want to challenge a point, please do so with kindness.
- If you have attended the conference alone and are struggling to make connections, or otherwise feeling a bit lost or uncomfortable, please speak to one of the organisers who will be able to keep an eye out for you and introduce you (if you want!) to people.



Thursday 20th June

9:00 – 9:30	Registration (Peter Chalk Centre)
9:30– 9:45	Welcome and Introduction to 4M and the Conference
9:45 – 11:00	Oral presentations: Experiences and management of menstrual bleeding and pain (part 1)
11:00 – 11:20	Morning break
11:20 – 12:00	Oral presentations: Experiences and management of menstrual bleeding and pain (part 2)
12:00 – 12:45	Keynote Talk 1: Hilary Critchley
12:45 – 13:40	Lunch and posters
13:40 – 14:20	Panel discussion: Data for menstrual and mental health research
14:20 – 15:00	Oral presentations: Premenstrual symptoms and disorders (part 1)
15:00 – 15:20	Afternoon break
15:20 – 15:40	Oral presentations: Premenstrual symptoms and disorders (part 2)
15:40 – 16:50	Panel discussion: Research Gaps and Priorities in Menstrual and Mental Health
16:50 – 17:00	Close Day 1
18:00 – 22:00	Evening entertainment & barbecue (Reed Hall)



Friday 21st June

9:00 – 9:30	Registration (Peter Chalk Centre)
9:30 – 9:40	Welcome to Day 2
9:40 – 10:45	Oral presentations: Adolescence and Education
10:45 – 11:05	Morning break
11:05 – 11:50	Keynote Talk 2: Mandi Tembo
11:50 – 12:45	Panel discussion: Adolescence and Education
12:45 – 13:45	Lunch and posters
13:45 – 14:50	Oral presentations: Menopause
14:50 – 15:35	Keynote Talk 3: Martha Hickey
15:35 – 15:55	Afternoon break
15:55 – 16:40	Panel discussion: Challenges and solutions in menopause research and practice
16:40 – 17:00	Close of conference & ECR prizes announced



Conference social

Please come along to our conference social at the beautiful Reed Hall, just down the hill from the Peter Chalk Centre.

Vegan and non-vegetarian barbecue food will be served on the lawns outside (weather permitting!)

We'll have some 4M-related artworks inside, including an update on a recent 4M public engagement activity.

4M-themed face painting will be offered thanks to talented face painter (and epidemiologist) Kaitlin Wade. Get a uterus on your forehead, or a tampon on your cheek!

Decorate a uterus or menstrual product and contribute your masterpiece to our 4M bunting.

Finally, we're very excited to be joined by comedian, writer and theatre maker Amy Mason (Funny Woman Finalist, BBC New Act shortlist).



A poster for the 4M Conference Social. At the top is a circular logo with '4m' in the center and '4th MARCH 2024' around the perimeter. Below the logo, the text 'CONFERENCE SOCIAL' is written in large, bold, purple capital letters. To the left of a central image is a list of activities: '• BARBECUE', '• CASH BAR', '• CRAFT STALL', '• 4M-THEMED FACEPAINTING'. Below the list is a square graphic with stylized purple and green floral patterns. To the right of the list is a photograph of comedian Amy Mason, a woman with short brown hair wearing a white top and a necklace, holding a yellow can. Below the photo is the text 'COMEDY BY AMY MASON'. At the bottom, the text reads '20TH JUNE 2024 FROM 6PM', 'REED HALL, UNIVERSITY OF EXETER', and 'ENTRY FOR 4M CONFERENCE ATTENDEES ONLY' in white text on a purple background.

4m
4th MARCH 2024

**CONFERENCE
SOCIAL**

- BARBECUE
- CASH BAR
- CRAFT STALL
- 4M-THEMED
FACEPAINTING

COMEDY BY AMY MASON

20TH JUNE 2024 FROM 6PM
REED HALL, UNIVERSITY OF EXETER
ENTRY FOR 4M CONFERENCE
ATTENDEES ONLY



Thank you to our funders

The conference would not be able to go ahead without your registration fees and generous funding from the following organisations. We are incredibly grateful to you and them!



South West Doctoral Training Partnership (SWDTP)

Funded by the Economic and Social Research Council (ESRC), the SWDTP consists of eight universities in the South West of England (Bath, Bath Spa, Bournemouth, Bristol, Exeter, Plymouth, Plymouth Majon, UWE). It offers PhD students funding and a stipend to study in one of 18 subject pathways as well as offering a range of further funding for additional projects. The SWDTP kindly funded 10 free places for ECRs at the conference, as well as funding ECR prizes, and expenses for some stakeholder organisations to attend.

University of Exeter Department of Psychology

The Department of Psychology provides world-leading psychology research and research-led teaching, underpinned by robust methods, high quality facilities, and strategic partnerships. This improves our understanding of mind and behaviour across the lifespan and across species, and to positively impact individual, societal, and environmental health and wellbeing. The department kindly funded the making of our conference video, and for our student volunteers to attend.



University
of Exeter



The GW4 Alliance

Founded in 2013, GW4 is an alliance of four of the most research-intensive and innovative universities in the UK: Bath, Bristol, Cardiff and Exeter. Collaboration is at the heart of everything GW4 does. 4M was initially funded by the GW4, and they kindly funded our conference illustrator, Laura Sorvala, to live scribe the sessions.



Venues & accessibility

Main venue: Peter Chalk Centre (17; 5F on the map)

All presentations and panel discussions will be held in the Newman Blue Lecture Theatre. Posters will be displayed in room 2.4–2.6. Lunch and refreshments will be served in the foyer. Room 2.1 is a designated quiet space that delegates are free to use as and when necessary.



Conference social: Woodbridge Suite, Reed Hall (14; 6E on the map)

Our conference social will take place in Reed Hall, which is a short walk from the Peter Chalk Centre.

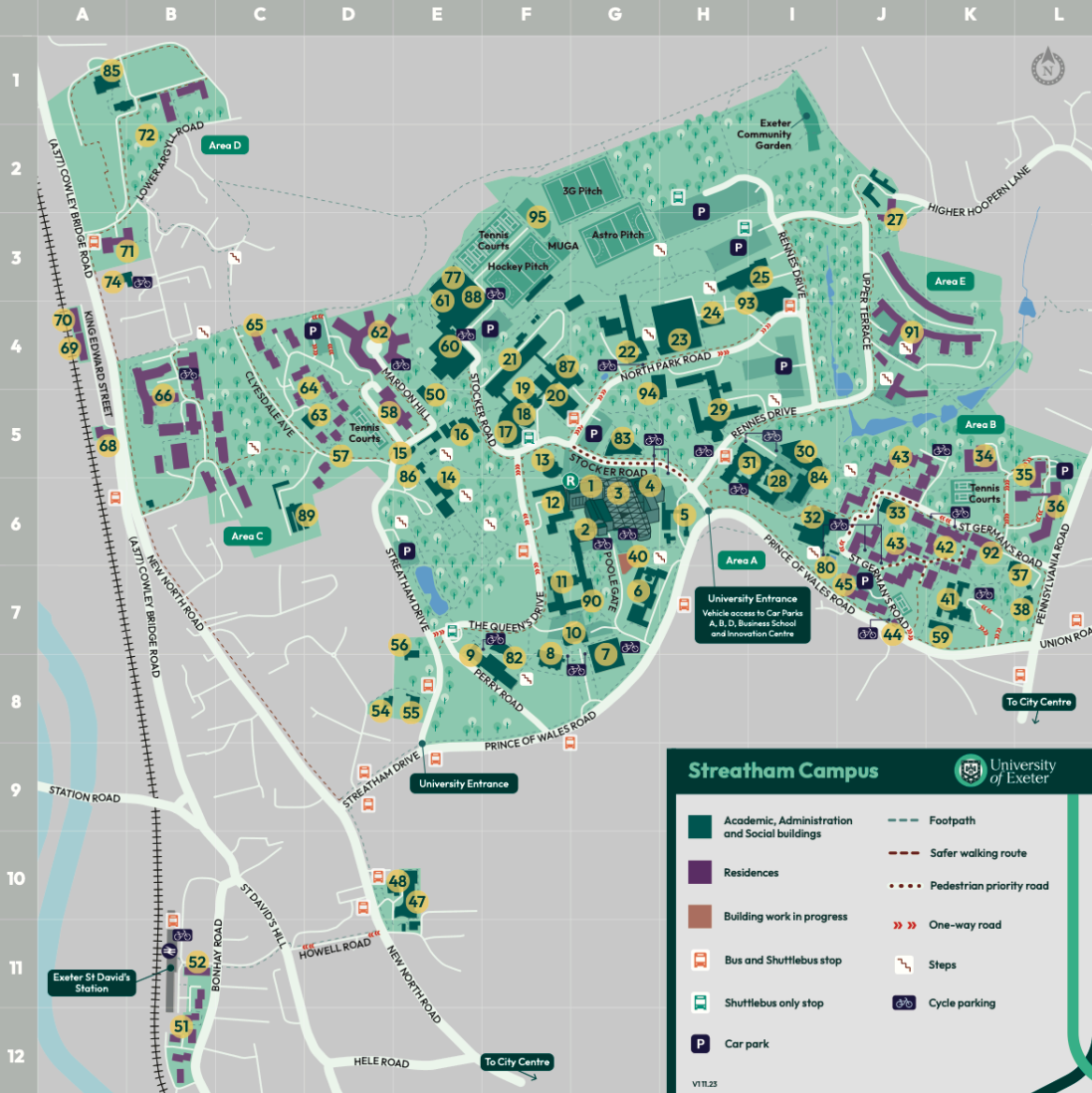
Accessibility

Accessibility information for both venues is available on the 4M website:

www.4mhealth.uk/4m-conference-2024/4m-conference-information-for-attendees/

If you have any concerns about accessibility of the venues, please don't hesitate to speak to one of the conference organisers.





Streatham Campus

Academic, Administration and Social buildings

Residences

Building work in progress

Bus and Shuttlebus stop

Shuttlebus only stop

P

Car park

Footpath

Safer walking route

Pedestrian priority road

One-way road

Steps

Cycle parking

Academic, Administration and Social buildings

Alexander	47	10E	Harrison	23	4H
Amory	29	5H	Hatherly	6	7G
Bill Douglas Cinema Museum	7	8G	Henry Wellcome Building for Biocatalysis	19	5F
Business School Building:One	84	6I	Hope Hall	41	7K
Byrne House	37	7K	Innovation Centre	25	4I
Catholic Chaplaincy	74	3A	Institute of Arab and Islamic Studies	16	5E
Centre for Resilience in Environment, Water and Waste	94	5H	INTO International Study Centre	83	5G
Clayden	54	8D	Kay Building	24	4H
Clydesdale House	63	5D	Kay House Duryard	85	1A
Cornwall House	32	6I	Knightley	55	8E
Cornwall House Swimming Pool	80	7I	Lafrowda House	33	6J
Creative Quadrant	28	6I	Laver	22	4G
Devonshire House	2	6G	Lazenby	38	7L
Digital Humanities Lab	90	7G	Library	4	6H
Exeter Northcott Theatre	13	5F	Living Systems	87	5F
Estate Services Centre	89	6C	Main Reception	(R)	6G
Family Centre (Owlets)	59	8K	Mardon Hill Wellbeing Centre	50	5E
Forum	3	6G	Mary Harris Memorial Chapel	10	7F
Geoffrey Pope	20	5F	Multi-Faith Centre	40	7G
Great Hall	1	6G	Newman	18	5F
			Northcote House	12	6F

Old Library	7	8G
Peter Chalk Centre	17	5F
Physics	21	4F
Queen's	11	7F
Redcot	56	7D
Reed Hall	14	6E
Reed Mews Wellbeing Centre	15	5E
Roborough	8	8F
Russell Seal Fitness Centre	88	4E
Sir Christopher Ondaatje Devon Cricket Centre	77	3E
Sir Henry Wellcome Building for Mood Disorders Research	82	8F
Sports Park	60	4E
St David's Retail Services	52	7D
Streatham Court	31	6H
Streatham Farm	5	6H
Student Health Centre	86	6E
South West Institute of Technology	93	4I
Tennis Centre	61	4E
Thornlea	48	10D
Vic Ambler Short Game Training Centre (Golf)	95	3F
Washington Singer	9	8E
Xfi	30	5I

Residences					
Birks Grange Village	66	5B			
Clydesdale Court	64	5C			
Clydesdale Rise	65	4C			
Cook Mews	69	4A			
Duryard	72	2B			
East Park	91	4J			
Garden Hill House	27	3J			
Holland Hall	62	4D			
Holland Hall Studios	62	4D			
King Edward Court	68	5A			
Lafrowda	43	7J			
Lafrowda Cottage	44	8J			
Llwellwyn Mews	70	4A			
Lopes Hall	34	6K			
Mardon Hall	58	5E			
Moberly	71	3A			
Nash Grove	57	5D			
Pennsylvania Court	36	6L			
Ransom Pickard	35	6L			
Rowe House	45	7J			
Spreytonway	92	7K			
St David's	51	12B			
St German's	42	7K			

Abstracts

Please find all abstracts for the conference in this section.

To search a specific name or topic use **ctrl + f** if using a laptop, and use the **search bar** if using on a smartphone.

Abstracts are listed in **alphabetical order** by first author's surname.



Exploring Psychosocial Factors Influencing Menstrual Health Experiences

1* Abdullayev, K., 1 Brown, A., Wallace, H., 1 Windgassen, S.
***lead presenter**

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Background: Literature highlights the impactful role of illness perceptions on illness experience and quality of life. Although the menstrual cycle is not an illness, many people who menstruate face both psychological and physiological difficulties throughout their cycle, particularly during menstruation, which ultimately impacts wellbeing. It is therefore important to understand the psychological and social factors that may play a role in exacerbating or alleviating these challenges, especially given the lack of research exploring menstrual health experiences.

Aims and Hypotheses: This study's primary aim is to explore the relationship between menstrual health related illness perceptions and menstrual health experiences. We hypothesize that more negative perceptions of one's menstrual cycle will be associated with more distressing menstrual health experiences. The secondary aim is to explore the potentially moderating effect of perceived social support. We hypothesize that higher levels of perceived social support will weaken the relationship between menstrual health-related illness perceptions and menstrual experiences. Based on power analysis for the primary hypotheses, we will recruit a minimum of 200 participants.



Methods and Analysis: UK-based people who menstruate are completing a quantitative cross-sectional online survey, including the following measures: menstrual health related illness perceptions, menstrual health attitudes, menstrual health education experiences, menstrual health related perceived social support, menstrual distress, and menstrual health related quality of life. As several of these measures were adapted to be appropriate for menstrual health, confirmatory factor analysis will be conducted to investigate the factor structure and model fit in this sample.

Discussion: This study provides novel insight into how menstrual health related illness perceptions may influence menstruation experiences, and therefore highlights a previously unexplored pathway to reducing the severity of menstrual symptoms and improving quality of life. The findings of the present study could justify a greater focus on targeting negative perceptions and attitudes related to menstrual health within educational curriculums and clinical practices. It is crucial for future research to continue building on our understanding of menstrual health experiences using high-quality, scientific evidence.



Do ADHD symptoms and impairment change across the menstrual cycle?: A study protocol for the Measuring Adult ADHD and Menstruation (MAAM) study

***Jessica Agnew-Blais¹, Stamatina Iliodromiti², Justyna Voisnyte¹, Amandine Senequier¹, Hayley Denyer³, Wakaho Hayashi^{3,4}, Amos Folarin^{5,6,7,8,9}, Richard Dobson^{5,6,7,8,9}, Jonna Kuntsi³**

***lead presenter**

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2. Women's Health Research Unit, Queen Mary University of London Barts and The London School of Medicine and Dentistry, UK

3. Social, Genetic and Developmental Psychiatry Centre, Institute of Psychiatry, Psychology and Neuroscience, King's College London, UK

4. Department of Psychiatry, Showa University School of Medicine, Japan

5. Department of Biostatistics and Health Informatics, Institute of Psychiatry, Psychology and Neuroscience, King's College London, UK

6. Institute of Health Informatics, University College London, London, UK

7. NIHR Biomedical Research Centre at South London and Maudsley NHS Foundation Trust and King's College London, UK

8. Health Data Research UK London, University College London, UK

9. NIHR Biomedical Research Centre at University College London Hospitals NHS Foundation Trust, UK



Background: The effects of hormonal fluctuations on functioning are a significant concern for women with attention-deficit hyperactivity disorder (ADHD). Fluctuations of hormone levels across the menstrual cycle are associated with adverse effects for some women, including depressed mood, as well as poorer functioning on tasks associated with memory and response inhibition. Given many women with ADHD already face challenges in these domains, additional exacerbation by hormonal changes may be a significant clinical issue. Declines in estrogen levels (e.g. premenstrually) are associated with reduced dopamine availability, and as dopamine is key neurotransmitter associated with ADHD, drops in dopamine availability may impact ADHD symptoms and compromise ADHD medication effectiveness. The Measuring Adult ADHD and Menstruation (MAAM) study is the first study to investigate hormonal changes and ADHD symptoms, impairment and medication effectiveness among women with ADHD, using remote, prospective monitoring of ADHD symptoms over the menstrual cycle.

Methods: The MAAM study will recruit 50 women and follow them prospectively for 3 months. Women will be recruited who are between the ages of 18–38 and who are currently taking ADHD medication, and are not pregnant, breastfeeding or using hormonal contraception. Real-world monitoring will include active monitoring via smart phone questionnaire to assess ADHD symptoms, depression, anxiety and other aspects of functioning. Passive monitoring via a wearable sensor, the Oura smart ring, will assess sleep quality and duration, physical activity and basal body temperature (which can be used to indicate ovulation and help track the menstrual cycle). These methods use the ADHD Remote Technology (ART) system, which is built on the RADAR-base mobile-health platform. All aspects of this project, from its inception, to study questionnaire selection and adaptation, and study design, are informed by a panel of women with lived experience of ADHD.

Discussion: The aim of the MAAM study is to provide quantitative evidence regarding change in ADHD symptoms and impairment across the menstrual cycle among women with ADHD. These findings could have clinical implications, as menstrual cycle tracking could be used by women to self-monitor and predict when functioning may be affected by hormonal changes. Additionally, if ADHD medication is less effective in certain cycle phases, this may suggest a benefit to increasing dose during these phases. If sleep and physical activity are key mediators, interventions could focus on improving these areas to mitigate hormonal effects.



Prevalence and factors associated with unmet need for menstrual hygiene management in six countries in sub-Saharan Africa: a multilevel analysis.

1*Akoth, C., 1Wambiya, E.O.A., 2Kibe, P.M., 3Mbuthia, G.W., 1Ng'ang'a, L., 3Otieno, P.O., 1Oguta, J.O.

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1University of Sheffield, United Kingdom

2 African Population and Health Research Centre, Kenya

2 Jomo Kenyatta University of Agriculture and Technology, Kenya

Background: Menstrual hygiene management (MHM) holds significant importance for the well-being of women and girls worldwide, given that over 300 million women experience menstruation. Despite being an essential issue, women and girls in a low-income setting often struggle to fulfill their menstrual hygiene needs due to various challenges. Nevertheless, numerous stakeholders have concerted efforts to improve access to MHM needs for women. With the aim of enhancing evidence and informing policy, our study sought to investigate the prevalence and determinants of unmet menstrual hygiene needs across Kenya, Burkina Faso, Niger, Uganda, and Ethiopia.

Methods: The study utilized data from Performance Monitoring for Action (PMA), which used a multi-stage stratified cluster design. The main outcome variable, the unmet need for menstrual hygiene, was defined as the lack of resources, supplies, and facilities for MHM. Analyzed data were summarized using frequencies and percentages to describe sample characteristics, and proportions and confidence intervals for prevalence data. Subsequently, a multi-level mixed-effect logistic regression was used to determine factors associated with unmet needs for MHM.



Results: The study included 4427 women in Kenya, 4406 in Ethiopia, 2667 in Uganda, 1976 in Burkina Faso, 1766 in Niger, and 2806 in Ghana. Across the countries, most women were aged 20–34 years, married or cohabiting, and had no children. Despite the predominant urban populations across the countries, Kenya and Uganda had more rural residents. Burkina Faso exhibited the highest unmet need for MHM at 74.8%, while Ghana had the lowest at 34.2%. Unmet MHM needs prevailed among uneducated women, multiparous, MHM material re-users, open defecators, and rural dwellers. Younger age, lower education, less wealth, unmarried status, and higher parity increased the odds of unmet needs.

Conclusion: The need for MHM is still unmet among women in Sub-Saharan Africa (SSA), with over half of the studied countries lacking essential resources. These findings underscore the pervasive nature of period poverty in SSA. Addressing MHM needs comprehensively is crucial, necessitating collaborative efforts to ensure all women have access to all menstrual needs as one unit. Policymakers and MHM program implementers should prioritize the affordability and accessibility of menstrual products and facilities, particularly targeting vulnerable communities.



Investigating Socioeconomic & Demographic Determinants of Adverse Child Health Outcomes in the Indian Subcontinent: A Cross-National Assessment of the Weathering Hypothesis

1*Sharlene Alauddin, 2Dr Sarah Walker, 2Professor William Henley

1e-mail: sa928@exeter.ac.uk, University of Exeter, UK
2 University of Exeter, UK

Introduction: Young and advanced maternal age, ethnic diversity, education, and socioeconomic background are associated with adverse birth and child health outcomes and play significant roles as contributing factors in health disparities. Evidence is accumulating that chronic exposure to such social and economic inequalities can lead to the acceleration of normal aging, termed the 'maternal weathering hypothesis.' Limited studies have explored its impact in low- and middle-income countries (LMICs). This study investigated the relevance of the maternal weathering hypothesis for understanding the impact of social inequalities on childbirth and health-related outcomes in the Indian subcontinent.



Methods: We used a pooled dataset from Demographic and Health Surveys including mothers from India (2019–2021), Bangladesh (2017–2018), Pakistan (2017–2018) and Nepal (2016). Associations between maternal age and offspring-related outcomes (stunting, wasting, underweight) were examined using logistic regression model. The impact of age, education and socioeconomic factors on maternal weathering was assessed by introducing interaction terms into the regression models. The magnitude of relative inequalities in health outcomes, expressed as ratios among ethnic/socioeconomic groups, was estimated using Theil's index.

Results: In the baseline analysis, we analyzed data on a total of 175,701 live births to mothers where information was available on childhood malnutritional status, among whom 33.8% of children were stunted, 19% wasted, and 29.8% were underweight. There was a U-shaped pattern in the overall effect of maternal age on childhood stunting and underweight. An increased risk of childhood stunting for low-educated and socially disadvantaged mothers was observed in their prime childbearing ages (25 to 34 years) [OR:1.19, 95% CI:1.13–1.24 & OR:1.14, 95% CI:1.09–1.19] and the risk remained high among mothers aged ≥ 35 [OR:1.27, 95% CI:1.15–1.40 & OR:1.26, 95% CI:1.15–1.39]. Similar patterns are observed for childhood wasting and underweight.

Conclusion: This study observed that the risk of unhealthy child growth outcomes among the children born to women with low education and living in a poor socioeconomic class increases during their 'prime' childbearing ages and is maintained among advanced-aged mothers. This provides evidence to support the relevance of the weathering hypothesis for explaining infant health inequalities in LMICs. The findings of this study aim to contribute to attaining the sustainable development goal of 'Good health and well-being' by advocating effective policies to eradicate unjust social inequalities and improve health outcomes in the LMICs of the Indian subcontinent.



Comparing birth interval determinants for first and subsequent births in Bangladesh: A recurrent time-to-event analysis of cross-sectional survey data

1*Sharlene Alauddin, 2Dr Sarah Walker, 2Professor William Henley

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2 University of Exeter, UK

Background: The time from marriage to first birth(FBI), and the length of successive birth intervals(SBI) have both been linked to adverse maternal and child health outcomes in Low- and Middle-Income Countries. Previous studies on birth intervals (BI) generally consider either FBI or SBI but not both, and treat successive births for a mother as independent events. This study aims to investigate whether the socioeconomic and demographic determinants of birth interval length in Bangladesh are consistent for FBI and SBI.

Methods: Data was obtained for the prior reproductive history of 20,127 women from the Bangladesh Demographic and Health Survey (BDHS-2017). A range of recurrent event models were fitted for joint modelling of FBI and SBI, allowing for the dependency between successive births. Differences between BI determinants for FBI and SBI were investigated using interaction terms.



Results: The average at marriage was 16.14 ± 2.97 with a median FBI of 21 months and 48% of women having their first child before the age of 18. Women had a median of 3 children with SBI of 41 months. Differences in the significance, direction, and magnitude of risk factors for FBI and SBI were seen for socioeconomic and demographic variables such as mother's education, age of the mother at index birth, effectiveness of contraception, and access to family planning/media alter the risk of having a child with increasing birth order. For example, higher levels of maternal education were associated with shorter first birth intervals (HR: 1.08, 95% CI: 1.04–1.12) but longer intervals for second and subsequent births (HR: 0.88, 95%CI: 0.81–0.97). Risk factors of access to media and mothers' working status were found to be significant for SBI only. Among all the recurrent event models, the PWP–TT model was selected as the best-fitting model. Despite the variation in SBI by socioeconomic factors, median birth interval lengths remained within WHO guidelines for all substantive risk strata.

Conclusion: Many Bangladeshi women experience early marriage and have their first child before the age of 18. The FBI holds particular importance as the initial step into motherhood, setting the foundation for the course of the woman's overall reproductive history. This study has shown that the socioeconomic factors influencing the timing of a woman's first birth can differ markedly from the factors influencing the timing of subsequent births. Better understanding of these factors can help policymakers develop targeted interventions to address family planning goals and facilitate improved maternal and infant health.



Hormonal Contraceptive Use in Adolescence and Risk for Depression: Are Sampling Biases Masking Long-Term Effects?

1*Anderl, C., 2Chen, F. S., 2Zareian, B., 2Nelson, M.A. & 2,3Edwards, N.

*lead presenter

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2 University of British Columbia, Canada

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Objective: Growing evidence suggests that the use of hormonal contraceptives (HCs) during adolescence may be linked to increased risk for depression. This presentation examines major inconsistencies that have been reported regarding this relationship, and in particular, how the common practice of combining “never users” and “former users” of HCs in analyses obscures patterns that are detectable when these groups are analyzed separately.



Methods: A focused systematic review was conducted of research examining the relationship between HC use and depression to determine what data-analytic choices were commonly made by individual researchers. Specifically, we assessed whether past history of HC use had been accounted for in each reported analysis. Furthermore, we investigated the relationship between HC use and depression in three additional samples: 1) a US population representative sample of almost 900 adolescents enrolled in the National Longitudinal Study of Adolescent Health who were repeatedly interviewed from adolescence into adulthood, 2) a retrospective assessment of over 1,000 females residing in the US recruited via Amazon Mechanical Turk, and 3) a retrospective assessment of over 2,000 female undergraduate students at a Canadian university.

Results: The majority of papers published between 2013 and 2022 did not account for former use of HCs. These papers reported mixed findings regarding the relationship between HC use and depression. In contrast, the subset of papers that did account for former use of HCs, or otherwise explicitly addressed common biases affecting the interpretation of observational data, revealed a more consistent relationship between HC use and depression and analyses of the three additional samples provided further supporting evidence.

Conclusion: We conclude that there is consistent evidence of a relationship between adolescent HC use and long-term risk for depression and offer several recommendations to help ensure that future work in this area will yield consistent, interpretable findings. Although this presentation focuses primarily on HCs and depression, many of the analytical approaches and recommendations outlined within it are also relevant to research investigating effects related to the menstrual cycle as well as research on the side effects of other drugs and medications.



Premenstrual Dysphoric Disorder; Indicators, Causes and Triggers

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Premenstrual Dysphoric Disorder (PMDD) affects 1–5.5% of people with periods (Wei et al., 2018). It is defined as the sudden onset of severe changes in emotional, cognitive and behavioural functioning during the late luteal phase of the menstrual cycle (i.e. the 7–10 days before the onset of menstrual bleeding). Symptoms subside within a few days of the onset of menses (DSM-5, (American Psychiatric Association, 2013) and are significantly distressing, with 30% of people with PMDD attempting to commit suicide in their lifetime (Eisenlohr-Moul et al., 2022).

The diagnostic criteria for PMDD specify that symptoms need to be confirmed prospectively by daily ratings recorded for at least 2 symptomatic cycles. The majority studies on PMDD rely on retrospective measures as highlighted by Schmalenberger and colleagues (Schmalenberger et al., 2021) who emphasise the lack of operationalizing of methods has lead to a significant confusion in the literature and inaccuracies in published meta-analyses (Hampson, 2020).

PreDDICT ('Premenstrual Dysphoric Disorder; Indicators, Causes and Triggers') project aims to be the first large-scale genetic study of Premenstrual Dysphoric Disorder (PMDD), which utilises standardised prospective measures for confirming diagnosis.



At present we have recruited 901 people who have either have a confirmed diagnosis or PMDD, or are in the process of receiving one. Participants who have received a diagnosis given by a medical professional with the help of a mood diary, and live in the UK were invited to provide a saliva sample for genetic analysis. We have 247 participants who meet this criteria, and 125 of these have provided a sample.

For participants who do not have a diagnosis of PMDD through completing a mood diary, we have invited them to take part in our online Mood Monitoring diary for 2 consecutive menstrual cycles. A total of 357 participants did qualify to take part, but of the 181 who agreed to take part in the diary, we only had 28 who completed it. From speaking with participants it was apparent this was due to some limitations to the survey platform we were using. Therefore, we are now collaborating with Cardiff University's School of Computer Science to develop a bespoke Mood and Menstrual tracking app to ensure the accurate collection of symptom severity against the stages of the menstrual cycle.



Conceptualisations of menstruation in English education policy 1928–2020

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Young activists have suggested that the stigma around menstruation can affect menstruating young people's wellbeing and mental health (Rees 2023). England's Department for Education (DfE) (DfE 2020) has responded to such youth activism by introducing free period products in schools and a new relationships, health, and sex education (RSHE) curriculum. It claims such policies are crucial to tackling menstrual stigma (DfE 2020). Such policies construct menstruation as a biological process that teachers can instruct young people about and provide products for. The policies thereby appear to position adults as agentic actors who can address stigma and young people as passive consumers of menstrual products and knowledge. As such, the policies overlook the potential for young people to contribute to addressing stigma. This oral presentation considers how government policy arrived at this point and how it could be different. It utilises Deleuze and Guattari's (1988) concept of 'tracing and mapping' as a method to analyse 27 English education policy documents from 1928 until 2020 that are connected to the current RSHE and free period products policies. In doing so, the presentation traces how menstruation has been conceptualised in English education policies, as well as how such conceptualisations have positioned young people.



The presentation highlights how such policies have constructed menstruation as 1) a cis girls' biological process; 2) a controllable problem; and 3) a process that can be instructed on and learned. Through analysing the philosophical assumptions that underpin such conceptualisations, the paper then explains how each of the three conceptualisations position young people as passive non-agents. The presentation then draws on ideas from feminist relational materialist philosophy, critical menstruation studies and childhood studies to 'map' or experiment with different ways of thinking about menstruation and agency. It finishes by reimagining menstruation education young people's role in addressing stigma.



The Mental Health Burden of Menstrual Restrictions in Nepal: Evidence From Cross-Sectional Survey Data

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Background: Adolescence is a critical time for mental health, with many mental health conditions first emerging during this life stage. There is a particularly stark research gap in terms of understanding predictors of depression and anxiety in LMICs, even though adolescents in LMICs account for one in three suicides worldwide. Menstruation in Nepal is surrounded by stigma and restrictions, the most severe of which is chhaupadi (seclusion during menstruation), which is criminalized. Stigma is a powerful force constraining progress in menstrual and mental health. While the Government of Nepal has long recognized the issue of chhaupadi it is yet to fully acknowledge the full range of menstrual taboos in Nepal. This paper considers whether chhaupadi is really so uniquely harmful that it should be singled out in policy and whether the focus on chhaupadi has been to the detriment of broader conversations and policy solutions concerning the impact of menstrual restrictions and stigma.



Method and Results: This paper utilizes both the 2022 Nepal Demographic and Health Survey (DHS), and primary survey data collected in Dailekh District in 2019, to provide a detailed picture of the mental health impacts of menstrual restrictions at the national level and a more detailed picture of the situation in a district where chhaupadi is commonly practiced. The data from Dailekh district includes 365 post-menarcheal adolescents aged 14–19 years, while the DHS includes those aged 15–49. The DHS measures anxiety using the GAD-7 and depression using the PHQ-9, while the Dailekh data uses the Nepal Depression Self-Rating scale, which has been adapted and validated specifically amongst adolescents in Nepal. We estimate comparative multilevel logistic and OLS regression models of depression for adolescents in both surveys. This is compared to other age groups and models with anxiety as the outcome for the DHS data. Finally, we utilize the more detailed menstrual data from Dailekh to look at the impact of menstrual pain. Results show that chhaupadi is significantly associated with both depression and anxiety, but that other many other menstrual restrictions are also associated with poor mental health outcomes. Interestingly, solely religious restrictions (such as not visiting temple or practicing pooja) are not associated with poor mental health. Mental health does not show a strong socioeconomic gradient, but being in education is protective for adolescents. Menstrual pain also shows a significant association with poor mental health indicating the importance of menstrual programmes that both address stigma and improve access to healthcare.



Engaging with evidence-informed policy to support participation in physical activity during menstruation: rapid evidence review

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Background: Insufficient physical activity is a leading risk factor for non-communicable diseases and has a negative effect on mental health and quality of life.(1) Women living in Wales are less likely to engage in regular exercise (150 min/week moderate-intensity, 75 min/week vigorous-intensity exercise, or any combination of these) than men, in line with global trends.(2,3) Teenage girls are less active than boys – 84% report reduced interest in sport and activities following menarche and 23% feel embarrassed to participate in exercise during their periods.(4) Associated menstrual symptoms can also be a barrier to physical activity, whilst trans and non-binary populations may experience additional challenges. Current NHS physical activity guidance does not include any advice on menstrual health during physical activities for women, girls and people who menstruate.(5)



Objective: The Welsh Government is committed to promoting equity and inclusion in health and social care, as outlined in The Quality Statement for women and girls' health.(6) Therefore, the aim of this rapid evidence review is to identify research focusing on the impact of periods on physical activity participation for women, girls and people who menstruate, to inform the Welsh Government Period Proud Action Plan.(7)

Methods and Results: The Health and Care Research Wales Evidence Centre works with policy, clinical and social care leaders to identify evidence needs and deliver rapid, relevant, rigorous research to help inform decision making.(8) Our rapid evidence reviews follow a phased, tailored approach with stakeholders including policy leads, academic experts and public partners as collaborators. (9) We use abbreviated systematic review methods: protocol development, formal database and grey literature searches, study selection, quality appraisal, data extraction and data synthesis. A knowledge mobilisation plan is then developed to ensure the evidence reaches those that need it and understand the impact of the work. This rapid evidence review is currently being conducted and will be completed by May 2024 with findings available to be presented at the conference.

Conclusion: The findings will help inform workplace, educational and other relevant recommendations for women, girls and people who menstruate throughout the lifespan, as part of the Welsh Government Period Proud Action Plan. It is essential to engage with policy makers, public contributors and key stakeholders such as Sport Wales to prevent menstruation being a barrier to participation in physical activity, to benefit the physical and mental health of the women of Wales



Mental and Psychosocial Aspects of Menstruation: An Analysis of Public Policies in Nepal

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Menstrual health has remained a neglected aspect of SRHR in low and middle-income countries including Nepal. The barriers to good menstrual health contribute to physical, mental, and psycho-social impacts like pain, confusion, stress, shame, and anxiety on a person who menstruates. Moreover, social restrictions, taboos, and stigma surrounding menstruation add to these impacts. Nepal's policy landscape has a crucial role in determining the efforts to overcome these barriers and impacts. This paper explores the policy environment of menstruation in Nepal. Content analysis of relevant public policies was conducted to assess the extent to which these policy documents have addressed the issue of menstruation. Altogether 17 policy documents endorsed between 2000–2003 were reviewed across various sectors including health, education, and sanitation.



There is an absence of a dedicated policy on menstruation. Out of 17 reviewed policy documents, 10 mention menstruation either directly or indirectly. Most of the policy documents have focused on menstrual hygiene management like the construction of toilets, availability of soap and water and some have mentioned the availability of menstrual products and awareness raising on menstrual hygiene in schools. Only one policy document has touched upon the issue of menstrual pain while none of the policy documents mentioned mental or psychosocial well-being related to menstruation. Policy actions on menstruation are scattered and inadequate and mainly focus on schools, neglecting others. A dedicated and holistic policy document incorporating other dimensions apart from sanitation and hygiene is necessary to ensure the well-being of all Nepalese who menstruate.



Menstrual Healthcare Experiences of Gender-Diverse Menstruators in Scotland: Protocol for a Qualitative Study

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Background: Menstrual health is a critical aspect of reproductive health, yet research and healthcare services often overlook the experiences of gender-diverse individuals who menstruate. Gender diversity encompasses a spectrum of identities beyond the binary understanding of male and female, including transgender, non-binary, and genderqueer individuals. In Scotland, despite progressive steps towards LGBTQ+ inclusivity, there remains a dearth of research exploring the unique challenges faced by gender-diverse menstruators in accessing and navigating menstrual healthcare services.

Rationale: Understanding the menstrual healthcare experiences of gender-diverse individuals is essential for promoting inclusive and equitable healthcare practices. Existing literature predominantly focuses on cisgender women, neglecting the diverse needs and experiences of gender-diverse individuals. Moreover, societal stigmatization and institutional barriers exacerbate the marginalization of gender-diverse menstruators, leading to disparities in healthcare access and quality of care. By employing an Interpretative Phenomenological Analysis (IPA) approach, this study aims to provide an in-depth exploration of the lived experiences, challenges, and coping strategies of gender-diverse individuals accessing menstrual healthcare services in Scotland. Such insights are crucial for informing healthcare policies, practices, and interventions that prioritize inclusivity and address the unique needs of this marginalized population.



Methods: This qualitative study will recruit a purposive sample of gender-diverse menstruators aged 18 years and above from diverse backgrounds and identities. Semi-structured interviews will be conducted to facilitate rich data collection, allowing participants to articulate their experiences, perspectives, and concerns regarding menstrual healthcare. Data analysis will follow the principles of Interpretative Phenomenological Analysis, focusing on uncovering the underlying meanings and patterns within participants' narratives.

Conclusion: By amplifying the voices and experiences of gender-diverse menstruators, this study seeks to contribute to the growing body of literature on menstrual health and gender diversity. Ultimately, the findings are anticipated to inform policy recommendations and healthcare interventions aimed at fostering inclusivity, reducing stigma, and improving the accessibility and quality of menstrual healthcare services in Scotland and beyond



Menopause in whales: late-life help, harm and the evolution of menopause in the ocean

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Menopause – extended female post-reproductive life – is uncommon in animals. In fact, the only species demonstrated to exhibit menopause in natural conditions are humans and five species of whale. Here I will present a summary of work we have been doing to understand what whales can teach us about why this unusual strategy has evolved. First, I will present data comparing across different whale species that do and do not exhibit menopause to show how menopause has evolved. I will compare this to what we know about the development of menopause in humans. Second, I will present work from a series of studies investigating the evolutionary pressures that led to the evolution of menopause, focusing on studies in menopause-exhibiting killer whales. Specifically, I will present work highlighting the role of post-reproductive females in leading their groups, and providing survival benefits to their offspring and grandoffspring. I will also present work highlighting the role of intergenerational reproductive competition in selecting against female late-life reproduction. I will discuss these results in relation to menopause in humans and highlight how comparing across species can give valuable insights in human life history.



Evaluation of barriers to and predictors of help-seeking for premenstrual symptoms and disorders

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Premenstrual symptoms and disorders impact a substantial portion of the population, affecting wellbeing, productivity and increasing suicidality. Despite the potential severity of these conditions and the availability of effective treatments, individuals tend to opt for online resources and lifestyle changes over accessing formal healthcare. Understanding the barriers to engaging in formal care for premenstrual symptoms is crucial, especially as it is necessary to gain access to medical treatments. Additionally, understanding barriers to care and determining factors implicated in predicting help-seeking can assist in designing data-driven public health interventions to improve engagement. The aims of the study included: (1) identifying barriers to formal help-seeking for premenstrual symptoms, and (2) examine factors predictive of formal help-seeking using a machine learning approach.

Data from 592 UK-based participants who experienced premenstrual symptoms across consecutive menstrual cycles were collected via an online survey. The average participant age was 33.91 (SD=6.18), with the majority identifying as women (97.30%) and being white (91.89%). 57.26% (n=339) had sought help from HCPs for premenstrual symptoms.



The study revealed that concerns that symptoms may be dismissed or not taken seriously were predominant barriers to formal help-seeking, affecting both those who had sought help (95.58%, n=324) and those who had not (92.09%, n=233). Further analysis revealed significant differences in perceived formal help-seeking barriers between the two groups.

An extreme gradient boosted machine learning approach was employed to examine the predictors of formal help-seeking (AUC-ROC=0.74). Impaired social functioning was revealed as the top predictor of previous formal help-seeking. Not having had a previous negative experience of care for a gynaecological or reproductive condition, recognising symptom severity is high enough to warrant formal help, and thinking professional care would help were also highly implicated.

Overall, the results reveal key approaches for encouraging engagement with formal healthcare for premenstrual symptoms and disorders. Notably, functional impairment was identified as highly influential in driving help-seeking behaviour. Additionally, the results demonstrate the importance of improved HCP training to deliver high quality, attentive care for a variety of women's health conditions. Furthermore, effective public health messaging is vital to combat symptom normalisation and to educate about the efficacy of available interventions.



Menarche & Menstrual Health in Adolescents with Down Syndrome in the UK

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Available evidence indicates that people with learning difficulties face unique challenges and suffer disparities in many aspects of their menstrual health experience. This research aims to describe the menstrual health-related knowledge and experiences of adolescents with Down syndrome in the UK to inform the development of targeted and effective interventions and guidance to improve menstrual health outcomes for this population. This mixed-methods study involves a national online survey targeting caregivers of adolescents aged 10–19 years with Down syndrome and follow-up interviews with adolescents aged 13–19 years and their family and professional caregivers. The study is funded by the Down Syndrome Research Foundation.



Investigating employment experiences of people experiencing problematic menstruation in the hospitality industry

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Up to 1 in 3 women experience periods that are too heavy, irregular, prolonged, infrequent or too frequent, and 1 in 4 experience menstrual pain that limits their daily activity. People experiencing problematic menstruation are more likely to miss work, work despite having disruptive symptoms, or experience stress and job dissatisfaction. The existing literature on problematic menstruation and employment lacks focus on people in lower-paid work, who in addition to being more financially vulnerable are also more likely to have working conditions that make problematic menstruation symptoms difficult to manage. The hospitality sector, which represents approximately 10% of the UK's workforce, is one in which workers typically spend hours standing and walking, with few opportunities to sit down or take breaks. The sector also has a predominantly female workforce, with women overrepresented in low-paid, low-skilled roles and underrepresented in skilled decision-making roles. Drawing upon Acker's gendered organisations theory, the current research aims to address a gap in the literature by investigating the employment experiences of UK hospitality workers managing problematic menstruation using qualitative data from semi-structured interviews.



Four women were interviewed as part of a pilot study in February 2024. Analysis of the data showed that access to bathrooms could be very difficult due to high customer volumes, venue layouts, and the expectation that workers be constantly available to customers and colleagues. Sanitary bins were often unavailable in staff bathrooms. Participants faced negative reactions and guilt when they missed work, left early, or took breaks, believing they would be seen as trying to 'get away with doing less' or that they had 'abandoned' their colleagues. Participants said their health was 'neglected' or deprioritised due to the long and busy hours of hospitality work. Three participants had sought medical care; one had received a diagnosis of endometriosis, which led to her manager making more accommodations for her condition. Participants also believed that male supervisors were less understanding and empathetic and were reluctant to disclose their symptoms or talk about periods with them.

The pilot study data is being used to refine and inform the main study of the project, due to begin in summer 2024, which aims to further investigate employment experiences among hospitality workers and explore the impact of employment experiences on medical treatment decisions, with an aim to develop recommendations for both hospitality organisations and clinicians to better support menstruating employees and identify barriers to treatment uptake.



Menstrual Health Education and Knowledge in Sub-Saharan Africa

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There has been a growing number of menstrual health interventions being implemented globally. However, in the context of sub-Saharan Africa (SSA) there is a lack of evidence synthesizing the menstrual health education that has been provided to individuals. It is important to understand the type of education received and the impact it has on individual and community perceptions of menstrual experiences and overall menstrual health. For example, puberty for girls in general and rural girls in particular is a critical transition which brings other concerns such as having a period with limited knowledge and practical resources (Grieve 2016; Sommer 2009; WaterAid 2009).

Exploring and critiquing previous menstrual health education, whether it is formal or informal, is imperative for understanding where and how knowledge about menstruation is produced and reproduced, as well as how well it prepares adolescent girls for menarche, and how it influences menstrual health management and choices later in life. In this paper we identify current gaps in menstrual health education more broadly and specifically in SSA.



Drawing from a systematic review of SSA countries, this mixed-method review will synthesise both qualitative and quantitative studies. The imperative is to capture qualitative experiences of menstrual education drawn from the lived experiences of individuals living in SSA countries which includes traditional, formal, and informal education. The quantitative studies included measurements of menstrual health education and knowledge among community members who took part in such interventions.

The insights will offer nuanced understanding of menstrual health education by extending knowledge and understanding of related areas of reproductive health. It will be a valuable source to inform academic and non-academic communities including researchers, International Non-Governmental Organisations (INGOs), Non-Governmental Organisations (NGOs), education systems, and policy makers within SSA countries. This paper will address additional gaps in the literature by exploring what informs menstrual health knowledge in SSA countries as well as analysing shifts in menstrual health education over time.



The impact of the menstrual cycle on emotional dysregulation in people with borderline personality disorder

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The phases of the menstrual cycle can have profound impacts for those diagnosed with mental health conditions. This includes a worsening of symptoms such as psychosis, mania, anxiety, and substance use (Handy et al, 2021), a 25% increase in risk of death by suicide along with a 17% increase in suicidal ideation, and a 20% increased risk of psychiatric admission during menstruation (Jang & Elfenbein, 2019). Common mental health diagnoses such as depression, anxiety disorders and psychosis have been well documented as being exacerbated by different phases of the menstrual cycle, but there is a lack of focus on personality disorders with only 7 research studies identified worldwide by a systematic review conducted by the author in October 2022. The most diagnosed personality disorder is borderline personality disorder (BPD), with a UK prevalence of 1 in 20 (Mental Health Foundation, 2022), and an estimated 70% of psychiatric inpatients having a personality disorder (Dale et al, 2017). Emotional dysregulation is the most recognised, and particularly pernicious, characteristic of BPD, linked with increased suicidal behaviour (Turton et al, 2021), risk taking and impulsivity, substance use and self-harm (Chapman et al, 2022). Despite this, no studies to date have evaluated the impact of the different phases of the menstrual cycle on emotional dysregulation in people with BPD.



This poster represents a planned doctoral enquiry examining the impact of the menstrual cycle on emotional dysregulation in people with BPD over a 3-month period. It is a mixed methodology study about the lived experiences of people with BPD using 3 methods of obtaining data. These are 1) daily cyclical tracking diaries, 2) weekly emotional dysregulation self-rating assessments and 3) monthly semi-structured interviews. It will specifically explore the impact of fluctuating symptomology specific to BPD, and participants' perceptions of menstrual knowledge and their own wellbeing, and how they think other people they interact with perceive this. It also aims to consider the potential for diagnostic overshadowing, in particular the act of their menstrual worsening of symptoms being attributed to their diagnosis of BPD. Both sets of data will be triangulated to produce an explanatory account of the impact of the menstrual cycle on emotional dysregulation in BPD. It is anticipated that the menstrual cycle will be found to have a marked impact on emotional dysregulation experienced by the participants, and that this may have a secondary impact on their quality of life and sense of self.



EQUATE: Enhancing Quality And inTEgration of women's mental healthcare in physical care settings

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The aim of this PhD project is to bridge the gap between psychiatry and gynaecology.

There are high rates of comorbidity between gynaecological and female reproductive system disorders. Many common gynaecological conditions are associated with psychological or psychiatric disturbances and impaired quality of life, including endometriosis, PCOS and chronic pelvic pain. Normal reproductive events also predispose women to psychiatric symptoms with an increased rate of depression during perimenopause. Premenstrual disorders are a particular area where closer collaboration is needed between gynaecologists and mental health professionals, given that the assessment and treatment span both areas of healthcare. Most women with premenstrual dysphoric disorder (PMDD) experience at least passive suicidal ideation, and one-third have had a suicide attempt, although it is a disorder that many mental health professionals are unfamiliar with.



The PhD is composed of the following four (so far) projects, all at the proposal/early data collection stage:

1. A systematic review to synthesise the current evidence base for integrated working between these two specialties to inform clinical practice, service delivery, and public policy. Given the multifaceted nature of available evidence, a synthesis of both qualitative and quantitative evidence is necessary.
2. A cross-sectional study to determine psychopathology in gynaecology outpatients using validated instruments for depressive symptoms (Patient Health Questionnaire; PHQ-9), anxiety (General Anxiety Disorder Scale; GAD-7), and somatic symptom disorder (Somatic Symptom Disorder – B Criteria Scale; SSD-12).
3. A qualitative study using semi-structured interviews of both consultant and trainee gynaecologists to explore their perspectives and experience of the need for psychiatric or mental health expertise in the treatment and management of their patients.
4. Pilot screening pathway for premenstrual disorders among women presenting with suicidal thoughts and behaviours to an emergency department. A biopsychosocial assessment, as part of routine clinical care, will be followed by screening for PMDD using the PSST instrument, GAD-7, PHQ-9 and Adverse Childhood Experience Questionnaire. Patients who screen positive will be asked to complete two months of prospective daily ratings to determine if they meet criteria for PMDD, provided with psychoeducation, and referred on as appropriate.

This work will generate new expertise in the Irish setting on the interface between these two specialties and inform a proposed model of care for delivering integrated mental healthcare to patients with gynaecological disorders or reproductive transitions.



Menstruation and Suicide: Exploring the Role of Menstrual Cycle Data in Suicide Autopsies

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Suicide is a multifaceted phenomenon requiring integrated research and intersects with various aspects of human health and well-being. Among these, the menstrual cycle emerges as underexplored dimension. Existing research on the connection between menstruation and suicide yields mixed results, with autopsy studies from India hinting at a potential link that warrants further investigation.

Menstrual cyclicity can profoundly impact physical, psychological, and social well-being, often manifesting in conditions such as endometriosis, premenstrual syndrome, and premenstrual dysphoric disorder (PMDD). PMDD, particularly, has been linked to heightened suicide risk, underscoring the significance of understanding menstrual health in the context of mental well-being. However, menstrual health remains underexamined, stigmatised, and inadequately addressed globally.



Methodological challenges are abound in this area of inquiry, including issues related to sample size, the absence of longitudinal studies, ambiguity in defining menstrual phases, clarifying suicidal intent, and accounting for contraceptive influences. Moreover, the complex interplay of physiological, psychological, and sociocultural factors complicates our understanding of both menstruation and suicide. Scant attention is given to menstrual cycle phase status in autopsy reports of suicide cases, with the majority of relevant research originating from India. Comprehensive autopsy data analysis could provide valuable insights into community healthcare needs.

If indeed there is a relationship between suicide and menstrual cycle phase, elucidating this connection holds promise not only for informing pathology practices but also for developing more effective suicide prevention strategies. To navigate this complex terrain, a questionnaire-based study was distributed to pathologists internationally, focusing on their autopsy practices regarding the collection of menstrual cycle data. Initial findings reveal varied practices and rationales among pathologists, with most not routinely collecting menstrual cycle data, although several noted a trend of menstruation present in suicide cases.

This presentation invites participants to engage in discussion regarding innovative approaches, methodologies, or frameworks that might be considered in this ongoing PhD research to address the current state of research equipoise. For example, what methodologies could be employed to conclusively determine the presence or absence of a link between menstrual cycle phase and suicide? Collaborative efforts are essential to advancing our understanding of this complex intersection and developing effective interventions to support individuals' mental health and well-being.



Co-producing a digital symptom reporting tool for suspected endometriosis: A development and pilot study

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Background: Endometriosis is a chronic condition where tissue, similar to tissue found inside the uterus, is found elsewhere in the body. Endometriosis affects at least 1 in 10 women and people assigned female at birth, and often causes severe symptoms (pain, infertility) which can significantly impact quality of life. Despite this impact, it takes on average 8 years to receive a diagnosis for endometriosis in the UK. A digital endometriosis symptom reporting tool (Endo Cymru SRT) was co-produced with patients to track symptoms of suspected endometriosis, to facilitate discussion of these symptoms with healthcare professionals, with the expectation that more effective discussions would reduce diagnostic delay.

Aims: To collect initial pilot data on the digital version of the Endo Cymru SRT including user data (e.g. frequency of use) and feedback on the tool, and initial data about association between tracking and healthcare seeking intentions and behaviours.



Results: 63 participants completed the baseline questionnaire ($M_{age} = 19.6$ years, range = 18 to 34). 17 participants (27%) scored 4 or higher on the Period Impact and Pain Assessment, indicating potential risk of endometriosis, while only 4 participants (6%) suspected their period/pelvic symptoms were very/extremely likely to be due to an underlying condition. Participants reported moderate comfort discussing their menstrual symptoms with a doctor ($M = 3.7$; $SD = 1.0$; 1:strongly disagree; 5:strongly agree). Daily use of the symptom reporting tool is currently underway (to be completed April 1, 2024).

Conclusions: Many more individuals experience symptoms that would warrant clinical attention than consider the possibility of an underlying condition. This study will provide initial information about the usability and effectiveness of a digital endometriosis symptom reporting tool and association with healthcare seeking intentions and behaviour.



Healthcare Experiences of Individuals Seeking a Diagnosis of Premenstrual Dysphoric Disorder (PMDD) in the UK

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Background: Premenstrual dysphoric disorder (PMDD) is a complex condition affecting 3–8% of people who menstruate, and is characterized by distressing cognitive, psychological, and physical symptoms that occur cyclically in the days before menstrual bleeding. Timely diagnosis of PMDD is essential to support individuals to understand their symptoms and access appropriate treatment. However, there appear to be barriers to receiving a diagnosis. Understanding healthcare experiences, barriers, and facilitators is essential to developing healthcare system changes, tools, and educational resources to facilitate effective pathways to diagnosis and, in turn, reduce the length of time individuals cope with unmanaged symptoms and their consequences.

Aims: (1) To characterize the healthcare seeking experiences of individuals with confirmed or suspected PMDD in the UK; and (2) To understand the barriers and facilitators to healthcare for PMDD, from the perspective of those who experience the condition.



Methods: A mixed-methods, online cross-sectional survey of individuals with a suspected or confirmed diagnosis of PMDD was undertaken from May to August 2023. Recruitment sources included social media and online PMDD support groups. The online questionnaire included questions regarding demographics, PMDD symptoms, healthcare experiences in relation to seeking a PMDD diagnosis and open-ended questions about perceived barriers and facilitators to diagnosis. Ethical review and approval for the study was provided by Newcastle University.

Results: 157 participants completed the study ($M_{age} = 35.7$; $SD = 7.9$; Range: 18 to 55), 70% ($n = 110$) with a suspected diagnosis of PMDD and 30% ($n = 47$) who self-reported that a healthcare provider had given them a diagnosis of PMDD. Less than 20% of participants had sought healthcare review in the first year of experiencing PMDD symptoms, with GP surgeries (59%) and gynaecology clinics (27%) being the most common healthcare clinics attended while seeking a diagnosis. 32% of individuals with a diagnosis waited an additional 12+ months between approaching healthcare provider and receiving a diagnosis. 50% of participants believed their PMDD symptoms were misdiagnosed.

Open-ended responses identified barriers and facilitators to receiving a diagnosis for PMDD, with themes pertaining to the challenges of experiencing an unknown condition, the normalization and minimization of women's health conditions, and the facilitative role of self-advocacy.

Conclusions: Individuals with suspected PMDD experience barriers and delays to diagnosis. More public and healthcare provider knowledge of PMDD is needed, and the development and use of tools that facilitate timely, accurate diagnoses. Future studies may seek to reach larger, representative samples.



Snatch 22- How 'normal curve' analogies restrict menstrual health knowledge and practices

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Approximately half of the world's biomedical (n= 13) and critical academic (n= 3) experts on Premenstrual Syndrome (PMS) were interviewed about this condition. 12 self-identifying sufferers of PMS were also interviewed. Participant descriptions were then compared with the available epidemiological data regarding the timing, severity, and type of premenstrual symptoms experienced in global (18+ countries) menstruating populations (n= approx. 40K). The main finding was that participant descriptions appeared to reflect societal gender myths more than the available epidemiological data.

A Critical Realist Discourse Analysis of the interview data identified 4 major discursive themes; 'mind over matter' (the psychologisation of premenstrual changes), 'Snatch 22' (the simultaneous medicalization of healthy premenstrual changes and minimization of debilitating cyclical symptoms), 'femininity as debility' (positioning the female reproductive body as inherently pathological), and 'black box' (the unknown/ mysterious female reproductive body). It is the second theme 'snatch 22' that I would like to present here.



A couple of key discursive mechanisms appeared to enable contradictory discourses to simultaneously exist. Namely, the use of 'normal curve' analogies to describe the relationship between healthy/ non-pathological premenstrual changes and severe cyclic symptoms, and the biomedical categorization of severe physical symptoms as something *other* than PMS or PMDD. These two mechanisms help to create the snatch 22 paradox, whereby typical premenstrual changes are positioned as pathological, while debilitating cyclic symptoms (typically indicative of an underlying condition) are positioned as 'normal'.

Menstrual health issues are not simply 'more severe versions of typical premenstrual changes'. Each indicates an underlying pathology. Similarly, chronic conditions (such as asthma, epilepsy, or migraine) may be triggered at certain points in the menstrual cycle, but are not 'caused by' it. However, nearly all of the participants employed a 'normal curve' analogy when describing the relationship between healthy and pathological experiences.

The use of 'normal curve' analogies appears to have restricted scientific research into healthy menstrual physiology and the likely inflammatory nature of non-pathological premenstrual changes, and how they trigger underlying conditions. It also contributes to the medical dismissal of female patients/ cyclical symptoms. Finally, by positioning PMDD, as 'bad PMS' rather than an underlying condition triggered or worsened by the menstrual cycle (as suggested by the available data), healthy premenstrual changes are also effectively psychologised and pathologised. This has the dual effect of minimising female pain and positioning 'all women' as inherently (pathologically) emotional due to the menstrual cycle.



Reshaping the Menopause Landscape

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Popular menopause discourse focuses predominantly on White lived experiences. As a result, it fails to acknowledge the challenges faced by Black women during this life transition. This presentation addresses this gap by highlighting the importance of including and understanding Black women's menopause experiences. It will review the cultural and racial boundaries of Black menopause. I will argue that the exclusion of Black women's narratives has created a critical blind spot in understanding menopause. I will describe myriad variables that intersect with race that are currently overlooked – including socio-economic disparities, cultural nuances, and historical legacies – that significantly impact the Black menopausal journey.

It follows that the intersectionality of race and gender is key to providing a holistic understanding of menopause. Black women frequently face compounded challenges, including healthcare disparities, stigmas, and socio-economic factors that influence their menopausal experiences. These factors, when overlooked, perpetuate a skewed narrative that fails to capture the diversity of women's journeys through menopause. Thus, it is argued that including these factors enhances our current understanding of the menopause.



The effect of a school-based menstrual-health intervention (MENISCUS) on menstrual health and its modification by socio economic status among girls in secondary schools in Uganda

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Poor menstrual health has potential economic, social and health consequences. We recently completed the MENISCUS cluster-randomized controlled trial in 60 secondary schools in Uganda to evaluate whether a multi-component menstrual health intervention improves education, health and well-being outcomes among female students.



Thirty schools were randomized to receive the MENISCUS intervention which included puberty education, drama skits, provision of menstrual-health kits, training in pain management including provision of analgesics and improvements to water, sanitation and hygiene facilities in schools. We evaluated what effect the intervention had on menstrual health (trial secondary outcomes) and the effect modification by socio economic status (SES). To assess the impact of the intervention on these outcomes, we fitted random-effects regression models adjusting for school-level clustering and baseline measures of outcome values. Effect modification by SES was assessed through fitting an interaction term. SES was determined using participant responses to household materials and assets questions.

3047 girls were included in the analysis, of whom 1201 (39.4%) were categorized as low SES. The mean number (out of 9) knowledge questions answered correctly was higher among girls in the intervention versus control arm (6.2 vs 5.6, adjusted incidence ratio (aIRR)=1.10, 95%CI 1.07–1.14; $p<0.001$). In both arms, the mean number of correct questions was greater among girls with higher SES (intervention: high vs low SES: 6.3 vs 6.0; aIRR=1.04, 95%CI 0.99–1.08, $p=0.09$; control: High vs Low SES: 5.7 vs 5.5; aIRR=1.00, 95%CI 0.96–1.05, $p=0.89$). Similarly, the mean number (out of 3) attitude questions with positive response was higher among girls in the intervention than control arm (2.3 vs 1.9, aIRR=1.22, 95%CI 1.16–1.28; $p<0.001$), and this was not moderated by SES. The mean score on self-efficacy to manage menstrual health needs (SAMNS) was higher (better) in the intervention arm (6.9 vs 6.4, adjusted mean difference (aMD)=0.53, 95%CI 0.35–0.70; $p<0.001$), with no effect-modification. The mean menstrual practice needs score (MPNS) in terms of perceived menstrual management practices and environments met was higher in the intervention arm (2.4 vs 2.3, aMD=0.10, 95%CI 0.06–0.15; $p<0.001$), and there was evidence of a stronger intervention effect among girls in the low baseline SES group ($p<0.001$).

This trial provides strong evidence that a menstrual-health intervention improved menstrual health among girls in secondary school in Uganda. There was evidence that girls with lower SES at baseline benefitted more in terms of their menstrual practice needs being met than those with high SES at baseline.



Effects of the Menstrual Cycle on Emotional Processing in individuals with Premenstrual Difficulties and Healthy Controls.

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Introduction: Even though nearly all reproductive-age females experience the menstrual cycle described above, only a small percentage suffer from Premenstrual Disorders (PMDs), such as Premenstrual Dysphoric Disorder (PMDD) and Premenstrual Exacerbation (PME) of behavioural disorders. At present, evidence-based treatment of PMDD is primarily medical, with selective serotonin reuptake inhibitors (SSRIs) being the first line treatment for PMDD ([Casper & Yonkers, 2019](#)). Only a small number of studies have investigated psychological factors associated with prospectively diagnosed PMDD and other premenstrual disorders. Understanding how ovarian hormones across the menstrual cycle may contribute to psychological difficulties is key for effective non-medical interventions.

Methods: Premenstrual symptoms, emotional processing outcomes and other psychological and mood variables were assessed during distinct phases of the menstrual cycle in 109 physically healthy, unmedicated naturally cycling female individuals over two months. Cycle phase was calculated using forward and backwards counting methods. Multilevel models were used to evaluate cyclical differences of symptoms between cycle phases.



Results: Psychological variables demonstrated marked cycle effects, with emotional processing difficulties and social paranoia highest during the premenstrual cycle phase, co-occurring with increases in anxiety and depression, in individuals with premenstrual difficulties. Cycle effects were absent or mild in the group without premenstrual difficulties.

Conclusions: Naturally cycling individuals with premenstrual disorders appear to be at elevated risk for luteal worsening of a range of psychological symptoms, including maladaptive beliefs about emotions, distress tolerance, and social paranoia. Research on emotional processing in females should consider cycle effects. Cycling individuals with premenstrual difficulties may benefit from cycle-tracking to increase awareness of these effects and to develop appropriate strategies.



'I wish I was a boy': Comparing the Mental Burden of Menstruation Among Schoolgirls in the UK and Philippines.

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Menstruation requires active management. Girls need to be prepared for its onset by carrying suitable products for menstrual blood capture. When bleeding commences, there is an urgent need to visit the bathroom to put the product in place. Constant monitoring is required in order to change the product in a timely way. Social norms require young menstruators, whose periods are often irregular and unpredictable, to carry this mental load alone and in silence. This study into the lived experiences of schoolgirls in the Philippines and in the UK reveals the psychological stress that accompanied menarche and menstruation. Much of the anxiety came from the worry about leaking and revealing their menstrual status. Girls in the Philippines lacked suitable or sufficient products. They said that a stain 'was the worst' thing that could happen to a girl, that they would be 'ashamed', and one girl said she wished she 'could be a boy'. In the UK, girls felt an additional pressure to 'sort themselves out' and not affront the sensibilities of others by mentioning menstruation. They had more resources, such as menstrual cups, analgesics and even contraceptives which offered them control over their bleeding. They found, however, that it was a daunting responsibility to select the 'correct' management option, and the fear of failure to get it right caused them stress which affected their mental health. Girls in the UK were even more negative about their menstruation than girls in the Philippines, finding the mental load at times overwhelming and isolating.



The Lived Menstrual Experiences of Women in Western Uganda

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Menstruation creates challenges for women globally, affecting their participation in the workforce and societal activities. Menstruation is often stigmatised and can prevent women from fully engaging and participating in society. In some African countries, women miss significant days of school or work due to menstruation and associated stigma. This stigma can negatively affect women's self-perception, education, and life choices.

Ugandan women, in particular, face challenges as menstruation is considered taboo. This can lead to a lack of menstrual health education in adolescents and also a lack of support whilst menstruating, both in the private and public domains. Women are often encouraged to hide their menstrual status in order to protect them from harassment, but this reinforces ideals of menstrual stigma and concealment. However, due to the limited availability of menstrual products, resources, and information it can be difficult for women to manage their menstruation discreetly, highlighting a paradox between societal expectations and reality.

Research on menstrual stigma in Uganda has mainly focused on its sociocultural and economic impact, particularly in school-aged adolescent girls. Menstruation is typically portrayed in terms of how often girls miss school and how dropping out of school impacts financially on the wider society and country. There is a limited understanding of how women navigate menstruation in their daily lives concerning employment, household responsibilities, and how living in an urban city influences menstrual experiences and perceptions.



Urbanisation in Uganda further shapes women's experiences of menstruation. African cities are seen as dynamic and improvisational, with women playing diverse roles in production, residential care, and commuting between private and public domains. Menstruation can play a significant role in how women interact and move in these different spaces as increased challenges can arise for women in low-income countries due to informal work and inadequate infrastructure, impacting their economic opportunities.

This research project aims to address a gap in literature and policy by focusing on how menstruation impacts adult women, shifting the spotlight from school-aged girls. It explores how women navigate urban spaces, examining the significance of their bodies within these environments and its implications for resource access. The study also delves into how customs and knowledge influence the self-management and care of the menstruating body.

This research will also be of use to a range of policy makers and non-governmental organisations and will enhance methodological approaches to understanding the impact menstrual stigma have on women's livelihood choices and experiences.



Changes in adiposity over menopause are mostly due to ageing.

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While it is agreed that adiposity increases around menopause, there are conflicting reports on whether the rate of change increases through the menopausal transition and whether the change is due to chronological or reproductive ageing. Postmenopausal women are at increased risk of various adverse health outcomes, including cardiovascular disease and cancer and it is important to understand whether risks could be attributed to adiposity change. This study investigates changes in 8 adiposity measures that occur around the time of menopause, including more measures than previous studies, while disentangling the effects of chronological ageing and menopause timing.

We investigated the changes that occur around the time of menopause, in over 7,000 women from the UK Biobank. We tested linear spline models on 4 fat mass measures (trunk, arm, leg, and whole-body fat measured by bioimpedance) and 4 anthropometric measures (BMI, waist circumference, hip circumference, and waist-hip ratio). Measures were taken at baseline and at least one of three follow-ups over more than 13 years. Each measure was modelled against years from menopause and chronological age. These measures were also modelled in over 13,000 UK Biobank males as a control.



All fat mass measures increased from well before menopause linearly up to and through the menopausal transition. Trunk fat mass increased by 0.13kg/year up to 3 years postmenopause. From three years after menopause the increase was attenuated to zero. The males, however, increased consistently across the study period. For arm fat mass, the trend was similar, but the overall change was very small. BMI increased up to 2 years premenopause, slowing slightly through the menopausal transition, and showed no increase thereafter, while showing very little change in the men. Waist circumference showed a consistent increase in the females across the study period that was not affected by menopause. The males showed an increase up until 51 years old, followed by a brief decrease and then a sharp increase. Hip circumference showed no change until after menopause, whereby it decreased by 0.12cm/year. Males showed a constant decrease that accelerated slightly after 55 years old. Waist-hip ratio showed a gradual increase across the study period in females and males.

We conclude that chronological ageing is the main driver of increased adiposity, which occurs until just after menopause. After menopause the increase does seem to halt further increase or even decrease, and there is a loss of hip circumference, contributing to a redistribution of adiposity.



Improving menstrual and overall health using digital technology: Emm, the next generation menstrual product.

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The American College of Obstetricians and Gynaecologists considers menstrual cycles to be a 'fifth vital sign' when thinking about a person's overall health (along with blood pressure, body temperature, heart rate, and respiratory rate). Yet no period product provides an objective and automated way of measuring one's menstrual health metrics (e.g. menstrual fluid volume loss), that could be used to evaluate and identify abnormal patterns.

Emm is addressing this through our revolutionary smart menstrual cup with sensors and connected app that (i) measures key menstrual health metrics, i.e. for the first time the volume of menstrual fluid lost, as well as menstrual cycle duration, frequency and regularity, (ii) provides an interface to link the measured metrics with tracked cycle-associated symptoms and user's medical history data, and (iii) enables longitudinal menstrual health data monitoring at both individual and population level.



Our new technology will generate a unique first-of-its-kind dataset for thousands of users and will collect biological samples to drive innovation and research in using menstrual effluent for diagnostic and therapeutic purposes in both gynaecological and non-gynaecological diseases. I

We believe our product, unique data and biological sample collection are of great interest to the attendees of the 4M conference. Thus, we would like to introduce Emm to like-minded researchers passionate about menstrual health. Together we can work towards improving the quality of lives of those who menstruate.



A novel hypothesis-generating approach for detecting phenotypic associations using epigenetic data

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Background Identifying associations between multiple phenotypes can help guide causal analyses that go on to have clinical implications. One way of identifying new phenotypic associations is a phenome-wide association study (PheWAS), which utilises all available data to identify potential associations amongst phenotypes, and with genotypes. However, many large cohorts that hold both phenotypic and genotypic data are not yet coded to facilitate such analyses. Given that epigenetic markers can capture variation in genetics, environmental exposures, and physiological states, we propose novel method to identify associations. We used a hypothesis-generating epigenome-wide association study (EWAS) approach in the Avon Longitudinal Study of Parents And Children (ALSPAC) cohort, with menstrual symptoms dysmenorrhea (painful periods) and heavy menstrual bleeding (HMB) as example phenotypes.



Methods In the ALSPAC cohort, participants were sent questionnaires during puberty which asked about menstrual experiences between the ages of 8 and 17. From these questions, we identified participants who suffered from severe dysmenorrhea or HMB (who visited the doctor for the symptom) and those who did not report to suffer from the symptom. In the subset of participants with DNA methylation data available, we performed two EWAS, one for each symptom, adjusted for age and batch effects only. We then searched all the differentially methylated CpG sites ($P < 1 \times 10^{-5}$) in an online repository of published EWAS findings (the EWAS Catalog) to identify phenotypes that may be associated with either symptom via shared CpG sites. We then tested these hypotheses using logistic regression in the full ALSPAC cohort.

Results 4,222 ALSPAC participants (or their caregivers) had responded to at least one questionnaire during puberty, stating whether they had started their period. Of these, 487 had methylation data available and were thus eligible for inclusion in the EWAS analyses. For dysmenorrhea, seven differentially methylated CpGs were identified, and these were associated with 31 different phenotypes in the EWAS Catalog. For HMB, two differentially methylated CpGs were identified, and these were associated with 10 different phenotypes. In the hypothesis-testing phase, we found that prenatal exposure to smoke, adverse childhood experience score, and C-reactive protein (at age 9) were associated with dysmenorrhea and HMB.

Conclusions The novel approach used here detected both known and novel associations between menstrual symptoms and environmental or physiological exposures. We show that the EWAS approach, for datasets where epigenetic and phenotypic data are available but not systematically coded, is a potentially useful alternative to identify associations between phenotypes.



Perceptions of healthcare provision throughout the menopause in the UK: a mixed-methods study

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Background: It is disheartening to note that menopausal care provision remains inadequate, even in high-income countries like the UK. Importantly, there is a notable gap in research regarding women's first-hand experiences with menopausal care provision in the UK general population and it remains uncertain whether care experiences in the UK differ based on the specific stage of the menopause (i.e., early or late perimenopause stage versus the post-menopause) or for those experiencing medically-induced menopausal symptoms.

Objectives: To understand women's perspectives regarding the availability and quality of menopause care services in the UK, including care provision specifically for mental health concerns that may arise due to the menopause. In addition, we explored whether experiences with care provision vary across the perimenopause and the post-menopause, as well as for individuals with medically-induced menopausal symptoms.

Methods: An online survey was delivered. Data from 952 respondents were analysed. Descriptive statistics were calculated for quantitative data overall and per menopause stage. Thematic analysis was calculated on qualitative data.



Results: 74.47% sought help for the menopause. Oral (68.83%) and topical medication (17.21%) and lifestyle changes (17.21%) were the most common treatment approaches, with respondents in the early perimenopause stage being more likely to have had no treatment or support relative to the post-menopause group. Consistent integration of mental health screening into menopausal care was lacking, despite the overwhelming majority (86.76%) of respondents expressing that their menopausal symptoms had negatively affected their mental health. In terms of overall perceived quality of care for menopausal symptoms, 36.95% stated that they had received very good or good care, while 27.65% experienced acceptable care, and 35.40% stated that they had received poor or very poor care, with the medically-induced menopause group expressing poorer levels of care. Open-ended data from women who reported poor care quality revealed six themes: consequences of poor care, dismissive or negative attitudes from healthcare professionals (HCPs), poor treatment management, symptom information and misattribution, poor HCP knowledge, and the need for self-advocacy.

Conclusions: There is an urgent need for immediate improvements in the delivery of healthcare services for women going through the menopause in the UK. The study brings to light the importance of recognising the impact of early perimenopause symptoms and the benefits of early intervention, as well as the unique care requirements of women who have undergone medically induced menopause, as their needs may differ from those who experience natural menopause.



Deep phenotyping of women with bipolar disorder approaching the menopause: what do you think matters?

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Importance: Bipolar affective disorder is a severe mental illness affecting around 1–2% of the population. The menopausal transition is a high risk time for relapse and new onset of bipolar disorder. Fluctuations in reproductive hormones are widely assumed to cause these difficulties, but evidence for this is lacking and the mechanisms remain unclear.

Approach: The project still has to go through the co-production process but currently my thoughts are: I plan to recruit a cohort of women who are experiencing perimenopausal symptoms, some with bipolar and some without mental disorder. I will follow them up over time, assessing key clinical factors (mood, sleep, activity, menstrual cycle, menopausal symptoms) alongside potential causal factor (reproductive hormones and metabolic parameters). I will perform individual level time-series analysis to temporally relate changes in physiological parameters to changes in clinical factors, providing evidence for or against causation.

What do you think? I am in the early stages of designing this project and am seeking patient and public involvement to assist with co-production. I would be really pleased to hear any thoughts you have as to what is important to measure and what techniques may be most informative and comfortable for participants.



Suicide and self-harm prevention: a research priority for Premenstrual Dysphoric Disorder (PMDD)

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Background: Premenstrual Dysphoric Disorder (PMDD) is a severe hormone-based mood disorder that impacts 1 in 20 women (and AFAB* individuals). In the UK, over 824,000 women have PMDD, of which 593,600 will experience suicidal ideation, 412,000 will self-harm and 275,000 will attempt suicide. To investigate research and funding priorities, we co-developed the UK's first research agenda for PMDD.

Methods: We undertook a multi-step co-design process. Step 1: focus groups with five different stakeholders per group (people with lived experience, health professionals, mental health crisis services, support organisations and researchers, n=25). Step 2: an online consultation with interdisciplinary stakeholders (n=208). Step 3: a consensus workshop (n=6). Step 4: launch of the final research agenda. We are now collating data to inform the development of a systems map and programme theory, specifically targeted at suicide and self-harm prevention in people living with PMDD.



Findings: Suicide and self-harm prevention was identified as one of the top 5 PMDD research priorities. These issues overlapped with the other four key priorities: (i) delayed diagnosis and treatment; (ii) lack of appropriate psychological support services; (iii) lifelong impact of PMDD on education, employment and relationships; and (iv) impact of hormonal 'triggers' for PMDD crises, such as weaning from breastfeeding or perimenopause. Stakeholders identified neurodiversity and exacerbation of pre-existing illnesses (e.g. major depressive disorder or bipolar disorder) as other priorities associated with suicide and self-harm behaviours.

Discussion: Current models and interventions of suicide and self-harm prevention do not take into account the cyclical nature of the menstrual cycle and PMDD. Understanding the unique influencing factors of PMDD is key to preventing suicide and self-harm. Our systems map and programme theory will inform future interventions and influence health professional behaviours around the care and management of people living with PMDD.

*assigned female at birth



Exploring the Impact of Social Norms on Adolescent Girls' Menstrual Health in Nepal

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This paper explores how social norms impact adolescent girls' menstrual health in Nepal and aims to identify how they can be addressed. Three questions guide the research:

1. What influences norms and beliefs regarding menstruation?
2. How do menstrual norms and beliefs affect adolescent girls' menstrual experiences?
3. How can the Nepali government support menstrual health?

Menstrual taboos are negative social norms that present a major barrier to adolescent health and wellbeing. In some areas of Nepal, menstrual taboos have translated into restrictive practices that have become normalised within communities over generations. This includes the illegal practice of chhaupadi where women and girls are required to sleep away from their home while menstruating. Restrictions such as chhaupadi are tied to religious and cultural beliefs of menstrual impurity and carry with them fear of retribution if they are not adhered to.



A qualitative social-constructivist approach has been adopted to conduct the research. It includes primary data collection and analysis conducted in collaboration with the Center for Research on Environment, Health & Population Activities and secondary analysis of data produced through the UKRI-funded Menstrual Justice in Low- and Middle-Income Countries (MeJARa) project.

So far, data has been collected in two districts of Nepal: Surkhet and Kaski. In-depth interviews have been conducted with healthcare workers; teachers and school nurses; and community leaders and faith healers. Focus groups have taken place with adolescent girls, adult women and men.

Initial analysis reveals that it is common in both districts for adolescent girls to adhere to menstrual restrictions. These include restrictions on visiting temples; participating in festivals and social rituals; touching family members; and sleeping separately. Chhaupadi is common in Surkhet, despite awareness of its illegality, but few are aware of it in Kaski.

Girls in both districts do not want to participate in menstrual restrictions but comply to protect their families from misfortune and maintain their reputation. Communities are heavily influenced by superstition and community leaders and faith healers ensure these norms are upheld. Girls feel ashamed and stigmatized which negatively impacts their menstrual experiences.

Community leaders in Surkhet revealed that they believe women and girls have accepted these restrictions as a normal part of their everyday lives and follow them willingly, raising important questions about perceptions of what others do, approve of and expect.

Research outputs hope to advance our understanding of the of the processes and structures involved in enabling good menstrual health.



Using genetics to investigate causal relationships between glycodeclin and reproductive factors in over 50,000 UK Biobank participants

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Previous studies have suggested that glycodeclin, also known as progesterone-associated endometrial protein, could act as a biomarker for female reproductive disorders including endometriosis and pre-eclampsia, and malignancies such as breast, endometrial, and ovarian cancer. Regulated by progesterone, glycodeclin is expressed in key reproductive tissues, including the secretory and decidualized endometrium, ovaries, and fallopian tubes, and in the male reproductive tract. A recent study using UK Biobank proteomic data showed that glycodeclin has notably different levels in males and females, with levels declining after the menopause.

We aimed to investigate whether these changes could be the cause or consequence of reproductive traits. With the release of proteomics data in over 50,000 participants in the UK Biobank, a population-based UK cohort, we sought to investigate causal relationships between glycodeclin and a range of reproductive factors.



We used measures of glycodelin from blood plasma in 23,525 males and 27,593 females in UK Biobank. We tested the relationship between age and glycodelin levels in males and females, and the effect of menopause and menopause age in females, by carrying out observational analysis. To explore causal relationships between glycodelin and other reproductive factors, we conducted Mendelian randomization, a method that uses genetics to make robust causal inferences. We used published genetic variants associated with reproductive factors such as sex hormone binding globulin (SHBG), testosterone and oestrogen levels, and age at natural menopause, to test the effects of having higher hormone levels or risk of disease on glycodelin levels.

From our observational analyses, we identified that glycodelin levels showed no significant relationship with natural menopause timing ($P > 0.05$ in all analyses) but were significantly lower in post-menopausal women compared with pre-menopausal women (-3.14 standardised units, $P < 2 \times 10^{-16}$). Our Mendelian randomization analyses demonstrated that in pre-menopausal females, higher levels of bioavailable testosterone lowered glycodelin ($\beta = -0.56$ per standard deviation change (s.d.), $P = 0.02$) while higher SHBG raised glycodelin ($\beta = 0.09$ per s.d., $P = 0.01$). In males, higher bioavailable testosterone levels raised glycodelin ($\beta = 0.09$ per s.d., $P = 6.8 \times 10^{-6}$).

Our findings suggest that the decline in glycodelin levels is not directly attributable to age at menopause. However, our results underscore the significance of the decline in glycodelin levels after menopause and the potential role of glycodelin in other reproductive traits. Expansion of our analysis using recently published studies will allow for further exploration this, and potential utilisation of glycodelin as a reproductive disorder biomarker.



PMDD research: an in-road into addressing the Gender Pain Gap

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The intersection of menstruation and mental health is a critical yet often overlooked area of research. My journey as a menstrual scholar-activist began with a commitment to empower girls by providing free period products and menstrual education to indigent girls in Zimbabwe through my charity, the Save the Girl Child Movement. This grassroots work propelled me to pursue my PhD which focused on menstrual narratives across three generations of cisgender women and girls in rural Zimbabwe. By engaging with women across different age groups, I unearthed stories of resilience, stigma, and empowerment. These narratives revealed not only the physical aspects of menstruation but also its emotional and psychological dimensions.

As I immersed myself in the narratives, a crucial realization emerged: mental health was intricately woven into the fabric of menstruation. The emotional rollercoaster during premenstrual phases, the burden of societal expectations, and the impact of hormonal fluctuations all converge to shape mental well-being. It was at this confluence that I encountered pre-menstrual dysphoric disorder (PMDD) – a severe hormonal mood disorder that can evoke suicidal thoughts, non-suicidal self-injury, and attempts at suicide. PMDD is a condition that is often misdiagnosed or dismissed. In the UK, the under-diagnosis and delayed diagnosis of PMDD and other menstrual problems is part of a larger narrative in which women's health is neglected – propounding what is now recognized as the gender pain gap. This gap is one in which there is a gross discrepancy in the ways that pain is perceived, diagnosed, and managed between men and women.



The gender pain gap is tied to a legatorial pathologization of menstruation by male physicians that can be traced to the 1800s. The personal cost of this pain gap has a compound effect that can be quantified to an economic loss of £20 billion each year as a resulting from sick leave, treatment costs, loss of income and stunted career progression.

Addressing the (mis)diagnosis and (mis)management of PMDD and its impact on life aligns with two out of the five research priorities outlined in the UK's first research agenda for PMDD. Such research paves a way for us to consider how interventions can be developed to identify and mitigate the long-standing detrimental impact of PMDD and other menstruation-related problems on the quality of life of people who menstruate globally.



Effects of a multi-component menstrual health intervention on mental health symptoms and educational performance in Ugandan schools (MENISCUS): a cluster-randomised controlled trial

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Improving menstrual health (MH) may offer long-term benefits to individuals' health, wellbeing, and educational attainment. The MENISCUS trial evaluated a school-based intervention that aimed to address physical and psychosocial aspects of MH and improve students' mental health and education performance (primary outcomes) and menstrual health (secondary outcomes).



We conducted a cluster-randomised trial in 60 Ugandan schools, randomised 1:1 to the MENISCUS intervention or optimised usual care (printed government MH materials). The intervention included creating school action groups; strengthening puberty education; distributing menstrual kits; supporting a student-led drama skit; providing pain-management strategies; and improving school water and sanitation facilities. Primary outcomes were mental health symptoms, measured using the Strength and Difficulties Questionnaire (SDQ) Total Difficulties Score, and an educational assessment set by the Uganda National Examinations Board (UNEB). Secondary outcomes included MH knowledge, attitudes, practices and needs, self-efficacy to manage menstruation, school and class attendance, symptomatic urinary tract infections (UTIs), and confidence in mathematics and science in females, and MH knowledge and attitudes among male students. Analyses were intention-to-treat, using mixed-effects models adjusted for school clustering and the baseline school-level mean of the outcome.

In total, 3841 female students participated at baseline (89.7% of eligible) and 3356 participated in the endline assessments. A random sample of 15 male participants per school were recruited into a closed cohort and 655 (74.9%) were followed up at endline. At endline, there was no evidence of a difference in mental health symptoms (mean SDQ score: 10.8 vs 10.7 in intervention vs control arms; adjusted mean difference [aMD]: -0.05, 95% CI: -0.49-0.40) or educational performance (mean UNEB z-score: 0.20 vs 0.12; aMD -0.05, 95% CI: -0.20-0.11). There was strong evidence for an effect on most MH-related outcomes: knowledge, attitudes, menstrual practice needs, pain management, self-efficacy, and male students' attitudes. There was weak evidence for an effect on UTIs and no evidence for an effect on adequate menstrual hygiene management, school attendance, confidence in maths and science, or male students' menstrual knowledge.

The MENISCUS trial was one of the first and largest trials to evaluate a multi-component, school-based MH intervention. The intervention improved multiple dimensions of menstrual health, including the social environment, but this was not sufficient to improve mental health symptoms nor educational performance over one year. Future research is needed to develop and test interventions which address menstrual health as part of a broader effort to improve adolescents' wellbeing and education.



Impact of COVID-19 on Menstruating Women and Girls in Uganda

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Introduction: The COVID-19 pandemic has exacerbated global gender equity challenges, especially in low-resource settings, with limited empirical evidence on its impact on menstrual health and hygiene (MHH), including disorders, violence, and the role of reusable menstrual health (MH) innovations (Menstrual cups (MCs) and reusable pads). To address this, Women Uganda conducted two rapid assessments in 2020 and 2021 across six districts in Uganda to evaluate COVID-19 effects on domains of MHH.

Methodology: The study targeted samples from schools, refugee settlements, and communities in WoMena's operational areas, employing purposive and snowball sampling techniques. Data collection occurred remotely through key informant telephone interviews conducted by WoMena trainers. Respondents increased from 65 in 2020 to 83 in 2021, with 44 – 49% being direct participants of WoMena's programming.



Key Findings:

Menstruation Status: In 2020, 94% experienced menstrual periods, compared to 99% in 2021.

Access to Markets & MH Products: In 2020, 48% of respondents faced challenges accessing markets. 72% reported increased prices of disposable pads. In 2021, 70% of the participants reported that their household could not afford MH products.

Discomfort/Disorders: In 2020, 35% experienced changes in menstruation due to COVID-19, including increased menstrual pain (39%), infrequent periods (33%), and changes in bleeding amount (18%), often attributed to high-stress levels. This trend continued in 2021, with 35% reporting similar changes, primarily linked to stress.

Supportive Social Environment: In 2020, 17% experienced or knew someone facing violence during lockdown, often due to financial stress and GBV; 14% encountered violence related to MH product expenses. Violence increased for 28% of participants from 2020 to 2021, with 8% experiencing violence or financial restrictions regarding MH products. Additionally, 11% engaged in transactional sex to access MH products in 2021.

Role of reusable MH innovations: In 2020, those with access to reusable MH innovations reported positive product experiences and lower self-reported stress levels than other respondents. In 2021, the role of longer-term, reusable MH products became even more pronounced, with 50% of all respondents expressing the need for such products to address communal MH needs.

Conclusion: COVID-19 exacerbated MH challenges, limiting access to essential products and supportive environments, increasing SGBV risks. Yet, input from MC and reusable pad users highlights sustainable MH products' positive impact, stressing the need to integrate MHH innovations into broader humanitarian responses in LMICs.

Impact: This study contributes to the MH discourse in humanitarian and emergency settings. The findings reveal the complex interplay among MH, GBV, and livelihoods during the crisis, suggesting potential pathways for intervention and support.



Coping with dysmenorrhea: a qualitative analysis of period pain management among students who menstruate

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Background

Dysmenorrhea, or period pain, affects up to 95% of menstruating individuals and is a common cause of educational absenteeism among students who menstruate worldwide. Evidence suggests that students may lack sufficient knowledge about their menstrual health, which may impede self-management. The aim of the current study was to explore pain management strategies used by students in Ireland with painful periods and to identify their unaddressed needs across physical, psychological, educational, and social domains.

Methods

This study used a qualitative, interpretive design and opportunity sampling approach to collect and interpret individual accounts of dysmenorrhea from third-level students in Ireland. Data from 21 students were collected using semi-structured online one-to-one interviews and analysed using reflexive thematic analysis.



Results

Analysis resulted in the construction of five themes: (1) Pain management is self-directed trial-and-error, (2) Home as safe haven, (3) Prioritising productivity over pain, (4) We're missing an option between 'normalise' and 'medicalise', and (5) Cycle of censorship and concealment. Overall, limited formal education on dysmenorrhea and prevailing negative attitudes towards menstruation create an unsupportive environment for students to learn adequate coping skills.

Beyond education, menstrual stigma may also restrict the availability of clear management guidance in domestic and medical spheres. Experiences of dysmenorrhea were also influenced by the COVID-19 pandemic, where work-from-home measures were viewed favourably by individuals with dysmenorrhea.

Conclusions

This study indicates that students in Ireland are inadequately prepared to cope with dysmenorrhea. The current findings have substantial implications for evaluating and reforming current menstrual education standards, in addition to clarifying the negative effects of social stigma on menstrual health literacy.



Healthcare-Seeking Behaviours and Healthcare Access for Dysmenorrhea in High-Income Countries: A Scoping Review in Progress

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Background

Dysmenorrhea (period pain) is a public health issue affecting everyday life for up to 91% of the 1.8 billion individuals who menstruate each month. Healthcare access for dysmenorrhea is an area of concern; studies report that individuals with dysmenorrhea delay seeking medical care or avoid it entirely, often opting to endure pain without support. Pain invalidation or diagnostic delays for gynaecological disorders have also been reported where individuals sought healthcare for dysmenorrhea. Difficulties seeking or accessing care is troubling, as individuals may suffer without knowledge of evidence-based techniques or access to prescription-based methods, as well as the potential for health concerns to go undiagnosed.

Using Levesque and colleagues' Conceptual Framework of Access to Healthcare, facets of healthcare access, including characteristics of (i) the population with dysmenorrhea, (ii) their national healthcare system, and (iii) the interplay between both characteristics will be systematically searched. Evidence synthesis will provide a comprehensive overview of barriers and enablers to care for dysmenorrhea, as well as highlighting the breadth of clinical approaches and outcomes for dysmenorrhea complaints.



Objective

Many high-income countries have launched strategies for women's health to address gaps in care access and knowledge around menstruation. This review will contribute to these strategies by providing an overview of healthcare access for dysmenorrhea, clarifying barriers and enablers, as well as the clinical approaches used for complaints of dysmenorrhea and their outcomes.

Methods

This scoping review will follow the JBI methodology guidance for scoping reviews, based on the guidance of Arksey and O'Malley (2005), and will be conducted with the PRISMA checklist for Scoping Reviews. Searching will seek to locate both peer-reviewed and grey literature using an initial search of MEDLINE to identify keywords and MeSH terms for a full search strategy. A second search across EMBASE, MEDLINE, CINAHL, PsycINFO and Web of Science will be supplemented by Google-searches for healthcare reports and other non-peer reviewed evidence. A call for evidence will be placed on social media and through stakeholder networks. Results will be synthesized and mapped to construct a pathway to care, highlighting both enablers and barriers to seeking and achieving healthcare for dysmenorrhea, as well as highlighting potential gaps in clinical practice for its treatment.

Implications:

Results will form a necessary overview to inform policy approaches based on women's health strategies, including identifying and mitigating barriers to access and highlighting missed opportunities in clinical practice to provide support and manage dysmenorrhea.



“Embrace the Pause’: Investigating Mental Health and Sexual Satisfaction Before and During the Perimenopausal Phase”

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Part of a natural physiological process, perimenopause is the transitional stage in which ovary function declines and hormone levels fluctuate. During this stage, many people experience associated symptoms, such as hot flashes, brain fog, and vaginal atrophy. With approximately four to ten years of symptoms and changes, it has been found that many people experience anxiety and depression in perimenopause. On top of this, many people experience changes in sexual interest and activity. Despite this, there is very minimal information on the relationship between perimenopause and sexual satisfaction. At this point, there is no academic study investigating these symptoms and changes in the general public in Ireland.

The purpose of this present study is to investigate mental health and sexual satisfaction before and during the perimenopausal phase. The survey was developed with a steering group of experts in women’s health. The survey contains demographic questions such as age, education level, and employment, as well as two scales, the Depression, Anxiety, and Stress Scale (21 Items) measuring mental health, and the Sexual Satisfaction Questionnaire, measuring sexual satisfaction.



In a quantitative approach and correlational design, two hypotheses have been formed around mental health and sexual satisfaction before and during perimenopause. While data collection is ongoing, the plan for the method of analysis will be to use a correlational test to analyse the data. Additionally, the between-subjects element will involve independent t-tests looking at reported mental health and sexual satisfaction scores between people in perimenopause and people not yet in perimenopause. There is also the potential for secondary analyses. Some potential examples of this could include analysis of responses from post-menopausal participants or from people who experience medical menopause (chemical and surgical), or further analysis of reported symptoms and treatments.

As this is the first study investigating these factors in the Irish general public, this research will provide valuable information on the experiences before, during, and after perimenopause in this population. Such information will be valuable for creating and assessing resources and policies for the public.



Studies on Menstrual Rights and Consequences on Reproductive Health and Mental Health: Case of Girls and Women who have been Captive of Boko Haram in the Far North Region

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According to UNFPA, human rights are the rights that every person possesses by virtue of their human dignity. Menstruation is directly linked to human dignity: when a person does not have access to safe sanitary facilities or effective means of managing their menstrual hygiene, they cannot manage their periods with dignity. According to WHO, poor menstrual hygiene can lead to infections of the urinary or reproductive system and affect the well-being of women and girls.

Gender inequality, extreme poverty, humanitarian crises, and certain dangerous traditions can turn the time of menstruation into a period of deprivation or stigmatization for women and girls. On the evening of April 14th, Islamist fighters raided the town of Chibok and kidnapped 237 schoolgirls aged 12 to 17. In Cameroon's far north, women and young girls are abducted from their community and forced to live with extremist groups.



Figures shared by the DDR (National Committee for Disarmament, Demobilization, and Reintegration) in November 2022 indicated 542 girls.

Furthermore, during our awareness sessions and distribution of sanitary towels, women and young girls who have lived in captivity have reported problems related to menstrual hygiene with consequences for their reproductive and mental health. An 11-year-old girl abducted did not understand the onset of her first period (menarche), which she equated to the blood of her virginity during her rape, affecting her sexuality. A woman during her captivity had her privacy violated because in the absence of means for her menstrual hygiene, others saw her blood.

Two scientific methods: the first is that of the history of health to help us understand communities' perceptions of menstruation. How beliefs about menstruation are constructed and evolve within communities. The second method is qualitative for data collection and analysis. Our targets are women and young girls who have been in captivity by Boko Haram in the far north of Cameroon. Our data collection tools: Focus groups, individual interviews, and testimonial collections. For ethical questions, we obtained authorizations from competent authorities and designed ethics clearances and consent forms.



The impact of menstrual symptoms on academic performance: a cross-sectional study among female students at Lund University

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Background: Menstruation is an important part of women's reproductive life and unmet needs and care regarding menstrual health can affect their academic performance and experience. This happens through absenteeism, presenteeism and effects on social life, and consequently, can put female students at a greater disadvantage in their studies and career prospects. Investigating how menstrual symptoms can impact academic performance is important to accommodate students' menstrual-related academic needs and provide an equitable learning experience.

Aim: The main aim of the study was to assess the impact of menstrual symptoms on the academic performance of female students at Lund University, Sweden.



Methodology: The study was conducted following a cross-sectional design. Data were collected through an online questionnaire from 1527 female students at Lund University. The attainment of academic credits was used to assess academic performance. Analysis was performed using descriptive statistics, t-test and χ^2 test, univariate and multivariate logistic regression and additive interaction test.

Results: Increased severity of menstrual symptoms was significantly associated with poor academic performance. Students with severe symptoms had 2.89 times higher odds of poor credit attainment compared to those with mild symptoms. Menstrual symptoms' negative impact on attendance and participation in class, preparation and performance on exams and assignments and the overall student experience was associated with significantly higher odds of poor credit attainment. A synergistic effect of being an Engineering student and reporting a negative effect by menstrual symptoms on exam performance was found.

Conclusion: Poor academic performance was associated with increased severity of menstrual symptoms and the impact of menstrual symptoms on various education elements. Policies at the university level addressing students' menstrual needs are needed to provide an equitable learning environment. Further research is required to investigate the ways in which menstruation impacts academic achievement.



Comparing autistic and non-autistic women's' experiences of menopause

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Menopause is a key transition in the lives of all people assigned-female-sex-at-birth, which involves physical and psychological challenges. There is some evidence to suggest that autistic people face additional challenges as they navigate menopause, as well as the ones faced by non-autistic people. This study used semi-structured interviews with twenty-nine adults: fifteen autistic and fourteen non-autistic people (all assigned female at birth), to explore their experiences of menopause. Thematic analysis was conducted separately for the autistic and non-autistic groups and the resulting themes were compared between the groups.

The analysis yielded four main themes: information about menopause, experiences of menopause, medical support for menopause and backdrop to the menopause. Each of these contained subthemes, which indicated both common and unique experiences for the two groups. Both groups reported a lack of information about menopause and experienced problems with access and trust of medical professionals.



Both groups also endured negative psychological changes during menopause and experienced menopause alongside other important life events. The analysis identified challenges which were unique to autistic people during menopause, including medical professionals not accommodating autistic differences, uncertainty-induced anxiety during menopausal changes and the impact of lifelong experiences from living without an autism-diagnosis.

To our knowledge, this study is the first qualitative investigation into menopause comparing autistic and non-autistic people. Results provide important insights into the unique difficulties faced by autistic people during menopause and highlight the need for bespoke care for this group during the menopause transition.



“It’s a horrible place to have a period”: a survivor-led investigation of experiences of menstrual health in psychiatric inpatient settings in England

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Background

There is a lack of research, policy, and guidance regarding how psychiatric inpatient services should cater for the needs of patients who menstruate. Motivated by my own experience of treatment on mental health wards, this study examined staff and patient perspectives to understand experiences of menstrual health in psychiatric inpatient settings.

Methods

Online questionnaires were conducted with people with experience of treatment in psychiatric hospitals in England (n=101) and staff (n=67). Individual interviews (n=10) were conducted with people with lived experience.

Results

Using thematic analysis, the following themes were identified and placed into two overarching categories of institutional and interpersonal contexts: access to menstrual materials; the lack of privacy when menstruating in a psychiatric hospital; staff attitudes and approaches to menstruation; and support-needs vs support-provision around menstruation.



Conclusions

This research highlighted that patients in psychiatric hospitals are often insufficiently supported with their menstrual health and experience a lack of privacy, independence and choice when menstruating in these settings. This was sometimes described as degrading, dehumanising and distressing. Patients reported having insufficient access to good quality menstrual products which met their needs and preferences as these were either not supplied or were prohibited on this basis of their perceived risk. This failure to meet patients' needs could be viewed as amounting to neglect and menstrual injustice. This appeared to arise from a combination of an overreliance on restrictive practices and an oversight of the importance of menstruation.

Psychiatric inpatient settings were described as amplifying feelings of shame and stigma around menstruation. This heightened sense of shame appeared to be shaped by institutional restrictions and unmet needs, as well as the responses and attitudes of staff toward menstruation. Some participants discussed the menstruation related harms they experienced in relation to a wider context of the gendered inequalities and harms of psychiatric treatment. Patients' physical health needs relating to menstruation were often overlooked. Staff lacked knowledge and training around menstrual health; some patients described mental health services overlooking their physical health needs more broadly. Some participants shared their experiences of navigating menstruation while mentally ill, highlighting how illness, distress, and trauma influenced their relationship with menstruation. This connection appeared particularly pronounced in cases of sexual abuse and eating disorders. However, patients often did not receive support with this.

This research highlights a need for urgent actions to be taken to improve experiences of menstrual health in psychiatric inpatient settings.



Period Positive Schools: Cross-curricular menstruation education benefits pupils and teachers

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In 2023, a collaborative pilot program called Period Positive Schools: Menstrual Literacy for All was conducted in Sheffield, involving a private girls' school, a youth homelessness charity, and an LGBTQ+ youth charity. The aim was to expand menstruation education beyond traditional frameworks in response to young people's requests for better lessons on menstrual health and a more open school atmosphere.

As a leading movement for inclusive menstrual literacy advocacy, Period Positive campaigns for shame-free menstruation education through evidence-based workshops, benchmark awards, and global networks. The initiative's definition of menstrual literacy encompasses four key elements: body, product, media, and cultural literacy, providing a holistic understanding of menstruation. Collaborating with schools, the project aimed to encourage teachers to integrate menstruation education across subjects, fostering period-safe spaces for young people.

Drawing from a curriculum content list and a framework of inclusion standards developed previously through the Period Positive Schools project, this follow-on project aimed to address key needs identified by young people, emphasising inclusivity, visibility, and comprehensive education. The project employed a design sprint model to engage pupils and staff in integrating wider menstrual literacy across diverse subjects, yielding positive outcomes.



Young people and youth workers from the linked charities provided additional insights into inclusive lesson design around trans and homeless menstruators. Insights from the initiative underscore the viability and benefits of a comprehensive, school-wide approach to menstrual education, advocating for the normalisation of conversations surrounding menstruation and the elimination of associated taboos between staff and pupils. Peer-education and skill-sharing enhanced the resources' richness and future transferability. Key findings highlighted the effectiveness of youth-driven lessons, pupil-teacher collaboration, bespoke activities tailored to individual school populations, and the importance of centring marginalised voices in the menstrual discourse. The pilot successfully integrated menstrual literacy into diverse subjects, evidenced by case studies showcasing innovative lesson plans tested by students and educators. Beyond education, outcomes included increased confidence among pupils who become advocates for policy changes regarding menstrual product access and facilities in their own school and in consultations around the Free Products England scheme. Additionally, the school hosted menopause awareness training and improved communication on toilet use policies.

The initiative demonstrated scalability and replicability, offering a practical, enjoyable, and impactful model for integrating menstrual education into the broader curriculum. Ultimately this model stands as a transformative approach to improving period positivity while equipping students with essential knowledge and skills in menstrual literacy across diverse educational settings.



Assessing the shared genetic architecture of vasomotor symptoms and insomnia over the menopausal transition

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Many women report both vasomotor symptoms (VMS) and sleep problems during the menopausal transition. We aimed to investigate common genetic effects between VMS and insomnia, as well as the direction of causality between VMS and insomnia.

A recent genome-wide association study revealed a signal near TACR3 (rs34867104, AT allele) associated with a lower VMS risk ($p=1.7 \times 10^{-20}$, $n=153,152$). We found that this variant is also strongly related to insomnia among females ($p=1.59 \times 10^{-5}$, $n=208,958$), but not males ($p=0.198$, $n=178,030$), within the UK Biobank. We also found evidence of an age-varying effect, where rs34867104 is associated with insomnia only after the onset of menopause (OR=1.01, 95% CI=0.95, 1.07; $p=0.735$ per AT allele for women <50 years vs OR=0.93, 95% CI=0.90; 0.95; $p=7.87 \times 10^{-8}$ for women >50 years).



In Mendelian randomization analysis, using rs34867104 as the genetic instrument and the Wald ratio method, we estimated an 18% higher insomnia risk per doubling in VMS risk (OR=1.18; 95% CI=1.09, 1.28). The Steiger test confirmed an effect of the TACR3 variant on insomnia via VMS. Strong evidence of colocalization at this locus was identified, with 96.4% posterior probability of a shared causal variant. Using 175 variants identified in relation to female-specific insomnia (n=1,409,137) and the inverse-variance weighted method, we uncovered a bi-directional relationship, where insomnia in turn influence reporting of VMS (OR=1.26; 95% CI=1.07, 1.49). This effect was largely consistent across pleiotropy-robust methods.

Our findings suggest that therapies targeted at TACR3 may improve both VMS and insomnia among menopausal women.



Associations of adolescent menstrual symptoms with school absences and educational attainment: analysis of a prospective cohort study.

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Background

A large proportion of young people who menstruate report struggling with problematic menstrual symptoms that contribute to their school absences and negatively impact their ability to focus and be productive whilst at school. However, understanding of this relationship is limited by reporting bias and confounding and little is known about the impact on educational attainment. We aimed to explore whether adolescent heavy menstrual bleeding and menstrual pain had a detrimental effect on attendance at school and educational attainment.

Methods

Participants were 2,698 girls from the Avon Longitudinal Study of Parents and Children, a prospective birth cohort study in the South West of England. Exposures were self-reported menstrual symptoms (heavy or prolonged bleeding and menstrual pain) during adolescence.



Outcomes were school absences and attainment in qualifications at the end of compulsory schooling (age 16), which were captured through linked administrative data. Data were analysed using multivariable linear regression models, adjusting for a comprehensive range of confounders.

Results

36.0% of participants reported heavy or prolonged bleeding and 55.5% reported menstrual pain. Heavy or prolonged bleeding was associated with greater levels of school absence (16.6%; 95% CI: 9.4, 24.2; p value < 0.001) and lower educational attainment (-5.7 points; 95% CI: -10.1, -1.2; p value = 0.013). Menstrual pain was also associated with more school absences (12.8%; 95% CI: 9.4, 23.6; p value < 0.001); however, there was little evidence for an association between menstrual pain and attainment (-3.14 points; 95% CI: -7.46, 1.17; p value = 0.153).

Conclusions

School absences were higher in those with heavy or prolonged bleeding and pain and GCSE attainment was lower in those with heavy or prolonged bleeding. The results may suggest that school-based interventions to support young people suffering with problematic menstrual symptoms are needed to mitigate the adverse consequences.



Menopause and the healthcare workforce: A scoping review to characterise the nature of the problem and its impacts.

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Background:

In the UK, 10% of women who are employed when experiencing menopause leave their jobs. This is due to feeling unable to continue to work, with many more reducing their hours because of symptoms.

The loss of female healthcare workers because of menopause can be considered a hole in the leaky career pipeline, a critical time where women leave the workforce, which impacts staffing levels and how services are managed. Specifically, within the NHS, the cost of the impact of menopause in nurses, health-visitors and midwives has been estimated at £166 million annually by the NHS Strategy Unit. Their report highlighted the issue of presenteeism, and the experiences of women who leave work, change roles and hours because of symptoms.

There is currently limited research exploring how staff experience symptoms of menopause and how organisations respond.



Objective:

This scoping review aims to characterise the nature of the problem of menopause at work and its impacts from the perspective of female healthcare workers.

Methods:

The scoping review was conducted as per Arksey and O'Malley's framework. Searches were carried out on MEDLINE, EMBASE, PsycINFO, Social Policy and Practice, HMIC and CINAHL. Inclusion criteria was developed, and the literature was screened at the title and abstract level and at full text by two reviewers. Citation chasing and a Google search were also conducted.

Results:

In total, 1548 articles were screened at title and abstract level, of which 76 were assessed at full text for eligibility. A total of 62 articles were included.

The articles were from 18 different countries with 73% published in the last 5 years. They included different types of studies: quantitative (22) and qualitative (10) empirical studies as well as non-empirical reviews (6), commentary and opinion pieces (15), organisational reports (5), website articles (4) and a book chapter (1). Studies look at different professions: nurses (25), mixed healthcare workers (18), doctors (8), dentists (2) and physiotherapists (1). Further analysis will explore experiences and impacts for healthcare workers and identify gaps to allow to plan further research.

Implications:

It is striking how little empirical research has been conducted on the topic, given the scale of the problem and the implications for individuals and organisations. Is the taboo of talking about the menopause extending to research?



Exploring experiences of puberty in young women with attention-deficit/hyperactivity disorder (ADHD): A qualitative study protocol

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Background: Attention-deficit/hyperactivity disorder (ADHD) is a prevalent neurodevelopmental disorder characterised by persistent difficulties with inattention, hyperactivity and impulsivity. While females may display hyperactivity and impulsivity, they commonly exhibit the inattentive subtype, marked by inattentiveness, disorganisation, or emotional reactivity (Young et al., 2020). Gender disparities persist in ADHD diagnosis, with boys typically identified by age 8, whereas girls often remain undetected until an average of 9 years later, sometimes not until adulthood (Lloyd et al., 2021). This delay and failure to recognise ADHD in females detrimentally impacts their physical and mental wellbeing. Furthermore, the onset of puberty and the complexities of adolescence, characterised by physical and emotional changes (Inchley et al., 2020), complicates the challenges faced by young women with ADHD, especially considering the exacerbation of ADHD symptoms during social and educational transitions (Young et al., 2020).



Objective: To explore the lived experiences of young women with ADHD as they navigated adolescence and puberty, focusing on their challenges, coping mechanisms and resources available.

Methods: Semi-structured interviews will be conducted with young women aged 18–21 years diagnosed with ADHD and residing in the United Kingdom. Interviews will explore topics including: (a) the interplay of pubertal changes and their ADHD symptoms across emotional, social and academic domains; (b) the coping mechanisms and strategies used during adolescence; and (c) the perceived strengths and weaknesses of existing support systems and resources for young women with ADHD through adolescence. The content of the semi-structured interviews will be thematically analysed, following an inductive approach, using the steps described by Braun and Clarke.

Results: Findings from this study will cover candidate themes discussed by young women with ADHD regarding puberty, including challenges and coping mechanisms, offering insights into available support systems and resources. Additionally, this study will provide a methodological framework for qualitative research on puberty experiences among women with ADHD.

Conclusions: This study will offer valuable insights into the unique journeys of young women with ADHD during adolescence. By exploring how puberty might exacerbate ADHD symptoms and the coping strategies employed to navigate the associated physical and emotional changes, we hope to enhance understanding of this population's experiences. Additionally, this study will uncover existing support systems and resources, to enrich findings and identify areas for improvement in providing comprehensive support throughout adolescence. Ultimately, this study will lay the groundwork for the development of more effective, targeted interventions and support services tailored to this demographic.



The MenstruLife consortium: longitudinal cohort data for menstrual and mental health research

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There is growing recognition amongst the media, policy makers and medical researchers that menstrual health is a critical issue for women and society. Heavy menstrual bleeding (HMB) and menstrual pain (MP) can have a significant negative impact on financial, social, physical, and mental wellbeing, and individuals with HMB/MP are at an elevated risk of depressive symptoms, anxiety, and poor social wellbeing. Identifying the causes of, treating, and managing HMB/MP is a global health priority, but research and clinical practice are lagging behind public awareness and there are substantial knowledge gaps.

This project addresses gaps in this under-recognised, under-resourced and under-researched area of clinical need by bringing together the only cohort studies globally that have collected HMB and MP data. By harnessing existing, rich, longitudinal, and genetic data from these cohorts, we will provide evidence to inform better ways to predict, prevent and manage HMB/MP and reduce negative relationships with mental health and wellbeing over the life course.



Managing menstrual symptoms in primary care with a mindfulness-based intervention programme.

***Kate Shepherd Cohen**

Does the daily mindful practice of 'Menstrual Cycle Awareness' (MCA), help manage menstrual symptoms for better health outcomes?

For the last 18 months, through over 500 GP surgeries across the UK, the digital menstrual health and education organisation, Menstrual Cycle Support, has run an evidence-informed and clinically-backed online four step 60 minute programme in MCA as a treatment pathway in primary care, on social prescription (self-referral also available).

Early evidence, as compiled by independent academics, reveals that the approach can improve outcomes and help manage menstrual symptoms.

In this short presentation, Kate Shepherd Cohen will briefly describe the practice of MCA and how it is taught by Menstrual Cycle Support; present the early qualitative and quantitative research findings and will pose the question: could MCA become a viable clinical intervention for managing menstrual symptoms in the future?



Menstrual Cycle Support is a digital menstrual health and education organisation, launching the world's first menstrual health service on social prescription at the House of Lords in Oct 2022. The service – a short online course – is clinically-backed and peer reviewed and endorsed by the Women's Health Ambassador, the President of the RCOG and all of the leading menstrual health charities. In partnership with the charity, Endometriosis UK and schools from across the UK, Menstrual Cycle Support is launching an online course for teens in Parliament in March 2024.

The recently published Menstrual Cycle Support Impact Report was compiled by Dr Marie Polley and Dr Helen Seers, Meaningful Measures Ltd.



Period – Should Not Be a ‘Full Stop’ on Education

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India, the 5th largest economy in the world is still a developing country. And has a long way to catch up with virtuous standards in menstrual health and hygiene management.

As per a recent study, 23 million girls drop out of school every year in India.

Reason? Plenty, and mostly, interrelated.

- Lack of gender-sensitive toilet or private place to change period products
- Lack of access to sufficient water to ensure a clean and hygienic period during school hours, which directly increases the risk of urinary tract infections (UTIs) and vaginal infections, leading to absenteeism
- Lack of dustbins to dispose sanitary waste, resulting in girls having to carry soiled pads in their school bags all day
- Lack of prior knowledge & awareness about menstruation
- Period poverty
- Social & cultural association (in many communities it is believed and practiced that post menarche, the girl is ready for marriage and childbirth)



Impact of Missing School/Drop Out

The impact of periods on education can be extremely detrimental for girls, especially on their long-term education, mental health and in the overall growth and development.

Remaining absent on 2–5 days of school every menstrual cycle means that girls are missing out on school curriculum regularly and fall behind with their coursework.

As a result, they face increased pressure at school as it can take a toll on their final grades to progress to the next class.

While at school during periods, studies show that girls who miss school, have low concentration rates and face period anxiety. All these factors create period-related barriers to education and can cause a menstruating student to fall behind in their educational development.

Girls dropping out from school due to periods also affects their financial independence. This also directly impacts their potential for involvement and leadership in society.

Resolution

- Development & implementation of a comprehensive period policy by government and school management
- Better water, sanitation and disposal facilities in schools
- Awareness and knowledge sessions in the classroom on growing up and menstruation from early years of puberty
- Availability of period products in the school
- Accessibility of a safe space to change and rest

Conclusion

By providing comprehensive menstrual education, access to period products, and creating a supportive environment, schools can help break down the stigma surrounding menstruation and promote better physical and mental health outcomes for girls.



What can we learn from transaction data about period poverty in England?

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Introduction & background

It has been reported that up to 91% of those who menstruate experience associated pain. Despite its ubiquity, the prevalence of menstrual pain has been under researched due to stigma, disregard from medical professionals and a lack of data. It has also been reported that different demographics experience menstrual pain differently yet the impact of socio-demographic factors on menstrual pain remains to be explored on a national scale due to data scarcity.

Objectives & approach

In this study, we propose one way to overcome this data barrier, using a novel measure of menstrual pain extracted from supermarket shopping data. We use these national datasets to identify individual customer behaviour patterns. Specifically, we use transactions involving both a pain and menstrual item as a proxy measure for menstrual pain. We investigate national menstrual pain sales and whether there are significant differences between deprived and less deprived areas of England.



Results

Our findings indicate that there is a high prevalence of menstrual pain with at least 26.7% of customers who purchase menstrual items also purchasing pain relief simultaneously. These customers are nearly four times more likely to purchase pain relief with a menstrual item than they are without. In addition, our results indicate a significant geographical disparity between menstrual pain transactions. We examine the relationship between a variety of deprivation factors and regional menstrual pain transactions and find average regional income has the highest predictive impact on menstrual pain sales. Contrary to what would be expected from previous research, customers from the region with the lowest regional income were a third less likely (32%) to make a menstrual pain transaction than those from the highest income region.

Conclusions & implications

This work motivates further research into the national prevalence of menstrual pain to understand why this regional disparity exists and whether it is a consequence of "period poverty". A better understanding of the sociodemographic factors associated with menstrual pain will help healthcare professionals stratify patients by risk, and could inform strategies to predict and prevent menstrual pain and its adverse impacts.



The Impact of Menstrual and Mental Health on Patients' Interactions with a Healthcare Chatbot

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Background: Menstrual health has historically been neglected in research despite evidence suggesting its significant impact on physical and psychological well-being. This neglect extends to the provision of personalized digital healthcare technologies (DHTs), such as healthcare chatbots, for menstruating individuals. To the best of our knowledge, no study has specifically explored how the menstrual cycle affects patient-chatbot engagement within healthcare settings.

Objective: This work explores how the menstrual cycle influences patients' engagement with empathic chatbots. We specifically evaluate the impact of empathic self-awareness (ESA) and empathic active listening (EAL) cues in text- and rule-based healthcare chatbots and how these cues affect perceptions of empathy, user engagement, and the patient-chatbot relationship in healthcare contexts.



Methods: We developed four functional but fictitious healthcare chatbot prototypes engaging patients in a realistic anamnesis dialogue incorporating EAL and ESA cues. These cues were manipulated following a 2 x 2 full-factorial between-groups design (1: no empathic cues, 2: ESA only, 3: EAL only, 4: EAL+ESA). We aimed to recruit 1'000 participants with chronic conditions from the UK. Thus, participants were invited via Prolific and randomly assigned to interact with one of these prototypes; 921 provided complete data (female: 50.27%; mean age = 42.4 years, SD = 14.1). Menstruating individuals were also asked for menstrual health and cycle-related questionnaires to examine the influence of characteristics such as menstrual cycle phase or menstrual health disorders on the patient-chatbot engagement. To assess the effects of empathic cues on users' perceptions of empathy, engagement, and the patient-chatbot relationship, we will apply conventional statistical methods and (e.g., MANOVAs) and machine learning approaches (e.g., for sentiment analysis).

Preliminary Results: Early findings suggest that chatbots incorporating only EAL cues enhance users' perceptions of empathy, engagement, and the user-chatbot relationship. However, combining both ESA and EAL cues yields conflicting results.

Further Expected Outcomes: Ongoing analysis will investigate how individual experiences and (menstrual and mental) health conditions may highlight the need for personalized empathic responses to enhance user experience and satisfaction. We expect that engagement metrics and perceptions of empathy will vary with menstrual and mental health disorders, presenting a contrast to the experiences of non-menstruating individuals. These contrasts will further inform the development of chatbot communication strategies, ensuring they are inclusive and sensitive to the changing needs of patients for personalized DHTs.



Attitudes towards menstrual leave among high-school students: exploring the role of ambivalent sexism and perception of menstrual pain.

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Background. Menstrual leave policy is a debated topic worldwide, and understanding how it is perceived also in school settings is highly relevant. According to meta-analytic evidence, 20% of female students report losing school days due to dysmenorrhea. However, no law currently regulates menstrual leave in Italy, and menstrual discomfort per se is not considered a reason for justified absences. This research aims to investigate high-school students' attitudes toward menstrual leave, by focusing on the associations between internalized ambivalent sexism, attitudes towards menstruation, and agreement towards menstrual leave.

Method. The study was conducted in Italy with a sample of 156 female high school students aged between 13 and 19 years. Participants volunteered to complete a survey including measures of benevolent and hostile sexism (the Ambivalent Sexism Inventory [ASI]), attitudes towards menstruation (the Menstrual Attitude Questionnaire [MAQ]), and 17 ad-hoc items to assess attitudes toward menstrual leave.



Next, a vignette was presented with a message from an adolescent girl (Giulia), in which she described her menstrual pain and required menstrual leave. Participants were asked to rate the severity of Giulia's pain with a Visual Analogue Scale (VAS) from 0 to 100, to list arguments both in favour and against allowing menstrual leave to Giulia, and to rate the strength of these arguments. Participants also rated their average menstrual pain with a VAS from 0 to 100.

Results. As hypothesized, the results of the study showed that hostile sexism is associated with negative opinions about menstruation, more dismissive attitudes towards menstrual pain, and increased opposition to menstrual leave. Unlike the initial expectations, benevolent sexism was not associated with positive opinions about menstruation and showed an association with negative attitudes towards menstrual leave. **Conclusion.** The results of this study highlighted significant and different associations between internalized hostile and benevolent sexism, attitudes towards menstruation, and attitudes towards menstrual leave among high-school female students. Through this exploration, the study introduces menstrual leave as a novel research topic within a society where this policy is starting to be implemented in both workplace and educational settings.



The unexplored lived experience of endometriosis and the potential for occupational therapy: A scoping review

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Endometriosis is a chronic progressive inflammatory disease, affecting 1 in 10 women and those assigned female at birth globally (Cousins et al., 2023). Individuals with endometriosis are faced with a myriad of barriers (Becker et al., 2022), such as delayed diagnosis (Pino et al., 2023), access to adequate treatment options (Evans et al., 2022), and a lack of understanding from health care professionals (Dixon et al., 2021). Endometriosis has been identified as a priority area within the latest women's health strategy (Department of Health and Social Care, 2022) emphasizing the need for more research pertaining to the wider health impact of endometriosis and its impact upon quality of life. Furthermore, it highlighted the need to expand services and management options from a wider multidisciplinary team perspective, particularly in primary care services.

Despite its prevalence amongst the general population, there is limited research regarding the management of endometriosis from the field of occupational therapy (Lozano-Lozano et al., 2021). Because of endometriosis, many individuals report an impact on the everyday activities that they choose to do, how they complete those activities, and how they spend their time. Within occupational therapy these concepts are defined as 'occupations' (Molineux, 2017). Occupations are considered essential to everyday living, providing structure, meaning and purpose. Engagement in meaningful occupation contributes to an individual's overall health, wellbeing, and quality of life (Royal College of Occupational Therapists, n.d).



Due to the gap within the research regarding the potential opportunity for occupational therapy as part of the management of endometriosis, a scoping review was conducted, to synthesize the available evidence from other disciplines and map it to concepts of occupation and the discipline of occupational therapy. From the data gathered three main themes emerged (1) individuals with endometriosis report a significant impact on a variety of their occupations (2) the impact of endometriosis not only impacts upon participation in occupation, but it also impacts upon occupational meaning, choice, and balance (3) The lack of endometriosis research is an occupational injustice. This highlights potential areas for future research into the impact of endometriosis on occupation and the development of occupational therapy interventions in this emerging area to support the overall management of endometriosis focused on enhancing quality of life and engagement in daily meaningful activity.



The role of inequalities in managing symptoms of menstruation: harnessing shopping data to innovate female reproductive health research

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Introduction & background

Menstruation affects half the population, yet its patterns and management are greatly under-researched. A regular and functioning menstrual cycle is considered an important vital sign and menstrual-related issues can be strong indicators of both reproductive and wider health issues. This project explores a novel health data source – shopping data history – to study how individuals manage menstrual symptoms such as pain, intensity of flow, mental health, and other issues, and explore potential social inequalities in these management strategies.

Objectives & approach

The core objectives of this research are to:

- Enhance our understanding of menstrual management strategies and potential inequalities in these
- Evaluate the utility and acceptability of shopping data for future female reproductive health research



Our approaches include:

- Review the literature to identify current gaps in our understanding of:
 - Menstrual patterns, management strategies and potential inequalities
 - Non-self-reported methodologies in menstrual research
- Consult the public to investigate attitudes towards shopping data for health research, as well as guide research questions and interpretations of patterns in the data
- Study retail data to identify products and patterns of purchasing which may be relevant to menstrual management
- Conduct surveys and data analysis with linkage to shopping data at a national level in the UK

Results

We present a conceptual framework of studying management of menstruation symptoms with shopping data. By analysing shopping behaviour, combined with survey data and area-level socioeconomic data, we identify regions of the UK and individual characteristics which influence the risk of experiencing menstrual symptoms and ability to manage these within a high-income context.

Conclusion & implications

Our research contributes to understanding of menstrual management strategies for women and people who menstruate, and associated inequalities.



Where is menstruation in global health policy?

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From both an academic and a policy angle, menstruation is receiving an unprecedented level of attention. Within the academic literature there are many different normative arguments being furthered for how menstruation *should* be understood and framed. Arguments are variously presented that it should be understood as an issue of rights, justice, hygiene or health management. Yet less attention has been paid to the step preceding these normative arguments – how menstruation *actually is* understood presently within global health policy.

In this paper we argue that, despite this proliferation of academic and policy interest, attention to menstruation is still relatively muted at the level of global health policy. Using Carol Bacchi's 'what's the problem?' approach to critical frame analysis, we show that global health policy on menstruation remains patchy, with little cohesive understanding of it as a policy issue emerging at the international level. Instead, competing framings of it as an issue emerge, such that there is not one clear way in which menstruation is addressed in international policy. We sketch the implications of this, arguing that without a collective understanding of the problem, solutions are likely to remain siloed, and cross-sectoral work will be difficult.



Psychosocial risk factors for Premenstrual Dysphoric Disorder symptom severity: a systematic review and meta-analysis

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Premenstrual dysphoric disorder (PMDD) is a disorder affecting about 5% of reproductive-age women. PMDD affects women's cognitive, emotional and physical well-being for up to three weeks of their menstrual cycle, including symptoms such as feelings of despair, fatigue and changes in appetite. The first line of treatment recommended by websites such as Mind.org and Johns Hopkins Medicine is lifestyle changes such as more exercise and maintaining a healthy diet. However, research investigating the association between psychosocial risk factors and symptom severity has been limited, and no systematic review has been conducted to synthesise the research investigating the relationship between psychosocial risk factors, health behaviours and PMDD symptom severity.



Therefore, the present systematic review aimed to examine which psychosocial risk factors and health behaviours predict PMS and PMDD symptom severity, by reviewing all available quantitative observational research. The databases Pubmed/Medline, Web of Science, Embase, CINAHL and PsychINFO were searched for studies investigating the association between any psychosocial or behavioural risk factor on PMS or PMDD symptoms, retrieving 10,411 studies. Abstracts were uploaded to Covidence and duplicates were removed, leaving a total of 4765 abstracts to review. Two reviewers independently screened titles and abstracts and are in the process of screening full texts for potential inclusion. Both reviewers will conduct data extraction. The review protocol is published in Prospero, registration number: CRD42023410126.

The review is currently ongoing, and the results of the data extraction will be synthesised into a narrative summary. A meta-analysis will be conducted if there is low heterogeneity across a group of studies (e.g., similar psychosocial risk factors examined, methodologies, outcome measures). We expect the review to be completed in May 2024.

How psychosocial factors predict symptom severity has not yet been studied in a systematic review. Therefore, this study will provide valuable information about which health behaviours and risk factors should be targeted in future research. It will also help to inform which lifestyle interventions should be recommended to people with PMDD.



Flow Right: Establishing a Problematic Menstrual Bleeding Patient and Public Involvement Group

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2Flow Right, Patient and Public Involvement Group

Introduction: Heavy menstrual bleeding (HMB) affects up to 1 in 3 women. HMB has a negative impact on quality of life, it can lead to anaemia and can be associated with significant pain. It affects individuals, the NHS and society. In the UK, 7.5 million women experience HMB and yet, until now, there has not been a dedicated problematic menstrual bleeding PPI group. PPI groups allow those with lived experience to influence priorities and co-design research which delivers maximum benefit and impact.



Methods: Researchers attended training ('Creating and running a PPI group' via Edinburgh Clinical Research Facility). Group membership was advertised through poster display, calling for people with lived experience of problematic menstrual bleeding. To increase diversity, the advert was distributed via social media, clinical areas, the Health and Social Care Alliance and NHS mailing lists. Steps were taken to advertise via GPs and community teams in contact with under-represented groups. A face-to-face initial meeting was arranged for group members and menstrual researchers. This provided opportunity to discuss motivations, research activities and a strategy for bi-directional communication. A tour of the laboratory area was arranged to demonstrate where and how our menstrual research is carried out. With input from researchers and group members, the group was named Flow Right.

Results: Flow Right have co-designed a short-listed UKRI grant application on menstruation and mental health and will have continued input in this, if successful. Review of documentation for an NHS Research Ethics Committee application allowed Flow Right to influence how we carry out clinical research activities. The group provided feedback to ensure that patients participating in research do not have to undergo repeated procedures. Researchers and Flow Right have collaborated to secure grant funding for an engagement project "Red-y to Talk: Discussing Periods to Reduce Health Inequalities." This workshop series aims to empower those with lived experience to share their story. Outputs will be disseminated to other researchers, the public and policy makers to raise awareness and influence research priorities.

Future plans: We aim to expand the group to encourage representation across the life span. We have secured funding for a James Lind Alliance priority setting partnership for problematic menstrual bleeding and will invite Flow Right to participate in this process. We hope that the partnership between researchers and Flow Right will strengthen and lead to further collaboration which will ultimately improve the lives of those who experience problematic menstrual bleeding.



A mixed-methods investigation of coping, adaptation, and health-related quality of life in endometriosis

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Background: Endometriosis is associated with reduced health-related quality of life. Coping has been linked to health-related quality of life in this population, but longitudinal research to establish the impact of coping on quality of life, over time, is lacking. Furthermore, limited research has examined coping and adaptation to endometriosis from an in-depth qualitative or mixed-methods perspective. Taking a mixed-methods approach, the current research aimed to investigate the ways in which participants coped and adapted to living with endometriosis, and the extent to which coping predicted quality of life over time.

Methods: A sequential, mixed-methods design incorporated a two-wave longitudinal survey and semi-structured interviews was used. Participants (n=408) diagnosed with endometriosis, completed a baseline survey measuring demographics, clinical factors, and coping. One-year later, 283 participants completed a measure of quality of life. Data was analysed using hierarchical multiple regression analysis. Meanwhile, 30 semi-structured interviews were conducted and analysed using reflexive thematic analysis. Findings were integrated by considering points of convergence, divergence, and complementarity between the datasets.



A Choice of One's Own: A Cross-Country Investigation of the Association Between Women's Decision-Making Autonomy and their Menstrual Hygiene in Low- and Middle-Income Countries

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Menstruation is a natural part of life for 1.8 billion women, girls, transgender men and non-binary persons across the globe. On average, a menstruator will spend around 6.25 years managing their menses. However, it is estimated that 25% of the female population of reproductive age face challenges and barriers to managing their menstrual health and hygiene (MHH). This can have adverse effects on menstruators' social, economic, political and personal lives and liberties. Therefore, understanding the barriers to and consequences of inadequate MHH is essential for the promotion of human rights, and achievement of the United Nation's Sustainable Development Goals.



Fortunately, over the past decade there has been a surge in advocacy, programming and research which has highlighted the importance of menstrual experiences for women's health. A growing consensus underscores that socio-cultural context coupled with resource limitations impairs MHH in low- and middle-income countries (LMICs). Furthermore, empirical studies demonstrate that greater female autonomy can improve women's health outcomes and welfare. Yet there is a surprising paucity of research which directly examines the relationship between women's autonomy and their MHH, an important but often ignored component of reproductive health. To begin filling this empirical gap, this paper aims to test the statistical association between menstrual hygiene, as a component of MHH, and women's decision-making autonomy, as a factor of female autonomy, in LMICs.

Utilising cross-sectional data consisting of over 70,000 women from the Demographic and Health Surveys (DHS) across eight LMICs, this paper conducts quantitative analyses of women's decision-making autonomy and their menstrual hygiene in Nepal, Cambodia, The Philippines, Burkina Faso, Kenya, Ivory Coast, Ghana and Tanzania. Women's decision-making autonomy is measured by assessing women's participation in three types of household decision making: (1) their own health care, (2) major household purchases and (3) visits to family and friends. Menstrual hygiene is assessed according to the adequacy of menstrual products. While this is not an exhaustive indicator of adequate hygiene, it remains a useful proxy from the data available.

Preliminary results suggest that there is a significant association between women's decision-making autonomy and their menstrual hygiene, as well as cross-cultural differences and similarities in the strength of the relationship. MHH interventions and policies may therefore need to consider ways of improving women's general autonomy as a path towards lasting and impactful change for menstruators' health and wellbeing in developing nations.



List of Attendees

Alexis Cullen
Alice Beck
Alison Cooper
Amandine Senequier
Amrita Sidhu
Amy Mair
Angie Hoskin
Anna Murray
Argyro Pavlidou
Becky Cotton
Carrie White
Catherine Akoth
Charlotte Bermingham
Charlotte Loving
Charlotte Wilson
Chella Quint
Chloe Apsey
Chrissy Cattle
Christine Anderl
Claire Spreadbury
Clare Dolman
Dana Tarif
Davinny Sou
Deepthi Lavu
Diya Khullar
Ellen Lambert

Ellie Ansell
Elpida Vounzoulaki
Elysha Paige
Emma Campbell
Erin Haskell
Erin Lucy Funnell
Erin Mercado
Florence Martin
Fódhla Ní Chéileachair
Fran Yarlett
Gabriella Goodrich
Gemma Ford
Gemma Sawyer
Gemma Sharp
Gill King
Grace O'Donnell
Hanna Kallo
Hannah Durand
Hannah Sykes
Hat Porter
Hazel Lea Acland
Helen Weiss
Hilary Critchley
Isobel Ward
Jackie Maybin
Jasmine Tagesson

Jennifer Thomson
Jessica Agnew-Blais
Jessica Scott
Jessica Yang
Jie Ren
Jon Heron
Jonathan Chow
Josephine McAllister
Judit Csontos
Kamilla Abdullayev
Kat Frere-Smith
Kate Bowen-Viner
Kate Nelson
Kate Penning
Kate Shepherd Cohen
Katharine Murphy
Katherine Ruth
Katherine Thomas
Katie Greenland
Katie Marwick
Kelly Jennings-Robinson
Kirsten Weber
Kirsty Mushing



Kirsty Mushing	Rebecca White
Laura Gill	Rebecca Wood
Laura Sorvala	Robyn Jackowich
Lisa Shitomi-Jones	Rochelle Knight
Lottie Finister	Rosie Dixon
Louise Pendry	Rumbi Mutenga
Luana De Giorgio	Ruth Brauer
Luke Mahoney	Sally King
Lynn Williams	Samantha Cole
Lynsay Matthews	Samantha Tavender
Madison Lindeman	Samantha Trevaskis
Maja Kazmierczak	Samuel Ellis
Mandikudza Tembo	Sandrah Nabuule Manuella Senfuma
Marcia Niflen	Sania Siddiqui
Maria Fannin	Sarah Harman
Marianne Watters	Sarah Howard
Marie Kochsiek	Sarah O'Brien
Marina Vabistsevits	Sarah Walker
Martha Doerfler	Shani Zmigrod
Martha Hickey	Sharlene Alauddin
Martha Piper	Siona-Lee Hemming
Martina Stanic	Sophia McDowell
Melanie Channon	Sorcha Alford
Mia Pollington	Stephen Lagony
Millie Banks	Su Yi Kuek
Minakshi Dahal	Sula Windgassen
Molly Fenton	Terra Sprague
Nadia Ncube	Thao Ngoc Do
Nayra Martin-Key	Thomas Broughton
Nikki Berridge	Thomas Richardson
Nina Kuypers	Tigist Grieve
Olivia Glaze	Vicky Stiles
Pooja Khurana	Yvonne Hartnett
Poppy Taylor	Zamira Figuereo
Rachel Reid-McCann	Zoe Hale
Rebecca Charlton	
Rebecca Evans	
Rebecca Kingdom	
Rebecca Richmond	



