

VOLUME ONE:

“An exploration of adolescent girls’ menstrual experiences in relation to educational experience and engagement”

by

MADALAINE ELIZABETH NICOL

A thesis submitted to the university of Birmingham for the degree of
DOCTOR OF APPLIED EDUCATIONAL AND CHILD PSYCHOLOGY

Department of Disability, Inclusion and Special Needs (DISN)
School of Education
College of Social Sciences
University of Birmingham
July 2024

UNIVERSITY OF
BIRMINGHAM

University of Birmingham Research Archive

e-theses repository

This unpublished thesis/dissertation is copyright of the author and/or third parties. The intellectual property rights of the author or third parties in respect of this work are as defined by The Copyright Designs and Patents Act 1988 or as modified by any successor legislation.

Any use made of information contained in this thesis/dissertation must be in accordance with that legislation and must be properly acknowledged. Further distribution or reproduction in any format is prohibited without the permission of the copyright holder.

Abstract

Background: Menstruation is recognised as a global public health issue, with menstrual health considered inextricably linked with human rights. Increasing research highlights the significant impact of adolescent girls' menstrual needs on their physical, social and emotional health, as well as their educational engagement, with these challenges being particularly pronounced in marginalised communities.

Aims: This study aimed to contribute to the growing body of research surrounding the menstrual experiences of adolescent girls in low socio-economic areas, by exploring and giving voice to their views. It is hoped that this research can support educational professionals and settings to enhance the menstrual health of young people and support educational engagement.

Methods: Semi-structured interviews were conducted with four menstruating cis-gender girls aged 14-18 years. Data was analysed using reflexive thematic analysis (RTA) to generate shared themes across the participant dataset.

Findings: Participants reported menstrual experiences significantly impacting on their educational engagement, primarily during menstruation. Predominantly negative menstrual experiences were shared in relation to physical, social and emotional wellbeing. Findings highlight systemic barriers to menstrual health within the school environment that perpetuate menstrual stigma and contribute to menstrual hygiene management difficulties. Barriers include menstrual education, a culture of menstrual silence, restricted access to facilities and menstrual products, and perceptions of male peers and teachers as lacking menstrual understanding and empathy. Participants also expressed distrust in teachers to support their menstrual needs. Barriers were associated with concentration and engagement difficulties during learning activities, as well as reduced motivation to engage in school. However, protective factors included solidarity with menstruating peers and using learning as a coping mechanism. Psychological theories supported interpretive analysis, such as self-

determination theory. This study illuminates the value of using RTA in collaboration with a feminist approach to reflexivity, to elevate the voices of young people at risk of experiencing marginalisation.

Implications: Implications for educational psychology practice are proposed, including the incorporation of menstrual considerations into problem-solving frameworks, gathering pupil voice and supporting the menstrual awareness of educational professionals. Educational setting implications include staff development of skills and knowledge, and the provision of environments to promote menstrual health and reduce stigma. Opportunities for future research are considered.

Dedication

For my parents, my biggest supporters. Who have inspired me in more ways than they will ever know to pursue my dreams and aspirations. Thank you for always believing in me.

This thesis is also dedicated to the young people who participated and made this research possible. Thank you for generously sharing your time, thoughts, and perspectives. Your voices matter and have the power to promote meaningful change.

Acknowledgements

Firstly, I would like to share my thanks and gratitude to my university tutor, Anthea for her continued support, supervision, guidance and belief in me throughout my training and research. Your calming presence and vast knowledge have made this study possible.

Thank you to my placement supervisor for providing me with opportunities to develop professionally, your steadfast support and guidance, and for the timely reminders to take breaks!

To the school and the young people who participated in this study, thank you for your time and your openness. This research would not have been possible without you. I hope that your voices, amplified through this research, will enhance our understanding of menstrual experiences and how we can improve support in schools.

To my wonderful fellow TEPs, I am grateful to have shared this journey with you. A special thank you to our 'shut up and work group' for your humour, kindness, empathy and encouragement – I cannot put into words how invaluable you have been.

A heartfelt thank you to my wonderful friends and family for your unwavering support through the highs and lows. To my parents, Sarah and Robert, thank you for every opportunity you have given me growing up and for your constant love and support.

To my girls, Roo and Jura, thank you for being a constant source of comfort, for bringing structure to my day, and for the lovely walks that forced me to leave my desk and kept me grounded!

Finally, to my incredible husband, Jack. Thank you for your endless love, support, sense of humour, cups of tea, words of encouragement and continuous patience throughout this journey. I could not have done it without you, and I could not be more grateful to have you by my side.

Contents

Chapter One: Introduction and Context.....	1
1. Chapter overview.....	1
1.1 Background and rationale of the current research	1
1.2 My positioning - Personal and professional interest in the research area.....	2
1.3 Aims of the research.....	4
Chapter Two: Literature Review	6
2. Chapter overview.....	6
2.1 Defining menstrual terms.....	7
2.1.1 The menstrual cycle and menstruation.....	7
2.1.2 Menstrual health.....	8
2.1.3 Menstrual health – A public and human right.....	9
2.2 Historical overview of menstruation	10
2.2.1 Menstrual taboos.....	10
2.2.2 Menstruation as a source of power	11
2.2.3 Medical misconceptions	11
2.2.4 Religious and ritual significance	12
2.2.5 Evolving attitudes towards menstruation	12
2.2.6 Modern perspectives.....	12
2.3 UK Menstruation policy and initiatives	13
2.3.1 National policy and initiatives	13
2.3.2 UK school policy and initiatives	14
2.4 Defining ‘adolescent girls’	15
2.4.1 Defining ‘girls’.....	15
2.4.2 Adolescence – a critical period of development.....	15
2.5 Adolescence and menstruation.....	16
2.5.1 Psychosocial impact.....	16
2.5.2 Cognitive impact.....	17
2.5.3 Adolescent girls’ mental health.....	19
2.5.3.1 An association between the menstrual cycle and social, emotional and mental health (SEMH)	20
2.6 Menstruation and systemic inequality	22
2.7 The integrated model of menstruation	24
2.8 UK research on adolescent experiences of menstruation	27
2.9 Menstrual experiences in education.....	28
2.9.1 Menstrual health education	28
2.9.2 Social stigma and cultural taboos.....	29
2.9.3 Availability of menstrual hygiene management facilities	30

2.9.4 Educational engagement.....	31
2.10 Rationale for the current study	32
2.10.1 Objectives and unique contribution of the current study	33
2.10.2 Research questions	33
Chapter Three: Methodology.....	35
3. Chapter overview	35
3.1 Philosophical position	35
3.1.1 Ontology	35
3.1.2 Epistemology	36
3.1.3 Rationale for critical realism	36
3.2 Qualitative research methods.....	37
3.3 Reflexive thematic analysis.....	37
3.4 Alternative approaches considered.....	39
3.4.1 Interpretive phenomenological analysis.....	39
3.5 Recruitment of educational settings, gatekeepers and stakeholder engagement ..	39
3.6 Participants and recruitment	41
3.6.1 Sampling of participants.....	41
3.6.2 Recruitment of participants.....	42
3.6.3 Participant characteristics and sample size	42
3.6.4 Pen portrait of participating school	43
3.7 Procedure.....	44
3.7.1 Semi-structured interviews	44
3.7.2 Development of interview schedule and pilot.....	45
3.7.3 Conducting interviews with participants.....	46
3.8 Ethical considerations	46
3.9 Data analysis	49
3.9.1 A feminist research contribution	50
3.9.2 Reflexivity	51
3.9.3 Validity and trustworthiness of qualitative research	53
Chapter Four: Findings	57
4. Chapter overview.....	57
4.1 Research question 1a: What are the perceptions of adolescent girls on their menstrual experiences, in relation to <i>school experiences</i> ?.....	58
4.1.1 Superordinate theme: Physical symptoms during menstruation.	61
4.1.2 Superordinate theme: Negative emotional experiences.	61
4.1.2.1 Sub-theme: “You've got so many extra things to worry about”.....	62
4.1.2.2 Sub-theme: Heightened emotions during menstruation.	63
4.1.2.3 Sub-theme: Confusion.....	63

4.1.3 Superordinate theme: Social demands during menstruation.	64
4.1.4 Superordinate theme: Desire to conceal menstrual status.	65
4.1.4.1 Sub-theme: Strategies to conceal blood.	66
4.1.4.2 Sub-theme: Conceal menstrual products.....	66
4.1.4.3 Sub-theme: Discomfort sharing menstrual status with staff.	67
4.1.5 Superordinate theme: Menstrual solidarity.	67
4.1.5.1 Sub-theme: Practical support.	68
4.1.5.2 Sub-theme: Emotional support.	68
4.1.5.3 Sub-theme: Implicit support from peer menstruators – “they just get it”.	69
4.1.6 Superordinate theme: Male peers perpetuate menstrual stigma.	69
4.1.7 Superordinate theme: Perception of teachers.	70
4.1.7.1 Sub-theme: Distrust in teachers to support menstrual needs.....	70
4.1.7.2 Sub-theme: Male teachers perceived as less supportive than female teachers.	71
4.2 Research question 1b: What are the perceptions of adolescent girls on their menstrual experiences, in relation to <i>engagement in learning</i> ?	72
4.2.1 Superordinate theme: Motivation to engage in school.....	74
4.2.1.1 Sub-theme: Physical factors.....	74
4.2.1.2 Sub-theme: Emotional factors.	75
4.2.2 Superordinate theme: Attention and concentration difficulties - “ <i>You’re here but not mentally here</i> ”.....	75
4.2.2.1 Sub-theme: Physical symptoms.	76
4.2.2.2 Sub-theme: Worry.	76
4.2.2.3 Sub-theme: Mental load of menstruation.	77
4.2.3 Superordinate theme: Learning as a support strategy.....	77
4.3 Research Question 2a: What are the perceptions of adolescent girls on school support and provision, in relation to <i>understanding their menstrual experiences</i> ?	79
4.3.1 Superordinate theme: Menstrual education.	81
4.3.1.1 Sub-theme: Independent education.....	81
4.3.1.2 Sub-theme: Focus on biology.....	82
4.3.1.3 Sub-theme: Desire for holistic menstrual literacy.....	83
4.3.2 Superordinate theme: Paucity of menstrual discourse opportunities.	84
4.4 Research Question 2b: What are the perceptions of adolescent girls on school support and provision, in relation to <i>how their menstrual needs are addressed</i> ?	85
4.4.1 Superordinate theme: Menstrual hygiene management.	86
4.4.1.1 Sub-theme: Teachers as gatekeepers to the toilets.....	86
4.4.1.2 Sub-theme: School environment restricts access to facilities.....	87
4.4.1.3 Sub-theme: Restricted access to period products.	87
4.4.2 Superordinate theme: Teacher support: Menstrual accommodations.....	88

Chapter Five: Critical Review	90
5. Chapter overview.....	90
5.1 Key findings and contributions of the study	92
5.1.2 The toll of experiencing menstruation	92
5.1.2.1 Social, emotional and mental health considerations	93
5.1.2.2 Resilience	95
5.1.3 Menstrual impact on cognition and learning	96
5.1.4 Systemic barriers to menstrual health	99
5.1.3.1 Menstrual education.....	99
5.1.3.2 Silent culture around menstruation	101
5.1.3.3 Restricted access to facilities and menstrual products.....	103
5.1.5 Disengagement and non-attendance	105
5.1.6 Perceptions of males	107
5.1.7 Perception of teachers and support	108
5.2 Methodological issues and limitations of the research	109
5.2.1 Participant sample.....	109
5.2.2 Cross cultural considerations	110
5.2.2 Reflection on recruitment difficulties	111
Recruitment of schools.....	111
Recruitment of adolescent girls	112
Gatekeepers to YP's voices.....	112
5.2.3 Reflexive thematic analysis	113
Coding.....	114
5.2.4 Alternative methodological approaches.....	115
Case study design.....	115
Feminist epistemology.....	115
5.2.5 Menstruation versus menstrual cycle	116
5.3 Implications of the research	116
5.3.1 Implications for educational psychologists.....	117
Systemic support.....	117
Casework	123
5.3.2 Implications for educational settings and staff	126
5.4 Future research	128
5.5 Conclusion.....	130
References.....	132
Appendices	153
Appendix 1: Key information regarding the systematic literature review titled 'Adolescents' perceived experiences of menstruation in the United Kingdom: A systematic review.' ...	153

Appendix 2: Appropriateness of reflexive thematic analysis (RTA)	154
Appendix 3: Evaluation of alternative methodologies	157
Appendix 4: Recruitment flyer.....	161
Appendix 5: Information and consent forms.....	162
Appendix 6: Interview schedule	170
Appendix 7: Ethical approval for the study	173
Appendix 8: Familiarisation (initial ideas)	174
Appendix 9: Initial codes – Systematic coding	178
Appendix 10: Sample of theme generation in relation to the theme “Desire to conceal menstrual status”	185
Appendix 11: 15-point checklist of criteria for good thematic analysis.....	187
Appendix 12: Useful resources for signposting	188

List of Figures

Figure 1	<i>The integrated model of menstruation (Barrington et al., 2021)</i>	25
Figure 2	<i>Thematic map of adolescent menstrual experiences (Nicol, 2023)</i>	27
Figure 3	<i>Thematic map for theme 'Negative emotional experiences during menstruation'..</i>	62
Figure 4	<i>Thematic map for theme 'Desire to conceal menstrual status'</i>	66
Figure 5	<i>Thematic map for theme 'Menstrual solidarity'</i>	68
Figure 6	<i>Thematic map for theme 'Perception of teachers'</i>	70
Figure 7	<i>Thematic map for theme 'Motivation to engage in school'</i>	74
Figure 8	<i>Thematic map for theme 'Attention and concentration difficulties - "You're here but not mentally here".</i>	76
Figure 9	<i>Thematic map for theme 'Menstrual education'</i>	81
Figure 10	<i>Thematic map for theme 'Menstrual hygiene management'</i>	86
Figure 11	<i>Thematic map showing theme synthesis within the critical review</i>	91

List of Tables

Table 1	<i>Inclusion criteria and rationale</i>	41
Table 2	<i>Demographic information of participants</i>	43
Table 3	<i>Ethical considerations</i>	46
Table 4	<i>Six stages of reflexive thematic analysis (adapted from Braun and Clarke, 2022)</i>	49
Table 5	<i>Criteria for the evaluation of qualitative research to assess research quality (Yardley, 2015)</i>	53
Table 6	<i>Themes and codes for adolescent girls' menstrual experiences in relation to research question 1a</i>	58
Table 7	<i>Themes and codes for adolescent girls' menstrual experiences in relation to research question 1b</i>	72
Table 8	<i>Themes and codes for adolescent girls' perceptions in relation to research question 2a</i>	79
Table 9	<i>Themes and codes for adolescent girls' perceptions in relation to research question 2b</i>	85

Abbreviations

BERA: British Educational Research Association

BPS: British Psychological Society

CR: Critical realism

DfE: Department for Education

DHSC: Department of Health and Social Care

DSL: Designated Safeguarding Lead

EMS: Early maladaptive schemas

EP: Educational psychologist

EPS: Educational psychology service

FST: Feminist standpoint theory

GP: General practitioner

HIC: High-income countries

IPA: Interpretative phenomenological analysis

LA: Local authority

LGBTQ: Lesbian, gay, bisexual, transgender and queer or questioning

LMICs: Low and middle-income countries

MH: Mental health

MHHM: Menstrual health and hygiene management

NHS: National Health Service

PE: Physical education

PMDD: Premenstrual dysphoric disorder

PMS: Premenstrual syndrome

RSHE: Relationships, sex and health education

RTA: Reflexive thematic analysis

SEMH: Social, emotional, and mental health

SENDCo: Special Educational Needs and Disabilities Coordinator

SLR: Systematic literature review

TA: Thematic analysis

TEP: Trainee educational psychologist

UK: United Kingdom

UN: United Nations

UNGA: United National General Assembly

USA: United States of America

VAT: Value-added tax

WHO: World Health Organisation

YP: Young people

Glossary of menstrual terms

Dysmenorrhea: Discomfort and pain during the menstrual period.

Endometriosis: *“Endometriosis is a disease in which tissue similar to the lining of the uterus grows outside the uterus. It can cause severe pain in the pelvis and make it harder to get pregnant”* (WHO, 2023 p.1)

Eumenorrheic: Experiencing predictable (varying plus or minus 1 day) menstrual cycles of 25–35 days.

Luteal phase: The final phase of the menstrual cycle which starts after ovulation and ends with the first day of the next period. During this phase the body prepares for a possible pregnancy and releases progesterone to thicken the womb lining ready for a fertilised egg (NHS Newcastle upon Tyne Hospitals, 2022).

Menstrual cycle: The menstrual cycle prepares the body for pregnancy. The menstrual cycle is a natural process. It is a complex cycle controlled by hormones that cause regular bleeding (periods). The menstrual cycle has four phases: menstruation, the follicular phase, ovulation and the luteal phase.

Menstrual hygiene management: The practice of using clean menstrual products, having access to safe and private facilities, and maintaining hygiene during menstruation.

Menstrual health: *“Menstrual health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity, in relation to the menstrual cycle”.* (Hennegan et al., 2021, p. 35)

Ovulation/mid-cycle phase: Ovulation takes place approximately two weeks before the start of menstruation. During this time an egg is typically released from one of the ovaries for potential fertilization.

Note: These terms are often used interchangeably.

Perimenstrual/paramenstrual: The period of time immediately before and during menstruation.

Note: These terms are often used interchangeably. Perimenstrual commonly refers to the time immediately before and during menstruation, while paramenstrual may encompass a broader range of days, including the pre-menstrual and early menstrual phases.

Menstruation: Menstruation, commonly known as a period, is the normal vaginal bleeding that occurs as part of a woman's monthly cycle, typically lasting between 2 and 7 days. It is regulated by hormones, primarily oestrogen and progesterone, which prepare the body for pregnancy. If pregnancy does not occur, hormone levels decrease, causing the shedding of the uterine lining.

Period poverty: Period poverty refers to a state in which an individual has insufficient access to menstrual products, education, and sanitation facilities, resulting in menstrual-related injustice and inequity (Jaafar et al., 2023).

The ‘toxic trio’: Refers to the factors that contribute to period poverty in the UK. These include the cost of period products, a lack of education about the menstrual cycle, and the shame, stigma, and taboo surrounding menstruation (Plan International UK, 2018).

Premenstrual syndrome: PMS describes the physical and emotional symptoms that some menstruators experience on the days leading up to their menstrual period.

Premenstrual dysphoric disorder: A severe form of PMS with significant emotional and physical symptoms that significantly impact on daily functioning.

Oestrogen: A hormone that plays a role in regulating the menstrual cycle, ovulation (when an egg is released), and promoting the growth of the uterus lining to prepare for potential pregnancy.

Progesterone: A hormone produced primarily in the ovaries after ovulation, crucial for preparing and maintaining the uterine lining for potential pregnancy during the second half of the menstrual cycle.

Chapter One: Introduction and Context

1. Chapter overview

This study serves as volume one of a two-volume thesis which has been submitted to fulfil the academic requirements of the Applied Educational and Child Psychology Doctorate (App Ed and Child Psy D). The purpose of this chapter is to summarise the overarching context of the chosen research topic and introduce the author and their positioning within the research.

1.1 Background and rationale of the current research

Every month, 1.8 billion people worldwide menstruate (UNICEF, 2023). Despite this global phenomenon, research on the female menstrual experience is a historically underrepresented area (Critchley et al., 2020), particularly within the United Kingdom (UK) adolescent population (Nicol, 2023). This is reflected in the current UK literature, with little academic research exploring the voices of adolescent girls (defined in Section 2.4.1) regarding their menstrual experiences generally and in education. Difficulty managing menstruation has been identified as a barrier to accessing education and employment (Sumpter & Torondel, 2013). Given the significant impact of menstruation on girls physical, mental, and social health (Barrington et al., 2021) it is surprising that qualitative literature in this field remains limited. Exploring menstrual experiences in the context of adolescent girl's learning and education is crucial. It plays a vital role in seeking to address menstrual challenges, with the goal of improving school experience, academic achievement, and overall menstrual health.

Some studies have explored menstruation experiences generally (Plan International UK, 2018) and there are emerging models of menstrual experience, such as the 'Integrated Model of Menstruation Experience' (Barrington et al., 2021). More specifically within education, there have been explorative studies into teachers' perspectives on menstrual education and school support (N. Brown et al., 2022). Additionally, a recent systematic literature review (SLR) of 19 international studies has synthesised current knowledge about school experiences of menstruation in high-income countries (HIC) (Thomas & Melendez-

Torres, 2024), arguing that young people (YP) are experiencing menstrual injustice with schools failing to take responsibility for menstrual management, resulting in self-excluding behaviours. Despite these efforts, research remains in its infancy, with a notable absence of in-depth exploration from the perspectives of adolescent girls within UK educational contexts.

The need to position YP's views and voices at the centre of menstruation research is paramount. Understanding their experiences is crucial for informing school support initiatives and future research. YP themselves are the experts on their own experiences, and it is clear there exists a lack of menstruation knowledge among both YP and the adults around them (Plan International UK, 2018). Without their voices and shared experiences, the development of new education initiatives that address this gap is unlikely. Hence, this research is not only well-positioned but also indispensable in the current climate, serving as a critical catalyst for addressing this significant gap in understanding and support.

1.2 My positioning - Personal and professional interest in the research area

As a cis-gender¹, white British woman with a middle-class upbringing, I recognise that these characteristics typically afford me a privileged position. While I had access to menstrual products growing up, I faced challenges due to inadequate menstrual education and stigmatised views. Most prominently felt in secondary and post-16 education, male peers often associated menstruation with being 'unclean', leading me to hide my menstruation and engage in unhealthy practices, such as prolonged use of menstrual products and potentially harmful feminine hygiene products containing chemicals, which I believe are reflective of the experience of my peers. I do not recall receiving comprehensive menstrual education distinct from learning about the reproductive cycle, nor support structures at school for menstrual needs. On reflection, my lack of understanding prevented me from seeking necessary professional support, resulting in prolonged physical and psychological impacts, affecting attendance in education and later increasing anxiety and difficulty managing work-related and personal challenges. Receiving professional support and a focus on menstrual health

¹ Assigned female at birth and identify as female.

improved my well-being. Over the past three years, I have become more self-aware and gained a sense of agency over my menstrual cycle, recognising its impact on multiple areas of my life.

My background in health psychology, concerned with psychological factors and behavioural processes contributing to physical health and wellbeing, led me to understand how psychology can improve wellbeing, prevent issues, and manage health. While completing a master's degree, I noticed what seemed to be very little support for women experiencing menstrual disorders. Upon reflecting on my own and others' anecdotal experiences, I realised how profoundly menstrual cycles can impact daily functioning. I felt that labelling menstrual issues strictly as conditions might dismiss the significant impact menstrual cycles, in themselves may have. This reflection contributed to a drive to better understand my own menstrual cycle and empower others to do the same, to support physical and psychological mental health (MH) and wellbeing. My personal menstrual experiences, academic and professional interests have therefore motivated me to explore adolescent perspectives on the menstrual cycle.

As a Trainee Educational Psychologist (TEP), I frequently work with adolescent girls and the adults supporting them. I have wondered whether there may be a lack of understanding and consideration among professionals regarding the impact of menstrual experiences on education. Surprisingly, there were instances where punitive measures, such as sanctions for non-participation in physical education (PE), were imposed. I often considered the potential impact of YP's menstrual experiences on their MH, wellbeing, and educational engagement, and on whether these experiences should play a role in the generation of guiding hypotheses. However, discussing menstruation with adults felt challenging because of my perceived stigma and sensitivity. Additionally, the lack of research on shared experiences and support for YP in education further complicated this issue, leaving me uncertain about how to approach this topic.

I believe professionals play a crucial role in developing educational environments that support menstrual health and break down stigma (Hennegan et al., 2021); in addition to identifying and supporting young women who may be experiencing menstrual-related barriers to education. However, UK research focusing on girls' menstrual experiences is noticeably lacking. Recognising the need for a more comprehensive understanding, this study seeks to amplify girls' voices concerning the impact of menstrual experiences on education. Research guided by the perspectives of adolescent girls can promote a person-centred approach to inform supportive provision.

My focus on girls' experiences motivated me to explore feminist research principles and perspectives. Concurrently, my personal identity evolved, which shaped my positionality in the research process (see Chapter 3). Reflexivity is essential during this study and is documented through example reflections from my research diary (Section 3.9.2). As a cis-gender woman who menstruates, I have my own biases, assumptions, and preconceptions. Transparent reflections on my positionality aims to support a contextually sensitive and culturally informed analysis, considering my own biases and systemic oppression; thus, aiding the trustworthiness of research findings (Korstjens & Moser, 2018).

1.3 Aims of the research

This study aims to qualitatively explore the menstrual perceptions and experiences of adolescent girls in low socio-economic areas, concerning their educational engagement. Current UK research in this area is limited, with existing studies primarily addressing broader menstrual experiences, therefore this study seeks to extend the literature. The primary goal is to highlight shared themes of lived menstrual experiences by elevating girls' voices and placing them at the centre of research.

Additionally, this study seeks to enhance teacher understanding, optimise menstrual education, and the wider school support offered to pupils. By incorporating YP's perspectives, the research aims to provide a platform from which menstruator's educational environments can be optimised in ways that are menstruation informed. Moreover, the study aspires to

empower adolescent girls by supporting them to understand their cycles and themselves. This effort aligns with the broader goal of promoting menstrual health.

Chapter Two: Literature Review

2. Chapter overview

This chapter discusses the challenges in defining the menstrual cycle, menstruation, menstrual health and adolescence, and the implications this has for research in this field. A brief overview of historical research surrounding women's menstruation is explored, followed by a review of existing research and models concerning menstrual experience.

Menstrual research is a broad and evolving field, reflecting a growing recognition of the diverse challenges associated with menstrual health and hygiene. Whilst much of past research has focused on the needs of menstruators in low and middle-income countries (LMICs) (Boyers et al., 2022), recent literature highlights significant and growing difficulties within HIC. This study will therefore primarily focus on research conducted in HIC, which largely reflects Western attitudes, while also drawing on insights from LMIC research where appropriate to support a comprehensive understanding.

This chapter draws on an SLR of UK research on adolescent girls' general perceptions of menstrual experiences that I conducted as part of a professional practice report (PPR) for volume-two of the doctorate (Nicol, 2023). These findings contribute to the rationale for the current UK-based research exploring adolescent girls' menstrual experiences in relation to education experience and engagement. A systematic literature review was conducted because at the time of the study, there were no existing SLRs exploring the menstruation experiences of adolescent girls in the UK; leaving a gap in understanding how menstruation is currently experienced by young people during this developmental period.

Relevant studies were identified through systematic searches of electronic databases, including PROQUEST, EBSCO, PsychInfo and eETHOS. The searches were restricted to publications from 2020 to 2023 to ensure the most current understanding of experiences was captured. The search terms, as reported in Nicol (2023 p. 13), included:

(Menarche OR menstruation OR menstrual OR period) AND (adolescent OR teenager* OR youth OR young OR puberty OR student* OR girl* OR female). Search terms used in eETHOs included: (Menarche OR menstruation OR menstrual OR period) AND (adolescent OR teenager), adjusted to widen searches as the previous search terms did not yield any results.*

The search terms were designed to be as broad as possible with the aim of capturing a wide range of studies relevant to the topic with the hope this would support a comprehensive understanding of the current research landscape. The inclusion and exclusion criteria used to guide searches is reported in Appendix 1. Findings are reported in Section 2.8.

2.1 Defining menstrual terms

Providing a universal definition of the menstrual cycle, menstruation and menstrual health is challenging; complicated by diverse cultural beliefs, taboos, and social norms surrounding this profoundly personal and intimate biological process (Mayor Nuestra Señora del Rosario et al., 2012). This research adopts a Western perspective, influenced by scientific and medical understanding, which recognises menstruation as a natural process within the reproductive system. Further insights into Western attitudes towards menstruation are discussed in Section 2.3. The impact of my positionality in the research is reflected in the menstrual definitions used as discussed in Section 3.9.2.

2.1.1 The menstrual cycle and menstruation

Menstruation is a part of the menstrual cycle, which typically lasts 28 days, although its duration can vary (United Nations Population Fund, 2022). Statistics indicate that menarche, the onset of the first period, usually occurs between the ages of 12 to 14 years old. During the period of adolescence irregular menstrual cycles are often experienced due to early development, and the nature of establishing a consistent pattern aligned with ovulation onset remains unclear (Gruber & Modan-Moses, 2021). Recent research conducted in America challenges the typical notion of a '28 day' cycle, suggesting that this duration is not common for a significant proportion of women, 18 to 24 years old (Grieger & Norman, 2020). Further,

variations in cycle length have been reported based on demographic characteristics such as age, ethnicity and body weight (Li et al., 2023). Such variations in menstrual cycle experiences underpin the need for a participant-centred approach in menstruation research.

Commonly known as a ‘period,’ menstruation is defined as the *“normal vaginal bleeding that occurs as part of a woman’s monthly cycle”* (MedlinePlus, 2017 p.1).² The National Health Service (NHS, 2023) reports that periods typically last between 2 and 7 days, with varying intensity and volume of bleeding. Hormones, primarily oestrogen and progesterone, regulate menstruation by preparing the body for potential pregnancy. If pregnancy does not occur, the levels of these hormones decrease, leading to the shedding of the uterine lining (Thiyagarajan et al., 2022).

Within this research the above definition is adopted to define menstruation as it is widely accepted in Western culture and aligns with the current research positionality of critical realism (see Section 3.1).

2.1.2 Menstrual health

The menstrual cycle is influenced by an individual’s biological, psychological, social, and environmental factors. These factors can vary in individuals and change throughout the reproductive years, which makes each individual experience of menstruation unique. Social factors play a significant role in shaping this experience, with wide-ranging impacts on social interactions, work, and relationships (Mcpherson & Korfine, 2004). This holistic understanding of menstruation aligns with the development of the term ‘menstrual health’, encompassing the multifaceted nature of the menstrual experience and its effect on an individual’s well-being.

The term menstrual health has become prevalent in advocacy, programming, policy, and research however, it has lacked a consistent definition until recently. Hennegan et al.

² This research recognises that not all individuals’ that menstruate identify as female. See Section 2.6 for further information regarding this study’s gender positionality.

(2021) proposed a definition to improve communication across stakeholder groups and support menstruation-related practices. This research adopts their latest definition:

“Menstrual health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity, in relation to the menstrual cycle”. (Hennegan et al., 2021, p. 35)

The definition acknowledges that menstrual health relates to all individuals with a menstrual cycle, irrespective of gender. It encompasses the entire cycle, not just the menstrual period and aligns with the WHO’s holistic health definition (WHO, 2023) that attends to mental, social, and physical wellbeing, emphasising the importance of addressing menstruation comprehensively. The definition goes on to highlight crucial environmental factors for lifelong menstrual health. Optimal menstrual health requires more than just access to menstrual products; it hinges on individuals having the necessary resources to fully engage in all aspects of life during their menstrual cycles. This encompasses physical artifacts such as information, menstrual products, and sanitation facilities, as well as supportive relationships and environments such as teachers and managers with menstrual awareness and access to healthcare professionals trained in menstrual health disorders (Babbar et al., 2022) to achieve early diagnosis of reproductive health issues such as endometriosis³ (Critchley et al., 2020).

Educational institutions and the school environment are noted as key in a variety of activities, most notably so in the definition statement *“menstrual health must be considered in decision-making to ensure policies and programmes support a safe and positive environment”* (Hennegan et al., 2021, p. 34), aligning with the current research focus.

2.1.3 Menstrual health – A public and human right

Achieving menstrual health is fundamental to the equality, rights, and dignity of all menstruating individuals as emphasised by Babbar et al. (2022). Human rights are rights that

³ *“Endometriosis is a disease in which tissue similar to the lining of the uterus grows outside the uterus. It can cause severe pain in the pelvis and make it harder to get pregnant”* (WHO, 2023 p.1)

every human being has by virtue of their human dignity. Menstruation, intrinsically related to this dignity, is often acknowledged solely as a matter of hygiene. Notably, it is not explicitly stated in the United Nations (UN) sustainable development goals targets for health, gender equality and water and sanitation (UN, 2015). The WHO have called for “*menstrual health to be recognised, framed and addressed as a health and human rights issue*” (WHO, 2022). Despite not being defined as a human right, menstrual health intersects with multiple human rights outlined in the international human rights law (UNGA, 1948)⁴. Winkler et al. (2023) have explicitly linked menstrual health to the right to education, health, safe and healthy working conditions, as well as sexual and reproductive rights. Authors go on to state that to support the movement towards making menstrual health a reality for every individual, then policy, practice and research must investigate menstruators, and address the compounded stigma they may experience.

2.2 Historical overview of menstruation

An individual’s menstrual experience is shaped by both the biological process and their social-cultural environment, which is influenced by historical, generational, and popular beliefs (Mayor Nuestra Señora del Rosario et al., 2012). Such diversity in social context results in significant variations in how menstruation is understood, managed, and treated; therefore, it is crucial to recognise the social-cultural role in the experience of menstruation.

Throughout history, menstruation has been a topic of diverse shared cultural beliefs and practices. Considering historical constructs of menstruation is essential to understanding its contextual complexity. The following summary focuses on key themes in the literature.

2.2.1 Menstrual taboos

Throughout history, numerous cultures have imposed taboos on menstruation, deeming menstruating individuals as unclean or impure. This perspective was reinforced in sacred texts, including the Bible and Quran, associating women and related elements with

⁴ UNGA: United National General Assembly

impurity during menstruation (Mayor Nuestra Señora del Rosario et al., 2012). These beliefs often led to the isolation of menstruating individuals from communities, for example exclusion from religious practices, communal activities, and households. Such customs were widespread in ancient civilizations such as Greece and Rome (Colleran, 2023). In specific instances, such as among the Falashas of Ethiopia, women were isolated to designated spaces during menstruation days (Bard, 2023).

2.2.2 Menstruation as a source of power

In some cultures, menstruation was revered as a source of power and mysticism, with menstruating women often considered spiritually potent or possessing special intuitive abilities. In some indigenous cultures, menstruating women were considered healers or shamans. Conversely, during the 13th century in Germany an influential book titled 'The Secrets of Women' was distributed that propagated the Christian myth that menstruating women were dirty and inherently destructive (Hindson, 2009). According to the myth, menstrual blood was viewed as a sign of sinful nature and that under the influence of their menstrual blood, women might perform harmful or deceptive actions on men.

In Medieval Europe, menstruation was viewed to have negative effects, believed to hinder crop growth, spoil food, and cause the deterioration of various items. Additionally, it was believed that the presence of menstruating women could worsen the health of sick individuals (Mcpherson & Korfine, 2004). Such contrasting beliefs regarding menstruation and power highlight the diverse perspectives that have prevailed throughout history.

2.2.3 Medical misconceptions

In ancient and medieval medical traditions, menstruation was often poorly understood; Mayor Nuestra Señora del Rosario et al. (2012) highlighted key theories, describing them as 'rationalisations'. Ancient Greek physicians, such as Hippocrates (often referred to as the father of Western medicine), contributed to early medical knowledge about women's health. He theorised the concept of the 'wandering womb', suggesting the womb could move freely about the body and be the cause of women's health issues if the wombs 'needs' were not met

(Hanson et al., 2005). Such views convey a predatory narrative, suggesting women are controlled by their wombs. Throughout history, various incorrect beliefs about the causes and effects of menstruation prevailed due to limited scientific knowledge.

2.2.4 Religious and ritual significance

In some cultures, menstruation had religious significance. Menstruating women were sometimes considered sacred or were believed to have a spiritual connection. Rituals and ceremonies related to menstruation were performed in certain societies, signifying the transition from girlhood to womanhood (Maulingin-Gumbaketi et al., 2021).

2.2.5 Evolving attitudes towards menstruation

Menstruation is a deeply personal and individualised experience, leading researchers to suggest its unique nature allowed, and continues to allow for the projection of fiction and fantasy. Myths and stigmatised beliefs have been positioned as more 'rationalised' theories throughout history and are believed to have persisted because they have been difficult to confirm or deny (Mayor Nuestra Señora del Rosario et al., 2012).

Attitudes towards menstruation have varied across history and cultures. Despite advancements in some societies, there are still societies and cultural beliefs where menstrual taboos persist, resulting in stigma and discrimination against those who menstruate (van Lonkhuijzen et al., 2023). Education and awareness are essential in challenging oppressive beliefs and fostering a more positive attitude toward menstruation that aligns with the current definition of menstrual health.

2.2.6 Modern perspectives

In more recent history, with the advent of feminism and the women's health movement in the 20th century (Nichols, 2000), there has been a shift in Western attitudes toward menstruation. Efforts have been made to challenge menstrual taboos, promote menstrual hygiene, and raise awareness about the natural and healthy aspects of menstruation. Menstruation is increasingly recognised as a natural biological process in Western cultures

(NHS, 2023), with growing advocacy for positive messages and interventions that promote the body as a source of power, pleasure, and potential (Bobel & Fahs, 2020). There are growing artifacts and events within menstrual activism, and an increasing number of books, podcasts, and courses to develop menstrual understanding and education to support awareness and self-help (Koskenniemi, 2023). Additionally, there has been a trend on social media to represent different presentations of menstruation and challenge menstrual stigma and expectations (Hodge, 2019). However, Koskenniemi, (2023) has suggested that with the development in popularity of self-help texts with discourses that convey menstruation as natural, manageable, and potentially empowering, a new, potentially harmful discourse risks emerging. They argue that depicting self-monitoring and self-care as mandatory routes to health and wellbeing contributes to individualised responsibility. It is likely this risks a move in focus away from those considerations of social and environmental factors that have been identified within the current literature review as key.

Despite developments in biological understanding, socially transmitted knowledge continues to be pervasive, influenced by the historical beliefs that have been passed down through generations (Mayor Nuestra Señora del Rosario et al., 2012) and present day emerging socio-cultural norms (Koskenniemi, 2023). This emphasises the importance of inclusive menstrual health policies. Section 2.3 seeks to examine the UK's national frameworks and initiatives aimed at promoting menstrual health on a broader societal level.

2.3 UK Menstruation policy and initiatives

2.3.1 National policy and initiatives

In the UK, menstruation policies and initiatives encompass a multifaceted approach aimed at promoting menstrual health, accessibility, and education. The government's Women's Health Strategy for England, proposed by the Department of Health and Social Care (DHSC, 2022) outlines a 10-year plan to improve menstrual health through developing sustainable menstrual health solutions, catering to diverse needs and preferences within the UK. Research initiatives have included the first women's reproductive health survey (DHSC &

Caulfield, 2023) and the launch of the 4M consortium network, which facilitates collaborative interdisciplinary research into how menstruation and menopause interact with MH (4M Health, 2021). The government has taken steps to alleviate financial burdens contributing to ‘period poverty’ through abolishing VAT⁵ on menstrual hygiene products (HM Treasury, 2021). Charitable organisations actively seek to combat period poverty and to support menstrual health initiatives through raising awareness, access to period products, and improving education and research. Organisations include Plan International, (2023) Freedom4girls, (2016) and Heygirls, (2018). Together, these efforts reflect a recent governmental commitment to destigmatise menstruation, ensure product access, and foster supportive menstrual health environments across the country.

2.3.2 UK school policy and initiatives

Within schools, the government has implemented programmes providing free menstrual products to alleviate the financial burden on students and families as part of a drive to end period poverty and support disadvantaged pupils (HM Treasury, 2021). There have been efforts to incorporate menstrual health education into the school curriculum, for example the statutory guidance for Relationships, Sex, and Health Education (RSHE) as published by the Department for Education (DfE, 2021) set out curriculum aims for learning including understanding key facts about puberty, the menstrual cycle and reproductive health. However, menstrual education has been accused of falling short in providing comprehensive understanding and support, most prevalently in secondary schools (N. Brown et al., 2022). During the same year, the Women’s Health Strategy for England (DHSC, 2022) was introduced, advocating for evidence-based menstrual and gynaecological health education from an early age. This strategy emphasises the need for increased awareness, breaking down stigma, and empowering girls with self-care knowledge; aspiring to create a society where menstrual health is openly discussed and understood across all facets of life.

⁵ VAT: Value-added tax

2.4 Defining ‘adolescent girls’

2.4.1 Defining ‘girls’

This research seeks to explore the perceptions of cis-gender girls. Whilst menstruation is often associated with the female gender, menstruators hold various gender identities. I acknowledge that not all women menstruate, and menstruation is not exclusive to women. In menstruation research, Rydstrom (2020) highlight the importance of portraying menstruation and menstruators in ways that seek to destigmatise this natural, biological process. The rationale for focusing on cis-gender girls in this study stems from the limited existing research on menstrual experiences in relation to education. Despite this study’s specific focus, my positionality is that all menstruators’ experiences hold equal significance, in line with the definition of menstrual health (Hennegan et al., 2021). In the following section, the term ‘adolescence’ is defined and contextualised within the current study.

2.4.2 Adolescence – a critical period of development

The age phase defined as ‘adolescence’ is an area of debate. Adolescence can be argued to be a social construct with historical and cultural variability (Lesko, 2012). This developmental period typically encapsulates the transitional phase of growth and development between childhood and adulthood (Britannica, 2023). The beginning of adolescence is often defined by biological events, whilst the end of adolescence is typically associated with the achievement of relative self-sufficiency, thus primarily shaped by social factors (Blakemore & Mills, 2014).

The onset of adolescence is thus often characterised by biological, cognitive, and social changes associated with the initiation of puberty, for example hormonal changes that support sexual reproduction (Spear, 2000). During this time neurological changes, particularly within the prefrontal cortex and limbic brain occur (Steinberg, 2014) and social independence develops through changes in an individual’s social environment and expectations (Spear, 2000). It has been recommended that adolescence is conceptualised as a developmental

period, rather than a fixed period in time, due to the high variability in behavioural and developmental growth (Casey et al., 2008).

The World Health Organisation (WHO) formerly defined adolescence as the period between the ages of 10 to 19 years old (WHO, 2021), although age ranges vary within the literature (Dahl et al., 2017). Recent research has expanded the definition of adolescence to include young adulthood, between the ages of 18 to 25 years (WHO, 2023). This is consistent with developments in biological and sociological understanding termed “*the prolongation of adolescence*” (Jaworska & Macqueen, 2015, p.291) which challenges the social constructs that underpin the term adolescence. Neurologically, research has highlighted that brain development continues into the twenties, particularly within the pre-frontal lobe (Blakemore & Choudhury, 2006). Socially, independence and associated adult responsibilities are statistically occurring in later life within Western societies, such as starting a family, full-time employment and buying a house (Jaworska & Macqueen, 2015).

This study acknowledges that adolescence is a developmental period with individual variability. The WHO (2021) definition is adopted (10 to 19 years) as this narrower focus allows exploration with a population of participants in an educational context.

2.5 Adolescence and menstruation

The onset of menarche and subsequent menstruation during adolescence represents a critical developmental period in the lives of menstruators. Such experiences coincide with profound environmental and developmental changes including biological, cognitive, psychosocial, and emotional domains (National Academies of Sciences, 2019).

2.5.1 Psychosocial impact

Adolescence is a time of social transition. In early adolescence more time is spent with parents than peers, however this behaviour is switched by mid to late adolescence (Steinberg & Silverberg, 1986). Personal relationships and environmental settings change significantly during this period, as peers and romantic partners become more central influences as YP

move into secondary school and beyond (National Academies of Sciences, 2019). The ability to think abstractly about themselves and others contributes to individuals' forming of more complex social relationships and to phenomena such as self-concept, reputation, and social hierarchy (Sebastian et al., 2008). Heightened sensitivity to peer acceptance or rejection emerges during this developmental phase (Steinberg & Morris, 2001), intensifying the impact of socio-cultural stigma around menstruation. For example, the paramenstrual phase (3 days before and after menstruation onset), also known as 'perimenstrual phase' is suggested to be a time of vulnerability to increased social paranoid experiences, an increased likelihood that feelings of persecution feel deserved and lowered self-esteem, including increased risks of anxiety and depression (Brock et al., 2016). Emerging research supports the view that menstrual distress, including interpersonal sensitivities may fluctuate in response to the menstrual cycle and has an impact on relationships; key themes within this body of research are reviewed below.

2.5.2 Cognitive impact

Research is increasingly exploring the potential relationship between hormonal changes during the menstrual cycle and cognitive functioning; however, findings are inconsistent. For example, high oestrogen levels have been linked to improved verbal fluency but impaired visuo-spatial skills (Maki et al., 2002), though other studies do not support this (Rosenberg & Park, 2002; Schöning et al., 2007). Verbal and spatial working memory have also been suggested to improve during phases associated with high oestrogen levels (Poromaa & Gingnell, 2014). Overall, literature suggests that changes in cognitive function related to the menstrual cycle are minor and findings difficult to replicate, when compared to emotion-related changes which have been more consistently found in the literature (Poromaa & Gingnell, 2014). However, brain imaging studies indicate that the impact of sex hormones on cognition may not always be reflected in performance measures, especially if compensatory mechanisms support task performance, arguing that changes in brain activity and connectivity may still be present (Pletzer et al., 2019).

Emotion-related cognitive processes, such as facial emotion processing (Osório et al., 2018), consolidation of emotional memories (Felmingham et al., 2012) and fear extinction⁶ (Milad et al., 2010), have been suggested to fluctuate with menstrual phases, particularly during the luteal phase⁷ which is associated with poorer emotion-related cognition performance. Skills are suggested to be modulated by hormonal changes, particularly fluctuating levels of progesterone (Poromaa & Gingnell, 2014).

A recent narrative review by Le et al. (2020) suggested that while sex hormones may influence cognitive processes in participants termed biological females (such as areas of executive functioning), such effects may only be clinically relevant in cases of severe symptoms, such as premenstrual syndrome (PMS) or premenstrual dysphoric disorder (PMDD). PMS describes the experience of somatic and psychological menstrual symptoms that significantly impact functioning during the luteal phase, including emotional changes and concentration difficulties (National Institute for Health and Care Excellence, 2019). PMDD, a severe form of PMS, involves experiencing five out of eleven psychological premenstrual symptoms, including mood-related impacts (National Institute for Health and Care Excellence, 2019). Prevalence rates of adolescent experiences of PMS and PMDD are unknown, however estimates report 31% meet the criteria for PMS (Vichnin et al., 2006) and 4.8% for PMDD (Gupta et al., 2019), suggesting a potentially significant proportion of adolescents may be at risk of such 'clinical' levels of menstrual symptoms.

The pathologisation of hormonal changes is controversial. While some find validation in a diagnosis, others argue a diagnosis holds oppressive and detrimental risks including overlooking environmental factors, misdiagnosis and subsequent prescription of medication such as antidepressants (Schroll & Lauritsen, 2022). Le et al. (2020) acknowledge limitations

⁶ Fear extinction is the reduction or elimination of a conditioned fear response through repeated exposure to the fear-inducing stimulus without negative consequences.

⁷ The luteal phase is the final phase of the menstrual cycle. It starts after ovulation and ends with the first day of the next period. During this phase the body prepares for a possible pregnancy and releases progesterone to thicken the womb lining ready for a fertilised egg (NHS Newcastle upon Tyne Hospitals, 2022).

within their study, including generalising findings from investigations limited to a single cycle and not accounting for inter-cycle variability. Further, it is unclear whether perceived cognitive disturbances are attributed to biological, hormonal changes or relate to the experience of mood and psychological symptoms.

More recent research in sports suggests that visuospatial and anticipatory cognitive processes may also fluctuate throughout the menstrual cycle, with skill levels peaking during menstruation, indicating positive effects of the menstrual phase, and declining during the luteal and ovulation⁸ phases (Ronca et al., 2024). This suggests an interplay between hormonal changes and cognitive functioning, yet the nature of this relationship within broader research remains unclear.

It is largely understood that adolescence represents a sensitive period for cognitive development and resulting neuroplasticity. Therefore, the cognitive effects related to menstruation hold additional significant implications for the development of young individuals and their learning environments during this crucial stage of adolescence. Increased neuroplasticity during puberty makes this an important time for learning health-related behaviours (Blakemore & Choudhury, 2006), such as those related to menstrual health. This underpins the importance of providing comprehensive menstrual support and education. It emphasises the need to explore perceptions of menstrual experiences during this critical developmental phase to understand the impacts of menstruation on daily life and how to support adolescents.

2.5.3 Adolescent girls' mental health

A 2021 survey in England found that among adolescent children, girls are at higher risk of developing a MH disorder than other age groups, with young women most significantly affected (NHS Digital, 2021). Moreover, girls from the age of 12 years within the UK are more likely than boys to be referred to or receive specialist MH care, with particularly stark sex

⁸ Ovulation takes place approximately two weeks before the start of menstruation. During this time an egg is typically released from one of the ovaries.

differences around the period of adolescence (Grimm et al., 2022). Further, referrals and contact rates for adolescent girls increased with every year of age, up to the ages of 15 and 16 years, respectively. Amongst children and adolescents, adolescent girls (aged 15-17 years) are more than twice as likely as boys of the same age to be prescribed antidepressants (Grimm et al., 2022). Rates of antidepressant prescribing nearly doubled between 2006 and 2015, with this age group indicated to have accounted for a significant proportion of this rise (Grimm et al., 2022). Current statistics suggest an apparent rise in MH needs among CYP, with internalised symptoms (e.g. anxiety) suggested to be most prevalent among older females (Birch & Gulliford, 2023). Sex differences suggest that females may experience greater vulnerability, potentially placing adolescent girls at a higher risk of lower MH.

2.5.3.1 An association between the menstrual cycle and social, emotional and mental health (SEMH)

Menstrual experiences intersect with physical, mental, and social wellbeing, all of which are essential for overall health (Barrington et al., 2021). The relationship between menstrual and mental health is highly complex, involving biological, psychological, social, political, and structural factors that change throughout the lifespan. For example, menarche has been associated with impacts on self-esteem and body image (Kaczmarek & Trambacz-Oleszak, 2016; Mastorci et al., 2020), with early menarche having been linked to a higher risk of depression in late adolescence (Hirtz et al., 2022). Similarly, later in life, menopause is associated with increased risk of anxiety and depression (Alblooshi et al., 2023).

On average, eumenorrheic⁹ females experience eleven menstrual cycle related symptoms including mood changes, dysmenorrhea¹⁰ and increased levels of anxiety and fatigue (Bruinvels et al., 2021). Dysmenorrhea, which affects up to 93% of adolescent females (Parker et al., 2010) describes pain and discomfort typically during the luteal and menstruation phases, commonly located in the lower abdomen (also known as cramps) and can spread to

⁹ Eumenorrheic describes experiencing predictable (varying plus or minus 1 day) menstrual cycles of 25–35 days.

¹⁰ Dysmenorrhea describes discomfort and pain during the menstrual period.

the inner thighs and back (Nagy et al., 2023). Additional symptoms include nausea, fatigue, and diarrhoea (Cleveland Clinic, 2023). The impact of these physical symptoms extends beyond discomfort. Higher numbers of menstrual symptoms in adolescent girls are related to increased experiences of anxiety and depressive symptoms (Dorn et al., 2009), with dysmenorrhea associated with lower health-related quality of life perceptions (Unsal et al., 2010). The association between physical and psychological menstrual symptoms has been suggested by Van Iersel et al. (2016) in a survey of 208 Italian adolescent girls (mean age of 16.68 years), with perimenstrual¹¹ physical menstrual symptoms associated with perimenstrual psychological symptoms, such as low mood. This relationship was partially mediated by withdrawal from social activities for symptoms of depression and cognitive difficulties (such as decision-making, concentration and memory). Findings suggest physical symptoms have a direct impact on psychological symptoms, and an indirect impact through lowered social activity engagement.

Psychological MH pressures during menstruation might also be influenced by stress related to societal stereotypes and menstrual stigma within an individual's culture, which can create a hostile environment for psychological functioning around menstruation (Jang & Elfenbein, 2018).

Women experiencing mood changes related to their menstrual cycle, particularly during the perimenstrual or mid-cycle¹² phases, are at a greater risk of experiencing heightened affective symptoms such as anxiety and depression, according to recent findings (Kiesner et al., 2022). These mood changes, when prevalent during the mid-cycle phase, are associated with a higher risk of chronic negative affective states.

When considering severe MH difficulties, tentative research into MH outcomes such as suicide, psychiatric admissions, and drug abuse, suggests events occur at higher rates during the menstrual phase, as identified in a meta-analysis (Jang & Elfenbein, 2018).

¹¹ Perimenstrual relates to the time period immediately before and during menstruation.

¹² Mid-cycle is another term that refers to the ovulation phase in the menstrual cycle.

However, the findings are taken with caution as they are likely limited by selection bias and a focus on populations with existing or higher-risk MH difficulties, which will not accurately represent the general menstruating population.

The intersection between menstrual and MH is argued to be significantly under-recognised and under-researched, resulting in menstruators experiencing limited access to support and treatment options for associated difficulties (Sharp & De Giorgio, 2023). While there is a suggested association between the menstrual cycle and SEMH, the precise nature of this association remains complex and unclear.

2.6 Menstruation and systemic inequality

Menstrual hygiene management (MHM) refers to the broad spectrum of practices and resources individuals use to address menstruation. A report by the University of Leeds Nuffield Centre for International Health and Development summarised recent research on MHM and indicated that MHM has a significant impact on girls' education, health, and wellbeing (Tull, 2019). Rates of MHM have also been found to be impacted by socio-economic inequalities, with one of the most significant factors in MHM identified as low socio-economic status (Rossouw & Ross, 2021), increasing the risk of 'period poverty'. Period poverty refers to a state in which an individual has insufficient access to menstrual products, education, and sanitation facilities, resulting in injustice and inequity due to menstruation (Jaafar et al., 2023). Period poverty has been identified to impact menstruators in various domains including hygiene, comfort, dignity, and wellbeing. Plan International (2021) found that during the Coronavirus pandemic 36% of 14–21-year-olds in the UK were impacted by period poverty and unable to access menstrual products. The 'toxic trio' refers to the factors that contribute to period poverty in the UK. These include the cost of period products; a lack of education about the menstrual cycle; and the shame, stigma, and taboo surrounding menstruation (Plan International UK, 2018). The impact of the toxic trio is judged to be pervasive, impacting daily life including educational opportunities and attendance, MH, and self-esteem (Plan International UK, 2018).

MHM difficulties are intensified for menstruators experiencing various forms of marginalisation, such as migrant and refugee communities. These individuals face compounded challenges including displacement, difficulty navigating unfamiliar systems, limited access to hygiene products, cultural taboos, and inadequate healthcare (Vanleeuwen & Torondel, 2018). Such difficulties can further exacerbate systemic inequalities. For example, Ghandour et al. (2024) describe how adolescent Palestinian refugees face significant challenges due to dysmenorrhea, which negatively impacts their well-being, school attendance, and academic performance. This issue further hinders their access to education, a crucial tool in overcoming barriers (Chatty et al., 2005).

Race inequality in MHM persists through racial and ethnic disparities in areas such as access to menstrual products (In Kind Direct, 2024), menstrual education (White, 2013) and women's sexual and reproductive healthcare services (Sutton et al., 2021). For example, Bougie et al. (2022 p.38-39) argue *"there is a strong historical bias regarding the epidemiological impact of race/ethnicity on the prevalence of endometriosis"* with Black and Hispanic women perceived to experience less instances of endometriosis which has significant implications for the quality of care received by ethnic groups. Menstrual health related disparities intersect with broader issues of race inequality in health and are impacted by a range of social, economic, and systemic factors such as socioeconomic status (Williams et al., 2016).

Additional characteristics that are reported to increase the risk of experiencing discrimination through menstruation include groups such as menstruators with disabilities, those who are incarcerated and transgender, gender-diverse and intersex individuals, as reported by Goldblatt and Steele, (2019).

Menstrual stigma often intersects with other forms of stigma, such as those related to race, caste, class, disability, and gender identity, and perpetuated through structures of oppression such as patriarchy, white supremacy, classism, and ableism (Alhelou et al., 2022) contributing to social power dynamics and discrimination.

This study holds an intersectional lens on the pragmatic challenges faced by girls, which is important to understanding the female experience. Adolescent populations in areas of low socio-economic status represent an intersection of girls that are likely to experience an increased risk of discrimination and disadvantage including increased risks of:

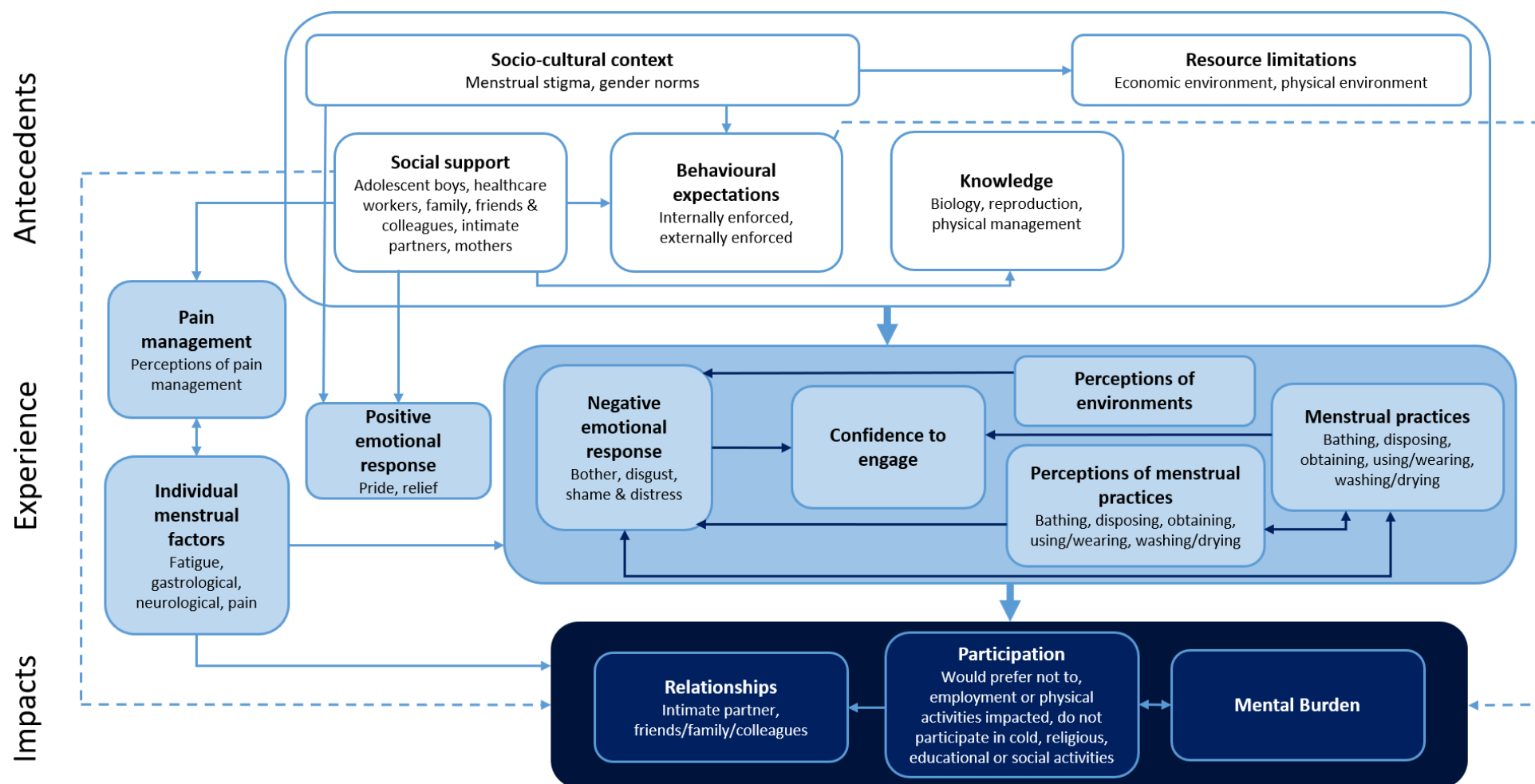
- Period poverty and the ‘toxic trio’.
- Female gendered oppression, including stigmatised socio-cultural beliefs.
- MH difficulties.
- Lower educational achievement (Thompson, 2018).

2.7 The integrated model of menstruation

To conceptualise key themes in menstrual experiences Barrington et al. (2021) conducted a SLR of evidence regarding the experiences of menstruation in high income countries (HIC). Developing an integrated model of menstruation (see Figure 1), authors compared themes with existing themes representing the experiences of participants in LMICs as reported by (Hennegan et al., 2019). Key differences included LMICs reporting more emphasis on resource deficits and economic/physical environment and a more commonly reported lack of confidence to manage menstrual bleeding than in HIC. HIC studies emphasised enduring discomfort to maintain participation in activities, however within LMIC studies there was an emphasis on non-attendance to school and social participation.

Through thematic analysis (TA), the authors developed a framework positing three levels of factors potentially underpinning menstruation experiences: antecedents (environmental factors), experience (related to menstrual bleeding), and impacts (on the lives of menstruating people).

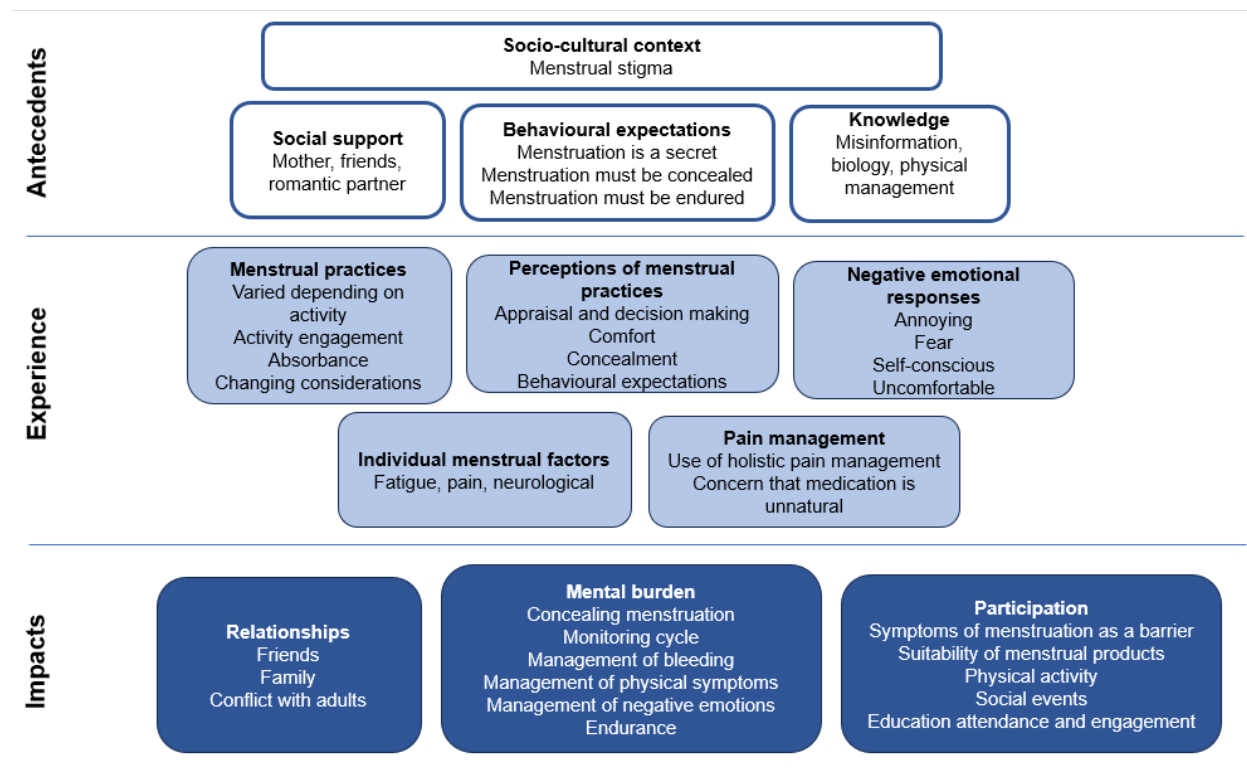
Figure 1
The integrated model of menstruation (Barrington et al., 2021)



The Barrington et al. (2021) framework suggests an individual's menstruation experience may result from a range of individual, social and environmental factors. The authors suggest that themes remained consistent across research during the 20th and 21st centuries and multiple geographical contexts; and through this, highlighted areas that could be addressed to improve menstrual health. Authors suggested *“approaches to reduce stigma, combat restrictive behavioural expectations and improve knowledge, social support and pain management may represent key levers for improving menstrual health”* (Barrington et al., 2021 p.3). It was noted that participants reported menstruation experiences and impacts that negatively affected their wellbeing, however many of the studies reviewed were focused specifically on negative experiences.

Although this model sought to provide a comprehensive understanding of the current literature on menstrual experience, it does not offer an in-depth understanding of adolescent experiences. As a result, I conducted a SLR of the current literature concerning adolescent menstrual experiences in the UK (Nicol, 2023).

Figure 2
Thematic map of adolescent menstrual experiences (Nicol, 2023)



2.8 UK research on adolescent experiences of menstruation

I systematically searched and critically appraised existing research gathering the menstrual experiences of adolescents within the UK between 2020 – 2023 (Nicol, 2023). Three studies (see Appendix 1) were identified and analysed through inductive and deductive coding, using the themes identified by Barrington et al. (2021). A thematic map was generated to represent shared themes within adolescent menstrual experiences (see Figure 2).

A majority of, although not all, identified themes were largely consistent with those in the integrated model of menstrual experiences (Barrington et al., 2021) and were found to have pervasive impacts within areas of cognitive, social, emotional, and physical functioning. Themes that were not identified included: (1) resource limitations, (2) positive emotional response, (3) confidence to engage, and (4) perceptions of environments. All themes apart from ‘positive emotional response’ were highlighted by Barrington et al. (2021) to be more

commonly associated with LMICs, which may be why they were not present in the adolescent HIC sample.

Shared themes within adolescent menstrual experiences included: (1) sociocultural context and associated stigma, (2) menstrual practices, (3) perceptions of menstrual practices, (4) behavioural expectations, (5) knowledge, (6) negative emotional responses, (7) individual menstrual factors, (8) pain management, (9) social support, (10) impact, (11) mental burden, (12) participation, and (13) relationships. In addition, inductive coding illuminated differences in sub-themes, illustrating the salience of the adolescent menstrual experience and the importance of developing an understanding of shared experiences within this developmental period.

Significant themes were identified in relation to the interconnecting interactions between menstruation experience and the educational environment. Themes included conflict with school staff, decreased school attendance and negative impacts on school functioning. Therefore, menstrual experiences in relation to educational contexts was recommended as a key area for future research.

2.9 Menstrual experiences in education

The literature on adolescent menstrual experiences in education reveals several key themes that highlight the challenges and implications of menstruation for menstruators in educational settings. Key themes are identified below.

2.9.1 Menstrual health education

Current literature on adolescent experiences of menstrual education in the UK indicates significant challenges. Plan International UK's (2018) research investigating girls' (age 14-21) menstrual experiences highlights that feelings of discomfort and unpreparedness were prevalent, with only 20% feeling comfortable discussing their periods with school staff. This lack of preparedness for the onset of menstruation reportedly led to distress and confusion, highlighting the need for comprehensive education, beginning in primary school.

Girls have expressed a desire for practical knowledge beyond a biological understanding, seeking guidance on managing menstruation (Plan International UK, 2018; Wigmore-Sykes et al., 2021). Recent studies, such as those by Roux et al. (2019) criticise menstrual education for its heavy focus on biology, which neglects the social and emotional dimensions that influence education and wellbeing. Randhawa's et al. (2021a) research further indicates that 57% of UK secondary school girls were unsure about the typicality of their periods, and many were unaware of endometriosis, suggesting the need for enhanced menstrual health education to improve knowledge of typical menstruation and pain treatment, aiding early identification of potential menstrual conditions requiring health professional support. Additionally, through descriptive content analysis, Secor-Turner et al. (2022) found that adolescents aged 12-16 years described a limited understanding of menstrual experiences and were confused about using menstrual hygiene products. These gaps in knowledge perpetuate social stigma, impact MHM, and ultimately affect educational engagement. The literature collectively calls for more comprehensive, practical, and emotionally supportive menstrual education to better equip adolescents in managing their menstrual health.

2.9.2 Social stigma and cultural taboos

Social stigma and cultural taboos surrounding menstruation are pervasive and can negatively affect adolescent girls' educational experiences (Thomas & Melendez-Torres, 2024). Plan International UK's, (2018) large qualitative study illuminated widespread shame and stigma among UK adolescent girls, influenced by reported societal pressure to feel ashamed about menstruation. A commonly cited worry related to the school environment was the anticipation of adverse reactions from boys. Further, embarrassment in response to stigma was commonly experienced, especially in cases of menstrual leaks or stained clothing. Girls reported that stigmatised views impacted on their confidence, MH, and interactions with peers, particularly boys. Furthermore, a recent SLR on adolescent menstruation experiences in HIC (Thomas & Melendez-Torres, 2024) concluded that the school environment often fails to support menstrual experiences adequately, perpetuating shame and leading girls to self-police

and conceal menstruation. Boys frequently used menstruation as a tool for ridicule and oppression, reinforcing notions of female inferiority. This failure of schools to address menstruation management often resulted in student's self-reports of self-exclusion and withdrawal from educational activities, raising concerns for further entrenching educational inequalities and impeding girls' overall development (Sommer et al., 2016).

2.9.3 Availability of menstrual hygiene management facilities

Current research highlights significant challenges related to MHM in educational settings, particularly for adolescent girls. International and UK studies (Thomas & Melendez-Torres, 2024) indicate that material management of menstruation in schools is problematic, largely due to restricted access to toilets during lessons or exams and inadequate facilities, such as the absence of hot water, disposal bins, or lockable doors (Plan International UK, 2018). These systemic barriers have been reported to negatively impact girls' well-being, attendance, participation, and academic achievement as reported through teacher observations (N. Brown et al., 2022). Authors also reported that teachers face difficulties in supporting menstruating students due to a lack of confidence, limited resources, and time constraints. Further, a descriptive content analysis by Secor-Turner et al. (2022) on adolescent views in the Midwestern United States reported school-related challenges including inadequate access to menstrual hygiene products, insufficient time for changing products, fear of menstrual leaks, and resulting negative impacts on school attendance. The broader literature supports these findings, emphasising the critical role of adequate MHM facilities in schools for the health and educational outcomes of menstruating students. Studies have consistently shown that the lack of clean toilets, water, and proper disposal options can severely hinder girls' ability to manage menstruation with dignity and privacy in LMICs (Hennegan et al., 2019; Sommer et al., 2016), with addressing these infrastructural deficits as essential for improving the educational experiences and well-being of menstruating students.

The lack of adequate MHM facilities in schools raises concern for the exacerbation of menstrual-related challenges, contributing to systemic inequalities and hindering the

educational experiences of adolescent girls. Whilst this issue is widely reported on in LMICs due to limited resources and infrastructure (Rossouw, 2020; Sommer, Robles, et al., 2016), period poverty is increasingly documented in HIC such as the United States of America (USA) and UK (Cardoso et al., 2021; Plan International UK, 2018). The growing recognition of these challenges highlights the need for further research and intervention to ensure equitable educational opportunities for menstruators.

2.9.4 Educational engagement

Research highlights the profound impact of menstrual experiences on girls' academic engagement and attendance, particularly during menstruation. Armour et al. (2019) report that dysmenorrhea resulted in school absence for 20% of young women and 40% experienced decreased classroom performance (e.g. concentration and assessments). Educational engagement difficulties raise the risk for long-term consequences on educational outcomes, as adolescence marks a critical phase for academic achievement (Hillen et al., 1999). Moreover, these menstrual-related academic challenges may persist into higher education, potentially influencing overall educational and career trajectories (Armour et al., 2019). Munro et al. (2021) expand on this, drawing on a global SLR study of university students, noting experiences of absenteeism, participation, concentration and perceived impaired academic performance due to dysmenorrhea, emotional and physical symptoms, stigma, and inadequate sanitation facilities. Similar findings are echoed in medical student populations, where menstrual difficulties are associated with lower academic and social engagement, as well as perceived lower grades (Maity et al., 2022). Further illustrating these issues, Randhawa et al. (2021a) report that 22.7% of young women miss school commonly due to painful periods, some missing up to two days during their period. A significant proportion sought medical advice, highlighting the severity of period pain.

In the UK, a survey by the Public Health Service, (2023) revealed that over half (54%) of secondary school girls took time off school during their periods, with a notable increase in girls anticipating future absences due to menstrual issues since 2019. Challenges in managing

menstruation within the school environment increase the risk of low school attendance and, in extreme cases, 'school dropout', particularly in the Global South (Plan International UK, 2018). Collectively, this research paints a concerning picture of adolescent girls struggling amidst limited support within education, illustrating the urgency in developing a better understanding of girls' experiences that can inform menstrual support in schools.

2.10 Rationale for the current study

Menstrual experiences within the literature have been overwhelmingly positioned as negative, impacting various areas of menstruators' lives, including physical health, emotional well-being, social participation, academic performance and attendance (Armour et al., 2019; Plan International UK, 2018). There is a growing call for menstrual research to delve deeper into these experiences, giving voice to menstruators (Anderson, 2020); especially those experiencing marginalisation, which can exacerbate menstrual health challenges (Alhelou et al., 2022).

National policies and initiatives, along with feedback from adolescent girls, recognise the pivotal role of schools in fostering menstrual health (N. Brown et al., 2022). However, recent reports indicate inadequacies in school-based menstrual health support, persistent menstrual stigma (Thomas & Melendez-Torres, 2024) and a lack of confidence among educational staff in supporting girls (N. Brown et al., 2022).

Adolescence is a critical developmental period coinciding with the onset of menstruation. Menstrual challenges during this period have been associated with impacts on educational engagement, achievement and overall well-being, potentially leading to enduring negative effects given this critical period of development (Blakemore & Choudhury, 2006; Hillen et al., 1999). This impact is particularly pronounced in low socio-economic areas, where pre-existing inequalities and challenges can be exacerbated by menstrual needs (Armour et al., 2019; Sommer, Robles, et al., 2016; Thomas & Melendez-Torres, 2024). I have therefore recognised the need to explore menstrual experiences within the educational context of

adolescent girls in low socio-economic areas, where the risk of period poverty is increased (Rossouw & Ross, 2021).

2.10.1 Objectives and unique contribution of the current study

Despite the recognised importance of addressing menstrual health, a gap remains in understanding menstrual experiences within UK education settings. Thomas and Melendez-Torres, (2024) call for further research into adolescents' menstrual experiences in school, particularly focused on addressing the impact of demographic factors such as socio-economic status. Research within this population is especially crucial, as this demographic represents a convergence of intersectional factors that predispose girls to discrimination, disadvantage, and risks associated with poor menstrual health (Section 2.6). This study therefore seeks to extend the UK knowledge base and it is hoped that findings have relevance in informing the support provided to adolescent girls in education. It aims to raise awareness of menstruating girls' lived experiences, thus promoting teacher understanding and responsive practices; with the overarching aim of contributing towards adolescent menstrual health.

The current research explores menstrual experiences within the context of the menstrual cycle, aligning with the most recent definition of menstrual health that encompasses the entirety of the cycle, rather than focusing solely on menstruation (Hennegan et al., 2021).

2.10.2 Research questions

The research questions for this study are:

Research Question 1: What are the perceptions of adolescent girls on their menstrual experiences, in relation to:

- School experiences
- Engagement in learning

Research Question 2: What are the perceptions of adolescent girls on school support and provision, in relation to:

- Understanding their menstrual experiences
- How their menstrual needs are addressed

Chapter Three: Methodology

3. Chapter overview

This chapter outlines the study's methodology. Philosophical positioning and ethical considerations are firstly considered. Information regarding the recruitment and demographics of participants is described as well as the interview framework used. Data analysis methods are reported, including considerations regarding reflexivity and research quality.

3.1 Philosophical position

I have adopted a critical realist (CR) positionality to guide this research (Bhaskar, 2014). The impact of a CR position is discussed when considering the current study's ontology, epistemology, and methodology.

3.1.1 *Ontology*

Ontology refers to the philosophical study of the nature of social reality, the existence of social entities and the relationships between them (Tollefsen, 2014). Holding different ontological perspectives can lead to diverse interpretations of reality and existence. Perspectives can be positioned along a spectrum ranging from realism (the belief in an objective existence of an external reality independent of human perception) to relativism (the belief that there is not an objective reality, instead realities can vary across individuals and cultural contexts) (Cohen et al., 2018). Whilst CR holds a realist ontology, it rejects both extreme forms of realist and relativist positions. Bhaskar (2014) suggested the positionality of transcendental realism which argues there are three levels to understand the stratified nature of reality, distinguishing between the 'real, un-observable' world and the 'observable' world. The levels include: the **empirical** (what individuals observe and experience through their senses), the **actual** (events that are produced by the *real level* which occur whether or not they are perceived by individuals) and the **real** (causal mechanisms and structures that generate events and are non-observable) (Fletcher, 2017). A CR perspective acknowledges

the complexity of 'reality', including subjective dimensions such as mental states, thoughts, and experiences (Maxwell, 2012).

3.1.2 Epistemology

Epistemology explores the nature of knowledge, considering what we can know and how we can know it; with positioning reflecting the assumptions a researcher makes about what constitutes as meaningful and valid knowledge (Braun & Clarke, 2022). Positions are represented on a spectrum, between interpretivism (knowledge is constructed through collaborative exploration with others emphasising the role of dialogue, interaction, and shared meaning) and empiricism (knowledge can be gained through observations of the natural world) (Cohen et al., 2018). While CR holds a realist ontology, it adopts a constructivist, relativist epistemology (Scott & Bhaskar, 2010). CR argues that a reality exists independent of human consciousness, however our knowledge of reality is conceptually mediated, and socially determined (Danermark et al., 2001 p.6). Therefore, human knowledge is perceived as fallible, with our understanding of social phenomena subject to the constraints of our methods, tools (such as verbal and written language), and interpretations (Danermark et al., 2001) which suggests there is not one interpretation of reality. As a result, transparent researcher reflexivity is an important part of conducting research, to support the contextualisation of knowledge development (Braun & Clarke, 2022).

3.1.3 Rationale for critical realism

Critical realism is consistent with my personal epistemological and ontological views about social phenomena, which is likely influenced by my health psychology background. Within the construction of menstruation experiences, critical realism considers a social phenomenon to exist within the three levels of transcendental realism. This acknowledges the objective reality of the "*materiality of change across the menstrual cycle*" that accepts the reality of physical changes to the body (Ussher & Perz, 2020 p. 218), but also an understanding that this materiality is conceptually mediated by social factors such as culture, language, and politics (Ussher & Perz, 2020). What can be learned about the reality of

menstrual experiences is filtered by individual's subjective social experiences which impacts their experience of menstruation itself.

I considered the perspective of social constructionism; however, this perspective has been criticised for neglecting the 'real' (Speer et al., 2000). As a result, there is a risk of marginalising menstrual experience outside of what is shared through language, such as the embodied aspects of menstruation as highlighted by Ussher and Perz (2020). This is significant because studies, such as those by Derntl et al. (2008) and White et al. (2011), have shown that women indeed undergo biological changes that impact on affective and physical states. These changes are recognized within critical realism which better aligns with my personal positioning that there is a level of objective reality and causal mechanisms (biological changes in the body) that impact on how menstruation is experienced by an individual.

3.2 Qualitative research methods

The term qualitative research encompasses a range of approaches that seek to explore people's experiences and perspectives, including the meanings and interpretations they ascribe to these experiences (Hennink et al., 2020). Crucially, this approach allows researchers to answer questions that aim to identify experiences from the perspective of participants. Various methods for data collection and analysis can be used, the selection of which is informed by the research question, design, and underpinning epistemological, theoretical, and disciplinary perspectives (Guest et al., 2012). I decided to use a qualitative approach within this study due to the exploratory nature of my research questions and philosophical positioning, which seek to understand the experiences and perceptions of participants.

3.3 Reflexive thematic analysis

Reflexive thematic analysis (RTA) is a flexible approach designed to systematically develop, analyse, and interpret patterns across qualitative datasets (Braun & Clarke, 2022). RTA explores the subjective 'sense making' of experiences held collectively among participants, helping researchers to understand how participants derive meaning from their

experiences and explore themes within a social context (Braun & Clarke, 2006). This study adopts an RTA approach as it supports the exploration of participants' menstrual experiences within education and the meanings they attribute to these experiences. It allows for the analysis of collective themes within the context of low socio-economic status and the interpretation of these themes considering the broader social and political context (Chapter 6).

Using RTA systematic procedures (Section 3.9), codes and subsequent themes can be developed that capture a central organising concept that is patterning within the data set. RTA can be used to capture themes at a semantic level (explicit, surface meaning) or latent level (the researcher's interpretation of meaning) (Terry & Hayfield, 2020). A predominantly semantic focus is adopted to coding, and whilst it is acknowledged that higher levels of interpretation can provide new insights, they may also impose meanings that inhibit the participants' true voices (Willig & Rogers, 2017). Implications of semantic coding in this study are further discussed in Section 5.2.3.

An inductive and deductive approach is taken to analysis, guided primarily by participants' accounts while also being informed by existing literature (Willig & Rogers, 2017). Although the analysis is data-driven, the deductive element arises from my prior knowledge, which will influence how I interpret the data and the assumptions I make during coding. This combined approach complements the exploratory nature of the research questions, aiming to illuminate adolescent girls' voices.

In RTA, researcher subjectivity is a primary analytical tool, emphasising the importance of researcher reflexivity in the generation of knowledge (Braun & Clarke, 2022). Researchers must therefore critically examine their own perspectives and the interpretive lens through which they analyse data (Braun & Clarke, 2022). As Braun and Clarke, (2021 p.10) posit, a researcher *"cannot enter a theoretical vacuum when doing TA"*. Given my personal interest in the topic and experience as a menstruator (Section 1.2), and having reviewed existing literature (Chapter 2), I engaged in reflexive processes throughout the research to seek to bring awareness to and mitigate any preconceived notions (further discussed in Section 3.9.2).

Further information documenting my reflections on the appropriateness of RTA for this study is provided in Appendix 2.

3.4 Alternative approaches considered

Various alternative data analysis approaches were considered before selecting RTA as the most suitable for addressing the study's research questions and aims. The rationale for this decision, including consideration for interpretative phenomenological analysis (IPA) is discussed below. Additional details are provided in Appendix 3.

3.4.1 *Interpretive phenomenological analysis*

IPA and RTA aim to understand people's lived experiences (Eatough & Smith, 2017) and share similar analytical processes (Braun & Clarke, 2006). While IPA emphasises the depth of understanding individual narratives, RTA facilitates a broader exploration of themes across participants. This study aims to gain a deeper insight into the shared experiences of adolescent girls. Therefore, while IPA is valuable for in-depth individual analysis, RTA is more suitable for capturing and analysing the broader patterns and themes relevant to this research. The IPA approach favours a homogeneous sample (Love et al., 2020). However, this study does not have strict inclusion criteria regarding participant demographics beyond what is stated (Section 3.6.1) to capture the diverse experiences of adolescents in education. While IPA typically investigates significant existential issues for participants that are often transformative and require deep reflection and reinterpretation (Eatough & Smith, 2017), this study focuses on the overarching experience of the menstrual cycle in education, making RTA a more appropriate method.

3.5 Recruitment of educational settings, gatekeepers and stakeholder engagement

Gatekeepers and stakeholder engagement are crucial aspects of this study. Various methods were used to recruit educational settings. Emails were sent to educational psychologists (EPs) in my placement Local Authority (LA) and neighbouring LAs who then contacted their link secondary and post-16 settings. I also emailed my own link secondary settings. Follow-up emails were sent directly to Special Educational Needs and Disabilities

Coordinator's (SENDCos) and headteachers of interested settings and included study details, a recruitment flyer (see Appendix 4), information sheets and consent forms (see Appendix 5). Three secondary schools and one college expressed interest in the research, however only one secondary school agreed to take part in the study. Recruitment challenges are addressed in Section 5.2.2.

Access considerations, as highlighted by Hayes (2005), are important in research, through attending to the various gatekeepers who control access and re-access to individuals and information of interest (Louis et al., 2018). Gatekeepers may block access or make access conditional, which in turn can impact on methodological decisions and outcomes. Gatekeepers in this study include educational psychology services' (EPS), headteachers, SENDCos, teachers, reception staff, and parents/carers. Singh and Wassenaar (2016) stress the importance of informed discussions with gatekeepers to fulfil ethical obligations and foster stakeholder engagement throughout research, while respecting institutional autonomy. Identifying and collaborating with explicit and implicit gatekeepers is crucial for effective research support. Louis et al. (2018) suggested the development of interpersonal trust between the researcher and gatekeepers was crucial. I already had an established rapport with the recruited school, which aided in this trust-building process.

Alongside gatekeepers, identifying and engaging with stakeholders is crucial as they can influence the study's design and implementation, and may be affected by its findings (Robson & McCartan, 2016a). Stakeholders in this study include the University of Birmingham, the LA, the LA EPS, secondary school staff, the participating adolescent girls', and their parents if under eighteen years old. Discussions with key stakeholders included sharing research timelines, required actions, and the potential contribution of the research to support engagement. Dissemination plans were also discussed to aid EPS and school reflection on findings' implications.

3.6 Participants and recruitment

3.6.1 Sampling of participants

A mixture of purposive, convenience and voluntary sampling was used to recruit participants. Purposive sampling is a key feature in qualitative research (Louis et al., 2018). This method involves selecting cases based on specific characteristics to meet research objectives. Inclusion criteria guided participant selection for the study. Refer to Table 1 for inclusion criteria and their rationale.

Table 1
Inclusion criteria and rationale

Inclusion criteria	Rationale
Identify as a cisgender girl.	• The decision to focus on the experiences of a hegemonic group of adolescent YP was driven by the lack of UK research in this area, as discussed in Chapter 1. Understanding their experiences can provide a foundation for future studies, including those exploring diverse population characteristics.
Between the ages of 11 to 19 years old.	• See Section 3.9.2 for reflection on this choice. • This age range encompasses YP in secondary and post-16 educational settings, providing an opportunity to explore their perspectives within the context of education.
Attends a mainstream secondary school or post-16 provision in a low socio-economic area.	• See Section 2.4.2. • See Section 2.10.1.
Have begun menstruating.	• To reflect on their experiences of the menstrual cycle, participants needed to have experienced menarche. • See Section 3.9.2 for reflections on YP that wanted to join the study but did not meet this criterion.

Due to recruitment challenges (Section 3.6.2), the SENDCo selected six to twelve female students from various tutor groups during tutor time on four separate occasions to attend a small assembly. Convenience sampling was used to select available students from available tutor groups, with efforts made by the SENDCo to include a mix of ages and

characteristics. However, this approach may introduce selection bias, as not all members of the intended population were equally likely to be included in the study. Ultimately, voluntary sampling was used, where participants self-selected to take part in the study (Louis et al., 2018). Limitations of this sampling approach are discussed in Section 5.2.1.

3.6.2 Recruitment of participants

Once an educational setting was recruited (Section 3.5), participant recruitment began. The SENDCo arranged short assembly meetings for me to share research information with female students (Section 3.6.1). Interested students wrote their names on slips of paper and placed them in a box to maintain confidentiality. The school office then emailed participant and parent information sheets and consent forms to parent/guardians, with paper copies available upon request. Completed consent forms were either sent directly to me or collected from the school office. I then contacted the parent/guardians or participants over the age of 18 to arrange a study information meeting with parents and participants. During this meeting I addressed any questions, explained the interview process, shared the interview framework (Appendix 6), and reminded them of ethical considerations such as the right to withdraw (Section 3.8). After confirming continued consent, an interview was scheduled (Section 3.7.3).

3.6.3 Participant characteristics and sample size

Of the 30 adolescents that expressed interest in taking part in the study, 28 met the inclusion criterion, as two YP had not yet experienced menarche. All individuals were from one mainstream secondary school. Of the 28 eligible participants, four parents provided informed consent to take part in the study (recruitment difficulties are discussed in Section 5.2.2).

Four participants, attending one secondary school, were recruited for the final sample. Given the small sample size, RTA is an appropriate method for analysis (Braun & Clarke, 2022). The sample lacked diversity, comprising predominantly white British participants and one British Indian participant (Table 2). The implications of limited diversity are discussed in Section 5.2.2.

Given participants all attended the same school, and the sample lacked diversity, there is an influence upon the generalisability or transferability of the conclusions. However, by comparing participants' data with existing literature, it is hoped that findings can be augmented and so better understood. Further implications of single-school data are discussed in Section 5.2.1. The characteristics of the final sample are reported in Table 2. Participants have been allocated numerical identifiers to ensure their anonymity.

Table 2
Demographic information of participants

Pseudonym	Age (years)	Ethnicity	School Provision
Participant 1	14	White British	Mainstream secondary school
Participant 2	14	White British	Mainstream secondary school
Participant 3	15	British Indian	Mainstream secondary school
Participant 4	18	White British	Mainstream secondary school

3.6.4 Pen portrait of participating school

The participating school is a mainstream secondary school that is part of an academy trust, located in an urban area. It is a mixed-gendered school with pupils ranging between eleven to eighteen years old. The percentage of children eligible for free school meals within the school is 29.2% (sourced from the government website) which is 5.4% above the national average (DfE, 2023), indicating the school population is within an area of socioeconomic deprivation. The school's ethnic representation was lower than that of the local community, with 26.2% of the student population belonging to ethnic minorities compared to an average

of 55.0% in the ten nearest secondary schools. The school has received an 'inadequate' Ofsted rating and has been undergoing a period of significant staff and policy changes.

3.7 Procedure

3.7.1 *Semi-structured interviews*

The use of interviews to collect research data has been hailed as an effective way to gather material about individuals, regarding how they see and make sense of their worlds (Magnusson & Marecek, 2015). Through interviewing, a researcher can locate 'clues' about an individual's personal and cultural meanings through which they make sense of their experiences and express these through the use of linguistic resources (Quinn, 2013). There are various modes of interviewing, broadly separated into interviews with individuals and focus groups (with groups of people). For the current research, focus groups were not used due to ethical concerns (see Section 3.8). Discussing sensitive menstrual experiences with peers may increase the risk of emotional distress, especially given the literature suggesting themes of negative stigma around menstruation (Barrington et al., 2021). Additionally, adolescent girls may experience social desirability bias, with girls potentially seeking to provide socially desirable answers in front of peers (Daley, 2013).

Interview methods vary in structure and depth in response to research questions (Robson & McCartan, 2016b). A structured interview framework was avoided due to its use of predetermined questions, which would limit participants' ability to express their experiences in ways that felt important to them. An unstructured framework was also unsuitable, as it would not support focused exploration of the research questions and may potentially increase participant anxiety due to less predictability. Semi-structured interviews were chosen for their benefits that align with the current research. These include flexibility, ability to use follow-up questions, deeper exploration of responses, consistency across interviews and a conversational style that increases participant comfort. This method, recommended by Robson and McCartan (2016), aligns well with the researcher's dual role as interviewer.

3.7.2 Development of interview schedule and pilot

The interview schedule was designed to explore adolescents' menstrual experiences within the school context (see Appendix 6). Initially, participants engaged in introductory discussions to establish rapport. This was followed by a warm-up question about general perceptions of menstruation. Consonant with the issues noted in Chapter 2, this approach aimed to reduce the potential stigma associated with menstruation and foster a supportive and safe environment. Additionally, I provided a definition of menstruation, highlighting it as a natural process (refer to Section 2.1.1). This preparatory phase supported participants to share their menstrual experiences at a pace and comfort level that prioritised their autonomy, in line with the principles outlined by (Prior, 2016).

Questions within the main body of the interview were informed by issues identified in the literature review (Chapter 2) and the study's research questions. Participants were separately asked about experiences of their menstrual cycle in relation to their daily living and learning in school to develop a deeper understanding of participants' menstrual educational experiences. Questions were also directed towards understanding the support and provisions available in schools for (1) understanding menstrual experiences (i.e. menstrual education) and (2) managing menstrual needs. The decision to explore these areas separately was informed by findings from previous research suggesting YP felt unprepared and unsupported in these two areas (Plan International UK, 2018). At the end of the interview, participants received a debrief where they could ask questions and express any concerns (further discussed in Section 3.8).

The terminology used in the interviews was carefully chosen based on insights from the literature review. For instance, asking girls about experiences throughout their entire 'cycle' rather than limiting questions to just 'menstruation'. This approach was informed by the understanding that menstrual health encompasses the whole cycle, as discussed by (Hennegan et al., 2021). All questions were collaboratively reviewed and refined with my supervisor, and a TEP.

Interview questions were piloted with Participant 1. The purpose of this pilot was to explore the utility and appropriacy of the interview schedule, the wording of the questions and provide opportunity to reflect on my skills as an interviewer (Robson & McCartan, 2016b). Following the pilot an adaptation was implemented; I emphasised flexibility within my questioning approach to promote interview fluency. For example, the sequence of questions was adjusted to minimise repetition of participants experiences when they had already shared their views on a certain topic.

3.7.3 Conducting interviews with participants

Interviews were conducted individually with participants in a private and quiet room, either in their school or in the LA office building, during February and March 2024. Interviews lasted between 40 minutes to one hour, adhering to guidance by (Adams, 2015), which recommends a maximum of one hour for semi-structured interviews. Interviews were audio recorded using a Dictaphone. Recordings were anonymised and securely stored. I transcribed data using the audio from the recordings.

3.8 Ethical considerations

This research project received ethical approval from the University of Birmingham Humanities and Social Sciences committee (see Appendix 7). The study was carried out with adherence to ethical guidance provided within the British Psychological Society (BPS) Code of Human Research Ethics (BPS, 2021; Oates et al., 2021) and British Educational Research Association (BERA, 2019). See Table 3 for detailed information on key ethical considerations in this study.

Table 3
Ethical considerations

Ethical consideration	Considerations in this study
Informed consent	Participants and parent/carers received comprehensive information and consent forms outlining the aims, implications and procedures within the study (Appendix 5).

Ethical consideration	Considerations in this study
	• Informed consent was initially sought from both the participant and their parent/carer with parental responsibility, (if under the age of 18) and continuously thereafter by obtaining verbal and written consent at key junctures of the study e.g. study information meeting and pre-interview. • Participants and their guardians were provided with my contact details to facilitate open communication regarding any queries or concerns prior to consenting and throughout the duration of the study. • After the consent forms were completed, a study information meeting (through a telephone call) was arranged to discuss the interview process in detail and to provide participants, and their parents (if under 18), with a copy of the interview questions. Information from the information sheet and consent form was reviewed, and I addressed any questions or concerns participants, or their parents had. • At the start of each interview, the researcher reviewed the information sheet and consent form with participants, outlining the study's objectives and procedures. Participants were given the opportunity to ask questions and, once they confirmed their understanding and agreement, they provided written consent.
Confidentiality/anonymity	• Given the nature of face-to-face interviews, complete anonymity was not feasible. However, confidentiality was rigorously maintained by excluding any identifying information and using numerical identifiers when storing and reporting data. • Contextual details about the participants and their educational settings that were collected are anonymised in final reporting. • Participants were made aware that anonymous interview excerpts would be included in the study's final report. • The use of individual face-face semi-structured interviews supported participant anonymity when compared to alternative data collection methods such as focus groups (discussed in Section 3.7.1).
Right to withdraw	• Participants had the right to withdraw from the study up to two weeks post-interview without any obligation to provide a reason, as explicitly stated in the provided informational materials (Appendix 5). The right to withdraw was verbally reiterated to participants before

Ethical consideration	Considerations in this study
	and after each interview. Contact details were provided, enabling participants to easily communicate their decision to withdraw from the study. Participants were made aware that withdrawal from the study bore no repercussions, and all related data would be promptly destroyed upon withdrawal.
Minimising harm	- Both the British Psychological Society (BPS, 2021) and British Educational Research Association, 2019) ethical guidelines were consulted when considering potential risks associated with this project. <u>Risk to research participants</u> - Risks to participants were minimal, although it is acknowledged that exploring the topic of the menstrual cycle can be sensitive as individuals may have experienced distressing events relating to the impacts of menstruation and stigma, which some individuals may find upsetting. Therefore, by participating in the study, there is a risk participants may experience psychological distress and discomfort. To mitigate this risk, the following considerations were made: - Safeguarding measures were implemented during interviews, including ensuring the presence of a designated safeguarding lead (DSL) in school settings and parental supervision in the reception areas of the LA office. Continuous contact with the EPS' DSL was maintained throughout the study. - Offering pauses and breaks or the option to discontinue the interview if distress was evident. - Providing interview questions prior to the interview so that participants can anticipate themes that will be explored in the session. - Conducting interviews with sensitivity and empathy, with an understanding of participants emotional needs, drawing on my TEP training. - Ensuring participants understood they were free to withdraw from the study at any time before or during the interview without consequence. - Conducting a debrief post-interview to offer support and provide additional signposting if required to relevant resources and professionals, e.g. their General Practitioner (GP). Lines of communication were maintained through ensuring participants had my contact details for any post-

Ethical consideration	Considerations in this study
	study questions or concerns, in addition to my supervisor's contact details. <u>Risk to research staff</u> Physical risk of harm to me as the researcher was minimal as the interviews were conducted in the school setting or council building, with other professionals in the vicinity. There may have been some emotional and psychological risks, potentially evoked by the possibly emotive nature of some of the areas of discussion. These risks were managed through regular supervision to reflect on and consider the impact of the research.

3.9 Data analysis

RTA is a reflective and iterative process that necessitates recursive movement through its various phases as necessary (Braun and Clarke, 2022). Data analysis adhered to the stages of RTA, as outlined in Table 4.

Table 4

Six stages of reflexive thematic analysis (adapted from Braun and Clarke, 2022)

Phase	Activities
Familiarisation with the data	Transcribed interviews verbatim using audio recordings and underwent two comprehensive readings after transcription to support familiarisation with the data. Familiarisation doodles, as suggested by Braun and Clarke (2022) were made, documenting my initial ideas (see Appendix 8).
Generating codes	Systematically worked through datasets and coded to capture my analytic take on the data using NVivo 12 software (Dhakal, 2022). See Appendix 9.
Generating initial themes	I considered patterns of shared meaning across the dataset and assembled clusters of codes that seemed to share a concept. Candidate themes were generated that seemed to address the research questions. All coded data relevant to themes was collated.
Developing and reviewing themes	I revisited the whole dataset and assessed candidate themes in relation to their initial fit and viability by considering them in relation to codes and then the full dataset; developed sub-themes associated with main themes and collapsed/split/retained or discarded themes as necessary.

Phase	Activities
Refining, defining, and naming themes	Each theme was assessed to ensure it had a strong core concept and was clearly delineated. A synopsis for each theme was written and a name was chosen for each theme.
Writing up	I reported themes with the use of thematic maps and data extracts to address the research questions and tell an analytic story.

3.9.1 A feminist research contribution

There is presently no single agreed definition for feminism, or feminist research. However, it is widely understood that such research is grounded in a commitment to equality and social justice, and is conscious of the gendered, historical, and political processes embroiled in the production of knowledge (Aranda, 2018). Research seeks to highlight and elevate the diversity of experiences of women and other marginalised groups, increasing awareness of how social hierarchies impact on oppression (Wilson, 2023). The current research aims thus align with feminist research values. Historical perspectives, structures of language and representations surrounding menstruation have contributed to stigmatised beliefs and expectations that have contributed to the oppression of women (Bobel & Kissling, 2011). Women's health has been impacted by such oppression, with historical underrepresentation in clinical trials impacting the health care of women (Liu & Dipietro Mager, 2016). Statistics suggest that only 2% of medical research funding is spent on pregnancy, childbirth, and female reproductive health (UK Clinical Research Collaboration, 2014). The current study, in seeking to illuminate the menstrual experiences of adolescent girls, aims to increase awareness, building on social justice principles with a commitment to equality of opportunities for girls within educational communities.

Research is deemed 'feminist' in the way that it is conducted by the researcher, through the integration of feminist principles in all research considerations (Wilson, 2023). Principles include collaborative, non-hierarchical and reflexive approaches to research (Fonow & Cook, 2005) aiming to elevate the voices of the marginalised. I seek to apply feminist principles

throughout this research project and evidence their use through research design (Section Chapter 3), use of RTA (Braun & Clarke, 2022) and a reflective diary (Section 3.9.2). Reflection considers the three discrete forms of reflexivity in relation to feminist principles as outlined by Wilson (2023). These include personal (the researcher's role in the construction of knowledge), functional (the influence that chosen research tools and processes have on research), and disciplinary (considering the influence of educational psychology when approaching this topic).

3.9.2 Reflexivity

Being reflexive involves seeking to be transparent in the act of critically examining and acknowledging one's own role, biases, and influence throughout the research process (Attia & Edge, 2017). I held reflexive processes at the forefront of all decision making and actions to consider their 'situatedness' in the research; at the personal, functional, and disciplinary levels (Wilkinson, 1988). Below are a variety of examples taken from my research diary.

When considering participant inclusion criteria, I reflected on feeling uncomfortable about only including cis-gender girls, and that I was 'othering' those who identify as non-binary and not allowing their voices to be heard. However, discussion with my supervisor highlighted the lack of research within the area of menstrual experiences, meaning that data collection within any population is an important addition to the literature. The key here was to sensitivity and continuously bring awareness to the complexities of gender-identity through reflection when considering menstrual experiences. This decision led to the adoption of gender-neutral pronouns within this study, only using gendered pronouns when discussing previous literature that reported them, and participants' pronouns.

During recruitment two cis-gender girls wished to join the study but did not meet the inclusion criteria due to not having reached menarche. Given the feminist orientation of this research, I felt guilty and saddened by their exclusion, worrying I was silencing their voices. Their eagerness to participate, despite not having experienced menarche, suggested they had valuable experiences they wanted to share, possibly related to social influences on their

understanding and views in apprehension of menarche. I handled this situation sensitively, after seeking supervision. I called parents and explained the situation to the YP. In both cases, parents shared with me they were open to discussing menarche with their daughters, which was an unexpected but powerful outcome of the recruitment process as it prompted preparatory and open discussions between YP and their mothers that may not have previously happened. This assertion is supported by literature indicating that, in 56% of English and Farsi publications, adolescents viewed their mothers as key sources of information about puberty and menstruation (Sooki et al., 2016). Additionally, reports suggest that many girls feel they are not adequately prepared for the onset of menarche (Plan International UK, 2018).

Potential power-imbalances between myself as the researcher and participants were considered and the impact this may have on participants being able to express themselves. Considering the influence of power on the development of knowledge production is a key feminist iteration when being reflexive (Holland & Ramazanoglu, 2002). To reduce the risk of this negative impact within the relationship, opportunities to develop rapport were interwoven through the research process. These included face-face assembly input to recruit participants, a study information meeting by phone call with the participant and their parent, face-face interviews (as opposed to virtual), and time allocated at the beginning of interviews for further rapport building. I also engaged in reflexive practice that drew upon skills such as active listening, and recommendations within existing literature on adolescent menstrual experiences. For example, care was taken to avoid conveying the assumption that participants' menstrual experiences mirrored those of mine, as highlighted by adolescents as a barrier to engaging in menstrual discussions (Nicol, 2023).

The menstrual definitions adopted by this study are rooted in Western perspectives (Section 2.1), reflecting my own Westernised understanding of menstruation and background in health psychology. Being non-religious, my experience and understanding of menstruation has not been influenced by religious practices or beliefs that I am aware of. Additionally, my CR positioning (Section 3.1) and feminist approach (Section 3.9.1) further shape my

perspective. It is acknowledged that my understanding may differ from others who view menstruation through various cultural lenses. Recognising this positionality provides transparency and frames the lens through which I view and interpret the research.

My positionality (as reported in Section 1.2) inevitably influences how I conduct and interpret this study. While confronting my cultural biases has been uncomfortable, I acknowledge that my perspective affects my interpretations, particularly regarding the cultural contexts and experiences of others. Recognising these influences is crucial to ensure that all voices are valued, thus supporting the trustworthiness and inclusivity of the research. By understanding both my own and participants' views of the world, and addressing the differences, I hope to integrate knowledge and experiences to create new insights (Ide & Beddoe, 2023). The lack of diversity in my sample highlights a significant limitation in my study, as the experiences and perspectives of individuals from different cultural and racial backgrounds may vary greatly (as further discussed in Section 5.2.2).

3.9.3 *Validity and trustworthiness of qualitative research*

When considering the quality of the knowledge generated from this research, care was taken to select a framework that aligned with the philosophical positioning of the study, resulting in the use of Yardley's, (2015) evaluative criteria. Open-ended and flexible principles focused on qualitative research methods guided the decisions and considerations of research trustworthiness throughout this study. Considerations are presented in Table 5.

Table 5
Criteria for the evaluation of qualitative research to assess research quality (Yardley, 2015)

Criterion	Characteristics within this study	Possible limitations
Sensitivity to context <i>Demonstrating an understanding of existing theoretical and empirical</i>	An extensive literature review was conducted, including drawing on an SLR on the reporting of menstrual experiences. This sought to ensure the current research questions were informed by previous literature and extended existing knowledge.	- Due to the lack of research in menstrual experiences, the literature review included international research which may not represent the UK context. - The literature review may not fully represent the current body of literature

Criterion	Characteristics within this study	Possible limitations
<i>research in relation to the current study.</i>	- Consideration was given to the historical understandings of the menstrual cycle and current legislation and initiatives. This supported an understanding of the sociocultural context of the current research. - Reflexivity was enacted, as best as possible, throughout the study (see Section 3.9.2), including considerations regarding the relationship between myself as the researcher and participants, such as the balance of power. - Participant interviews were transcribed verbatim. Inductive and deductive analysis that held a largely semantic focus supported the sensitive exploration of participant views (see Section 3.2 and 5.2.3).	due to the sheer body of grey literature on menstrual experiences that was difficult to access due to time constraints and resources. It is acknowledged that I am a white British researcher, drawing on restricted literature (Chapter 1), with a low diversity sample of participants. Therefore, this study does not claim to be representative of the broader adolescent population. Lack of diversity could mean that the menstrual views and experiences gathered might not capture the full spectrum of perspectives, particularly those from different cultural backgrounds. Consequently, the findings and interpretations discussed in this study, whilst supported by researcher reflexivity will inevitably be biased due to the subjective experiences of all involved in the research. Therefore, research will represent a specific sample of participants. Implications for future research are discussed in Section 5.4.
Commitment and rigour <i>Demonstrating analysis has been carried out with sufficient breadth and/or depth to meaningfully provide</i>	- Interview questions were informed by the existing literature and reviewed with my supervisor and by a TEP (Section 3.7.2). - RTA was selected as an appropriate analytic technique after extensive consideration (Section 3.2, 3.3 and 3.4). - The steps of RTA were closely followed (Section 3.9) whilst reflecting on Braun and Clarke's,	Interview questions were not reviewed by a parent or adolescent girl before the pilot interview due to difficulties related to recruitment.

Criterion	Characteristics within this study	Possible limitations
<i>additional insight into this area of research.</i>	(2006) checklist for good TA (Appendix 11). • Iterative reading of transcripts and development of codes and themes. • The interpretation of themes was considered in research supervision sessions.	
Transparency and coherence <i>Ensuring transparency for each stage of the study, with a coherent and comprehensible overall account of the research process.</i>	• Methodology is clearly documented within Chapter 3. The decision on analytic method is discussed in Section 3.3 and 3.4. A breakdown of RTA is provided in Table 4. • Within the methodology section (Chapter 3) coherence is presented across the research questions, philosophical positioning, methods, and analytical approach. Justification for the use of each decision is transparently documented. • Exemplars of the analytic method are provided in Appendix 8, 9 and 10 to support transparency in the generation of initial ideas, coding and theme development (further described in Table 4). • Excerpts from the data are presented in Chapter 4 using illustrative quotes to support readers understanding of themes and aid them to discern for themselves the themes identified. • I was reflexive throughout the entirety of the study. Excerpts from my research diary are included in Section 3.9.2. • Difficulty generalising data and findings is acknowledged due to the sample size and lack of participant diversity. Data is carefully interpreted in line with	• Providing a clear and transparent account of the full RTA process was unfeasible due to the highly iterative nature of analysis.

Criterion	Characteristics within this study	Possible limitations
	this as discussed in Chapter 5. Despite the small sample size, data addressed the research questions, and provided insight into participants experiences. Chapter 6 considers links between the research and existing literature, theory and policies.	
Impact and importance <i>Providing an account of the impact of the research in order to provide further insight in the topic area. Types of impact may include practical, theoretical and socio-cultural domains.</i>	- The impact and importance of this research is presented in Chapter 1 when considering the rationale for this study. - The utility of the research within educational psychology is explored in Chapter 5. - This research presents an in-depth account of participants' perspectives on their menstrual experiences in their educational context, raising considerations for educational settings as considered in Chapter 5.	

Chapter Four: Findings

4. Chapter overview

The following chapter outlines the themes that were generated through RTA. Findings are organised in relation to each research question and commence with an overview table of themes, followed by interpretive commentary. A total of 14 overarching themes are presented, supported by subordinate themes, represented in thematic maps. Quotes from participant transcripts are included to illustrate the proposed themes (Eldh et al., 2020) and elevate the voices of participants.

Whilst steps were taken to reduce the cross-over of coding between themes, there were concepts that interrelated. Due to the interconnected nature of the research questions, this cross-over is unsurprising. Interconnected concepts are identified and further discussed in Chapter Five. Some of the participants' perceptions were raised in similar ways to different research questions, therefore nuances are reflected on across the research questions.

4.1 Research question 1a: What are the perceptions of adolescent girls on their menstrual experiences, in relation to *school experiences*?

Table 6

Themes and codes for adolescent girls' menstrual experiences in relation to research question 1a

Theme	Sub-theme	Codes	
Physical symptoms during menstruation		Tired	
		Increased hunger	
		Painful period cramps	
		Backache	
Negative emotional experiences during menstruation	<i>"You've got so many extra things to worry about"</i>	Worry about uncertainty of menstrual status at school	
		Worry that others will know you are on your period (and subsequently feel embarrassed)	
		Worry blood will 'leak' at school	
	Heightened emotions during menstruation	Mood swings during menstruation	
		Feeling upset during menstruation	
		Menstruation increases stress to existing stressors	
		Feeling angry during menstruation	
		Periods are annoying because of having to frequently change pads	
		Periods are annoying because of the physical pain	
		Periods are frustrating	
	Confusion	Difficulty understanding emotions - Why am I upset?	
Social demands during menstruation		Social interaction demands heighten emotional dysregulation	
		Desire for solitude	
		Ruptures in peer relationships	
Desire to conceal menstrual status	Strategies to conceal blood	Avoidance of movement	Apprehension about climbing stairs 'In case it (blood) comes out of me'
			Apprehension about increased movement between lessons
			Avoidance of movement in PE

Theme	Sub-theme	Codes
		Not liking walking long distances
		Wearing darker clothes during menstruation 'just in case'
	Conceal menstrual products	Strategies to hide sound of period products
		Considering how to hide period products when taking them to the toilet
		Pads in toilets reduce the worry of transporting them
		Period products are too noisy
	Discomfort sharing menstrual status with staff	Discomfort sharing menstrual status with school staff
Menstrual solidarity	Practical support	Peers check for leaking blood
		Peers share pain relief
		Peers share menstrual products
		Peers share food
	Emotional support	Receiving emotional support from close friends during menstruation
		Supportive presence of friends
		Preference for discussing menstrual topics with friends over adults
		Discussing menstruation with close friends makes you feel more comfortable with menstruation
	Implicit support from peer menstruators – <i>"they just get it"</i>	Shared empathy between menstruators
		Relatability with other menstruators
		Sense of community with other menstruators
Male peers perpetuate menstrual stigma		Male peers ridicule menstruation
		Male peers ridicule 'safe spaces'
		Male peers do not understand menstruation
		Male peers are less empathetic
		Male peers are shocked by menstruation
		Male peers not often heard discussing menstruation
		Importance of menstrual education for male peers
Perception of teachers	Distrust in teachers to support menstrual needs	Dismissive responses from teachers regarding menstrual experiences
		Wish for increased staff empathy
		Wish for increased staff understanding

Theme	Sub-theme	Codes
		"Just get on with it" social expectation
		Teachers can misinterpret behaviour and jump to conclusions
		Perceived generational gap with teachers – Less ability to connect
		Reluctance to seek support from school staff
		Teachers cannot help
		Inconsistent perceptions of the availability of pastoral support.
	Male teachers perceived as less supportive than female teachers	Male teachers are less empathetic
		Menstrual status is not shared with male teachers – Feels embarrassing

4.1.1 Superordinate theme: Physical symptoms during menstruation.

All participants reported experiencing physical symptoms of menstruation at school. Among them, the majority experienced period cramps, while two participants reported increased hunger. Additionally, P3 reported increased fatigue, and P2 experienced backache. For period cramps, the level of pain conveyed is interpreted to be significant, as it was perceived to impact on daily functioning, such as the need to take breaks and difficulty engaging in education (Section 4.2.1.1, motivation to attend school, physical factors).

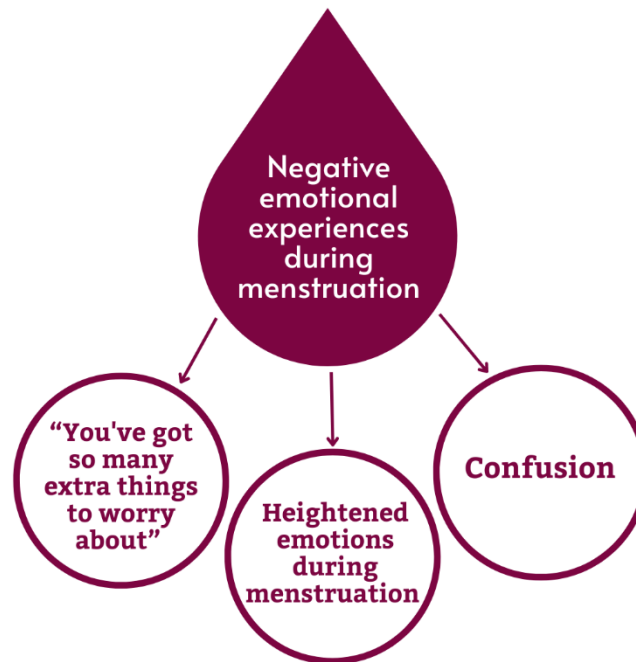
P4: Especially if it's like cramps and things like that [experienced at school]. You just sort of try to. Yeah. Stay upright.

4.1.2 Superordinate theme: Negative emotional experiences.

This theme represents the multifaceted emotional experiences reported by adolescent girls during menstruation, and how these can present within education. It includes concerns related to social stigma, heightened emotional distress and frustrations over the practical challenges posed by menstruation. This theme also highlights a sense of confusion about why intense emotions are felt. Interestingly, participants did not share positive emotions associated with their menstrual cycle.

Figure 3

Thematic map for theme 'Negative emotional experiences during menstruation'



4.1.2.1 Sub-theme: “You've got so many extra things to worry about”.

All participants reflected on the feeling of worry associated with experiencing their period at school. They expressed anxiety related to the possibility of menstrual blood leaks and its visibility to others. Most participants recounted incidents of themselves or peers bleeding through their uniforms at school, reinforcing their anxiety about menstruating in their school environment.

P1: I went at the end of the day and found out I'd just got my period and then I was crying on the way home because I thought everyone could see my blood from my trousers and I felt really worried.

All participants expressed that uncertainty about their menstrual status contributed to their feelings of worry, particularly fearing the onset of their period while at school and not being prepared which increased the risk of blood leaking.

P4: I think I always panic that I'm gonna be in the middle of a lesson. And then it's gonna start. And then I'm going to stand up and there's going to be like blood on the back of my trousers, on my skirt or whatever. And then I've got to sort of walk around with that all day and it's embarrassing, embarrassing to think about.

Worry around leaking menstrual blood pervaded participant experiences at school, impacting various aspects of their school life, including strategies to conceal blood (see Section 4.1.4), peer support dynamics (see Section 4.1.5.1) and their ability to engage in learning (see Section 4.2.2.2).

4.1.2.2 Sub-theme: Heightened emotions during menstruation.

Participants shared experiencing heightened emotions during menstruation at school. These included feelings of frustration related to menstrual management, mood swings, and instances of anger, as well as a general sense of feeling emotional.

P3: A lot of people, including me, get really emotional. Like a lot of things set me off and stuff.

P4 highlighted experiencing lowered emotional resilience during menstruation, related to existing school stressors:

P4: If you go into a lesson with a teacher, who you know isn't really your favourite, and they're probably going to have a bit of a go at you or just be a bit annoying, and then you know that's only going to be worse because you're a bit emotional anyway.

Findings suggest a sense of heightened emotional arousal during menstruation at school, impacting on perceived school functioning.

4.1.2.3 Sub-theme: Confusion.

Participants expressed confusion and uncertainty about their experience of fluctuating emotions during menstruation. There was also a sense of difficulty understanding why they felt the way they did and difficulty controlling their emotions.

P1: ...And then the next minute I can be happy. Then the next minute I'll cry my eyes out. And I have no idea why.

P4: You've got, like, your hormones are everywhere, and you don't know why you're upset, but you are, and then you're really stressed, and someone's really annoyed you and you don't know why. And you're trying to sort of justify why you're upset and then, you know, if someone's got on your nerves, you can't explain to them why they've got your nerves so much. And then you feel bad because you've annoyed them. But then they've really annoyed you, but you don't know why.

Findings suggest a sense of helplessness expressed by participants. This insight underpins the importance of addressing the emotional dimensions of the menstrual cycle and equipping pupils with the resources to understand and manage their emotions during menstruation. In alignment with the aims of this research, this finding emphasises the need for empowerment through understanding and emotional support, mirroring the principles advocated for in the Women's Health Strategy for England (DHSC, 2022).

4.1.3 Superordinate theme: Social demands during menstruation.

Participants reported that during menstruation they experienced heightened emotional dysregulation and lowered social tolerance in relation to social demands at school which impacted on their social interactions. Participants shared instances of social ruptures with peers, and commonly reflected on their emotional reactions with a sense of distress and remorse.

P3: It's like when teachers ask me to answer something or when my friends are trying to talk to me...That's when you get all bothered and pissy about it. Just don't want to deal with it.

P1: One minute I can be shouting at my friends, which I really don't mean to do.

Two participants expressed a desire for solitude during menstruation, seeking to retreat from social interactions. This suggests a tension between the need for solitude and the pressure to engage socially at school.

P4: You don't want to interact with anybody, but you've got to go into school and sit with people in your lesson.

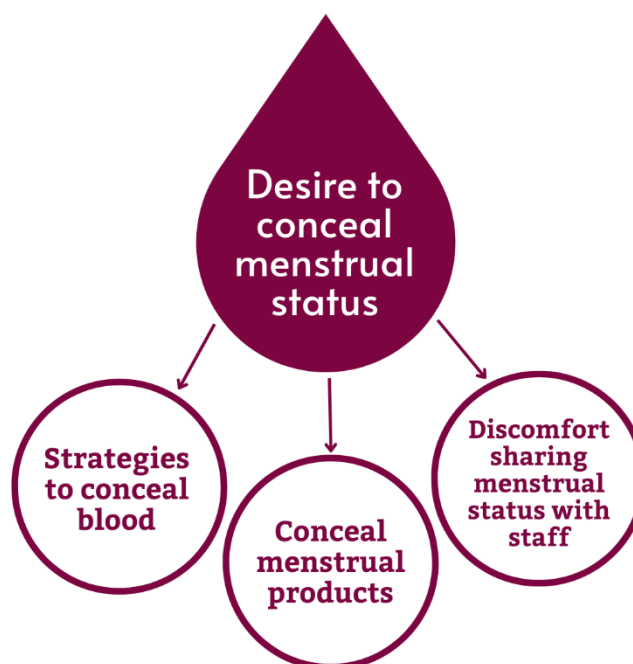
Findings suggest that the demands of social interaction during menstruation exacerbate emotional dysregulation, indicating that navigating social expectations at school can be emotionally taxing. Overall, participant experiences indicate an interplay between menstruation and social interactions, highlighting the challenges individuals face in managing social demands while menstruating.

4.1.4 Superordinate theme: Desire to conceal menstrual status.

This theme represents participants shared experiences of concerns that their menstrual status will become known by others (peers and school staff), and the potential for subsequent embarrassment. It highlights key concerns about leaking blood (Section 4.1.2.1), concealing menstrual products and discomfort in sharing their menstrual status with staff. Overall, this theme highlights potentially heightened anxiety and efforts to hide or manage the visibility of menstruation in various social contexts within the school environment.

Figure 4

Thematic map for theme 'Desire to conceal menstrual status'



4.1.4.1 Sub-theme: Strategies to conceal blood.

All participants shared significant concerns about the prospect of leaking blood at school during menstruation, and blood becoming visible for example on clothes and furniture (Section 4.1.2.1). For many participants, concerns resulted in strategies to reduce the likelihood of visible leaking and subsequent embarrassment. These included reducing the amount of movement exerted during PE and when walking between classes and wearing darker clothing.

P3: Getting up the stairs. Like upstairs, you know, like...legs spreading and stuff.

4.1.4.2 Sub-theme: Conceal menstrual products.

Participants expressed concerns about the noise and visibility associated with using menstrual pads, with P4 citing their bulkiness and the challenges of discreetly carrying them to the toilet. Despite schools providing menstrual products in PE changing rooms, participants reported a stigma around their use, with P1 sharing concerns around the noise of products and the embarrassment they would feel if others could hear. Strategies such as waiting for

background noise or using the hand dryer to mask the sound of period products were used to conceal their use.

P1: I wait for someone to put the hand dryer on and I just open it [menstrual pad] or try and open it really slowly and you know, just make some humming noises while I do it so I don't be that noticeable.

Furthermore, as discussed in Section 4.4.1, participants faced challenges accessing menstrual products in main access toilets. Consequently, transporting personal period products from the classroom to the toilets became more likely, amplifying the risk of experiencing menstrual stigma. Whilst the school technically provided menstrual products, participant concerns underpin the significance of addressing both practical and social dimensions in MHM. Issues regarding the accessibility of MHM are further discussed in Section 4.4.1.

P4: And I guess they're harder to hide. And then I know you shouldn't have to. But I guess if you're walking around and you're taking a tampon onto the toilet. You can just, like, hold it in your hand. And no one is going to notice, but I guess pads are sort of harder to hide.

4.1.4.3 Sub-theme: Discomfort sharing menstrual status with staff.

All participants expressed discomfort in sharing their menstrual status with school staff.

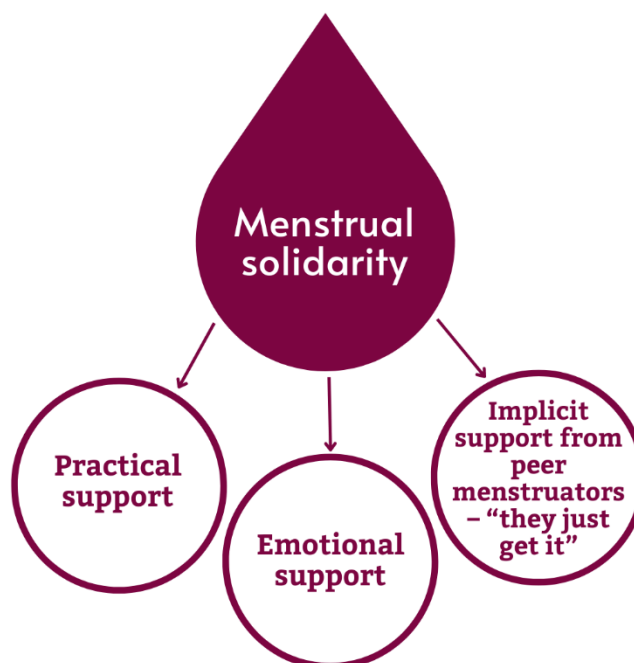
P2: ...but I could always go to the office and get some stuff, but then I'll have to like, say I don't know what to do.

4.1.5 Superordinate theme: Menstrual solidarity.

Participants expressed a sense of unity, support, and understanding among menstruating individuals in the school environment, where they rely on each other for practical and emotional support related to menstruation; commonly reported with close friends. Participants expressed a preference for peer support over adult support in the school environment.

Figure 5

Thematic map for theme 'Menstrual solidarity'



4.1.5.1 Sub-theme: Practical support.

All participants spoke about a mutual exchange of practical support with peers whilst managing their menstruation at school. Activities included checking for leaking blood, sharing pain relief, distributing menstrual products, and offering food.

P3: [We] mutually provide each other, like pads and painkillers. And then I usually try to give them some of what I have for lunch just to make sure they're getting what they need.

4.1.5.2 Sub-theme: Emotional support.

Participants expressed the importance of receiving emotional support from close friends during menstruation, noting the supportive presence of friends; and a preference for discussing menstrual topics with peers rather than adults. Additionally, participants shared that engaging in conversations about menstruation with close friends fostered feelings of comfort and normalisation regarding the menstrual experience.

P2: Like we know we're always there to speak to each other about anything. Like if something's worrying each other.

4.1.5.3 Sub-theme: Implicit support from peer menstruators – “they just get it”.

All participants shared a sense of implicit support from other menstruators. Notions included a sense of safety and reassurance within friendships which supported the experience of relatedness, and a sense of shared understanding and empathy.

P4: I guess. I think with girls you don't tend to have to talk about it because everyone just sort of gets it.

Two participants acknowledged the diversity of individual experiences and had concern for the menstrual experiences of friends that were perceived as more vulnerable (e.g. experiencing endometriosis).

P1: Because, you know, we are in a younger year and we can't be mean to each other because we've got to be there for each other.

Overall, participants described a collective effort among menstruators to look out for each other, creating a strong sense of community and solidarity. In school, all menstruating peers were experienced as approachable for menstrual support. Peers provided an environment with less menstrual stigma, making it easier to relate to and share experiences. Findings emphasise the salience of peer relationships in managing and navigating menstrual experiences within the school environment.

4.1.6 Superordinate theme: Male peers perpetuate menstrual stigma.

Participants perceived male peers to have limited menstrual understanding and a lack of empathy, with girls having experienced ridicule in many interactions regarding menstruation. Participants reported this perception created barriers to open discussion and accessing menstrual support in front of male peers (for example, going to the toilet).

P3: I think sometimes you know how boys are. Sometimes they'll tease you about them things [periods].

P3: Sometimes in tutor, it's usually the boys, they're always like knocking on it [safe spaces] like omg LGBTQ¹³ safe space. It's hard to speak up when you know this, like people are against you having one, even though it's not your fault.

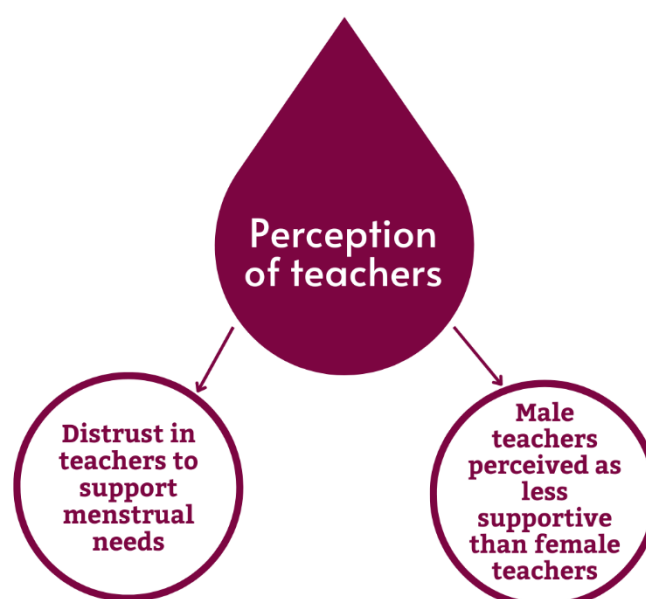
Most participants felt it important that male peers receive menstrual education.

P4: I think. Yeah, I think that would definitely be helpful [boys having menstrual education], 'cause. I guess when they don't know about it, they just think it's funny.

4.1.7 Superordinate theme: Perception of teachers.

Figure 6

Thematic map for theme 'Perception of teachers'



4.1.7.1 Sub-theme: Distrust in teachers to support menstrual needs.

Participants reported a shared lack of confidence in teachers' ability to understand and provide adequate support for menstrual issues.

¹³ LGBTQ is an acronym that stands for lesbian, gay, bisexual, transgender and queer or questioning.

P1: Teachers. I don't know how they would really help you. You'd just be there on your period. Unless they can magically stop it. I don't think they can really help.

P3: Teachers are like oh, no, you could tell us you could trust us. But it's different. You know, there's a whole age imbalance and everything.

Participants also shared experiences of dismissive or unsympathetic responses from teachers when requesting accommodations or expressing menstrual-related discomfort, which impacted their level of trust in teachers and likely contributed to their reluctance in seeking support.

P3: You get told oh just do it, deal with it. One time we were doing Yoga, and I was like Miss. Oh my god, it's going to happen. She was like no it's fine. Just clench.

Participants shared a desire for teachers to be more empathetic to participants' menstrual needs and have greater awareness of the variation in individualised experiences of menstruation.

P3: And them [staff] just letting you know that we're here to support you and we're not going to like shame you for it.

P2: I feel like they should be very. Almost considerate of what they're saying. They have to understand everyone has different experiences.

4.1.7.2 Sub-theme: Male teachers perceived as less supportive than female teachers.

Participants expressed discomfort and reluctance in seeking assistance and sharing menstrual information with male teachers due to feelings of embarrassment and a perception that male teachers lacked empathy and understanding.

P1: I mean, it's a man, and I know they've been brought up and taught to do this, but it'd just be like, you know, sort of embarrassing to tell a man because normally they don't really go through it. And you know. Kinda feels weird.

4.2 Research question 1b: What are the perceptions of adolescent girls on their menstrual experiences, in relation to *engagement in learning*?

Table 7

Themes and codes for adolescent girls' menstrual experiences in relation to research question 1b

Theme	Sub-theme	Codes
Motivation to engage in school	Physical factors	Difficulty managing pain
		Difficulty managing heavy blood flow
	Emotional factors	Teacher empathy impacts motivation to engage in lessons
		Perceived persecution from others during menstruation
		Apprehension to manage pain at school
		Apprehension to manage menstrual concerns (leaking blood) at school
		Difficulty in the mornings to have the motivation to attend school when menstruating
		Not wanting to be at school during menstruation – <i>“I’d rather be anywhere else”</i>
		Difficulty engaging in less preferred lessons
		Apprehension to attend lessons with unpreferred teachers
Attention and concentration difficulties - “You’re here but not mentally here”	Mental load of menstruation	Distracting thoughts about period management
		During periods learning is easier when it is understood
		Easier to focus when not expecting or on period
		Hard to balance managing period symptoms with focusing on lessons
		Hard to focus when on period
		You’ve got so much to think about
	Physical symptoms	Distracting thoughts related to pain management
		Feeling sick because of cramps
		Focus is dependent on the intensity of cramps
		Hard to focus because of the pain
		Hard to listen because of everything on your mind
		Stopping cramps is the biggest priority

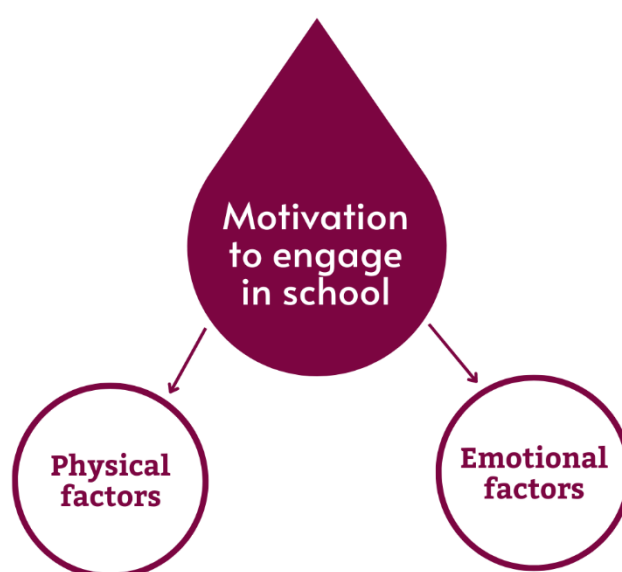
Theme	Sub-theme	Codes
	Worry	Hard to listen because of period worries
		Learning to ignore worries
		What if I leak blood?
		Worrying about feeling sick
		Cannot focus because of worrying
		When will the pain stop?
Learning as a support strategy		Enjoyable lessons can support mood
		Learning can distract from period concerns
		Learning can be done independently – you are in control

4.2.1 Superordinate theme: Motivation to engage in school.

Participants detailed how menstruation affects their desire and ability to attend school and participate in academic activities. They identified barriers including: feelings of physical discomfort (Section 4.1.1), emotional distress (Section 4.1.2), and low motivation, during menstruation. They described struggles with getting out of bed, managing pain, and dealing with emotional dysregulation, which negatively impacted their readiness to attend school and engage in lessons; especially when facing perceived unsupportive or challenging school environments (for example, unpreferred teachers). This theme highlights the significant influence of menstrual symptoms on YP's motivation to attend school and engage in education.

Figure 7

Thematic map for theme 'Motivation to engage in school'



4.2.1.1 Sub-theme: Physical factors.

Participants shared that dysmenorrhea (cramps) impacted on their motivation to attend and engage in school.

P4: Everything hurts and I just want to go back to bed, so I don't want to be here [school].

P2 stated that significant experiences of dysmenorrhea (cramps and backache) and heavy blood flow resulted in regular school absence approximately once every three months.

4.2.1.2 Sub-theme: Emotional factors.

Emotional factors impacted on participants' motivation to engage in school during menstruation. These included apprehension about managing pain and menstrual concerns at school (such as leaking menstrual blood) as well as difficulty mustering the motivation to attend school in the mornings.

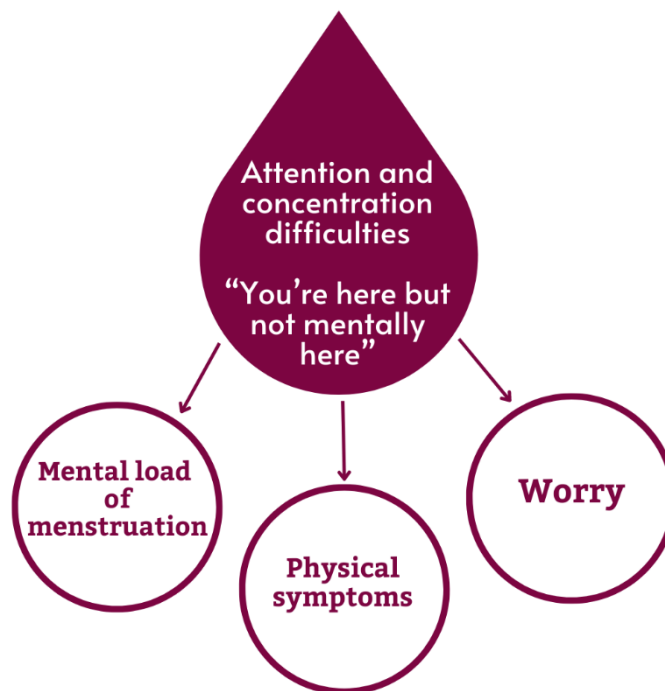
P1: You've got to get out of bed. Check your period. You see how heavy it is then go change it. Then get dressed and have to go to school with all these cramps and all these worries and all that. And I'm like, I really can't be doing with that.

4.2.2 Superordinate theme: Attention and concentration difficulties - “You’re here but not mentally here”.

Participants shared accounts of how menstrual symptoms, particularly cramps and worries related to menstruation, and the mental load of managing menstruation impacted on their ability to focus and engage in learning activities at school. Overall, this theme encapsulates the multifaceted challenges girls experienced during menstruation, encompassing both physical symptoms and emotional concerns.

Figure 8

Thematic map for theme 'Attention and concentration difficulties - "You're here but not mentally here"'.



4.2.2.1 Sub-theme: Physical symptoms.

The majority of participants reported their ability to engage and concentrate in lessons was impacted by cramps, with alleviating pain as a foremost priority.

P1: Stopping the cramps is the biggest part...Which distracts my learning because I'm trying to like focus and then I just keep getting these waves of cramps and it's really difficult.

4.2.2.2 Sub-theme: Worry.

Participants worries related to menstruation impacted on their ability to concentrate on learning. These included concerns about potential leaking of menstrual blood, feeling sick, and anticipating the onset of their period.

P4: You're stressing about it so consistently, it's sort of like you never get a break...you're stressing about school [when not on your period], that's fine. But if you're in pain or you're trying to think, you've just got so much to think about. You can't just

relax. So I think the stress sort of tends to, like, build up, and then you've got a lot to deal with consistently...I think it's just because you've got so many extra things to worry about...it's a lot to think about all at once... Because you've got like, so many extra emotions anyway. And then you're trying to think about everything. It's just, yeah, it's a lot.

Section 4.1.2.1 further discusses participant experiences related to menstrual worry.

This sub-theme highlights participants perception of an explicit link between the experience of menstrual worries and challenges focusing on learning activities. Findings provide an in-depth insight into the nature of factors that impact on engagement in learning.

4.2.2.3 Sub-theme: Mental load of menstruation.

Participants shared experiences of distracting thoughts associated with period management, finding it difficult to concentrate due to the variety of concerns and responsibilities they had during menstruation.

P1: You might be distracted thinking...have I changed my pad? Have I changed my tampon? And am I going to do this? What am I going to do about a leak through?

The majority of participants shared it was easier to focus on learning when they were not menstruating.

P1: It's sort of worrying because you don't know when you're gonna' to get it, but it's easier [when not on your period] because...you just focus on the lesson. You don't have to worry about anything.

4.2.3 Superordinate theme: Learning as a support strategy.

Participants shared that engaging in academic activities served as a form of distraction from menstrual discomfort or emotional distress. They expressed that focusing on schoolwork allowed them to manage their menstrual symptoms independently and provided a sense of relief or improvement in mood.

P2: [When] I feel like doing the work. It's alright because it, like, distracts yourself.

Findings suggest that academic learning was used as a support strategy to distract from menstrual challenges and alleviate associated difficulties. However, the effectiveness of this was stated to be contingent on specific conditions, such as lessons or tasks participants found enjoyable, or they felt able to complete independently.

4.3 Research Question 2a: What are the perceptions of adolescent girls on school support and provision, in relation to understanding their menstrual experiences?

Table 8

Themes and codes for adolescent girls' perceptions in relation to research question 2a

Theme	Sub-theme	Codes
Menstrual education	Independent education	Menstrual understanding increases with personal experience
		You cope with menstruation alone
		Independent development of coping strategies
		Seeking information online
	Focus on biology	Taught about menstruation to pass exams, rather than understand own experiences
		Teaching has not been helpful in understanding menstrual cycle
		Teaching limited to factual description
		Teaching feels dismissive
		Scientific teaching of the menstrual cycle
		Not taught how to use period products
		Menstrual cycle taught as part of the reproductive cycle
		Understanding biological changes is helpful, to know what to expect
		Teaching is not relatable or representative of real-life experience
		Male peers receiving menstrual education is supportive
	Desire for holistic menstrual literacy	Difficulty understanding individual menstrual experiences – knowledge gap
		Menstrual learning is not revisited
		Wish for real life implications of the menstrual cycle
		Wish for practical support on how to manage menstrual symptoms
		Wish for support on how to manage emotional dimensions
		Gender disparities in menstrual teaching
		Wish to understand the variation in menstrual experiences – what is normal?
		Current safe spaces are not suitable for talking about menstruation

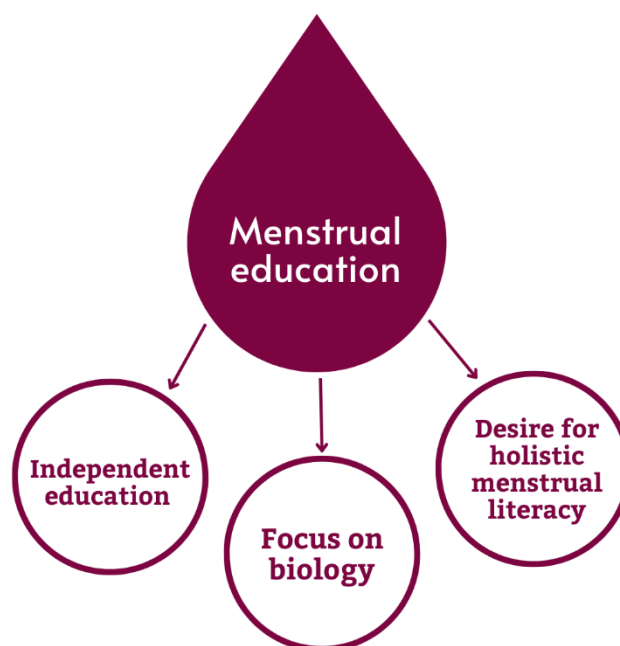
Theme	Sub-theme	Codes
Paucity of menstrual discourse opportunities		Wish for a dedicated space to talk about menstrual feelings
		Wish for opportunities to discuss menstruation
		Menstruation is not openly discussed at school
		Feels like you cannot talk about menstruation in school
		Preference for female only groups to discuss experiences of the menstrual cycle

4.3.1 Superordinate theme: Menstrual education.

This theme represents participants' perceptions of school support in developing understanding of their menstrual cycles. It includes a notion of self-reliance when understanding and coping with menstruation as a unique and personal experience. Current teaching reportedly focused on the biology of the menstrual cycle and was perceived to lack relatability and real-life implications. Participants shared a desire for a holistic understanding of menstruation that goes beyond the biological aspects to encompass its multifaceted influences on participants lives.

Figure 9

Thematic map for theme 'Menstrual education'



4.3.1.1 Sub-theme: Independent education.

Participants shared a notion of self-reliance when developing an understanding of their own menstruation. They cited personal experiences and turning to social media for information as supportive mechanisms. Moreover, participants shared coping mechanisms were developed independently to manage menstrual symptoms.

P1: They [school] just tell you that they're gonna happen. I've learned how to deal with them on myself by just, like, breathing and taking some paracetamol and distracting myself.

One participant shared feeling alone in their experience of menstruation, due to the individual nature of it, acknowledging both the uniqueness and universality of menstrual experience.

P3: It's nice to know you're not alone with it [menstruation]. And then it's also individual because you're not alone, but you are alone...It's different in everyone's experience. But it's also the same at the same time.

P4's view highlights how a perceived lack of comprehensive education may contribute to the seeking of information from elsewhere:

P4: Because we've never been taught about it. And like we were literally just taught the sciency part...It was just sort of. This is when you bleed. Good luck. So it's yeah. Trying to actually work it out is a bit tricky.

4.3.1.2 Sub-theme: Focus on biology.

Three participants shared that school taught a science-based approach to understanding the menstrual cycle. The remaining participant shared that they had not remembered receiving any menstrual education at school.

P1: Well, we've been doing that in science...Like going through the period cycle and the pregnancy cycle and all that...And then doing it all over again.

Two participants reported that understanding the biological changes during puberty, including the menstrual cycle were supportive in preparing them for physiological changes.

P2: Like it was useful. Because then it helped me understand my body and what was happening more.

However, one participant felt strongly that education was based on factual information only, for the purposes of academic achievement and not real-life implications:

P4: It was like we weren't really taught the practical side of it. It was just, this is the anatomy part of it. This is the information you need to pass an exam. You weren't really taught what it was going to be like in reality.

While two Key Stage 3 participants found biological teaching beneficial in preparing them for bodily changes, the eldest participant (P4) expressed dissatisfaction, considering it too abstract and disconnected from real-world applications or personal reflections.

4.3.1.3 Sub-theme: Desire for holistic menstrual literacy.

Participants expressed a desire for comprehensive menstrual education, which addressed individual impacts, coping strategies, and the social and emotional dimensions of the menstrual cycle.

P2: I feel like telling us ways on how to cope and manage would have been useful.

P4: I think being actually taught what it's like to have a period would be quite nice... I think sort of them telling us sort of what this is, how you might feel on this week. And then this is how you might have to deal with something on this week instead...And just sort of yeah, how it might actually affect you. We're always taught a very sort of like sterile version of it. But it's not that simple.

One participant also highlighted a desire for school support on the typical menstrual cycle and real-life implications.

P4: Because you're always taught it one way so oh, this is what normal is. But you're not really shown what that looks like for other people, and you're not really taught. Well, what normal could look like.

Two participants expressed a hope for teaching on the variety of period products available and demonstrations on how to use these.

P3: There could definitely be more practical and theoretical sides to it. 'cause we get we get the sex talk...and demonstrations. But I haven't seen anyone do a demonstration on how to do something simple like putting in a tampon or a [menstrual] cup.

4.3.2 Superordinate theme: Paucity of menstrual discourse opportunities.

Participants perceived a lack of opportunity to discuss menstrual experiences in school settings, generally.

P4: You know...when you just feel like it's something that you shouldn't talk about or you just get the overall sort of vibe. You can't talk about it, but if you can do it in things like lessons, it's sort of OK we'll do it once and we won't talk about it again. You just don't talk about it.

Participant narratives about this lack also conveyed the perception that such discussions were socially taboo within the school environment (outside of close friendships).

Two participants shared a dissatisfaction in existing spaces that encouraged emotional support, perceiving these spaces to be unsuitable for menstrual discourse:

P3: There's a social safe space they do at break and lunch I think, but I don't think it's like. You know, fully inclusive of people who go through periods. I've never gone. But I don't think you...talk much in there.

Participants shared a wish for opportunities to discuss menstrual experiences which included a variety of options, for example structured opportunities, and dedicated spaces to share their menstrual experiences, feelings, and concerns without judgment or discomfort.

P1: Maybe just a room that...you can take some time in there and you can just write down what you feel about the periods and like how you feel and you just leave it anonymous.

4.4 Research Question 2b: What are the perceptions of adolescent girls on school support and provision, in relation to *how their menstrual needs are addressed?*

Table 9

Themes and codes for adolescent girls' perceptions in relation to research question 2b

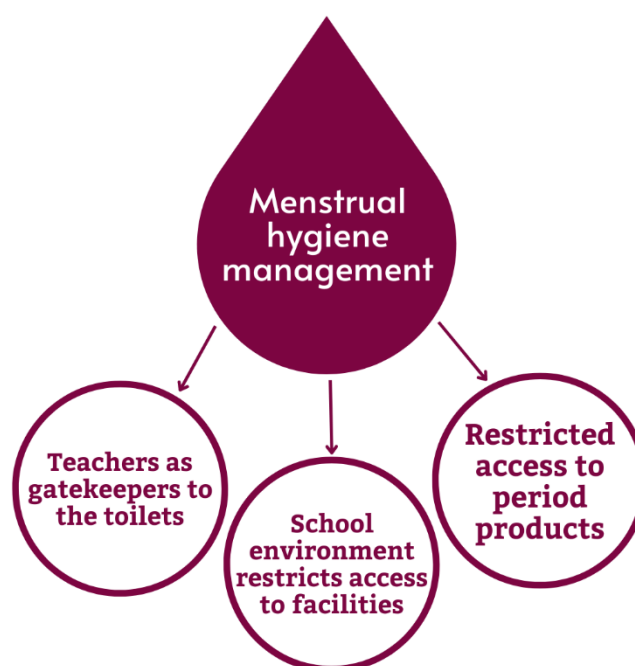
Theme	Sub-theme	Codes
Menstrual hygiene management	Teachers as gatekeepers to the toilets	Uncomfortable questions from teachers about reason for toilet request
		Feeling 'awkward' asking to go to the toilet
		Misuse of toilet breaks by peers' impact accessibility
		Needing to share menstrual status with staff to access toilets
	School environment restricts access to facilities	Long queues during breaktimes impact accessibility
		Restricted access to PE changing rooms with period products
	Restricted access to period products	No access to period products in main toilets (Key stage 3 and 4)
		Period products available in the PE changing room
		School provides helpful access to pads in the sixth form toilets (Key stage 5)
		Misuse of period products by peers restricts accessibility
		Inconsistent period products available in school
		Wish for preferences and choice in period product usage
Teacher support: Menstrual accommodations		Desire for coping strategy support from teachers
		Desire for opportunities to have a lesson 'time-out' when experiencing pain.
		Desire for teachers to provide additional support when experiencing menstrual difficulties in lessons.
		Wish for accommodations in PE lessons when experiencing menstrual symptoms.

4.4.1 Superordinate theme: Menstrual hygiene management.

This theme represents girls' perceptions and experiences of MHM in educational settings. It highlights multiple interconnected challenges faced by girls in accessing menstrual hygiene facilities when needed. Additionally, restricted availability of period products in school exacerbates challenges in managing menstrual hygiene effectively. The school environment, with its limitations on access to facilities and products, contributes to a sense of discomfort and inconvenience for participants menstruating at school.

Figure 10

Thematic map for theme 'Menstrual hygiene management'



4.4.1.1 Sub-theme: Teachers as gatekeepers to the toilets.

Participants felt they needed to disclose to teachers that they were menstruating to gain permission to use the toilet, with two participants reporting discomfort when disclosing their menstrual status to staff members.

P2: Some of the staff members, I think they're understanding. Like if you ask to go to the toilet, you have to have a pass to go to the toilet. But if you told them that it was because your period, they'd let you go.

P4: Stuff like when you're in lesson and you, you might want to go to the toilet and check things, but then you don't want to go because it's a bit awkward.

Participants expressed discomfort and hesitation in requesting toilet breaks due to uncomfortable questions from teachers about the reason for the request. There was a desire for understanding and leniency from teachers regarding toilet access during menstruation.

P4: Especially if you want to go to the toilet and you want to take your bag, then it's where are you going? Why are you taking that?

P3: [On how teachers could be more empathetic] Maybe not confronting them in front of the whole class and maybe allowing them to go to the toilet. Instead of like busting for it.

4.4.1.2 Sub-theme: School environment restricts access to facilities.

Participants reported the school environment presented barriers to accessing menstrual hygiene facilities, such as restricted access to PE changing rooms where period products are kept and long queues during break times, contributing to challenges in accessing toilets when needed to support MHM.

P3: With some teachers you get nice ones who let you go, but at break it's always crowded, cause everyone's busting at that point...It's just not worth going... I usually just kind of...leave it [the period product] in there [refrain from changing it].

P2: The PE room is locked unless you go in there to get changed so I could only access them if I was getting changed for PE.

4.4.1.3 Sub-theme: Restricted access to period products.

Participants reported that period products were not available in the main toilets at school, rather they were only available from the PE changing rooms.

P2: In the PE changing rooms there's stuff in there, but there wasn't any in the normal girls' toilet.

P1: But in the toilets that I have that I go to right now, there is no sanitary products which is kind of not good.

One participant (P4) whose experience differed attended sixth form and had access to separate facilities. However, they also noted a reduction in period product availability in the toilets. Participants attributed the access issues to concerns on the part of staff about potential misuse or vandalism by other students.

Participants expressed dissatisfaction with the range of period products available, and a desire for preferences and choice in these at school.

P4: I think in an ideal world you'd have sort of a nice little range in the toilets, you'd sort of like pick what you wanted and use what you need.

Interestingly, most participants expressed an aversion to tampon use, with one participant sharing that the limited availability of pads made engaging in menstrual hygiene practices inaccessible, highlighting the importance of providing a diverse range of menstrual products to accommodate individual preferences and needs.

P3: I think they only have tampons. They don't really have pads and I think it's....not as accessible as it could be to everyone else... and as I said, there's no pads, (so) there's no point in going anyways.

Participant discomfort in requesting toilet access can amplify concerns about leaking menstrual blood (Section 4.1.2), which in turn can impact on the ability to focus in the classroom and hinder engagement in learning (Section 4.2.2).

4.4.2 Superordinate theme: Teacher support: Menstrual accommodations.

Participants expressed a desire for teachers to respond to their menstrual needs by providing additional support and accommodations to help them cope with menstrual difficulties. This included coping strategies for managing menstrual symptoms, and additional academic support when menstrual needs are impacting on engagement in lessons (see

Section 4.2.2). Accommodations included reactive strategies that recognised when menstrual symptoms required a break in lesson participation.

P1: If we need a time out, maybe like outside the lesson 'cause, we can't really focus...because the cramps then we maybe could do that.

Chapter Five: Critical Review

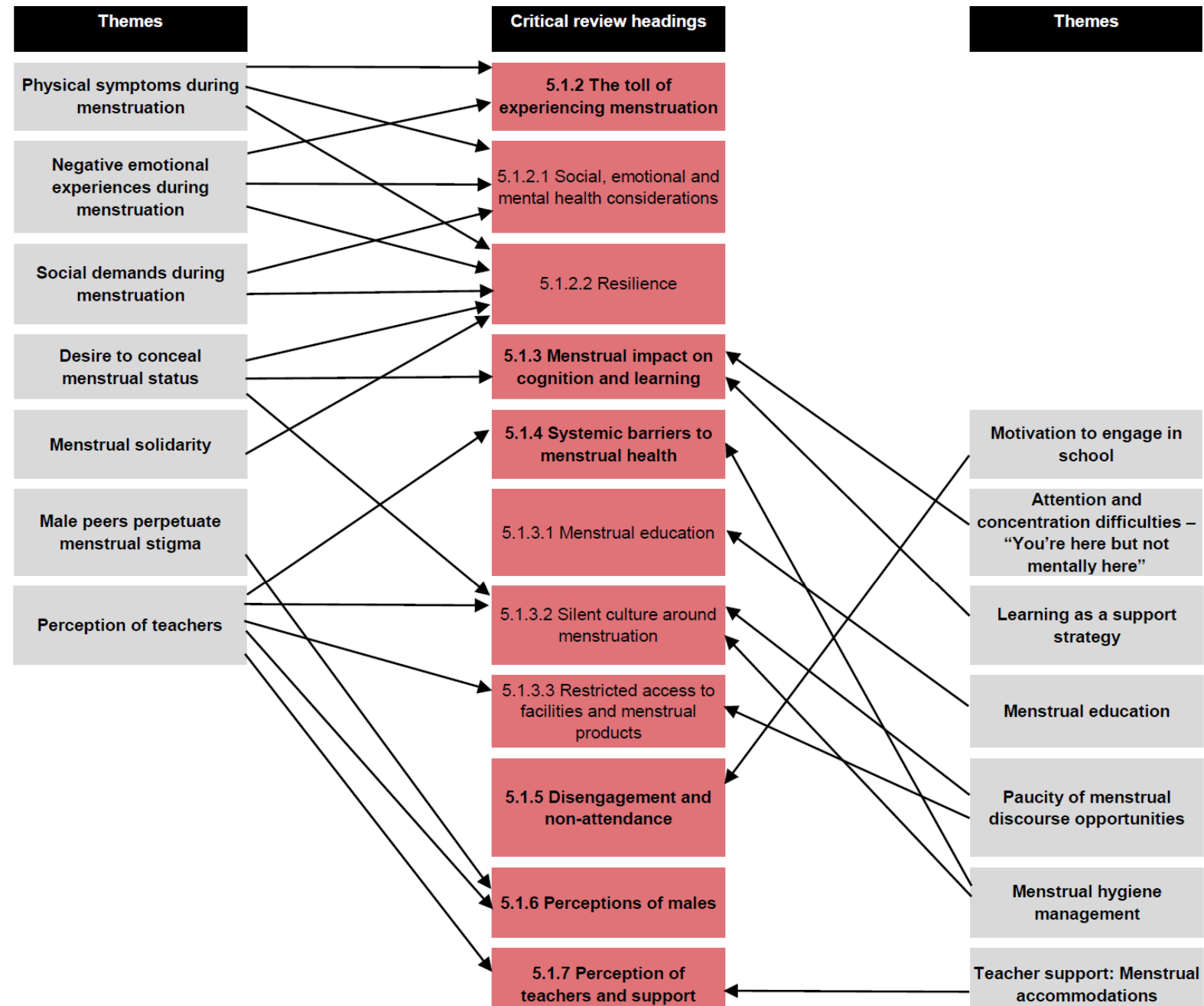
5. Chapter overview

In the previous chapter, findings have been reported. This chapter discusses research findings in relation to existing literature and theory, highlighting the contributions of this study. To ensure clarity and thoroughness, the themes presented in Chapter 4 have been carefully synthesised and organised under relevant headings within this chapter. This is due to themes being multifaceted and overlapping in nature. Figure 11 (thematic map) provides a visual representation of how these themes have been mapped onto the key headings in this chapter, discussing their relevance within the literature and the current social and political landscape. This thematic map also ensures that none of the themes generated from participant views have been overlooked to ensure the discussion remains true to their experiences.

Discussion of the research findings is followed by a critical reflection on the methodology employed and exploration of implications for practice, along with recommendations for future research.

Figure 11

Thematic map showing theme synthesis within the critical review



5.1 Key findings and contributions of the study

The current study set out to explore the perceptions of adolescent girls attending a secondary school within a low-socioeconomic area in relation to their experiences of:

- School experiences.
- Engagement in learning.
- Support and provision in relation to understanding their menstrual experiences.
- Support and provision in relation to how their menstrual needs are addressed.

The findings of this study provide insights into the multifaceted and overlapping experiences of menstruating participants within their educational setting, suggesting several critical themes. Themes indicate how participants experience their menstrual cycle and the impact on their daily educational lives and academic engagement. Due to the overlapping nature of themes (discussed in Section 5.2.3), overall key findings and contributions of the study are discussed, rather than being organised by individual research questions.

5.1.2 The toll of experiencing menstruation

Participants experienced pain and a range of negative emotions during menstruation (Sections 4.1.1 and 4.1.2) that significantly impacted their daily school functioning (Sections 5.1.3.2 and 5.1.5). The experience of physical symptoms during menstruation aligns with existing research, with the most common symptoms of dysmenorrhea reflecting that of wider international population samples (Parker et al., 2010).

Notably, no positive emotions associated with menstruation were reported here, as suggested by Barrington et al. (2021), who found that while positive experiences were present, they were rarely reported. Reporting of positive experiences are potentially more likely due to the author's large sample size (104 international studies). This suggests that the experience of menstruation is predominantly perceived negatively, potentially overshadowing positive aspects and broader attitudes. McHugh, (2020) argues that negative cultural views of

menstruation perpetuate shame and harm women's menstrual attitudes, advocating for research and activism to promote positive menstrual conversations towards building shame resistance. Mondragon and Txertudi, (2019) found that mixed-gender Spanish participants (ages 18-25) understood menstruation within social, ideological and emotional contexts rather than within its biological meaning. Authors reported that only a feminist conception of menstruation provided an empowered and emotionally positive representation of menstruation. Implications are discussed in Section 5.4.

Participant experiences of perceived social demands during menstruation and exacerbation of emotional distress are notable, as this contributes to our understanding of the experienced impact of menstruation on social dynamics. While previous research has emphasised the heightened risks of social paranoia, persecution, and low self-esteem during menstruation (Brock et al., 2016), participants highlight another aspect: lowered social tolerance, leading to potential ruptures in relationships. This insight into adolescent experiences is particularly noteworthy given the high level of social demands within school environments during this phase (Piera Pi-Sunyer et al., 2023).

5.1.2.1 Social, emotional and mental health considerations

The findings indicate heightened emotional arousal during menstruation at school, impacting on perceived school functioning. The fear and anxiety surrounding potential menstrual blood leaks was prominent in participants' school experiences, a concern widely recognised across various age groups and populations in existing research (Plan International UK, 2018; Secor-Turner et al., 2022). The suggestion of heightened emotional arousal is also consistent with international research by Munro et al. (2021) with similar experiences of emotional sensitivity during menstruation for Spanish university students. These insights suggest the experience of emotional challenges that could affect resilience in academic settings. Consequently, this raises concerns regarding the implementation of supportive measures in educational settings; to promote menstrual awareness, and to address the emotional needs of students, particularly during periods of heightened stress such as exams.

The experience of heightened negative emotions, pain, confusion, and menstrual stigma reported during menstruation is profoundly relevant to overall SEMH. Themes align with existing literature documenting the experiences of increased mood changes and anxiety during menstruation (Bruinvels et al., 2021). SEMH difficulties here were predominantly internalised, consistent with the pattern of internalised MH needs among older females (Birch & Gulliford, 2023). International research evidence further suggests that females are particularly vulnerable to the internalisation of emotional needs (Chaplin & Aldao, 2013), with the menstrual cycle suggested to exacerbate MH symptoms, such as anxiety (Green & Graham, 2022), especially during the luteal and menstruation phases (Handy et al., 2022).

Findings have relevance amid broader declining trends in female adolescent MH (Birch & Gulliford, 2023). Ahmed et al. (2024) suggest MH and emotional regulation difficulties worsen with age, citing negative self-schemas as contributing factors. Hormonal changes during the menstrual cycle have been identified as contributors to the activation of early maladaptive schemas (EMS), which are self-defeating thought patterns developed in childhood and adolescence and can significantly impact the development of MH difficulties (Ünsalver, 2017). In Lebanese female university students, EMS activation was linked to the menstrual cycle, peaking at the beginning of menstruation and decreasing by day 15 of their cycle (Sanayeh et al., 2023). Contributing factors included age, physical activity, monthly income, depression, anxiety, and stress. Findings here raise concerns that adolescent menstruators may experience heightened SEMH needs every month, related to a natural process that is poorly understood (Section 5.1.4) and pathologised (Section 5.1.5). In the broader MH literature, adolescent girls are positioned at the intersection of multiple risk factors that contribute to a compounded burden on their MH. Key concerns include:

- The risk of MH difficulties increasing with adolescents' age.
- The activation of EMS during menstruation heightening the likelihood of experiencing MH pressures.

- Girls facing menstrual stigma in schools and contending with hidden, silent menstrual pressures (Section 5.1.3.2), which raises the question of whether silent culture contributes to the internalisation of MH pressures, particularly through the embedding of pervasive self-defeating EMS.

Risks contributing to MH difficulties likely exacerbate existing vulnerabilities, such as those relating to socio-economic status. For example, the experience of period poverty is associated with increased MH and wellbeing difficulties (Rohatgi & Dash, 2023) (Section 2.6).

5.1.2.2 Resilience

Resilience theory in research seeks to understand how individuals achieve positive outcomes despite experiencing adversity (Zimmerman, 2013). Factors contributing to positive outcomes within the literature have been identified as ‘protective factors’ (Werner, 2000), which buffer or reduce the impact of risks associated with adversity, also known as ‘risk factors’ (Werner, 2000). Protective factors span various ecological systems, including individual (e.g. self-esteem) (Werner, 1993), familial and social support (e.g. supportive relationships) (Askeland et al., 2020), and societal (e.g. positive school experiences) (Ungar et al., 2014). Current resilience research represents a shift in focus, to highlight protective factors that foster resilience in individuals and communities (Gough & Gulliford, 2020).

Resilience theories as described offer a psychological framework to interpret findings and understand how menstrual experiences might present protective and risk factors that in turn affect emotional well-being, and educational engagement. Challenges in managing physical menstrual symptoms, heightened emotional states, and navigating perceived social demands and stigmatised environments present as potential risk factors within the school environment. For instance, P4 stated the explicit link that stressors are more challenging to manage during menstruation. However, amidst these challenges, all participants identified menstrual solidarity with peers to be a source of support, suggesting this is a key protective factor. Menstruation was positioned as a unifying experience, with participants reporting a

preference for peer support over adult support in managing menstrual challenges, which is consistent with adolescent psychosocial development, where peer influence is key (Steinberg, 2014). Moreover, positive peer relationships have been identified as an important factor in enhancing the MH of YP in schools (Hinze et al., 2024). This insight underpins the importance of fostering peer support networks as a key consideration for future menstrual health initiatives in schools, as well as considering the risk factors associated with menstrual health within the school environment. Implications for educational settings are discussed in Section 5.3.

5.1.3 Menstrual impact on cognition and learning

Participants noted menstrual cycle impacts on their capacity to concentrate and engage in learning activities at school, especially during menstruation. Various factors were reported to hinder their engagement in learning, with analysis generating three key areas encompassing physical, cognitive and emotional dimensions.

All participants reported experiencing pain from menstrual cramps, impacting their ability to engage in learning. Among Hispanic adolescents, dysmenorrhea is highly prevalent and has been associated with school absenteeism and limitations on social, academic, and sports activities (Banikarim et al., 2000). Munro et al. (2021), researching an international sample of university students, similarly found that dysmenorrhea affects concentration and engagement in learning regardless of country-income status. These authors suggest that dysmenorrhea might pose a greater barrier to academic performance than attendance. Supporting this finding, Sawyer et al. (2024) reported that menstrual pain was linked to a 16% decrease in the likelihood of achieving five standard passes among 2,698 adolescent girls. However, more significantly, heavy or prolonged bleeding was associated with lower school attendance (aligning with this study's findings) and academic attainment, including higher risks of missing school, a 48% increase in persistent absence, lower exam scores at age 16, and 27% lower odds of achieving five standard passes in GCSEs. Whilst further research is needed to understand this association and how to support YP (Section 5.4), these findings

highlight the profound impact menstrual pain and bleeding can have on adolescent educational engagement and achievement.

Factors impacting on lesson engagement were related to MHM, menstrual symptoms (such as pain), and conformity to perceived societal norms on concealing their menstrual status (Section 5.1.3.2), which has been coined in the literature as ‘self-policing’ (Jackson, 2019). This echoes prior research by Barrington et al. (2021) and Nicol, (2023), highlighting the mental burden associated with managing menstrual-related cognitive processes, including managing menstrual blood and tracking menstrual cycles.

Emotional factors that impacted participants engagement in learning tended to be rooted in menstrual taboos, such as the fear of potential menstrual leaks. Concerns illustrate how societal attitudes and cultural norms can contribute to emotional distress (Secor-Turner et al., 2022) and negatively impact on academic engagement. Thomas and Melendez-Torres, (2024 p.18) also noted that existing literature has reported a behavioural expectation felt by students to endure the *“dread, worry, and inconvenience experienced when managing menstruation at school”* without allowing difficulties to impact on their studies.

Whilst difficulties engaging in learning were reported here, learning was viewed as a valuable coping mechanism for managing menstrual discomfort, when lessons were enjoyable, or enabled independent task completion. This highlights the potential for positive educational experiences to support menstrual challenges.

As noted (Section 2.5.2), Ronca et al. (2024) suggest that in sports players (average age 28 years) visuospatial and anticipatory skills improved during menstruation, despite participants believing they performed at their worst. Performance fluctuated throughout the menstrual cycle, with poorer results in the luteal phase. Self-reported mood and physical symptoms were most negatively impacted during menstruation. These findings align with the current study’s themes of emotional and physical challenges during menstruation, which were linked by participants to impaired attention and concentration. However, Ronca et al. (2024)

challenge the belief that cognitive functions are impaired during menstruation, suggesting that emotional factors and self-perceptions, possibly influenced by stigmatised menstrual beliefs, may significantly impact cognitive performance, although this remains a tentative hypothesis.

International research has highlighted data patterns whereby girls from 9 to 18 years generally outperform boys in English language and literacy (Reilly et al., 2019b), while boys have tended to outperform girls in mathematics, science, and technology based on assessments administered at a mean age of 14 years (Reilly et al., 2019a). However, Voyer and Voyer, (2014) suggest that assessment methods might be a moderating factor in the gender-achievement gap, as girls tended to outperform boys in most subjects when teacher-assigned grades were considered (Pennington et al., 2018). Despite reported trends, gender achievement gaps have been reported to be highly complex and nuanced across subjects and may not necessarily align with similar differences in self-perceptions and attitudes (Pennington et al., 2021). Whilst menstrual experiences cannot be proposed as the primary influence on attainment gaps, current findings highlight the potential indirect and nuanced influences menstruation may have upon attainment.

The reported concentration and engagement difficulties raises consideration for participants' state of readiness to learn. Drawing from polyvagal theory (Porges, 2009), a YP's sympathetic nervous system is more likely to be activated if they are in a state of physical pain, heightened emotional dysregulation, or a sense of social threat, which participants reported resulted in cognitive processes associated with concealing menstrual status and managing symptoms discreetly. This activation impairs access to the social engagement system and higher order thinking, such as executive functioning processes required for engagement and learning.

Findings related to cognition and learning highlight the multifaceted impact of menstruation on academic engagement. Whilst menstruation is experienced differently by individuals, with varying degrees of symptoms and impacts on education, participant experiences point to teachers needing to make reasonable adaptations to their practice to

accommodate these challenges, to support universal access to education as described by Cologon and Lassig, (2019). This includes applying their principles of universal design for learning in areas of pupil engagement, particularly through minimising threats and distractions (e.g. stigmatised attitudes and processes) and providing opportunities for self-regulation to support students managing menstrual symptoms.

5.1.4 Systemic barriers to menstrual health

Menstruators' experiences here were constrained by numerous challenging factors within the school environment, including inadequate menstrual education, cultural taboos, limited access to basic menstrual supplies and facilities, restrictive school policies and discriminatory social norms. These factors jeopardise menstrual health by increasing the risk of unhygienic and unhealthy practices that impact on health (such as the participant reported prolonged use of period products to avoid changing them at school) (Jaafar et al., 2023). In addition, such barriers arguably perpetuate misconceptions and harmful attitudes, contributing to shaming and discrimination (Thomas & Melendez-Torres, 2024). The lack of trust felt by girls in school staff to support menstrual needs (Section 5.1.7), may exacerbate such challenges, and poses a potential risk factor to participants' psychological safety (Edmondson et al., 2016) and sense of belonging (St-Amand & Smith, 2017). Key systemic barriers generated from participants' data are discussed in turn, below.

5.1.3.1 Menstrual education

The exploration of menstrual education in this study highlights critical shortcomings in pedagogical approaches as experienced by participants. Biological teaching about the menstrual cycle within reproductive teaching is essential (Hennegan et al., 2021), with participants highlighting its benefits in developing menstrual awareness, and understanding reproductive processes. Participants explicitly reported helpful links to pregnancy guidance, with adolescent pregnancy recognised as *"a global public health problem"* (Diabelková et al., 2023 p.1). However, there was a perceived gap between academic information delivery and opportunities for practical, purposeful learning that addresses the real-life implications of

menstrual health with opportunities to develop personal relevance. Thomas and Melendez-Torres, (2024) suggested menstrual education has prioritised scientific content at the expense of broader health, social and emotional dimensions. By adopting a narrow focus on biology, education risks exacerbating a disconnect between YP and their bodily experiences, which may perpetuate stigmatised attitudes towards menstruator's bodies, such as conceptualising them as out-of-control (Olson et al., 2022).

Uncertainty about the concept of '*normal*' menstruation (P4, p. 83) was raised, reflecting previous research suggesting one in four secondary school girls were unsure whether their periods were typical (Randhawa et al., 2021b). This highlights the importance of educating students about typical and atypical menstrual characteristics, as such uncertainty can have implications for menstrual health, including early identification of gynaecological conditions, such as endometriosis (Randhawa et al., 2021b).

The sub-theme 'Independent education' contributes to the contemporary perspective of menstruation as described in Chapter 1, that moves focus towards the responsibility of individuals in managing their own menstrual health and wellbeing (Koskeniemi, 2023). However, the reliance on self-directed education and coping raises concerns about the perpetuation of misinformation and stigmatised views.

Despite the concerns about menstrual education that are raised in research, and national initiatives aiming to develop menstrual health in schools (DfE, 2021; DHSC, 2022) participants here felt menstrual education did not meet their needs. Providing holistic menstrual teaching has implications for supporting practical knowledge, such as hygiene practices which support YP to make informed decisions and ease discomfort associated with menstruation (Hennegan et al., 2021). Additionally, access to accurate information can challenge misconceptions and taboos surrounding menstrual health, further promoting overall well-being and informed decision-making (Hennegan et al., 2021). In the context of self-determination theory (Ryan & Deci, 1985), adolescence presents as a crucial period during which YP develop the skills to engage in volitional behaviour and develop the skills to make

autonomous decisions (Hui & Tsang, 2012). Autonomy is particularly important as it pertains to an individuals' sense of independence, choice, and control over their own bodies and lives. Regarding menstrual health, the United Nations Population Fund, (2024) argues that bodily autonomy is a human right, and the ability to care for your body during menstruation is an essential aspect of this autonomy. Shortcomings in menstrual education could have profound implications for YP's well-being and agency. By neglecting to address practical aspects such as hygiene practices and challenging misconceptions surrounding menstruation, educational settings risk perpetuating a cycle of ignorance and shame (Thomas & Melendez-Torres, 2024) that has the potential to undermine YP's autonomy and self-esteem.

In the broader political context, findings are significant for the ongoing review of the RSHE curriculum (DfE, 2024b). Public consultation offers a chance to include diverse perspectives of YP and prioritise menstrual health as a key part of RSHE. The proposed age limits on RSHE content (DfE, 2024a) are concerning, given that menstrual education has been experienced as inadequate within this study, and YP have expressed it is often received too late (Plan International UK, 2018). Delaying or removing important topics related to menstrual literacy such as sex education, puberty, and gender identity from the primary school curriculum poses a risk to adolescent menstrual health, especially for children who experience menarche in primary school.

5.1.3.2 Silent culture around menstruation

The theme 'Paucity of menstrual discourse opportunities' (Section 4.3.2) offers insights into a perceived culture of shame and stigma surrounding menstruation in the participating secondary school. Despite societal claims of progress towards greater acceptance of menstruation (Section 2.2), participants' perspectives indicate that open discussions about menstruation within the school environment, and beyond its biological aspects during lessons were stigmatised and contravene social norms. This stigma impacts participants' perceived ability to discuss menstruation with wider peers and school staff, which has implications for help-seeking behaviours. Plan International UK's (2018 p.25) assertion that "*the attitude of a*

school towards menstruation can hugely influence the attitude of the YP within that school” is relevant here. DHSC (2022) acknowledges the importance of open conversations in dismantling centuries-old cultures of shame and misinformation (Mayor Nuestra Señora del Rosario et al., 2012). However, the documented lack of confidence among teachers in addressing menstrual topics (Brown et al., 2022), may pose a potential barrier to fostering open discussions in schools. Brown et al. (2022) reported teacher avoidance in teaching about the menstrual cycle, an experience also observed in LMICs such as Indonesia (Utomo et al., 2020).

Within the theme ‘desire to conceal menstrual status’ (Section 4.1.4), participants detail the myriad of strategies employed to hide the visible signs of menstruation in school, including measures to minimise the risk of leaking menstrual blood, such as restricting movement. There was significant anxiety at the thought of menstrual status becoming known through menstrual leaking or the use of period products. Similarly to existing research, fear of menstrual blood leaking is widely identified as a significant worry across different age ranges and populations (Plan International UK, 2018; Secor-Turner et al., 2022). Findings here align with the historical construction of menstruation as shameful (Sangar & Howe, 2021), and taboos surrounding the visibility of menstrual blood (Munro et al., 2021). A recent SLR on menstruation experiences in school suggests these experiences are underpinned by the internalisation of patriarchal discourse on menstrual shame, hindering menstruation management (Thomas & Melendez-Torres, 2024). Participant responses here reflected the notion that menstruators anticipate negative reactions from others, which prompts them to modify their behaviour and engage in self-surveillance and discipline to conceal menstruation (Plan International UK, 2018). This reflects the compounded stigma experienced by adolescents in international studies (Secor-Turner et al., 2022). Evidence here illuminates the appraisal and complex decision-making involved in selecting and using products that effectively hide menstruation, with such decisions suggested to be held in priority ahead of personal preferences and needs (Barrington et al., 2021; Nicol, 2023). Self-monitoring efforts

present a potential risk factor to adolescents' SEMH, and subsequent engagement in school activities. By prioritising the concealment of menstruation, adolescents face heightened stress and distraction, ultimately impacting on their educational experience.

Themes of concealment therefore highlight the need for educational settings to interrogate and confront societal norms and structures that perpetuate menstrual taboo and hinder open discourse. Educational settings can challenge harmful, entrenched menstrual beliefs to promote menstrual health awareness within school culture. The hope is that by challenging stigma, we can work towards a more equitable and empowered future for menstruators.

5.1.3.3 Restricted access to facilities and menstrual products

The theme 'Menstrual hygiene management' highlights how restrictive school policies and practices hinder access to essential resources (toilets and menstrual products), ultimately affecting participant dignity within the school environment, a phenomenon widely identified in research (Thomas & Melendez-Torres, 2024). It also suggests a power imbalance between pupils and teachers, with literature hypothesising toilet access is restricted in favour of teacher requirements over child needs (Burton, 2013); which has implications for the development of autonomy within self-determination theory (Ryan & Deci, 1985). Participants felt uncomfortable asking teachers for access to facilities, which can increase concerns around leaking, and difficulties engaging in classroom learning (Plan International UK, 2018). The school's provision of period products was not experienced as accessible, conflicting with government guidance (DfE, 2023). This is concerning, particularly in relation to the low socio-economic participating school; raising concerns for the exacerbation of any existing disparities participants held in relation to MHM.

This study highlights the challenges posed by restricted access to essential menstrual health resources within a school in a low socio-economic area. Period poverty remains a pervasive issue with disproportionate effects on those from low socioeconomic or marginalised communities (Rossouw & Ross, 2021). This lack of access has far-reaching

implications, including the ability to access education (Period. The Menstrual Movement, 2021; Plan International UK, 2018) and higher risk of negative impacts on MH (Marí-Klose et al., 2023). The ongoing cost of living crisis has exacerbated period poverty, particularly among menstruators from low socio-economic backgrounds (Pycroft, 2023). Charities have reported alarming increases in period poverty, with Action Aid citing poll data showing a rise from 12% to 21%, with 28% of menstruators relying on the period products they have access to in school and work (Pycroft, 2023). Statistics highlight the critical role of educational settings in supporting menstrual health, particularly in disadvantaged areas (Olson, 2023). Adolescents from low socio-economic areas reportedly experience “*weakened*” forms of intrinsic academic motivation (Manganelli et al., 2021 p.1), exacerbating any existing difficulties experienced by disadvantaged adolescents. In the context of period poverty, the disempowering and restrictive school processes described by participants raise further concerns regarding potential impacts on adolescent psychological development, especially intrinsic motivation. These processes may risk pupils feeling demotivated and disengaged from learning, their ability to manage their menstrual needs, and the wider school environment.

The absence of safe spaces where participants could talk about menstrual difficulties is concerning given evidence highlighting the importance of providing ‘safe spaces’ outside of lessons that foster open discussions about menstrual experiences and concerns (Randhawa et al., 2021).

Understanding the social context around access to facilities for menstrual hygiene is crucial to safety and inclusivity. Research highlights existing gender disparities in unsupervised access to public spaces with girls typically afforded fewer opportunities than boys (Jack, 2010). The concept of ‘place attachments’ highlights the significance of emotional bonding between individuals and environments, which can be integral to promoting psychological and social wellbeing (Scannell & Gifford, 2010). Menstrual health necessitates that menstruators can “*care for their bodies during menstruation such that their preferences, hygiene, comfort, privacy, and safety are supported*” (Hennegan et al., 2021, p. 32). The

experience of comfort and safety suggests the importance of individuals developing place-attachment to hygiene facilities, such as toilets. This aligns with Ariccio et al., (2021) hypothesis that the ability of places to satisfy psychological needs is essential for the creation of bonds between individuals and those places, a concept that has also been linked by the authors to self-determination theory. Crucial components for developing place attachment, such as freedom from surveillance and capacity to exercise meaningful choice (Lengweiler, 2023), were notably absent among participant experiences which is significant for the perception of safe facilities to manage menstrual needs. This suggests that inadequate environments hinder both menstrual practices and overall wellbeing.

As stated in Chapter 1, access to hygiene facilities is a fundamental human right, crucial for engaging in menstrual health practices. However, the inability to access essential products and adequate toilet facilities not only poses practical challenges but also perpetuates the gendered stigma surrounding menstruation, deeply rooted in patriarchal norms (Olson et al., 2022). These norms contribute to the marginalisation of girls' experiences (Olson et al., 2022) and reinforce oppressive power structures within educational settings that significantly impact participants perceived ability to effectively manage their menstrual hygiene. For example, participants reported experiencing controlled access to physical spaces, such as toilets, by teachers. Addressing these issues is crucial for promoting menstrual health practices and challenging gendered stigma within educational settings.

5.1.5 Disengagement and non-attendance

The theme 'Motivation to engage in school' highlights menstruation significantly impacted participants' motivation to attend school and engage in academic activities, with physical discomfort, emotional distress, low motivation, and apprehension associated with perceived unsupportive school environments cited as major barriers. Participants shared instances of school non-attendance, difficulty getting ready for school and educational engagement. Findings reflect previous research on teacher perspectives of menstrual impact in schools, with YP observed by staff to have reduced engagement and effort in class during

menstruation (Brown et al., 2022). Similarly, Jackson, (2019) and a recent national survey (Public Health Service, 2023) indicated a correlation between periods and school attendance, with rising school absence among adolescent girls during menstruation. Thomas & Melendez-Torres, (2024) identified themes in existing research within HIC in line with this finding that self-exclusion from school and physical activity was a universal experience across four countries. In LMICs, studies have identified that menstruation is a key issue in negatively impacting school attendance, for example in Uganda (Tanton et al., 2021) and Lao (Sychareun et al., 2020). School non-attendance poses significant risks to learning development (Gulliford & Miller, 2023) and could contribute to an anxiety avoidance cycle that reinforces avoidance behaviours that perpetuate associated anxiety (Blöte et al., 2015), potentially leading to further school non-attendance risks and withdrawal during menstruation. Typically, when YP do not attend school due to menstrual needs this is marked down as absence due to illness. Such processes contribute to the pathologisation of the menstrual experience (King, 2020) and further stigmatise the experience of menstrual symptoms, that for many YP are a common, typical symptom during menstruation (NHS, 2021, 2022). The implication of these findings align with Thomas and Melendez-Torres, (2024) who argue that schools failing to support menstruation management risk placing menstruators at an academic disadvantage. This therefore requires schools to support students who are absent or disengaged in learning due to menstrual difficulties to ensure menstrual health needs do not become barriers to educational experience and engagement. Doing so is particularly crucial for schools in low-socioeconomic areas, where individuals who menstruate are more likely to experience period poverty, which can constrain lives by limiting social participation and school attendance (Briggs, 2021). Given the link between education and women's empowerment (Marmot, 2015), those who are absent from school due to menstrual management issues receive less education and contraception information, which can impact future economic prospects. For those already vulnerable to social disadvantages due to economic status, period poverty exacerbates the risk towards gender inequality (Marmot, 2015).

The impact of systemic barriers on YP's motivation and engagement within education can be understood through the lens of self-determination theory (Deci & Ryan, 2008), which maps autonomy, competence and relatedness as key components in achieving motivation. Considering the current findings, it appears that participants are affected in the following ways: First, in regard to autonomy, participants experience low levels of agency, choice, and control over how they manage their menstrual symptoms. In terms of competence, participants may struggle to optimise their menstrual health within the school environment that perpetuates a silent culture around menstruation, with further adverse impacts upon academic achievements. Finally, in relation to relatedness, whilst participants shared a sense of connection with others who menstruate, their overall feelings of social connectedness and support whilst menstruating in school were diminished. School belonging has been identified as a key factor in adolescent development, correlating with academic and wellbeing outcomes (Pittman & Richmond, 2007).

Drawing on a feminist approach (Wilson, 2023), the current findings call for consideration for creating environments that prioritise the voices and experiences of menstruators. This includes acknowledging, analysing, and challenging gendered expectations and power dynamics, working towards dismantling oppressive structures and fostering inclusive environments where all students can access the support and resources required to support menstrual health. The role of senior leadership within educational settings will likely be crucial in the decision-making processes (Aarons et al., 2014) and school culture (Wilson Heenan et al., 2023) needed to support actions as described above.

5.1.6 Perceptions of males

Participants constructed male peers and teachers as lacking menstrual understanding and empathy for menstrual experiences, creating barriers to open discussions, and accessing support. Whilst there was a general distrust in teachers' ability to support menstrual needs (Section 5.1.7), male teachers were perceived as less supportive than female teachers. Findings resonate with existing literature, where menstruators reported feeling embarrassed

when male educators were aware of their menstruation (Prince & Annison, 2023). Male educators themselves have acknowledged a lack of menstrual understanding (Prince & Annison, 2023). Research on the perceptions of 23 male undergraduate students (aged 18-24) in the USA reported that understanding of menstruation evolved with age, initially being viewed as 'gross' and later becoming less stigmatised through intimate relationships with menstruators (Allen et al., 2011). For male teachers to effectively support students, findings indicate a need for them to develop awareness of their own beliefs and attitudes towards menstruation. They should be mindful of how menstruators may perceive male responses to their menstrual experiences and of potential apprehension when engaging with male staff. This awareness is essential for male teachers to engage in proactive efforts to dismantle stereotypes related to menstrual awareness and support, thereby promoting the menstrual health of YP.

The theme 'Male peers perpetuate menstrual stigma' highlighted the experience of menstrual ridicule, consistent with existing literature on the experience of teasing and embarrassment from boys about periods within educational environments (Randhawa et al., 2021). Teasing reinforces the narrative as highlighted by Secor-Turner et al. (2022) that menstruation should be kept secret and not discussed with boys in the class. Further, Thomas & Melendez-Torres, (2024, p. 12) has suggested that a key theme in the school experiences of menstruators is that *"boys perpetuate the notion of female inferiority by using menstruation as a tool for ridicule, humiliation, and oppression"*. Findings, within the context of previous research emphasise the importance of menstrual education for male peers to promote understanding and support; to develop educational environments whereby menstruation can be discussed openly without fear of stigma or ridicule.

5.1.7 Perception of teachers and support

The theme 'Distrust in teachers to support menstrual needs' highlights the lack of confidence participants had in teachers' ability to support their menstrual needs, which tended to be rooted in previous experiences of dismissive interactions in response to their menstrual

discomfort that likely contribute to the perpetuation of menstrual stigma. Such interactions are consistent with the notion that students should endure menstrual symptoms without letting them impact on their engagement in learning (Li et al., 2020). The expectation to participate in education despite menstrual discomfort is further reported in research through the fear of experiencing sanctions (Secor-Turner et al., 2022). An overall discomfort and reluctance to discuss menstruation with teachers is widely identified in research (Randhawa et al., 2021); with adolescent girls preferring to talk to health care professionals, friends, and parents over teachers. Despite feeling uncomfortable interacting with teachers, findings report participants' collective wish for teachers to respond to their menstrual experiences with more empathy and active engagement in menstrual support. While existing literature emphasises the need for comprehensive menstrual education (Section 4.3.1), within this study participants highlighted the importance of immediate teacher response and tailored support to address menstrual difficulties 'in the moment'. This approach emphasises the integration of menstrual health considerations into daily classroom dynamics, advocating for proactive measures to support students' well-being and academic engagement during menstruation.

Overall, findings have implications for fostering supportive relationships and environments with teachers who have menstrual awareness (Babbar et al., 2022), which are positioned as potentially critical for optimal menstrual health. Concerns can be raised about the potential impact on pupils' menstrual health where they perceive teachers as unsupportive.

5.2 Methodological issues and limitations of the research

While Section 3.9.3 provides an overview of the contributions and potential limitations of the current study based on Yardley's, (2000) criteria evaluating research quality, the following section discusses key methodological issues and limitations relating to this study's validity and trustworthiness.

5.2.1 Participant sample

This study aimed to explore the experiences and perceptions of adolescent girls to identify shared themes across their data set (Braun & Clarke, 2021). However, the study had

a small sample size of four participants, all from the same secondary school, which, despite being consonant with some principles in qualitative research, raises limitations and considerations regarding the impact this has on generalisability of conclusions and limits the transferability of findings (Denzin & Lincoln, 2017). Experiences of a diverse population were not captured here (see Section 5.2.2 below). Consequently, this study refrains from making claims that findings are representative of the adolescent population, consistent with the principles of qualitative research methodology (Leung, 2015). However, by providing a detailed account of the participating school, and participant characteristics (with regard for anonymity), the interpretive analysis has drawn links between the participants' experiences and existing literature. The inability to recruit additional educational settings, as discussed in Section 5.2.2 below, presents as a limitation. Including multiple educational settings could have potentially facilitated the generation of shared themes across different settings, enabling comparisons between the perceptions of YP to have been made. As it stands, participant menstrual experiences at school are likely influenced by their educational environment. As all participants had the same school environment, the investigation of perspectives across settings would have provided a more diverse understanding of menstrual experiences across educational contexts.

Participants volunteered to participate in the study, suggesting that those who were more confident to share their views might have been more likely to take part (Louis et al., 2018). Additionally, since YP under the age of 18 required parental consent to participate, this requirement appeared to restrict participation, given the high level of interest expressed by girls during the initial stages of recruitment (see further recruitment considerations below in Section 5.2.2).

5.2.2 Cross cultural considerations

Despite some diversity in participant characteristics, such as age, the study lacks representation of sufficient diversity to draw conclusions that are generalisable, within the boundaries of qualitative methods, to all menstruators. The majority of the participant sample

were white British, with one British Indian participant. As previously noted, the experience of menstruation is intertwined with a variety of cultural factors that shape attitudes, beliefs, practices, and taboos (Jackson & Falmagne, 2013). Many key factors within the literature were not discussed by participants in this study, including religion (Maharaj & Winkler, 2020), affordability of period products (Briggs, 2021), family support and community (Betsu et al., 2023) and media and representation (Johnston-Robledo & Chrisler, 2011).

Due to the low diversity within the participant sample, I have a restricted data set which does not capture the experiences of diverse communities or cultures within educational settings. One participant was British Asian but there was no information on identity, culture or religion sought. This raises important considerations for communities that within research have been described as underrepresented, including individuals with disabilities (Phillips-Howard, 2022), individuals from LMICs (Hennegan et al., 2019), YP classed as migrants and refugees (Metusela et al., 2017) and individuals from religious communities whereby menstruation may be framed as a time of impurity, such as Judaism and Hinduism (Cohen, 2020). It is therefore recognised that findings may not capture the range of menstrual experiences in education and may hold low transferability through this. Further extension research involving different communities is therefore indicated (further discussed in Section 5.4).

5.2.2 Reflection on recruitment difficulties

A significant barrier encountered was the recruitment of participants. Factors contributing to recruitment difficulties were reflected on throughout the study. Key difficulties are discussed below. Implications for future research are discussed in Section 5.4.

Recruitment of schools

The initial recruitment of schools was challenging due to the unresponsive nature of educational settings who were approached. Schools may have felt overwhelmed by the tasks required to support the study which included providing a key point of contact and coordinating physical logistics for my access to students and parents. Common to much educational

research (Rhodes & Houghton-Hill, 2000; Saeed & Akhtar, 2017), this was likely perceived as a burden within the context of existing national recruitment difficulties, staff shortages and pressures faced by schools (National Education Union, 2024), potentially further complicating recruitment efforts.

Recruitment of adolescent girls

Recruiting adolescent girls also posed challenges, evident in the significant disparity between the number of girls registering their interest in the study following assembly presentations and the actual number of parental consent forms received. Obtaining parental consent to engage with participants was particularly difficult, highlighting the parental role as gatekeeper to YP's voices. School staff indicated their experiences of difficulties with parental engagement in school-initiated communication. Research indicates that socioeconomic status can play a significant role in teacher-parent interactions, with lower socio-economic status impacting on parental engagement (Ankrum, 2016).

Gatekeepers to YP's voices

Recruitment challenges therefore primarily stemmed from educational staff and parent factors rather than YP themselves, thus impacting opportunities for YP to voice their experiences. Possible parental discomfort may be rooted in historical menstrual taboos, which may have contributed to recruitment challenges. For instance, one parent expressed concerns about her daughter's participation, citing worries about potential emotional distress arising from menstrual discussions. Conversely, conversations with many consenting parents prompted a willingness to share their own menstrual experiences, suggesting parental beliefs and experiences may have impacted adolescent girls' access to the research opportunity to discuss their menstrual cycle. This notion is echoed within existing literature, which suggests that mother's responses to their daughters' menarche, particularly regarding menstrual taboos, shape children's access to menstrual discussions (Bennett & Harden, 2014), emphasising the gatekeeping role parents hold.

During school recruitment, there was notable hesitancy from two male key contacts who raised concerns about safeguarding issues and the appropriateness and impact of menstrual dialogues with YP. Neither educational setting engaged in the study. These inquiries echo male discomfort and lack of understanding as discussed in Section 5.1.6, and further suggest the pervasive sense of menstrual taboo, influencing school engagement with this topic. Such phenomena echo the broader issue of gender bias in research, whereby men's needs are often favoured due to dominance of male perspectives in various fields (Perez, 2019).

Staff in the participating school were apprehensive about allowing Year 11 and sixth form students to take part in the study during the Spring term, as it coincided with preparation for assessments. This exemplifies how institutional concerns could further silence girls' voices on this important issue, holding the potential to perpetuate structural and systemic oppression.

The reluctance of adults to support engagement in discussions about menstruation perpetuates a sense of menstrual taboo, contributing to the broader systemic oppression of girls' voices. Positioning adults as gatekeepers highlights how this stigma might further silence adolescent girls' voices. In seeking to elevate the voices of the marginalised, I experienced a tension between engaging in the gate-keeping processes necessary for ethical compliance versus reflecting on how girls' voices may be 'oppressed' through these processes.

5.2.3 Reflexive thematic analysis

Selecting RTA was judged an appropriate approach for this study as it aligned with the research questions that sought to explore adolescent girls' perceptions of their menstrual experiences in education. Adhering to the systematic framework proposed by Braun and Clarke, (2021) supported methodological rigor and the quality of data interpretation throughout the study (see Section 3.9, Table 4 for breakdown of activities).

RTA enabled the generation of patterns across participants lived experiences, views, and menstrual practices across the data set (Braun & Clarke, 2021). Due to the small number

of participants, I judged all their voices were important, especially within the historical context of this being an under-researched area with unheard voices. Therefore, given the small-scale study a deep RTA was conducted, enabling me to drill down and elevate YP's voices through patterns of experience, rather than treat RTA as an aggregate process. Analysis of this kind facilitated a deep understanding of adolescent girls' perceptions of their menstrual experiences in education.

The research methodology adopted an inductive and deductive approach, leading to the generation of themes that are strongly grounded in the dataset (Nowell et al., 2017), which supports my aim to elevate adolescent girls' voices and provide the opportunity for new insights from their experiences. A deductive approach may have supported a more detailed analysis of the data (Fife & Gossner, 2024), however this moves away from the purposes of the study to elevate YP's voices and would likely result in a less rich description and run the risk of not capturing nuances and details within the data.

Coding

A largely semantic analysis approach was used, resulting in a close link between participant statements and generated codes, potentially reducing reflexivity within analysis, but grounding the study in participants' physical realities and amplifying their voices. It aligns with CR, validating the 'real' impact of the menstrual cycle while recognising subjective experiences. Applied psychology aided my understanding of the data through reflexive considerations and discussions, supporting coding. For example, sub-themes relating to attention and concentration difficulties (Section 4.2.2) were informed by cognitive functioning theories (as described in Section 5.1.3). Overlapping codes were generated across research questions, as many issues, such as worry about leaking blood related to different contexts, such as emotional state and cognition. Overlapping codes likely resulted from the small sample size (Braun & Clarke, 2021), and participants providing a limited range of data due to shared experiences and priorities, such as managing menstrual hygiene in school.

5.2.4 Alternative methodological approaches

Case study design

Given that all participants were from the same school, a case study approach may have been possible. Case study methodology involves the in-depth investigation of a phenomenon within a specific context (Priya, 2021). While recognising the significance of the environment surrounding YP in comprehending their experiences, this study focuses on qualitatively exploring adolescent girls' shared perceptions and experiences. The case study approach would have also raised issues such as available resources (e.g. time limitations), and ethical considerations (e.g. a more intrusive approach).

Feminist epistemology

A feminist epistemology may have been appropriate for this study, specifically feminist standpoint theory (FST) (Harding, 2004). FST posits that all knowledge is socially situated and inextricable from social order, drawing from Marxist insights on class oppression (Fricker, 1999). FST asserts that marginalised groups have unique access to knowledge shaped by their social positions, suggesting research on power relations should begin with the lives of marginalised people (Cohen et al., 2022). Emphasising 'strong objectivity' (Harding, 2019), FST contrasts with value-neutral research assumptions (Haraway, 2016) by prioritising reflexivity and positionality to account for researcher bias.

A key strength of FST is its recognition of the epistemic privilege of socially situated perspectives, particularly those of systemically oppressed groups who can offer deeper societal insights (Anderson, 2020). Anderson, (2020) highlights the importance of recognising intersecting marginalised identities, such as those of females from low-socioeconomic backgrounds within this study. Whilst the current study incorporates many feminist approaches (Section 3.9.1), applying an FST epistemology would influence the research questions and methodologies chosen. The current study aimed to elevate the voices of adolescent girls and understand their experiences, however FST would prompt a deeper analysis of systemic dynamics affecting these experiences.

Although semantic coding was used (Section 5.2.3), and systemic dynamics are reflected on in the discussion, FST would require a more thorough examination of how power relationships shape experiences, potentially resulting in predominantly latent coding. Research questions would therefore aim to understand patterns of experience within larger societal and institutional systems of power (Brooks, 2007). Therefore, the use of IPA, guided by FST as demonstrated by Cohen et al. (2022), might have been more appropriate if an FST stance was taken. Reflections for further research are discussed in Section 5.4.

5.2.5 *Menstruation versus menstrual cycle*

Despite discussing the definition of the menstrual cycle at the beginning of interviews, participants predominantly centred their discussions on the menstruation phase. While this focus reflects the significance of this phase for participants, it could also indicate a lack of shared understanding and terminology. Existing research on the menstrual cycle varies in its approach, with some studies examining overall experiences while others focus on specific phases with varying terminology (Chodankar et al., 2022). The absence of shared terminology also poses a barrier to open menstrual discourse, risking disempowering YP to engage in discussions. Such challenges are likely further compounded by stigmatised beliefs and cultural taboos surrounding menstruation. Future research should seek to ensure terminology is clearly defined and in line with current definitions, for example the newly proposed definition of menstrual health (Hennegan et al., 2021).

5.3 Implications of the research

This study has been conducted at what feels like a pivotal period of transformation in menstruators' health, with the release of new women's health priorities, including targeting "*period problems*" (DHSC et al., 2024, p. 1) and the governmental review of the RSHE curriculum in schools (DfE, 2024b). A key implication of this research spanning all areas of practice is the necessity of placing YP's voices at the forefront of research and policy development. This should not be a tokenistic gesture, but rather a meaningful, ongoing, and

collaborative process involving participatory approaches, and collaboration with education staff and policy makers, as key stakeholders.

5.3.1 Implications for educational psychologists

EPs possess a diverse range of skills and the ability to work within multiple systems (Fox, 2009), allowing them to advocate for menstrual health and raise awareness through various modes of working. Findings raise implications for EPs' knowledge base, particularly in considering the risks to MH faced by adolescent girls', as discussed in Section 5.1.2. Analysis indicates that girls may be dealing with hidden, silent pressures related to menstruation. Recognising these pressures underpins the importance of EP support. Key areas for providing this support are considered below:

Systemic support

- **Training for school staff** – Brown et al. (2022) has highlighted teacher discomfort and desire for further training to understand menstruation and how to support students. This study highlights the need for this. EPs can advocate for and provide training that includes psychoeducation on adolescent development, menstrual health and relational practices that support teachers in their interactions with students that advocate for menstrual awareness and support SEMH needs. Training can aim to help staff better understand and address menstrual stigma and its impact on students. Practical examples for how this could be incorporated into EP practice include:
 - EPs can provide training for school staff which can be integrated into broader psychoeducation on adolescent development or offered as a standalone training session. Training could include:
 - Providing information on the potential impact of the menstrual cycle on areas of physical, social, emotional and cognitive functioning during adolescence.

- Develop an understanding of menstrual stigma and taboos and their potential effects on school experience and engagement.
 - Provide opportunities for school staff to critically examine their own beliefs, assumptions and cultural influences related to menstruation to aid a deeper understanding of their own biases and contribute to the development of understanding diverse cultural perspectives.
 - Explore supportive strategies and practices that support menstrual health and promote universal access to education. Approaches could include use of inclusive language, relational practices, and environmental support systems that develop YP's autonomy, competence and relatedness.
 - Menstrual training opportunities could be integrated into broader psychoeducation on adolescent development or offered as a standalone training session.
- Provide training on relational practices to support young people's SEMH, of which menstrual health is a part of. This might include emotion coaching training, whereby an example is provided to illustrate how to respond to a YP that is having difficulty managing their menstrual symptoms.
 - Teachers could be trained in practical ways on how to co-construct future support systems with young people to support their menstrual health needs and autonomy. For example, discussing co-regulation plans that have a psychoeducation element e.g. linking thoughts, feelings and behaviours, understanding the escalation curve and opportunity to reflect on key triggers and difficult periods during the month. Supportive mechanisms may include emotional regulation techniques, exit plans from the classroom and ways to receive support from relevant key adults.

- **Supervision for school staff** – This study has suggested teachers are required to provide increased menstrual support. In light of research that has indicated educators do not feel confident supporting YP in this area (Brown et al., 2022; Prince & Annison, 2023), teachers will likely experience challenges when discussing social and emotional aspects of menstruation, especially in cross-cultural contexts that require broad menstrual awareness and sensitive discussion. EPs can offer staff supervision (Beech et al., 2023), particularly in areas such as staff reflexivity, emotional containment and collaborative problem-solving. Practical examples for how this could be incorporated into EP practice include:
 - EPs could facilitate supervision sessions for teachers, offering a safe space for them to discuss any challenges they face when supporting students with menstrual health education and processes. These sessions could focus on helping staff to reflect on their own attitudes and biases, beliefs and cultural influences, increasing their confidence in addressing menstrual health. Such supervision sessions may be supportive whilst teachers are delivering menstrual education, or for key adults who are providing targeted support for individual or groups of young people experiencing menstrual difficulties.
 - EPs could help to establish peer support groups within schools, where teachers can reflect and support each other, and share experiences and strategies for fostering students' menstrual health. Establishing these groups after schools have received training and guidance on menstrual health would be particularly beneficial, as it would help to promote effective implementation and sustain ongoing support.
 - EPs can facilitate collaborative problem-solving supervision sessions where school staff can discuss any concerns they have encountered related to menstrual health, such as specific student concerns, challenges (e.g.

managing menstrual conversations), or how to change processes that contribute to systemic barriers to menstrual health (e.g. behavioural policy restrictions). These sessions provide an opportunity for teachers to collectively develop solutions, with support from EPs. Supportive frameworks for these discussions might include soft systems methodology (Checkland & Poulter, 2010), solution circles (Brown & Henderson, 2012), planning for alternative tomorrows with hope (PATH) (Pearpoint et al., 1993) and making an action plan (MAP) frameworks (Vandercook et al., 1989). Involving a diverse group of stakeholders, such as senior leadership, pastoral staff, teaching staff, and where appropriate, young people themselves would support problem-solving and enhance the effectiveness of the solutions developed.

- **Audits and guidance** – EPs can highlight the importance of school culture in perpetuating or challenging menstrual stigma. With skills in developing audit tools, and in organisational change, they can support schools to evaluate and develop their cultural and policy approaches to menstrual health. Considerations might include supportive questioning to dismantle potentially oppressive structural processes, the nature of menstrual discourses, and policies related to menstrual health. Practical examples for how this could be incorporated into EP practice include:
 - EPs can seek to initiate conversations with schools about menstrual health and school culture as a first step to raising awareness and destigmatising this issue. For example, EPs could raise menstrual health support systems and possible barriers during termly planning meetings or provide a short staff meeting input to raise awareness and initiate conversations.
 - Developing and administering school-wide audits: EPs could create tailored audit tools to assess the current school culture, policies, and practices

surrounding menstrual health. This might involve surveys or focus groups with students, staff, and parents to gauge perceptions of menstrual stigma, availability of menstrual products, and the adequacy of facilities. Alternatively, EPs can share current guidance and monitoring materials with schools that offer useful questions that could assist in the systemic auditing of school support for MHM (Appendix 12), with follow-up consultation. Auditing questions (such as those in Appendix 12) could serve as a starting point for schools and EPs to facilitate initial conversations on the topic of menstrual health.

- Policy review, and development: EPs could collaborate with school leadership teams to review and update school policies related to menstrual health, for example whole-school mental health initiatives, behaviour policies, and attendance policies. This could involve providing explicit information on how menstrual needs will be supported inside and outside of the classroom, ensuring access to free menstrual products, creating clear protocols for students who need to leave the classroom for menstrual-related reasons, and establishing private, accessible spaces for managing menstrual health needs. It will be important to support schools in considering how their practices support menstrual health and universal access to education.
- Supporting menstrual health education: EPs, as part of a multi-disciplinary team of education and health professionals could support the development of comprehensive menstrual health education into the curriculum. EPs can provide unique support, such as evidence-based learning approaches, how to promote psychologically safe environments, and provide opportunities for discussions about the emotional and social aspects of menstruation, challenge myths, and normalise menstrual conversations.

- Ongoing monitoring and feedback: After initial audits and interventions, EPs could support establishing mechanisms for ongoing monitoring and feedback, ensuring that changes in school culture and policies are effective and sustainable. This might include follow-up questionnaires, focus groups, or one-on-one interviews with students and staff.
- **EP practice and reflections** – As the impact of menstrual experience is an evolving area of research, EP practice would benefit from the ongoing sharing of research and practical insights, but also opportunities to discuss and engage in reflexive conversations that allow for deep-reflection on EPs own attitudes, beliefs and experiences. The EP community, in collaboration with multidisciplinary professionals, such as GPs, could also develop practice guidance in this area. Guidance could include supportive questions for consultation, data-gathering techniques, and problem-solving strategies that consider the health aspects of menstruators and their impact on education. Practical examples for how this could be incorporated into EP practice include:
 - EP communities, from peer supervision to service-wide discussions, can play a crucial role in initiating conversations about this topic. These discussions can explore the personal (if feeling psychological safe to do so), professional, and organisational implications of menstrual health. Such conversations are well-suited for supervision sessions and dedicated working groups. Discussions have implications for how EPs support those they work with, but also for their own menstrual health that contributes to The British Psychological Society (2017) guidelines for practice on professionals looking after their own wellbeing.

- Sharing resources: Teams can share relevant resources during meetings or on shared platforms to ensure that knowledge and best practices are accessible and applied across the service.

Casework

- **Promote awareness and break down stigma** – Provide information and support that raises awareness about menstrual health and actively works to break down any stigma associated with it. These activities support anti-oppressive practices and encourage supporting the school adoption of such approaches, as recommended by Legate (2023). This could involve creating supportive environments where YP feel comfortable discussing menstrual concerns, and during consultations with schools and families. Practical examples for how this could be incorporated into EP practice include:
 - Identify and sensitively challenge potentially harmful attitudes towards menstruation, such as the belief that a YP should endure difficult menstrual symptoms without support or accommodations. Additionally, challenge processes that reinforce menstrual stigma, such as teachers using public questioning about toilet requests or restricted access to toilets during lessons.
 - Consider menstrual health as a factor to explore as part of problem-solving frameworks during discussions with YP, school staff and parents (see consultation and formulation implication below).
 - Use interpersonal skills and anti-oppressive practices (e.g., addressing power imbalances) to create psychologically safe spaces where menstrual health can be openly discussed and considered where appropriate.
 - Approach discussions about menstrual health with cultural sensitivity, using culturally responsive reflective frameworks to guide practice. This ensures that conversations about menstrual health are respectful, inclusive, and considered in relation to the cultural contexts of stakeholders.

- **Advocate for menstruators' views** – EPs can support individuals to explore and share their views on their menstrual experiences, and advocate for these within collaborative problem-solving and action planning processes. Practical examples for how this could be incorporated into EP practice include:
 - Parental awareness: EPs can inform parents about the inclusion of menstrual-related questions as part of the information-gathering process, whether through pre-questionnaires or during consent processes. In doing so, this can support informed consent for EP involvement, and EPs can gauge an initial understanding of family attitudes and beliefs that will inform EP activities and support potential future menstrual-related discussions during involvement.
 - When initiating discussions about menstruation, EPs can use open questions to acknowledge and explore the unique nature of menstrual experiences. These conversations can be supported by using visual aids, such as an emotions wheel. Example questions include:
 - “I’d like to ask you some questions about your menstrual cycle – would that be OK?”
 - “Menstruation is a natural part of growing up, where the body goes through changes, which can include having a period where the lining of the uterus comes away and causes bleeding from the vagina. Since everyone experiences it differently, I’d like to find out how it might affect you.”
 - “What does menstruation mean to you?”
 - “What does having a period feel like for you?”
 - “What’s it like having a period at school?”
 - “Does it affect your daily activities at school?”
 - “Do you feel different at different times in your cycle?”

- Exploring menstrual experiences: EPs can use personal-construct psychology techniques to explore a young person's views on experiencing and managing their menstrual cycle in school. For example, use of scaling, such as 'on a scale from 0 (things are really hard) to 10 (things are going great), where do you place yourself when you are on your period?' Follow-up questions might include:
 - 'What was happening when your score was higher?'
 - 'What would be different if you were at an "X" score?'
 - 'What could help improve things by one point?'
 - 'What strengths and resources do you have that could help you move up the scale?'
 - 'What have you learnt about yourself from previous experiences?'
- Engage in discussions with YP about what helps or hinders their menstrual health, such as "what helps you manage your period at school?" and "what are the things that make it difficult?"
- **Consultation and formulation** – EPs can consider YP's menstrual experiences in consultation, assessment, and formulation. For example, questions about menstrual cycle experiences can be included within problem-solving frameworks when exploring a young person's health and SEMH. Practical examples for how this could be incorporated into EP practice include:
 - EPs could incorporate menstrual-related questions when discussing general health and SEMH, for example when using the interactive factors framework (Frederickson & Cline, 2009). These questions might include:
 - Has the young person experienced menarche (their first period)?
 - How is the young person finding managing their menstrual cycle (physically, socially, emotionally)?

- Are there times when the young person finds it easier/more difficult to manage their menstrual needs? (E.g. particular environments, the people they are with, activities, or access to resources and facilities).
 - Psychoeducation and self-awareness: Support the development of self-awareness through tools like diaries and CBT frameworks, which can help young people and their key adults to understand their menstrual health.
- **Signposting** – EPs can ensure that there are clear pathways for signposting school staff, families and students to appropriate resources and support systems related to menstrual health, for example menstrual health charities and appropriate healthcare professionals. As proposed by Royal College of Nursing, (2022), this recommendation aims to support the identification of menstrual difficulties as early as possible to improve the long-term health and wellbeing of menstruators. Practical examples for how this could be incorporated into EP practice include:
 - Keeping up to date with government policies, initiatives, charities and research related to menstrual health so that schools and families can be easily signposted to relevant support and guidance.
 - Working with schools to establish clear referral pathways for students who may be experiencing menstrual difficulties. This could involve setting up protocols for teachers to refer students to school nurses, mental health professionals, or external healthcare professionals, ensuring that students receive timely and appropriate care.

5.3.2 Implications for educational settings and staff

- **Teacher training for menstrual awareness** – As suggested by the current study, and Brown et al. (2022) it will be important to provide staff with comprehensive training that develops an awareness of the menstrual cycle and potential impact on various aspects such as educational engagement, SEMH, health, and help-seeking behaviours. This training contributes to supporting educators in being equipped to teach students a

holistic understanding of the menstrual cycle, but also support YP during day-to-day interactions.

- **Enhancing staff confidence and understanding** – schools can invest in initiatives to enhance staff confidence and understanding regarding menstrual health. This may include providing additional training, resources, and support networks for staff members to better address students' menstrual health needs and concerns.
- **Accessibility to facilities and period products** – schools must prioritise accessibility to facilities and period products to promote MHM and menstrual health. This includes ensuring the availability of toilet facilities, as well as access to period products with a range of choice. By doing so, schools create a supportive environment where girls are empowered to manage their menstruation needs.
- **Addressing stigma through safe spaces** – schools can create safe spaces where students can discuss and seek support for menstrual experiences, fostering open dialogue and addressing their menstrual health needs.
- **Evaluating menstrual education** – findings indicate that menstrual education should include the social and emotional aspects of the menstrual cycle. Schools should evaluate their delivery on menstrual education in light of the current findings to consider areas of strength and weakness. Emphasising interactive discussions is recommended, as they have been found to significantly enhance the effectiveness of menstrual education interventions (Evans et al., 2022). Findings also suggest that menstrual education is evaluated by YP themselves relating to the content, delivery methods, and comprehensiveness of menstrual education to ensure teaching adequately address students' needs and promote positive attitudes towards menstruation.
- **Feminist approach to menstrual education** - A feminist paradigm is recommended in how menstrual information is disseminated. Mondragon and Txertudi, (2019)

emphasised the importance of feminist discourse in improving health, social, and psychological education about menstruation. This approach promotes empowerment and positive messaging, effectively challenging menstrual stigma. I argue this perspective has significant implications for how the menstrual cycle is taught in schools.

- **Peer advocacy** – The supportive role of fellow menstruators in school was highlighted here. Encouraging peer advocacy could play a significant role in breaking down period stigma and promote initiatives that support YP. Initiatives led by YP, such as a student menstrual council, could collaborate with senior leadership teams to advocate for the menstrual needs of students. This approach would aim to facilitate the development of a culture of openness and support within the school community.
- **Reflecting on male culture** – Schools should reflect on peer and male culture and their impact on students' attitudes towards menstruation. This includes considering how boys are educated about menstruation and whether gender-segregated education perpetuates secrecy or stigma. Addressing these underlying messages can contribute to a more inclusive and supportive educational environment for all students.
- **Incorporating menstrual health into school policy** - Schools should consider integrating menstrual health into their policies, for example attendance and behavioural policies. By explicitly addressing menstrual health in school policies, schools can consider whether policies perpetuate or destigmatise menstruation with the aim of ensuring students' needs are appropriately accommodated without discrimination or bias.

5.4 Future research

The study's limitations suggest areas for future research. Recruitment challenges indicate the need for longer data collection periods to accommodate parent consent processes

and provide more opportunities to discuss menstrual beliefs and concerns rooted in taboo and stigma.

While this study offers insights into how adolescent girls experience their menstrual cycle within an educational context, subsequent research can build upon these findings, especially considering the study's small scale yet significant insights into the challenges surrounding menstrual health for individuals and within their school environment. Further research should investigate the nuanced experiences of more diverse populations, and specific populations, such as neurodivergent YP, as suggested by (Steward et al., 2018), including considerations for sensory differences and support throughout puberty. Additionally, understanding the experiences of non-binary and transgender menstruating YP is crucial, particularly given the current governmental focus on supporting schools to support 'gender questioning' YP (DfE, 2023a).

Following their interviews, all participants expressed a desire for menstrual education to begin before secondary school. This suggests a need to research the menstrual perceptions and experiences of primary-aged children to develop early support strategies and educational interventions. Participant insights highlight crucial considerations for future research, particularly amidst current political debates about the RSHE curriculum and the appropriate age for teaching such topics (DfE, 2024a).

Findings highlight participant views that male peers lack menstrual understanding and contribute to menstrual stigma. Further research should explore the menstrual perceptions and narratives held by male peers to understand existing attitudes. Erchull (2020) supports this, noting limited research on this topic and emphasising the impact of male beliefs and attitudes on their interactions with menstruators.

Menstrual experiences may benefit from further exploration in relation to supporting girls' academic experiences and attainment. For instance, exam conditions may limit access to MHM facilities and opportunities to engage in coping strategies, which could contribute to

differences between exam-based and teacher-based assessments. This highlights the need for further research and interventions to address the multifaceted challenges menstruating students face in academic settings.

As previously noted, I advocate for future menstrual studies to be undertaken within a feminist paradigm (Wigginton & Lafrance, 2019) to address gender inequalities, including structures of oppression. Further, transformative paradigms (Isaiah Omodan, 2020; Mertens, 2012) should also be considered as they offer a broader scope in addressing social injustices and power relations to support enabling change, through collaborative, dialogic conversations with stakeholders, ensuring menstruators' voices are central in shaping educational practices and policies concerning menstrual health.

5.5 Conclusion

This study has explored the perceptions of adolescent girls regarding their menstrual experiences in education, reporting significant impacts on their daily school experiences and learning engagement, primarily during menstruation. Challenges have been identified across societal, environmental, and personal dimensions, which risk exacerbating existing vulnerabilities experienced by marginalised groups, such as individuals in low socio-economic areas. The interpretation of findings suggests how these issues are interconnected and may negatively affect girls' menstrual health, social, emotional and mental health, educational engagement, and future outcomes.

Addressing menstrual challenges requires changes in educational practices, as highlighted in the study's implications. Relevant governing bodies must consider the comprehensive impact of the menstrual cycle on young people to support systemic efforts for developing menstrual awareness and support. This research calls on researchers, applied psychologists, and educational professionals to advocate for prioritising menstruators' menstrual health and reducing stigma within educational settings and systems. Given the historical stigma and taboos surrounding menstruation, it is crucial for systems to engage in reflexive practices. The potential emotional and social impact of such reflection underpins the importance of the EP

role in fostering understanding and reflection on how attitudes and beliefs affect young people's psychological development.

This research should be considered a catalyst for action by educational settings, EPs, and governmental structures to address inequalities potentially faced by adolescents in low socio-economic areas and combat structural oppressive practices that impact on menstrual health. By doing so, we can seek to ensure that whole school approaches are as effective as possible.

Menstrual health is positioned within a myriad of fundamental human rights. Let us champion it and work towards a future where every menstruator's educational experience is unhindered by menstrual stigma. Together, we can break the cycle of historical menstrual oppression.

References

- 4M Health. (2021). 4M. 4M Health. <https://4mhealth.uk/>
- Aarons, G. A., Ehrhart, M. G., Farahnak, L. R., & Sklar, M. (2014). Aligning leadership across systems and organizations to develop a strategic climate for evidence-based practice implementation. In *Annual Review of Public Health* (Vol. 35). Annual Reviews Inc. <https://doi.org/10.1146/annurev-publhealth-032013-182447>
- Adams, W. C. (2015). Conducting Semi-Structured Interviews. In *Handbook of Practical Program Evaluation, Fourth* (pp. 492–505).
- Ahmed, S. P., Piera Pi-Sunyer, B., Moses-Payne, M. E., Goddings, A. L., Speyer, L. G., Kuyken, W., Dalgleish, T., & Blakemore, S. J. (2024). The role of self-referential and social processing in the relationship between pubertal status and difficulties in mental health and emotion regulation in adolescent girls in the UK. *Developmental Science*. <https://doi.org/10.1111/desc.13503>
- Alblooshi, S., Taylor, M., & Gill, N. (2023). Does menopause elevate the risk for developing depression and anxiety? Results from a systematic review. *Australasian Psychiatry*, 31(2), 165–173. <https://doi.org/10.1177/10398562231165439>
- Alhelou, N., Kavattur, P. S., Olson, M. M., Rountree, L., & Winkler, I. T. (2022). Menstruation, Myopia, and Marginalization: Advancing Menstrual Policies to “Keep Girls in School” at the Risk of Exacerbating Inequalities. *Health and Human Rights Journal*, 24(2), 13–28.
- Allen, K. R., Kaestle, C. E., & Goldberg, A. E. (2011). More than just a punctuation mark: How boys and young men learn about menstruation. *Journal of Family Issues*, 32(2), 129–156. <https://doi.org/10.1177/0192513X10371609>
- Anderson, E. (2020, February). Feminist Epistemology and Philosophy of Science. *Stanford Encyclopedia of Philosophy*. <https://plato.stanford.edu/entries/feminism-epistemology/>
- Ankrum, R. J. (2016). Socioeconomic Status and Its Effect on Teacher/Parental Communication in Schools. *Journal of Education and Learning*, 5(1), 167. <https://doi.org/10.5539/jel.v5n1p167>
- Aranda, K. (2018). Feminist theories and concepts in healthcare: An introduction for qualitative research. In Bloomsbury Publishing. Bloomsbury Publishing. https://books.google.co.uk/books?hl=en&lr=&id=KiVHEAAQBAJ&oi=fnd&pg=PP1&dq=Aranda+K.+Feminist+theories+and+concepts+in+Healthcare.+London,+2018.&ots=5TczwKFFJ1&sig=6ujjGIP1AoJvXQH517dvPByieXk&redir_esc=y#v=onepage&q&f=false
- Ariccio, S., Lema-Blanco, I., & Bonaiuto, M. (2021). Place attachment satisfies psychological needs in the context of environmental risk coping: Experimental evidence of a link between self-determination theory and person-place relationship effects. *Journal of Environmental Psychology*, 78. <https://doi.org/10.1016/j.jenvp.2021.101716>
- Armour, M., Parry, K., Manohar, N., Holmes, K., Ferfolja, T., Curry, C., Macmillan, F., & Smith, C. A. (2019). The Prevalence and Academic Impact of Dysmenorrhea in 21,573 Young Women: A Systematic Review and Meta-Analysis. In *Journal of Women’s Health* (Vol. 28, Issue 8, pp. 1161–1171). Mary Ann Liebert Inc. <https://doi.org/10.1089/jwh.2018.7615>

- Askeland, K. G., Bøe, T., Breivik, K., la Greca, A. M., Sivertsen, B., & Hysing, M. (2020). Life events and adolescent depressive symptoms: Protective factors associated with resilience. *PLoS ONE*, 15(6 June). <https://doi.org/10.1371/journal.pone.0234109>
- Attia, M., & Edge, J. (2017). Be(com)ing a reflexive researcher: a developmental approach to research methodology. *Open Review of Educational Research*, 4(1), 33–45. <https://doi.org/10.1080/23265507.2017.1300068>
- Babbar, K., Martin, J., Ruiz, J., Parray, A. A., & Sommer, M. (2022). Menstrual health is a public health and human rights issue. In *The Lancet Public Health* (Vol. 7, Issue 1, pp. e10–e11). Elsevier Ltd. [https://doi.org/10.1016/S2468-2667\(21\)00212-7](https://doi.org/10.1016/S2468-2667(21)00212-7)
- Banikarim, C., Chacko, M. R., & Kelder, S. H. (2000). Prevalence and impact of dysmenorrhea on Hispanic female adolescents. *Archives of Pediatrics & Adolescent Medicine*, 154(12), 1226–1229.
- Bard, M. (2023). Who are the Ethiopian Jews? Jewish Virtual Library. <https://www.jewishvirtuallibrary.org/who-are-the-ethiopian-jews>
- Barrington, D. J., Robinson, H. J., Wilson, E., & Hennegan, J. (2021). Experiences of menstruation in high income countries: A systematic review, qualitative evidence synthesis and comparison to low- and middle-income countries. *PloS One*, 16(7), e0255001–e0255001. <https://doi.org/10.1371/journal.pone.0255001>
- Beech, K., Gulliford, A., & Lambert, N. (2023). Supervision as a mechanism in teacher wellbeing: A Q-methodological study of school staff viewpoints. *Educational and Child Psychology*, 40(4).
- Bennett, C., & Harden, J. (2014). An exploration of mothers' attitudes towards their daughters' menarche. *Sex Education*, 14(4), 457–470. <https://doi.org/10.1080/14681811.2014.922862>
- Betsu, B. D., Wall, L. L., Medhanyie, A. A., & Gebrehiwet, T. G. (2023). “Menstruation is a Fearful Thing”: A Qualitative Exploration of Menstrual Experiences and Sources of Information About Menstruation Among Adolescent Schoolgirls. *International Journal of Women's Health*, 15, 881–892. <https://doi.org/10.2147/IJWH.S407455>
- Bhaskar, R. (2014). The possibility of naturalism: A philosophical critique of the contemporary human sciences. Routledge. [https://books.google.com/books?hl=en&lr=&id=dmsKBAAQBAJ&oi=fnd&pg=PP1&dq=Bhaskar,+R.+\(1979\).+The+possibility+of+naturalism:+a+philosophical+critique+of+the+contemporary+human+sciences.+Humanities+Press&ots=uomZfI8BIT&sig=4o5IjeH8LdJPQnbDGDx2g7gxVPM](https://books.google.com/books?hl=en&lr=&id=dmsKBAAQBAJ&oi=fnd&pg=PP1&dq=Bhaskar,+R.+(1979).+The+possibility+of+naturalism:+a+philosophical+critique+of+the+contemporary+human+sciences.+Humanities+Press&ots=uomZfI8BIT&sig=4o5IjeH8LdJPQnbDGDx2g7gxVPM)
- Birch, S., & Gulliford, A. (2023). Educational psychology and mental health in schools. In *Educational Psychology* (pp. 165–182). Routledge. <https://doi.org/10.4324/9780429322815-12>
- Blakemore, S.-J., & Choudhury, S. (2006). Development of the adolescent brain: implications for executive function and social cognition. *Journal of Child Psychology and Psychiatry*, 47(3), 296–312. <https://doi.org/10.1111/j.1469-7610.2006.01611.x>
- Blakemore, S.-J., & Mills, K. L. (2014). Is Adolescence a Sensitive Period for Sociocultural Processing? *Annual Review of Psychology*, 65, 187–207. <https://doi.org/10.1146/annurev-psych-010213-115202>

- Blöte, A. W., Miers, A. C., Heyne, D. A., & Westenberg, M. (2015). Social Anxiety and the School Environment of Adolescents. In *Social Anxiety and the School Environment of Adolescents* (pp. 151–181).
- Bobel, C., & Fahs, B. (2020). From Bloodless Respectability to Radical Menstrual Embodiment: Shifting Menstrual Politics from Private to Public. *https://doi.org/10.1086/707802*, 45(4), 955–983. <https://doi.org/10.1086/707802>
- Bobel, C., & Kissling, E. A. (2011). Women's Studies Menstruation Matters: Introduction to Representations of the Menstrual Cycle. <https://doi.org/10.1080/00497878.2011.537981>
- Bougie, O., Nwosu, I., & Warshafsky, C. (2022). Revisiting the impact of race/ethnicity in endometriosis. In *Reproduction and Fertility* (Vol. 3, Issue 2). BioScientifica Ltd. <https://doi.org/10.1530/RAF-21-0106>
- Boyers, M., Garikipati, S., Biggane, A., Douglas, E., Hawkes, N., Kiely, C., Giddings, C., Kelly, J., Exley, D., Phillips-Howard, P. A., & Mason, L. (2022). Period poverty: The perceptions and experiences of impoverished women living in an inner-city area of Northwest England. *PLoS ONE*, 17(7 July). <https://doi.org/10.1371/journal.pone.0269341>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Braun, V., & Clarke, V. (2021). One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qualitative Research in Psychology*, 18(3), 328–352. <https://doi.org/10.1080/14780887.2020.1769238>
- Braun, V., & Clarke, V. (2022). *Thematic analysis: A practical guide*. SAGE Publications, Inc.
- Briggs, A. (2021). 'Period poverty' in Stoke-on-Trent, UK: new insights into gendered poverty and the lived experiences of austerity. *Journal of Poverty and Social Justice*, 29(1), 85–102. <https://doi.org/10.1332/175982720X16050132762411>
- Britannica. (2023, November). Adolescence. Britannica. <https://www.britannica.com/science/adolescence>
- British Educational Research Association. (2019). *Ethical Guidelines for Educational Research*. www.bera.ac.uk
- British Psychological Society. (2021, April). BPS Code of Human Research Ethics. British Psychological Society. <https://www.bps.org.uk/guideline/bps-code-human-research-ethics#>
- Brock, R., Rowse, G., & Slade, P. (2016). Relationships between paranoid thinking, self-esteem and the menstrual cycle. *Archives of Women's Mental Health*, 19(2), 271–279. <https://doi.org/10.1007/S00737-015-0558-4>
- Brooks, A. (2007). Feminist standpoint epistemology: Building knowledge and empowerment through women's lived experience. In *Feminist research practice: A primer* (pp. 53–82).
- Brown, E., & Henderson, L. (2012). Promoting staff support in schools: Solution Circles. *Educational Psychology in Practice*, 28(2), 177–186. <https://doi.org/10.1080/02667363.2012.665358>

- Brown, N., Williams, R., Bruinvels, G., Piasecki, J., & Forrest, L. J. (2022). Teachers' Perceptions and Experiences of Menstrual Cycle Education and Support in UK Schools. *Frontiers in Global Women's Health*, 3, 827365. <https://doi.org/10.3389/FGWH.2022.827365>
- Bruinvels, G., Goldsmith, E., Blagrove, R., Simpkin, A., Lewis, N., Morton, K., Suppiah, A., Rogers, J. P., Ackerman, K. E., Newell, J., & Pedlar, C. (2021). Prevalence and frequency of menstrual cycle symptoms are associated with availability to train and compete: a study of 6812 exercising women recruited using the Strava exercise app. *Br J Sports Med*, 55, 438–443. <https://doi.org/10.1136/bjsports-2020-102792>
- Burton, S. (2013). Toilets unblocked: A literature review of school toilets.
- Cardoso, L. F., Scolese, A. M., Hamidaddin, A., & Gupta, J. (2021). Period poverty and mental health implications among college-aged women in the United States. *BMC Women's Health*, 21(1). <https://doi.org/10.1186/s12905-020-01149-5>
- Casey, B. J., Jones, R. M., & Hare, T. A. (2008). The Adolescent Brain. *Annals of the New York Academy of Sciences*, 1124, 111. <https://doi.org/10.1196/ANNALS.1440.010>
- Chaplin, T. M., & Aldao, A. (2013). Gender differences in emotion expression in children: A meta-analytic review. *Psychological Bulletin*, 139(4), 735–765. <https://doi.org/10.1037/a0030737>
- Chatty, D., Crivello, G., & Hundt, G. L. (2005). Theoretical and methodological challenges of studying refugee children in the Middle East and North Africa: Young Palestinian, Afghan and Sahrawi refugees. *Journal of Refugee Studies*, 18(4), 387–409. <https://doi.org/10.1093/refuge/fei037>
- Checkland, P., & Poulter, J. (2010). Soft Systems Methodology. In M. Reynolds & S. Holwell (Eds.), *Systems Approaches to Managing Change: A Practical Guide* (pp. 191–242). Springer London. <https://doi.org/10.1007/978-1-84882-809-4>
- Chodankar, R. R., Munro, M. G., & Critchley, H. O. D. (2022). Historical Perspectives and Evolution of Menstrual Terminology. In *Frontiers in Reproductive Health* (Vol. 4). Frontiers Media S.A. <https://doi.org/10.3389/frph.2022.820029>
- Cleveland Clinic. (2023, May). Dysmenorrhea (Menstrual Cramps). Cleveland Clinic. <https://my.clevelandclinic.org/health/diseases/4148-dysmenorrhea>
- Cohen, I. (2020). Menstruation and Religion: Developing a Critical Menstrual Studies Approach. In *The Palgrave Handbook of Critical Menstruation Studies* (pp. 115–129). Springer Singapore. https://doi.org/10.1007/978-981-15-0614-7_11
- Cohen, J. A., Kassin, A., Wada, K., & Suehn, M. (2022). The personal and the political: how a feminist standpoint theory epistemology guided an interpretative phenomenological analysis. *Qualitative Research in Psychology*, 19(4), 917–948. <https://doi.org/10.1080/14780887.2021.1957047>
- Cohen, L., Lawrence, M., & Morrison, K. (2018). *Research Methods in Education*. In *Research Methods in Education* (8th ed.). Routledge.
- Cohen, L., Manion, L., & Morisson, K. (2018). *Research Methods in Education*. In *Research Methods in Education* (8th ed.). Routledge. <https://www.routledge.com/Research-Methods-in-Education/Cohen-Manion-Morrison/p/book/9781138209886>

- Colleran, A. (2023). Menstruation Products and Perceptions: Breaking Menstruation Products and Perceptions: Breaking Through the Crimson Ceiling Through the Crimson Ceiling. <https://pdxscholar.library.pdx.edu/younghistorians>
- Cologon, K., & Lassig, C. (2019). Universal approaches to curriculum, pedagogy and assessment. In *Inclusive Education for the 21st Century* (1st ed., p. 29). Routledge.
- Critchley, H. O. D., Babayev, E., Bulun, S. E., Clark, S., Garcia-Grau, I., Gregersen, P. K., Kilcoyne, A., Julie Kim, J.-Y., Lavender, M., Marsh, E. E., Matteson, K. A., Maybin, J. A., Metz, C. N., Moreno, I., Silk, K., Sommer, M., Simon, C., Tariyal, R., Taylor, H. S., ... Griffith, L. G. (2020). Menstruation: science and society. *American Journal of Obstetrics and Gynecology*, 223(5), 624–664. <https://doi.org/10.1016/j.ajog.2020.06.004>
- Dahl, R., Suleiman, A., Luna, B., Choudhury, S., Noble, K., Lupien, S. J., & Uncapher, M. R. (2017). *The Adolescent Brain : a Second Window of Opportunity*. UNICEF Office of Research.
- Daley, A. M. (2013). Adolescent-Friendly Remedies for the Challenges of Focus Group Research. In *Western Journal of Nursing Research* (Vol. 35, Issue 8, pp. 1043–1059). <https://doi.org/10.1177/0193945913483881>
- Danermark, B., Ekstrom, M., Jakobsen, L., & Karlsson, J. C. (2001). *Explaining society: critical realism in the social sciences*. Taylor & Francis Group.
- Deci, E. L., & Ryan, R. M. (2008). Self-determination theory: A macrotheory of human motivation, development, and health. *Canadian Psychology*, 49(3), 182–185. <https://doi.org/10.1037/a0012801>
- Denzin, N. K., & Lincoln, Y. S. (2017). *The Sage handbook of qualitative research*. Sage publications.
- Department for Education. (2021, September). Relationships and sex education (RSE) and health education. <https://www.gov.uk/government/publications/relationships-education-relationships-and-sex-education-rse-and-health-education>
- Department for Education. (2023a). Gender Questioning Children Non-statutory guidance for schools and colleges in England Draft for consultation.
- Department for Education. (2023b, June). Schools, pupils and their characteristics. <https://explore-education-statistics.service.gov.uk/find-statistics/school-pupils-and-their-characteristics>
- Department for Education. (2023c, September 7). Period product scheme for schools and colleges. Department for Education.
- Department for Education. (2024a, May). Age limits introduced to protect children in RSHE. Department for Education.
- Department for Education. (2024b, May 16). Review of the RSHE statutory guidance. Department for Education. <https://consult.education.gov.uk/rshe-team/review-of-the-rshe-statutory-guidance/>
- Department of Health & Social Care. (2022). Women's Health Strategy for England August 2022. www.gov.uk/official-documents.

- Department of Health and Social Care, Atkins, V., & Caulfield, M. (2024, January 17). Health Secretary announces new women's health priorities for 2024. Department of Health and Social Care. <https://www.gov.uk/government/news/health-secretary-announces-new-womens-health-priorities-for-2024>
- Department of Health and Social Care, & Caulfield, M. (2023, September). Landmark survey seeks women's views on reproductive health. <https://www.gov.uk/government/news/landmark-survey-seeks-womens-views-on-reproductive-health#:~:text=Delivering%20on%20a%20key%20commitment,fertility%2C%20pregnancy%20and%20the%20menopause.>
- Derntl, B., Windischberger, C., Robinson, S., Lamplmayr, E., Kryspin-Exner, I., Gur, R. C., Moser, E., & Habel, U. (2008). Facial emotion recognition and amygdala activation are associated with menstrual cycle phase. *Psychoneuroendocrinology*, 33(8), 1031. <https://doi.org/10.1016/J.PSYNEUEN.2008.04.014>
- Dhakal, K. (2022). NVivo. In *Journal of the Medical Library Association* (Vol. 110, Issue 2, pp. 270–272). Medical Library Association. <https://doi.org/10.5195/jmla.2022.1271>
- Diabelková, J., Rimárová, K., Dorko, E., Urdzík, P., Houžvičková, A., & Argalášová, L. (2023). Adolescent Pregnancy Outcomes and Risk Factors. *International Journal of Environmental Research and Public Health*, 20(5). <https://doi.org/10.3390/ijerph20054113>
- Dorn, L. D., Negriff, S., Huang, B., Pabst, S., Hillman, J., Braverman, P., & Susman, E. J. (2009). Menstrual Symptoms in Adolescent Girls: Association with Smoking, Depressive Symptoms, and Anxiety. *Journal of Adolescent Health*, 44(3), 237–243. <https://doi.org/10.1016/j.jadohealth.2008.07.018>
- Eatough, V., & Smith, J. A. (2017). Interpretative phenomenological analysis. In *The Sage handbook of qualitative research in psychology* (pp. 193–209). Sage Publications Ltd.
- Edmondson, A. C., Higgins, M., Singer, S., & Weiner, J. (2016). Understanding Psychological Safety in Health Care and Education Organizations: A Comparative Perspective. *Research in Human Development*, 13(1), 65–83. <https://doi.org/10.1080/15427609.2016.1141280>
- Eldh, A. C., Årestedt, L., & Berterö, C. (2020). Quotations in Qualitative Studies: Reflections on Constituents, Custom, and Purpose. *International Journal of Qualitative Methods*, 19. <https://doi.org/10.1177/1609406920969268>
- Erchull, M. J. (2020). “You Will Find Out When the Time Is Right”: Boys, Men, and Menstruation. In *The Palgrave Handbook of Critical Menstruation Studies* (pp. 395–407). Springer Singapore. https://doi.org/10.1007/978-981-15-0614-7_31
- Evans, R. L., Harris, B., Onuegbu, C., & Griffiths, F. (2022). Systematic review of educational interventions to improve the menstrual health of young adolescent girls. *BMJ Open*, 12(6). <https://doi.org/10.1136/bmjopen-2021-057204>
- Felmingham, K. L., Fong, W. C., & Bryant, R. A. (2012). The impact of progesterone on memory consolidation of threatening images in women. *Psychoneuroendocrinology*, 37(11), 1896–1900. <https://doi.org/10.1016/j.psyneuen.2012.03.026>

- Fife, S. T., & Gossner, J. D. (2024). Deductive Qualitative Analysis: Evaluating, Expanding, and Refining Theory. *International Journal of Qualitative Methods*, 23. <https://doi.org/10.1177/16094069241244856>
- Fletcher, A. J. (2017). Applying critical realism in qualitative research: methodology meets method. *International Journal of Social Research Methodology*, 20(2), 181–194. <https://doi.org/10.1080/13645579.2016.1144401>
- Fonow, M. M., & Cook, J. A. (2005). Feminist Methodology: New Applications in the Academy and Public Policy. *Journal of Women in Culture and Society*, 30(4), 2211–2236. <https://doi.org/10.1086/428417>
- Fox, M. (2009). Working with systems and thinking systemically—disentangling the crossed wires. *Educational Psychology in Practice*, 25(3), 247–258. <https://doi.org/10.1080/02667360903151817>
- Frederickson, Norah., & Cline, Tony. (2009). Special educational needs, inclusion and diversity : a textbook. Open University Press.
- Freedom4girls. (2016). Freedom4girls. Freedom4girls. <https://www.freedom4girls.co.uk/>
- Fricker, M. (1999). Epistemic oppression and epistemic privilege. . *Canadian Journal of Philosophy Supplementary Volume*, 25, 191–210.
- Ghandour, R., Hammoudeh, W., Stigum, H., Giacaman, R., Fjeld, H., & Holmboe-Ottesen, G. (2024). The hidden burden of dysmenorrhea among adolescent girls in Palestine refugee camps: a focus on well-being and academic performance. *BMC Public Health*, 24(1). <https://doi.org/10.1186/s12889-024-18219-0>
- Goldblatt, B., & Steele, L. (2019). Bloody unfair: Inequality related to menstruation-considering the role of discrimination law. *Sydney Law Review*, 41(3), 293–325.
- Gough, G., & Gulliford, A. (2020). Resilience amongst young carers: investigating protective factors and benefit-finding as perceived by young carers. *Educational Psychology in Practice*, 36(2), 149–169. <https://doi.org/10.1080/02667363.2019.1710469>
- Green, S. A., & Graham, B. M. (2022). Symptom fluctuation over the menstrual cycle in anxiety disorders, PTSD, and OCD: a systematic review. In *Archives of Women's Mental Health* (Vol. 25, Issue 1, pp. 71–85). Springer. <https://doi.org/10.1007/s00737-021-01187-4>
- Grieger, J. A., & Norman, R. J. (2020). Menstrual cycle length and patterns in a global cohort of women using a mobile phone app: Retrospective cohort study. *Journal of Medical Internet Research*, 22(6), e17109. <https://doi.org/10.2196/17109>
- Grimm, F., Alcock, B., Butler, J., Fernandez Crespo, R., Davies, A., Peytrignet, S., Piroddi, R., Thorlby, R., & Tallack, C. (2022). Improving children and young people's mental health services: Local data insights from England, Scotland and Wales. In *The Health Foundation*. <https://doi.org/10.37829/HF-2022-NDL1>
- Gruber, N., & Modan-Moses, D. (2021). Menstrual cycle in adolescents: Updating the normal pattern. In *Journal of Clinical Endocrinology and Metabolism* (Vol. 106, Issue 1, pp. E372–E374). Endocrine Society. <https://doi.org/10.1210/clinem/dgaa688>
- Guest, G., MacQueen, K. M., & Namey, E. E. (2012). *Applied thematic analysis*. Sage.

- Gulliford, A., & Miller, A. (2023). Coping with life by coping with school? School non-attendance in young people. In *Educational Psychology* (pp. 230–246). Routledge.
- Gupta, M., Dua, D., Kaur, H., & Grover, S. (2019). Prevalence of premenstrual dysphoric disorder among school-going adolescent girls. *Industrial Psychiatry Journal*, 28(2), 198. https://doi.org/10.4103/ipj.ipj_79_19
- Handy, A. B., Greenfield, S. F., Yonkers, K. A., & Payne, L. A. (2022). Psychiatric Symptoms Across the Menstrual Cycle in Adult Women: A Comprehensive Review. In *Harvard Review of Psychiatry* (Vol. 30, Issue 2, pp. 100–117). Lippincott Williams and Wilkins. <https://doi.org/10.1097/HRP.0000000000000329>
- Hanson, A., Jones, L. D., & Holmes, B. (2005). Magical and Medical Approaches to the Wandering Womb in the Ancient Greek World. *Classical Antiquity*, 30, 1067–8344. <https://doi.org/10.1525/CA.2011.30.1.1>
- Haraway, D. (2016). Situated Knowledges: the Science Question in Feminism and the Privilege of Partial Perspective. *Space, Gender, Knowledge: Feminist Readings*, 53–72.
- Harding, S. (2004). *The feminist standpoint theory reader: Intellectual and political controversies*. Psychology Press.
- Harding, S. (2019). *Objectivity and Diversity: Another Logic of Scientific Research*. University of Chicago Press.
- Hardy-Johnson, P. L. (2020). Dysmenorrhea and its Impact on the Health-Related Quality of Life of Adolescent Girls.
- Harvey, J., Emm-Collison, L., & Sebire, S. J. (2020). “I feel proper self-conscious all the time”: A qualitative study of adolescent girls’ views of menstruation and physical activity. *Wellcome Open Research*, 5, 279. <https://doi.org/10.12688/WELLCOMEOPENRES.16391.1>
- Hayes, D. (2005). Gaining access to data sources in statutory social work agencies: The long and winding road. *British Journal of Social Work*, 35(7), 1193–1202. <https://doi.org/10.1093/bjsw/bch295>
- Hennegan, J., Shannon, A. K., Id, J. R., Schwab, K. J., & Melendez-Torres, G. J. (2019). Women’s and girls’ experiences of menstruation in low- and middle-income countries: A systematic review and qualitative metasynthesis. <https://doi.org/10.1371/journal.pmed.1002803>
- Hennegan, J., Winkler, I. T., Bobel, C., Keiser, D., Hampton, J., Larsson, G., Chandra-Mouli, V., Plesons, M., & Mahon, T. (2021). Menstrual health: a definition for policy, practice, and research. *Sexual and Reproductive Health Matters*, 29(1). <https://doi.org/10.1080/26410397.2021.1911618>
- Hennink, M., Hutter, I., & Bailey, A. (2020). *Qualitative Research Methods*. Sage.
- Heygirls. (2018). Hey girls... Heygirls. <https://www.heygirls.co.uk/>
- Hillen, T. I. J., Grbavac, S. L., Johnston, P. J., Straton, J. A. Y., & Keogh, J. M. F. (1999). Primary Dysmenorrhea in Young Western Australian Women: Prevalence, Impact, and Knowledge of Treatment. *Journal of Adolescent Health*, 25, 40–45.

- Hindson, B. (2009). ATTITUDES TOWARDS MENSTRUATION AND MENSTRUAL BLOOD IN ELIZABETHAN ENGLAND. In Source: Journal of Social History (Vol. 43, Issue 1). <https://about.jstor.org/terms>
- Hinze, V., Dphil, J., Montero-Marin, S.-J., Blakemore, S., Byford, T., Dalglish, M., Degli Esposti, M. T., Greenberg, B. G., Jones, Y., Slaghekke, O. C., Ukoumunne, R. M., Viner, J., Mark, G., Williams, T. J., Ford, W., Kuyken, D., & Hinze, M.-M. (2024). Student-and School-Level Factors Associated With Mental Health and Well-Being in Early Adolescence. *Journal of the American Academy of Child & Adolescent Psychiatry*, 63(2), 266–282. www.jaacap.org
- Hirtz, R., Hars, C., Naaresh, R., Laabs, B. H., Antel, J., Grasemann, C., Hinney, A., Hebebrand, J., & Peters, T. (2022). Causal Effect of Age at Menarche on the Risk for Depression: Results From a Two-Sample Multivariable Mendelian Randomization Study. *Frontiers in Genetics*, 13. <https://doi.org/10.3389/fgene.2022.918584>
- HM Treasury. (2021, January). Tampon tax abolished from today. Department of Health and Social Care. <https://www.gov.uk/government/news/tampon-tax-abolished-from-today>
- Hodge, S. (2019). #MENSTRUATION: INSTAGRAM USERS CHALLENGING SOCIAL STIGMA.
- Holland, J., & Ramazanoglu, C. (2002). Feminist methodology: Challenges and choices. In *Feminist Methodology* (pp. 1–196).
- Hui, E. K. P., & Tsang, S. K. M. (2012). Self-determination as a psychological and positive youth development construct. In *The Scientific World Journal* (Vol. 2012). <https://doi.org/10.1100/2012/759358>
- Ide, Y., & Beddoe, L. (2023). Challenging perspectives: Reflexivity as a critical approach to qualitative social work research. *Qualitative Social Work*. <https://doi.org/10.1177/14733250231173522>
- In Kind Direct. (2024). The State of Period Equity in the UK Breaking Cycles of Exclusion.
- Isaiah Omodan, B. (2020). The Trajectory of Transformative Research as an Inclusive Qualitative Research Approach to Social Issues. *Multicultural Education*, 6(3), 34–44. <https://doi.org/10.5281/zenodo.4071952>
- Jaafar, H., Ismail, S. Y., & Azzeri, A. (2023). Period Poverty: A Neglected Public Health Issue. *Korean Journal of Family Medicine*, 44(4), 183. <https://doi.org/10.4082/KJFM.22.0206>
- Jack, G. (2010). Place matters: The significance of place attachments for children's well-being. *British Journal of Social Work*, 40(3), 755–771. <https://doi.org/10.1093/bjsw/bcn142>
- Jackson, T. E. (2019). Policing a menstrual monster: how working class girls discuss their menstrual reactions and experiences. *Journal of Youth Studies*, 22(2), 153–170. <https://doi.org/10.1080/13676261.2018.1492100>
- Jackson, T. E., & Falmagne, R. J. (2013). Women wearing white: Discourses of menstruation and the experience of menarche. *Feminism and Psychology*, 23(3), 379–398. <https://doi.org/10.1177/0959353512473812/FORMAT/EPUB>

- Jang, D., & Elfenbein, H. A. (2018). Menstrual Cycle Effects on Mental Health Outcomes: A Meta-Analysis. <https://doi.org/10.1080/13811118.2018.1430638>, 23(2), 312–332.
- Jaworska, N., & Macqueen, G. (2015). Adolescence as a unique developmental period. *J Psychiatry Neurosci*, 40(5), 291. <https://doi.org/10.1503/jpn.150268>
- Johnston-Robledo, I., & Chrisler, J. C. (2011). The Menstrual Mark: Menstruation as Social Stigma. <https://doi.org/10.1007/s11199-011-0052-z>
- Kaczmarek, M., & Trambacz-Oleszak, S. (2016). The association between menstrual cycle characteristics and perceived body image: a cross-sectional survey of polish female adolescents. *Journal of Biosocial Science*, 48(3), 374–390.
- Kiesner, J., Eisenlohr-Moul, T. A., & Vidotto, G. (2022). Affective Risk Associated With Menstrual Cycle Symptom Change. *Frontiers in Global Women's Health*, 3. <https://doi.org/10.3389/fgwh.2022.896924>
- King, S. (2020). Premenstrual Syndrome (PMS) and the Myth of the Irrational Female. In *The Palgrave Handbook of Critical Menstruation Studies* (pp. 287–302). Springer Singapore. https://doi.org/10.1007/978-981-15-0614-7_23
- Korstjens, I., & Moser, A. (2018). European Journal of General Practice Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. *European Journal of General Practice*, 24(1), 120–124. <https://doi.org/10.1080/13814788.2017.1375092>
- Koskenniemi, A. (2023). Taking Charge of the Menstrual Cycle: Discourses of Menstruation and the Menstruating Body in Self-Help Literature. *Women's Reproductive Health*, 10(3), 323–340. <https://doi.org/10.1080/23293691.2022.2085532>
- Le, J., Thomas, N., & Gurvich, C. (2020). Cognition, the menstrual cycle, and premenstrual disorders: A review. *Brain Sciences*, 10(4). <https://doi.org/10.3390/BRAINSC10040198>
- Legate, K. (2023). Supporting school staff to be anti-oppressive practitioners and promote community cohesion in schools.
- Lengweiler, S. (2023). "It doesn't have a name. It just is its own entity, I think" (P1, 1682) Exploring Year 10 girls' experiences of 'place attachments' within their school through the lens of New Materialism. The University of Sheffield.
- Lesko, N. (2012). *Act Your Age!: A Cultural Construction of Adolescence*. Routledge.
- Leung, L. (2015). Nature of Qualitative Research versus Quantitative Research Validity, reliability, and generalizability in qualitative research. *Journal of Family Medicine and Primary Care*, 324(3). <https://doi.org/10.4103/2249-4863.161306>
- Li, A. D., Bellis, E. K., Girling, J. E., Jayasinghe, Y. L., Grover, S. R., Marino, J. L., & Peate, M. (2020). Unmet Needs and Experiences of Adolescent Girls with Heavy Menstrual Bleeding and Dysmenorrhea: A Qualitative Study. *Journal of Pediatric and Adolescent Gynecology*, 33(3), 278–284. <https://doi.org/10.1016/j.jpag.2019.11.007>
- Li, H., Gibson, E. A., Jukic, A. M. Z., Baird, D. D., Wilcox, A. J., Curry, C. L., Fischer-Colbrie, T., Onnela, J. P., Williams, M. A., Hauser, R., Coull, B. A., & Mahalingaiah, S. (2023). Menstrual cycle length variation by demographic characteristics from the Apple

- Women's Health Study. *Npj Digital Medicine*, 6(1). <https://doi.org/10.1038/s41746-023-00848-1>
- Liu, K. A., & Dipietro Mager, N. A. (2016). Women's involvement in clinical trials: Historical perspective and future implications. In *Pharmacy Practice* (Vol. 14, Issue 1). Grupo de Investigacion en Atencion Farmaceutica. <https://doi.org/10.18549/PharmPract.2016.01.708>
- Louis, C., Manion, L., & Morrison, K. (2018). Research Design. In *Research methods in education* (pp. 109–285). Routledge.
- Love, B., Vetere, A., & Davis, P. (2020). Should Interpretative Phenomenological Analysis (IPA) be Used With Focus Groups? Navigating the Bumpy Road of “Iterative Loops,” Idiographic Journeys, and “Phenomenological Bridges”. *International Journal of Qualitative Methods*, 19. <https://doi.org/10.1177/1609406920921600>
- Magnusson, E., & Marecek, J. (2015). Doing interview-based qualitative research: A learner's guide. In *Doing Interview-Based Qualitative Research: A Learner's Guide*. Cambridge University Press. <https://doi.org/10.1017/CBO9781107449893>
- Maharaj, T., & Winkler, I. T. (2020). Transnational Engagements: Cultural and Religious Practices Related to Menstruation. In *The Palgrave Handbook of Critical Menstruation Studies* (pp. 163–174). Springer Singapore. https://doi.org/10.1007/978-981-15-0614-7_15
- Maity, S., Wray, J., Coffin, T., Nath, R., Nauhria, S., Sah, R., Waechter, R., Ramdass, P., & Nauhria, S. (2022). Academic and Social Impact of Menstrual Disturbances in Female Medical Students: A Systematic Review and Meta-Analysis. In *Frontiers in Medicine* (Vol. 9). Frontiers Media S.A. <https://doi.org/10.3389/fmed.2022.821908>
- Maki, P. M., Rich, J. B., & Shayna Rosenbaum, R. (2002). Implicit memory varies across the menstrual cycle: estrogen effects in young women. *Neuropsychologia*, 40(5), 518–529. [https://doi.org/10.1016/S0028-3932\(01\)00126-9](https://doi.org/10.1016/S0028-3932(01)00126-9)
- Manganelli, S., Cavicchiolo, E., Lucidi, F., Galli, F., Cozzolino, M., Chirico, A., & Alivernini, F. (2021). Differences and similarities in adolescents' academic motivation across socioeconomic and immigrant backgrounds. *Personality and Individual Differences*, 182. <https://doi.org/10.1016/j.paid.2021.111077>
- Marí-Klose, M., Julià, A., Escapa, S., & Gallo, P. (2023). Period poverty and mental health in a representative sample of young women in Barcelona, Spain. *BMC Women's Health*, 23(1). <https://doi.org/10.1186/s12905-023-02328-w>
- Marmot, M. (2015). The health gap: The challenge of an unequal world. In *The Lancet* (Vol. 386, Issue 10011, pp. 2442–2444). Lancet Publishing Group. [https://doi.org/10.1016/S0140-6736\(15\)00150-6](https://doi.org/10.1016/S0140-6736(15)00150-6)
- Mastorci, F., Piaggi, P., Bastiani, L., Trivellini, G., Doveri, C., Casu, A., Vassalle, C., & Pingitore, A. (2020). The impact of menarche on health-related quality of life in a sample of Italian adolescents: evidence from school-based AVATAR project. *European Journal of Pediatrics*, 179(6), 973–978. <https://doi.org/10.1007/s00431-020-03594-8>
- Maulingin-Gumbaketi, E., Larkins, S., Gunnarsson, R., Rembeck, G., Whittaker, M., & Redman-MacLaren, M. (2021). 'Making of a Strong Woman': a constructivist grounded theory of the experiences of young women around menarche in Papua New Guinea.

- BMC Women's Health, 21(1), 1–17. <https://doi.org/10.1186/S12905-021-01229-0/FIGURES/4>
- Maxwell, J. A. (2012). A Realist Approach for Qualitative Research. In Qualitative Research (Issue 4). SAGE Publications. <https://doi.org/10.1177/1468794113483232>
- Mayor Nuestra Señora del Rosario, C., Iván Gómez-Sánchez, P., Yohanna Pardo-Mora, Y., Patricia Hernández-Aguirre, H., Patricia Jiménez-Robayo, S., & Carlos Pardo-Lugo, J. (2012). Menstruation in history. In Invest Educ Enferm (Vol. 30, Issue 3).
- McHugh, M. C. (2020). Menstrual Shame: Exploring the Role of 'Menstrual Moaning'. In The Palgrave Handbook of Critical Menstruation Studies (pp. 409–422).
- Mcpherson, M. E., & Korfine, L. (2004). MENSTRUATION ACROSS TIME: MENARCHE, MENSTRUAL ATTITUDES, EXPERIENCES, AND BEHAVIORS. <https://doi.org/10.1016/j.whi.2004.08.006>
- MedlinePlus. (2017, May). Menstruation. National Library of Medicine. <https://medlineplus.gov/menstruation.html#:~:text=If%20no%20pregnancy%20occurs%2C%20the,menopause%20at%20about%20age%2051.>
- Mertens, D. M. (2012). Transformative Mixed Methods: Addressing Inequities. American Behavioral Scientist, 56(6), 802–813. <https://doi.org/10.1177/0002764211433797>
- Metusela, C., Ussher, J., Perz, J., Hawkey, A., Morrow, M., Narchal, R., Estoesta, J., & Monteiro, M. (2017). "In My Culture, We Don't Know Anything About That": Sexual and Reproductive Health of Migrant and Refugee Women. International Journal of Behavioral Medicine, 24(6), 836–845. <https://doi.org/10.1007/s12529-017-9662-3>
- Milad, M. R., Zeidan, M. A., Contero, A., Pitman, R. K., Klibanski, A., Rauch, S. L., & Goldstein, J. M. (2010). The influence of gonadal hormones on conditioned fear extinction in healthy humans. Neuroscience, 168(3), 652–658. <https://doi.org/10.1016/j.neuroscience.2010.04.030>
- Mondragon, N. I., & Txertudi, M. B. (2019). Understanding menstruation: Influence of gender and ideological factors. A study of young people's social representations. Feminism and Psychology, 29(3), 357–373. <https://doi.org/10.1177/0959353519836445>
- Munro, A. K., Hunter, E. C., Hossain, S. Z., & Keep, M. (2021). A systematic review of the menstrual experiences of university students and the impacts on their education: A global perspective. PLOS ONE, 16(9), e0257333. <https://doi.org/10.1371/JOURNAL.PONE.0257333>
- Nagy, H., Carlson Karen, & Khan, A. M. (2023). Dysmenorrhea. StatPearls [Internet].
- National Academies of Sciences, E. and M. (2019). The Promise of Adolescence: Realizing Opportunity for All Youth (E. P. Backes & R. Bonnie, Eds.). National Academies Press .
- National Education Union. (2024, February 24). Updated School Cuts data. National Education Union. [https://neu.org.uk/latest/press-releases/updated-school-cuts-data#:~:text=New%20data%20released%20today%20\(Saturday,88%25%20of%20main,tained%20secondary%20schools.](https://neu.org.uk/latest/press-releases/updated-school-cuts-data#:~:text=New%20data%20released%20today%20(Saturday,88%25%20of%20main,tained%20secondary%20schools.)
- National Health Service. (2021, November 3). Heavy periods. National Health Service.
- National Health Service. (2022, July 29). Period pain. National Health Service. <https://www.nhs.uk/conditions/period-pain/>

- National Health Service. (2023, January). Periods. <https://www.nhs.uk/conditions/periods/>
- National Institute for Health and Care Excellence. (2019, May). Premenstrual Syndrome. National Institute for Health and Care Excellence. <https://cks.nice.org.uk/topics/premenstrual-syndrome/>
- NHS Digital. (2021). Mental Health of Children and Young People in England 2021 - wave 2 follow up to the 2017 survey - NDRS. <https://digital.nhs.uk/data-and-information/publications/statistical/mental-health-of-children-and-young-people-in-england/2021-follow-up-to-the-2017-survey>
- NHS Newcastle upon Tyne Hospitals. (2022, November). Fertility jargon buster. NHS. <https://www.newcastle-hospitals.nhs.uk/services/fertility-treatment/fertility-jargon-buster/#:~:text=Luteal%20phase%3A%20The%20luteal%20phase,for%20the%20possibility%20of%20pregnancy.>
- Nichols, F. H. (2000). History of the Women's Health Movement in the 20th Century. *Journal of Obstetric Gynecologic and Neonatal Nursing*, 29, 56–64. <https://doi.org/10.1111/j.1552-6909.2000.tb02756.x>
- Nicol, M. (2023). Adolescents' perceived experiences of menstruation in the United Kingdom: A systematic review. Unpublished manuscript.
- Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic Analysis: Striving to Meet the Trustworthiness Criteria. *International Journal of Qualitative Methods*, 16(1). <https://doi.org/10.1177/1609406917733847>
- Oates, J., Carpenter, D., Fisher, M., Goodson, S., Hannah, B., Kwiatkowski, R., Prutton, K., Reeves, D., & Wainwright, T. (2021). BPS Code of Human Research Ethics. BPS Code of Human Research Ethics. <https://doi.org/10.53841/BPSREP.2021.INF180>
- Olson, M. (2023). The Impact of Period Poverty on Low-Income Adolescents in the United States [Portland State University]. <https://doi.org/10.15760/honors.1364>
- Olson, M., Alhelou, N., Kavattur, P. S., Rountree, L., & Winkler, I. T. (2022). The persistent power of stigma: A critical review of policy initiatives to break the menstrual silence and advance menstrual literacy. *PLOS Global Public Health*, 2(7), e0000070. <https://doi.org/10.1371/journal.pgph.0000070>
- Osório, F. L., Cassis, J. M. de P., de Sousa, J. P. M., Poli-Neto, O., & Martín-Santos, R. (2018). Sex hormones and processing of facial expressions of emotion: A systematic literature review. *Frontiers in Psychology*, 9(APR). <https://doi.org/10.3389/fpsyg.2018.00529>
- Parker, M. A., Sneddon, A. E., & Arbon, P. (2010). The menstrual disorder of teenagers (MDOT) study: determining typical menstrual patterns and menstrual disturbance in a large population-based study of Australian teenagers. *BJOG*, 117, 185–192. <https://doi.org/10.1111/j.1471-0528.2009.02407.x>
- Pearpoint, J., Forest, M., & O'brien, J. (1993). *PATH: A workbook for planning positive possible futures: Planning alternative tomorrows with hope for schools, organizations, businesses, families.* . Inclusion Press.
- Pennington, C. R., Kaye, L. K., Qureshi, A. W., & Heim, D. (2018). Controlling for Prior Attainment Reduces the Positive Influence that Single-Gender Classroom Initiatives

- Exert on High School Students' Scholastic Achievements. *Sex Roles*, 78(5–6), 385–393. <https://doi.org/10.1007/s11199-017-0799-y>
- Pennington, C. R., Kaye, L. K., Qureshi, A. W., & Heim, D. (2021). Do gender differences in academic attainment correspond with scholastic attitudes? An exploratory study in a UK secondary school. *Journal of Applied Social Psychology*, 51(1), 3–16. <https://doi.org/10.1111/jasp.12711>
- Perez, C. C. P. (2019). Invisible Women: Exposing Data Bias in a World Designed for Men. Period. The Menstrual Movement. (2021). State of the Period: The widespread impact of period poverty on US students.
- Phillips-Howard, P. A. (2022). What's the bleeding problem: menstrual health and living with a disability Comment. *The Lancet Regional Health - Western Pacific*, 19, 100349. <https://doi.org/10.1016/j>
- Piera Pi-Sunyer, B., Andrews, J. L., Orben, A., Speyer, L. G., & Blakemore, S. J. (2023). The relationship between perceived income inequality, adverse mental health and interpersonal difficulties in UK adolescents. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 64(3), 417–425. <https://doi.org/10.1111/jcpp.13719>
- Pittman, L. D., & Richmond, A. (2007). Academic and psychological functioning in late adolescence: The importance of school belonging. *The Journal of Experimental Education*, 75(4), 270–290.
- Plan International. (2021, May). OVER ONE MILLION GIRLS IN THE UK STRUGGLED TO AFFORD OR ACCESS PERIOD PRODUCTS DURING THE PANDEMIC. Plan International . <https://plan-uk.org/media-centre/over-one-million-girls-in-the-uk-struggled-to-afford-or-access-period-products-during-the-pandemic>
- Plan International. (2023). Plan International UK. Plan International . <https://plan-uk.org/>
- Plan International UK. (2018). Break the Barriers: Girls' Experiences of Menstruation in the UK. <https://plan-uk.org/file/plan-uk-break-the-barriers-report-032018pdf/download?token=Fs-HYP3v>
- Pletzer, B., Harris, T. A., Scheuringer, A., & Hidalgo-Lopez, E. (2019). The cycling brain: menstrual cycle related fluctuations in hippocampal and fronto-striatal activation and connectivity during cognitive tasks. *Neuropsychopharmacology*, 44(11), 1867–1875. <https://doi.org/10.1038/s41386-019-0435-3>
- Porges, S. W. (2009). The polyvagal theory: New insights into adaptive reactions of the autonomic nervous system. *Cleveland Clinic Journal of Medicine*, 76(SUPPL.2). <https://doi.org/10.3949/ccjm.76.s2.17>
- Poromaa, I. S., & Gingnell, M. (2014). Menstrual cycle influence on cognitive function and emotion processing from a reproductive perspective. *Frontiers in Neuroscience*, 8(Nov), 107933. <https://doi.org/10.3389/FNINS.2014.00380/BIBTEX>
- Prince, H. E., & Annison, E. (2023). Men and menstruation: views and perspectives influencing participation in adventurous activities. <https://doi.org/10.1080/13573322.2023.2269213>
- Prior, J. (2016). The use of semi-structured interviews with young children. In *Practical Research with Children* (pp. 135–152). Routledge.

- Priya, A. (2021). Case Study Methodology of Qualitative Research: Key Attributes and Navigating the Conundrums in Its Application. *Sociological Bulletin*, 70(1), 94–110. <https://doi.org/10.1177/0038022920970318>
- Public Health Service. (2023). Breaking the Cycle: Period equality research in the UK.
- Pycroft, H. (2023, May 26). Cost of living: UK period poverty has risen from 12% to 21% in a year. ActionAid. <https://www.actionaid.org.uk/blog/2023/05/26/cost-living-uk-period-poverty-risen>
- Quinn, M. P. (2013). *Qualitative research and evaluation methods* (4th ed.). SAGE.
- Randhawa, A. E., Tufte-Hewett, A. D., Weckesser, A. M., Jones, G. L., & Hewett, F. G. (2021a). Secondary School Girls' Experiences of Menstruation and Awareness of Endometriosis: A Cross-Sectional Study. *Journal of Pediatric and Adolescent Gynecology*, 34(5), 643–648. <https://doi.org/10.1016/J.JPAG.2021.01.021>
- Randhawa, A. E., Tufte-Hewett, A. D., Weckesser, A. M., Jones, G. L., & Hewett, F. G. (2021b). Secondary School Girls' Experiences of Menstruation and Awareness of Endometriosis: A Cross-Sectional Study. <https://doi.org/10.1016/j.jpag.2021.01.021>
- Randhawa, A. E., Tufte-Hewett, A. D., Weckesser, A. M., Jones, G. L., & Hewett, F. G. (2021c). Secondary School Girls' Experiences of Menstruation and Awareness of Endometriosis: A Cross-Sectional Study. *Journal of Pediatric and Adolescent Gynecology*, 34, 643–648. <https://doi.org/10.1016/j.jpag.2021.01.021>
- Reilly, D., Neumann, D. L., & Andrews, G. (2019a). Investigating Gender Differences in Mathematics and Science: Results from the 2011 Trends in Mathematics and Science Survey. *Research in Science Education*, 49(1), 25–50. <https://doi.org/10.1007/s11165-017-9630-6>
- Reilly, D., Neumann, D. L., & Andrews, G. (2019b). Supplemental Material for Gender Differences in Reading and Writing Achievement: Evidence From the National Assessment of Educational Progress (NAEP). *American Psychologist*, 74(4), 445–458. <https://doi.org/10.1037/amp0000356.supp>
- Rhodes, C., & Houghton-Hill, S. (2000). The Linkage of Continuing Professional Development and the Classroom Experience of Pupils: barriers perceived by senior managers in some secondary schools. *Journal of In-Service Education*, 26(3), 423–435. <https://doi.org/10.1080/13674580000200132>
- Robson, C., & McCartan, K. (2016a). *Real world research: A resource for users of social research methods in applied settings*.
- Robson, C., & McCartan, K. (2016b). *Real world research: A resource for users of social research methods in applied settings*.
- Rohatgi, A., & Dash, S. (2023). Period poverty and mental health of menstruators during COVID-19 pandemic: Lessons and implications for the future. *Frontiers in Global Women's Health*, 4. <https://doi.org/10.3389/fgwh.2023.1128169>
- Ronca, F., Blodgett, J. M., Bruinvels, G., Lowery, M., Raviraj, M., Sandhar, G., Symeonides, N., Jones, C., Loosemore, M., & Burgess, P. W. (2024). Attentional, anticipatory and spatial cognition fluctuate throughout the menstrual cycle: potential implications for female sport. *Neuropsychologia*. <https://doi.org/10.1016/j.neuropsychologia.2024.108909>

- Rosenberg, L., & Park, S. (2002). Verbal and spatial functions across the menstrual cycle in healthy young women. In *Psychoneuroendocrinology* (Vol. 27). www.elsevier.com/locate/psyneuen
- Rossouw, L. (2020). An Economic Assessment of Menstrual Hygiene Product Tax Cuts.
- Rossouw, L., & Ross, H. (2021). Understanding Period Poverty: Socio-Economic Inequalities in Menstrual Hygiene Management in Eight Low- and Middle-Income Countries. *International Journal of Environmental Research and Public Health*, 18(5), 1–15. <https://doi.org/10.3390/IJERPH18052571>
- Roux, F., Burns, S., Chih, H. J., & Hendriks, J. (2019). Developing and trialling a school-based ovulatory-menstrual health literacy programme for adolescent girls: A quasi-experimental mixed-method protocol. *BMJ Open*, 9(3). <https://doi.org/10.1136/bmjopen-2018-023582>
- Royal College of Nursing. (2022). Promoting Menstrual Wellbeing.
- Ryan, R. M., & Deci, E. L. (1985). Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being Self-Determination Theory. Ryan.
- Rydstrom, K. (2020). Degendering Menstruation: Making Trans Menstruators Matter. *The Palgrave Handbook of Critical Menstruation Studies*, 945–959.
- Saeed, M., & Akhtar, M. (2017). Problems and Issues in Implementation of CPD Framework: Perception of District Teacher Educators and Teacher Educators. In *PJERE* (Vol. 2, Issue 1).
- Sanayeh, E. B., Hallit, S., Azzi, V., Akel, M., & Obeid, S. (2023). Correlates and variation in early maladaptive Schema domains between Day 1 and Day 15 of Menses among Lebanese Female University students. *The Primary Care Companion for CNS Disorders*, 25(3).
- Sangar, M., & Howe, J. (2021). How discourses of sharam (shame) and mental health influence the help-seeking behaviours of British born girls of South Asian heritage. *Educational Psychology in Practice*, 37, 343–361. <https://doi.org/10.1080/02667363.2021.1951676>
- Sawyer, G., Fraser, A., Lawlor, D. A., Sharp, G. C., & Howe, L. D. (2024). Associations of adolescent menstrual symptoms with school absences and educational attainment: analysis of a prospective cohort study. <https://doi.org/10.1101/2024.04.24.24306294>
- Scannell, L., & Gifford, R. (2010). Defining place attachment: A tripartite organizing framework. *Journal of Environmental Psychology*, 30(1), 1–10. <https://doi.org/10.1016/j.jenvp.2009.09.006>
- Schöning, S., Engelien, A., Kugel, H., Schäfer, S., Schiffbauer, H., Zwitterlood, P., Pletziger, E., Beizai, P., Kersting, A., Ohrmann, P., Greb, R. R., Lehmann, W., Heindel, W., Arolt, V., & Konrad, C. (2007). Functional anatomy of visuo-spatial working memory during mental rotation is influenced by sex, menstrual cycle, and sex steroid hormones. *Neuropsychologia*, 45(14), 3203–3214. <https://doi.org/10.1016/j.neuropsychologia.2007.06.011>
- Schroll, J. B., & Lauritsen, M. P. (2022). Premenstrual dysphoric disorder: A controversial new diagnosis. *Acta Obstetrica et Gynecologica Scandinavica*, 101(5), 482–483. <https://doi.org/10.1111/AOGS.14360>

- Scott, D., & Bhaskar, R. (2010). *Education, Epistemology and Critical Realism* (Issue January 2012). Taylor & Francis Group.
- Sebastian, C., Burnett, S., & Blakemore, S. J. (2008). Development of the self-concept during adolescence. *Trends in Cognitive Sciences*, 12(11), 441–446. <https://doi.org/10.1016/J.TICS.2008.07.008>
- Secor-Turner, M., Huseth-Zosel, A., & Ostlund, R. (2022). Menstruation Experiences of Middle and High School Students in the Midwest: A Pilot Study. *Journal of School Nursing*, 38(6), 504–510. <https://doi.org/10.1177/1059840520974234>
- Sharp, G. C., & De Giorgio, L. (2023). Menarche, Menstruation, Menopause and Mental Health (4M): a consortium facilitating interdisciplinary research at the intersection of menstrual and mental health. *Frontiers in Global Women's Health*, 4. <https://doi.org/10.3389/fgwh.2023.1258973>
- Singh, S., & Wassenaar, D. R. (2016). Contextualising the role of the gatekeeper in social science research. *South African Journal of Bioethics and Law*, 9(1), 42–46. <https://doi.org/10.1177/1556264615592386>
- Sommer, M., Caruso, B. A., Sahin, M., Calderon, T., Cavill, S., Mahon, T., & Phillips-Howard, P. A. (2016). A Time for Global Action: Addressing Girls' Menstrual Hygiene Management Needs in Schools. *PLoS Medicine*, 13(2). <https://doi.org/10.1371/journal.pmed.1001962>
- Sommer, M., Robles, P., Comey, D., Yamakoshi, B., Burgers, L., & Cavill, S. (2016). WASH in schools empowers girls' education. 5th Annual Virtual Conference on Menstrual Hygiene Management in Schools, 80–80. <https://healtheducationresources.unesco.org/library/documents/wash-schools-empowers-girls-education-proceedings-5th-annual-virtual-conference>
- Sooki, Z., Shariati, M., Chaman, R., Khosravi, A., Effatpanah, M., & Keramat, A. (2016). The Role of Mother in Informing Girls About Puberty: A Meta-Analysis Study. *Nursing and Midwifery Studies*, Inpress(Inpress). <https://doi.org/10.17795/nmsjournal30360>
- Spear, L. P. (2000). The adolescent brain and age-related behavioral manifestations. *Neuroscience and Biobehavioral Reviews*, 24(4), 417–463. [https://doi.org/10.1016/S0149-7634\(00\)00014-2](https://doi.org/10.1016/S0149-7634(00)00014-2)
- Speer, S. A., Nightingale, D. J., & Cromby, J. (2000). Let's Get Real? Feminism, Constructionism and the Realism/Relativism Debate.
- St-Amand, J., & Smith, J. (2017). Sense of Belonging at School: Defining Attributes, Determinants, and Sustaining Strategies. *IAFOR Journal of Education*, 5(2).
- Steinberg, L. (2014). *Age of opportunity: Lessons from the new science of adolescence*. . Houghton Mifflin Harcourt.
- Steinberg, L., & Morris, A. S. (2001). Adolescent development. *Annual Review of Psychology*, 52(1), 83–110.
- Steinberg, L., & Silverberg, S. B. (1986). The Vicissitudes of Autonomy in Early Adolescence. *Child Development*, 57(4), 841. <https://doi.org/10.2307/1130361>

- Steward, R., Crane, L., Eilish, ., Roy, M., Remington, A., & Pellicano, E. (2018). 'Life is Much More Difficult to Manage During Periods': Autistic Experiences of Menstruation. 48, 4287–4292. <https://doi.org/10.1007/s10803-018-3664-0>
- Sumpter, C., & Torondel, B. (2013). A Systematic Review of the Health and Social Effects of Menstrual Hygiene Management. *PLoS One*, 8(4). <https://doi.org/10.1371/journal.pone.0062004>
- Sutton, M. Y., Anachebe, N. F., Lee, R., & Skanes, H. (2021). Racial and Ethnic Disparities in Reproductive Health Services and Outcomes, 2020. In *Obstetrics and Gynecology* (Vol. 137, Issue 2, pp. 225–233). Lippincott Williams and Wilkins. <https://doi.org/10.1097/AOG.0000000000004224>
- Sychareun, V., Chaleunvong, K., Essink, D. R., Phommavongsa, P., & Durham, J. (2020). Menstruation practice among school and out-of-school adolescent girls, Lao PDR. *Global Health Action*, 13(sup2). <https://doi.org/10.1080/16549716.2020.1785170>
- Tanton, C., Nakuya, K., Kansiime, C., Hytti, L., Torondel, B., Francis, S. C., Namirembe, P., Nakalema, S., Nalugya, R., Musoke, S. N., Neema, S., Ross, D. A., Bonell, C., Seeley, J., & Weiss, H. A. (2021). Menstrual characteristics, menstrual anxiety and school attendance among adolescents in Uganda: a longitudinal study. *BMC Women's Health*, 21(1). <https://doi.org/10.1186/s12905-021-01544-6>
- Terry, G., & Hayfield, N. (2020). Reflexive thematic analysis. In *Handbook of qualitative research in education* (pp. 430–441). Edward Elgar Publishing.
- The British Psychological Society. (2017). Practice Guidelines. www.bps.org.uk
- Thiyagarajan, D. K., Basit, H., & Jeanmonod, R. (2022). Physiology, Menstrual Cycle. *StatPearls*. <https://www.ncbi.nlm.nih.gov/books/NBK500020/>
- Thomas, C., & Melendez-Torres, G. J. (2024). The experiences of menstruation in schools in high income countries: A systematic review and line-of-argument synthesis. *Psychology in the Schools*. <https://doi.org/10.1002/pits.23192>
- Thompson, S. (2018). Achievement at school and socioeconomic background- an educational perspective. *Science of Learning*. <https://doi.org/10.1016/j.rssm.2010.01.002>
- Tollefsen, D. (2014). *Philosophy of Social Science: A New Introduction*. https://books.google.co.uk/books?hl=en&lr=&id=Oi0UDAAQBAJ&oi=fnd&pg=PA85&dq=ontology+in+social+sciences&ots=A2ao6mYon7&sig=QXiEJJ4YXaJWg2GUIUg_VI7LCX0&redir_esc=y#v=onepage&q=ontology%20in%20social%20sciences&f=false
- Tull, K. (2019). Period poverty impact on the economic empowerment of women. <https://opendocs.ids.ac.uk/opendocs/handle/20.500.12413/14348>
- UK Clinical Research Collaboration 2015. (2014). UK Health Research Analysis 2014. Health Research Classification System. <https://hrcsonline.net/reports/analysis-reports/uk-health-research-analysis-2014/>
- Ungar, M., Russell, P., & Connelly, G. (2014). School-Based Interventions to Enhance the Resilience of Students. *Journal of Educational and Developmental Psychology*, 4(1). <https://doi.org/10.5539/jedp.v4n1p66>

- UNICEF. (2023). Menstrual hygiene | UNICEF. <https://www.unicef.org/wash/menstrual-hygiene>
- United Nations. (2015). Transforming our world: the 2030 Agenda for Sustainable Development.
- United Nations Population Fund. (2022, May). Menstruation and Human Rights - Frequently Asked Questions. Resources. <https://www.unfpa.org/menstruationfaq>
- United Nations Population Fund. (2024, May 28). Menstrual Hygiene Day. United Nations Population Fund. <https://www.unfpa.org/events/menstrual-hygiene-day#:~:text=Menstrual%20health%20is%20a%20human,part%20of%20this%20fundamental%20freedom.>
- Unsal, A., Ayranci, U., Tozun, M., Arslan, G., & Calik, E. (2010). Prevalence of dysmenorrhea and its effect on quality of life among a group of female university students. <https://Mc.Manuscriptcentral.Com/Ujms>, 115(2), 138–145. <https://doi.org/10.3109/03009730903457218>
- Ünsalver, B. Ö. , U. A. , & S. G. H. (2017). Early maladaptive schema domains in the first day of menses and 15 days after the menses in healthy volunteers. *European Psychiatry*, 41(1), 909–910.
- Ussher, J. M., & Perz, J. (2020). Resisting the mantle of the monstrous feminine: Women's construction and experience of premenstrual embodiment. *The Palgrave Handbook of Critical Menstruation Studies*, 215–231. https://library.oapen.org/bitstream/handle/20.500.12657/41299/2020_Book_ThePalgraveHandbookOfCriticalM.pdf?sequence=1#page=252
- Utomo, E., Hidayat, O. S., Wicaksono, J. W., & Arif, A. (2020). The Misconception of Teachers' and Students' Knowledge Regarding Puberty in Higher Elementary Education. *KnE Social Sciences*, 135–141. <https://doi.org/10.18502/kss.v4i14.7865>
- Van Iersel, K. C., Kiesner, J., Pastore, M., & Scholte, R. H. J. (2016). The impact of menstrual cycle-related physical symptoms on daily activities and psychological wellness among adolescent girls. <https://doi.org/10.1016/j.adolescence.2016.03.007>
- van Lonkhuijzen, R. M., Garcia, F. K., & Wagemakers, A. (2023). The Stigma Surrounding Menstruation: Attitudes and Practices Regarding Menstruation and Sexual Activity During Menstruation. *Women's Reproductive Health*, 10(3), 364–384. <https://doi.org/10.1080/23293691.2022.2124041>
- Vandercook, T., York, J., & Forest, M. (1989). The McGill action planning system (MAPS): A strategy for building the vision. *Journal of the Association for Persons with Severe Handicaps*, 14(3), 205–215.
- Vanleeuwen, C., & Torondel, B. (2018). Improving menstrual hygiene management in emergency contexts: Literature review of current perspectives. In *International Journal of Women's Health* (Vol. 10, pp. 169–186). Dove Medical Press Ltd. <https://doi.org/10.2147/IJWH.S135587>
- Vichnin, M., Freeman, E. W., Lin, H., Hillman, J., & Bui, S. (2006). Premenstrual Syndrome (PMS) in Adolescents: Severity and Impairment. *Journal of Pediatric and Adolescent Gynecology*, 19(6), 397–402. <https://doi.org/10.1016/j.jpog.2006.06.015>

- Voyer, D., & Voyer, S. (2014). Gender differences in scholastic achievement: A meta-analysis. *Psychological Bulletin*, 140(4), 1174–1204. <https://doi.org/10.1037/a0036620>
- Werner, E. E. (1993). Risk, resilience, and recovery: Perspectives from the Kauai Longitudinal Study. *Development and Psychopathology*, 5(4), 503–515.
- Werner, E. E. (2000). Protective factors and individual resilience. In *Handbook of early childhood intervention* (Vol. 2, pp. 115–132). Cambridge University Press.
- White, C. P., Hitchcock, C. L., Vigna, Y. M., & Prior, J. C. (2011). Fluid Retention over the Menstrual Cycle: 1-Year Data from the Prospective Ovulation Cohort. *Obstetrics and Gynecology International*, 1–7. <https://doi.org/10.1155/2011/138451>
- White, L. R. (2013). The Function of Ethnicity, Income Level, and Menstrual Taboos in Postmenarcheal Adolescents' Understanding of Menarche and Menstruation. *Sex Roles*, 68(1–2), 65–76. <https://doi.org/10.1007/s11199-012-0166-y>
- Wigginton, B., & Lafrance, M. N. (2019). Learning critical feminist research: A brief introduction to feminist epistemologies and methodologies. *Feminism and Psychology*. <https://doi.org/10.1177/0959353519866058>
- Wigmore-Sykes, M., Ferris, M., & Singh, S. (2021). Contemporary beliefs surrounding the menarche: a pilot study of adolescent girls at a school in middle England. *Education for Primary Care*, 32(1), 59–60. <https://orcid.org/0000-0002-7177-5490>;
- Wilkinson, S. (1988). The role of reflexivity in feminist psychology. *Women's Studies International Forum*, 11(5), 493–502. [https://doi.org/10.1016/0277-5395\(88\)90024-6](https://doi.org/10.1016/0277-5395(88)90024-6)
- Williams, D. R., Priest, N., & Anderson, N. B. (2016). Understanding associations among race, socioeconomic status, and health: Patterns and prospects. In *Health Psychology* (Vol. 35, Issue 4, pp. 407–411). American Psychological Association Inc. <https://doi.org/10.1037/hea0000242>
- Willig, C., & Rogers, W. S. (2017). *The SAGE handbook of qualitative research in psychology*. Sage.
- Wilson, G. (2023). Research made simple: An introduction to feminist research. *British Medical Journal*, 26(3), 87–88. <https://doi.org/10.1136/ebnurs-2023-103749>
- Wilson Heenan, I., De Paor, D., Lafferty, N., & Mannix McNamara, P. (2023). The Impact of Transformational School Leadership on School Staff and School Culture in Primary Schools—A Systematic Review of International Literature. In *Societies* (Vol. 13, Issue 6). MDPI. <https://doi.org/10.3390/soc13060133>
- Winkler, I., Unnithan, M., & Aasgaard Jansen, K. (2023, May). Menstruation Matters for the Realization of Human Rights. Oxford Human Rights Hub. <https://ohrh.law.ox.ac.uk/menstruation-matters-for-the-realization-of-human-rights/#:~:text=It%20is%20for%20everyone%20who, stigma%20and%20its%20insidious%20impacts.>
- World Health Organisation. (2021, November). Mental Health of Adolescence . World Health Organisation. <https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health>
- World Health Organisation. (2023a). Health and Well-being. World Health Organisation. <https://www.who.int/data/gho/data/major-themes/health-and-well-being>

- World Health Organisation. (2023b, April). Adolescent and young adult health . World Health Organisation. <https://www.who.int/news-room/fact-sheets/detail/adolescents-health-risks-and-solutions>
- World Health Organization. (2022, June). WHO statement on menstrual health and rights. <https://www.who.int/news/item/22-06-2022-who-statement-on-menstrual-health-and-rights>
- World Health Organization. (2023, March 24). Endometriosis. World Health Organization. <https://www.who.int/news-room/fact-sheets/detail/endometriosis>
- Yardley, L. (2000). Dilemmas in qualitative health research. *Psychology and Health*, 15(2), 215–228. <https://doi.org/10.1080/08870440008400302>
- Yardley, L. (2015). Demonstrating validity in qualitative psychology. In J. A. Smith (Ed.), *Qualitative psychology : a practical guide to research methods* (3rd ed.). SAGE.
- Zimmerman, M. (2013). Resiliency Theory: A Strengths-Based Approach to Research and Practice for Adolescent Health. *Health Education and Behavior*, 40(4), 381–383. <https://doi.org/10.1177/1090198113493782>

Appendices

Appendix 1: Key information regarding the systematic literature review titled 'Adolescents' perceived experiences of menstruation in the United Kingdom: A systematic review.'

Inclusion and exclusion criteria (Nicol, 2023 p. 46)

Inclusion criteria	Exclusion criteria
Conducted in the United Kingdom.	Had an age range of >18 years and did not separate adolescent and adult data.
Published within the last three years (2020- 2023).	Reported on secondary, qualitative research (i.e. the perception of adolescent experiences from others).
Participants were reported as girls, aged 10-19.	Did not include the full study report.
Articles reported on primary, qualitative research.	Magazine, editorial, legislative, or news documents.
Published in English.	Focused on non-bleeding experiences e.g. concerning pregnancy, menopause and broadly adolescent sexual and reproductive health.
Peer reviewed.	

Research articles included within the systematic literature review

Study	Population	UK Location
Harvey et al (2020)	Adolescent girls in years 9 and 10 from three secondary schools.	Southwest England and Guernsey, Channel Islands
Hardy-Johnson (2020)	Secondary school students from one secondary school.	Southampton, England
Briggs (2021)	Secondary school student representatives.	Stoke-on-Trent

Appendix 2: Appropriateness of reflexive thematic analysis (RTA)

Key elements of RTA	Description based on Braun and Clarke (2022).	Relevance to the current study
Qualitative framework	RTA is a method to analyse qualitative data, aiming to explore and understand research questions that focus on people's experiences and perspectives.	RTA is well-suited for explorative, experiential research, as it prioritises the participants' voices and brings their lived experiences and perspectives to the forefront of the research. Since my research aims to explore adolescent girls' perceptions of their menstrual experiences in education, RTA's focus on capturing and conveying participants' meaning making through their use of language aligns with this study's objectives. Additionally, RTA's underlying assumption that language accurately communicates meaning, is consistent with my critical realist positioning (as reported in Chapter 3 and Section 5.2.3).
Participant sampling	RTA does not have specific requirements for sampling.	While this study's sample is homogeneous in that all participants share key characteristics such as attending the same school, identifying as cis-gender girls, and menstruating, there is also a level of heterogeneity. This is due to differences in participant ages, the timing of when they began menstruating (voluntarily and naturally shared by participants during pre-interview discussions), and ethnicity (for one participant). RTA allows for the exploration of both homogeneous and heterogeneous samples.
Reflexivity	Reflexivity involves transparently examining and acknowledging my own role, biases, and influence during the research process. Consideration and acknowledgement that data analysis is influenced by the researcher's perspectives.	Reflexivity is important for this study because: • I am positioned as an insider researcher, as I have my own experiences of the menstrual cycle and associated attitudes and beliefs (as reported in Section 1.2 and 3.9.2). • RTA aligns well with a reflective feminist approach (described in Section 3.9.1), as it acknowledges the role and positionality of the researcher within the entirety of the research process. Reflections include: ▪ The historical context of menstrual attitudes. ▪ The aim of promoting the voices of YP in potentially marginalised contexts such as low socio-economic areas. ▪ Reflections on how my positioning within the educational psychology field has shaped my perspective, including how theoretical orientations, such as the use of theories to interpret findings and a focus on anti-oppressive

Key elements of RTA	Description based on Braun and Clarke (2022).	Relevance to the current study
		practices stemming from my training as a TEP, have influenced my approach. • As I have conducted prior research within this topic area, for example the SLR (Nicol, 2023) and narrative literature review in Chapter 2, I must consider how prior knowledge of existing attitudes and concepts may impact on research processes. • Researcher subjectivity needs to be embraced by explicitly stating my positionality and perspectives and considering how this impacts the way in which the study is carried out, throughout the study.
Orientation to the data	Orientation to the data can involve an inductive approach, deductive approach or the use of both.	While I will strive to adopt an inductive approach, allowing the data to guide the analysis and theme development, I recognise that my analysis will inherently involve both inductive and deductive elements. Having conducted a literature review and a previous SLR on shared themes in adolescent experiences (Nicol, 2023), I acknowledge that my prior knowledge may influence my interpretation of the data and the assumptions I make during coding. As such, it will be important to engage in reflexive processes to have an awareness of my orientation to the data and balance the insights that emerge from the data with an awareness of existing literature.
Focus of meaning	Within RTA, researchers can use semantic or latent coding.	A semantic approach aligns with my critical realist positioning, allowing me to explore surface-level meanings and generate themes that closely reflect participants' articulated experiences. This approach is important for producing a descriptive and authentic account of shared experiences. Semantic coding is especially valuable in this study, as it enables me to elevate the voices of adolescent girls in a historically under-researched and stigmatised area, ensuring their perspectives are accurately represented and heard.
Development of shared themes	RTA supports the development of themes, which represent patterns of shared meaning that	The focus of this study is to develop overarching, shared themes of menstrual experiences in relation to each of the research questions. The focus on shared themes is because there is little research and understanding of adolescent experiences generally (Nicol, 2023), and no known research into the school experiences of YP in low socio-economic areas. Therefore, gathering shared meaning provides pragmatic value from the research, to gain

Key elements of RTA	Description based on Braun and Clarke (2022).	Relevance to the current study
	are organised around a central concept.	an understanding of shared experiences. This is likely impacted by my applied educational psychology background, whereby implications of research and theory are important considerations.

Appendix 3: Evaluation of alternative methodologies

Methodology	Interpretive Phenomenological Analysis (IPA)	Critical Realist Thematic Analysis	Grounded Theory	Discourse Analysis
Characteristics	Focus on exploring participants lived experiences. Explores the subjective experiences of individuals. It seeks to uncover the rich, nuanced meanings people attribute to their experiences.	Focus on exploring shared themes within the data. Emphasis on exploring causal mechanisms that underpin identified themes (not only exploring <i>what</i> is happening, but also <i>why</i> it might be happening). Encourages the integration of theory into analysis.	Systematic and inductive approach to generating theory from data.	Focus on understanding the participants use of language.

Methodology	Interpretive Phenomenological Analysis (IPA)	Critical Realist Thematic Analysis	Grounded Theory	Discourse Analysis
Strengths in relation to this research	Focus on understanding and interpreting the lived experiences of individuals from their own perspective. Emphasises the importance of understanding the context in which experiences occur.	Aims to identify underlying structures and mechanisms from patterns - which will be useful for thinking about how my research can provide action planning for schools. Aligns well with CR positionality.	Would support the development of theories relating to adolescent girls' experiences of menstruation within the context of education – currently an area with little existing knowledge.	Analysing how participants use their language to construct meaning regarding their menstrual experiences and how this shapes their social reality could elicit deeper insights into their experiences and the impact of their sociocultural context within low socio-economic areas.

Methodology	Interpretive Phenomenological Analysis (IPA)	Critical Realist Thematic Analysis	Grounded Theory	Discourse Analysis
Limitations in relation to this research	Seeks to capture the essence of individual experiences. However, the current research aims to develop a deeper insight into the shared experiences of adolescent girls in the UK with the aim of providing implications and actions for a range of stakeholders (e.g. education staff and educational psychology). Suitable for homogeneous samples.	Whilst there is a level of reflexivity involved, it is not to the same extent as Reflexive Thematic Analysis as the emphasis is more on understanding the underlying structures and mechanisms that contribute to observed phenomena – I think as a menstruating cis-gendered person myself; reflexivity is important within this study. Critical realism recognises the importance of context (education/ low socio-economic area) but is more concerned with identifying and understanding the underlying causal	This research is novel, and so it aims to gather and understand adolescent experiences as a first step, rather than develop theories. Grounded theory is not an appropriate analysis for a small sample size. The data would not provide enough diversity and richness to identify patterns and reach data saturation. This would impact the development of comprehensive and well-grounded theories.	The research aims seek to develop an understanding of adolescent girls' <i>perceptions of their menstrual experiences</i> rather than explore their choice of language and the impact of this.

Methodology	Interpretive Phenomenological Analysis (IPA)	Critical Realist Thematic Analysis	Grounded Theory	Discourse Analysis
		mechanisms that transcend specific contexts. It aims to uncover the structures and processes that influence observable events – However, my research aims are concerned with understanding adolescent experiences in relation to education, instead of identifying the structures and processes influencing these.		

Appendix 4: Recruitment flyer

**UNIVERSITY OF
BIRMINGHAM**

Participants wanted



Are you a cisgender female aged 11-19?

Have you had your period for at least 1 year?

You are invited to take part in a research study that explores your menstrual cycle experiences and their impact on your school life and learning.

To find out more, you are invited to come to:

Information session for young people: [insert date, time and venue]
Information session for parents: [insert date, time and venue]

Please contact Madalaine Nicol for more details at
[redacted]



Appendix 5: Information and consent forms

Information Sheet for Participants



UNIVERSITY OF
BIRMINGHAM

An exploration of adolescent girls' experiences of menstruation in relation to education experience and engagement

Hello, my name is Madalaine Nicol, and I am studying for a doctorate in educational psychology.

I am doing a study of how adolescent girls' experience menstruation and how this can impact on being at school and on learning.

When girls get their first period, they start 'menstruating' (also known as our 'cycle'). During our cycle, our hormones give messages to our body. These messages change throughout the month, and they can impact how we feel.

My research hopes to better understand girls' experiences at school, because at the moment there is little research on this in the UK. I hope I can change this and help schools to understand how to help girls to manage their cycles at school.

You are invited to take part in this research if you:

- Identify as a cisgender female (you were born female and identify as female).
- Attend a mainstream secondary school or post-16 provision.
- Have had your first period.

If too many people want to join the study, then I will give the people who cannot join a sheet at the end of the study about what the study found out and invite them to a meeting to explain what the research finds out.

What does taking part involve?

If you consent to take part, you would be interviewed by me, for no more than 1 hour. Depending on you, interviews will either take place in your education setting or at [insert local authority educational services office address]. I hope to talk about how menstruation affects your daily life experiences at school and your learning. Before we have a chat, I will send you the interview topics. You would not have to answer any questions you did not want to.

Who can see what I say in the interview?

No names will be used in the data, meaning you (or others) could not be identified. Any reports will be anonymous, meaning no one will be able to identify you in the research or guidance.

Our discussion will be confidential. However, if, for any reason, I become seriously concerned about your own or others' safety and/or well-being, I have a responsibility to pass on this information to the designated safeguarding lead, to decide how to offer support. I would talk to you about this first.

Can I change my mind?



Yes. If you agree to take part, it is completely voluntary, and you can withdraw at any time without giving a reason up until 2 weeks after the interview. Withdrawing yourself from the study means that all your information will be destroyed.

What happens after the interview.

Once the study is finished, there will be a chance to find out about what we learned in this study. You could choose to join a meeting or have a sheet telling you about what we found.

What will happen to my information?

Your name will not be used in the study. Any information you give as part of the research project will be stored on a secure university data store (a very safe place where no one else can see it) and will only be accessed by people involved in the project. The University of Birmingham will store your information for 10 years and then it will be destroyed. Your information will be processed following strict laws to keep your information safe, these laws are the Data Protection Act (1998) and General Data Protection Regulations (2018). Anonymised reports of the research (meaning no one will be able to identify you) might be published in academic and professional publications.

What if I'm feeling worried about talking about my cycle?

Some people might find talking about menstruation to be sensitive, which some young people may find upsetting. So, to help with this:

- You will receive the topics/questions beforehand, to help think anything through.
- I am trained to be sensitive in how I listen to people.
- You can leave the study, before or during the interview, without explaining.
- After the interview there will be time to talk through any worries you might have and if needed, I can share some places you can go to for support.

How do I take part in the study?

If you would like to take part in the study, please complete the attached consent form and either email or hand this to [insert name of the school's Special Educational Needs Coordinator], Special Educational Needs Coordinator. You will also need to send a signed consent form from your parent/guardian if you are under the age of 18. If you have any questions before signing up or whilst taking part in the study, please contact Madalaine Nicol using the email in the table below. Once I have received your consent forms, I will give your parent/guardian a call to introduce myself to you and organise your interview. If you are over the age of 18, I will call you directly on the contact number you provide.

Name	Who are they?	Contact details
Madalaine Nicol	Researcher	
Dr Anthea Gulliford	Madalaine's research supervisor	
Dr Katherine Callicott	Madalaine's research supervisor	

What should I do if I have any questions?

If there is anything you want to know about the study before you decide if you want to take part, please email me using

Thank you,
Madalaine

Consent Form for Participants



An exploration of adolescent girls' experiences of menstruation in relation to education experience and engagement

Participant Consent Form

Date:	Name:
Date of birth:	Ethnicity:
Contact number (if over the age of 18):	
Name of educational setting:	

I _____ would like to take part in the study looking at adolescent girls' experiences of menstruation in relation to educational experiences and engagement. This study is being carried out by Madalaine Nicol, Trainee Educational Psychologist, as part of a Professional Doctorate in Educational Psychology at the University of Birmingham.

Please read the below consent form and for each statement you agree with, write your initials in the green box. If you are unsure, please contact Madalaine Nicol.

	Initials
I understand what the project is about, what I would be expected to do and what will happen to the information I give.	
I agree that I have had an opportunity to ask any questions I have had, and I feel my questions have been answered.	
I confirm that I had my first period.	
I confirm I am between 11-19 years old and at either a mainstream secondary school or in post-16 education.	
I understand that I can withdraw (leave) the study at any point without giving a reason, up until 2 weeks after my interview.	
I understand that the information I give will be shared with other researchers in the study (named in the information sheet).	
I agree to being audio recorded and I understand that the recordings will only be heard by Madalaine Nicol and her research supervisors.	
I agree to take part in this study.	

Participant

Signature of participant:

Date:

Name of participant (in block capitals):

Researcher only

I have explained the study to the above participant, and they have agreed to take part.

Signature of researcher:

Date:

(Interview day only) - Participant Name:

Signature:

Date:

What do I do with my completed consent form?

Please hand this or send to [insert name and details of school link e.g. SENDCo]

Information Sheet for Parent/Guardian



An exploration of adolescent girls' experiences of menstruation in relation to education experience and engagement

Hello, my name is Madalaine Nicol and I am researching the menstruation experiences of adolescent girls and the impact these have on being at school and your learning.

When girls get their first period, they start 'menstruating' (also known as our 'cycle'). During our cycle, our hormones give messages to our body. These messages change throughout the month, and they can impact how we feel.

My research hopes to better understand girls' experiences at school, because at the moment there is little research on this in the UK. I hope that through this research I can change this and inform the support that helps girls to manage their menstruation at school.

Your child has been invited to take part in this research if they:

- Identify as a cisgender female (born female and identify as female).
- Attend a mainstream secondary school or post-16 provision.
- Had their first period.

If too many people want to join the study and I cannot see everyone, then I will give your child a sheet at the end of the study telling them what the study found out. You and your child will also be invited to a meeting where I will share what found out from the research.

If your child chooses to take part, they would be interviewed by me, Madalaine for 1 hour. Interviews will either take place in your child's education setting or at [insert local authority educational services office address] (whichever your child prefers). I hope to talk with your child about how menstruation affects their daily life experiences at school and their learning. Before we have the interview, I will send your child the interview topics. Your child would not have to answer any questions they did not want to and can leave the study at any point without giving a reason or any negative consequences.

With your, and your child's permission I will be recording the interview (only the sound will be recorded), and all the information gathered will be stored securely. I will use the information gathered only for research purposes.

No names will be used in the data, meaning your child (or others) could not be identified. Any reports will be anonymous, meaning no one will be able to identify your child in the research or guidance.

Our discussion will be confidential. However, if, for any reason, I become seriously concerned about your child's or others' safety and/or well-being, I have a responsibility to pass on this information to the designated safeguarding lead, to decide how to offer support. I would talk to your child about this first.

After your child's interview, there will be a chance to find out about what we learned in this study. Both yourself, and your child could choose to join a meeting or have a sheet telling you about what we found.



If you agree for your child to take part, it is completely voluntary, and your child can withdraw at any time without giving a reason up until 2 weeks after the interview. Withdrawing from the study means that all your child's information will be destroyed.

What happens to the information my child gives?

Any information given as part of the research project will be stored on a secure university data store (a very safe place where no one else can see it) and will only be accessed by people involved in the project. The University of Birmingham will store your child's information for 10 years and then it will be destroyed. Information will be processed following strict laws to keep your child's information safe, these laws are the Data Protection Act (1998) and General Data Protection Regulations (2018). Anonymised reports of the research (meaning no one will be able to identify your child) might be published in academic and professional publications.

What if my child feels worried about talking about their cycle?

Some people might find talking about menstruation to be sensitive, which some young people may find upsetting. So, to help with this:

- Your child will receive the topics/questions beforehand, to help think anything through.
- I am trained to be sensitive in how I listen to people.
- Your child can leave the study, before or during the interview, without explaining.
- After the interview there will be time to talk through any worries your child might have and if needed, I can share some places they can go to for support.

How can I support my child to take part in the study?

If your child would like to take part in the study, please complete the attached consent form and either email or hand this to [insert name of the school's Special Educational Needs Coordinator], Special Educational Needs Coordinator along with your child's completed consent form. If you have any questions before signing up or whilst taking part in the study, please contact Madalaine Nicol using the email in the table below. Once I have received your consent forms, I will call you on the number you provide to introduce myself to your child and organise their interview.

Name	Who are they?	Contact details
Madalaine Nicol	Researcher	
Dr Anthea Gulliford	Madalaine's research supervisor	
Dr Katherine Callicott	Madalaine's research supervisor	

Thank you,

Madalaine

Version 3
09.02.2024

Consent Form for Parent/Guardian



UNIVERSITY OF
BIRMINGHAM

An exploration of adolescent girls' experiences of menstruation in relation to education experience and engagement

Parent/Guardian Consent Form

Date:	Name:
Child's name:	
Contact number:	
Name of educational setting:	

I _____ agree for my child to take part in this study looking at adolescent girls' experiences of menstruation in relation to educational experiences and engagement. This study is being carried out by Madalaine Nicol, Trainee Educational Psychologist, as part of a Professional Doctorate in Educational Psychology at the University of Birmingham.

Please read the below consent form and for each statement you agree with, write your initials in the green box. If you are unsure, please contact Madalaine Nicol.

	Initials
I confirm I have parental rights for my child.	
I understand what the project is about, what my child would be expected to do and what would happen to the information my child gave.	
I agree that I have had an opportunity to ask any questions I have had, and I feel my questions have been answered.	
I confirm my child is between 11-19 years old and at either a mainstream secondary school or in post-16 education.	
I understand that my child is free to withdraw (leave) the study at any point without giving a reason, up until 2 weeks after their interview.	
I understand that the information my child gives will be shared with other researchers in the study (named in the information sheet).	
I agree for my child to be audio recorded and I understand that the recordings will only be heard by Madalaine Nicol and her research supervisors.	
I agree for my child to take part in this study.	

Parent/guardian of participant

Signature of parent/guardian:

Date:

Name of parent/guardian (in block capitals):

Researcher only

I have explained the study to the above parent, and they have agreed for their child to take part.

Signature of researcher:

Date:

What do I do with my completed consent form?

Please hand this or send to [insert name and details of school link e.g. SENDCo]

Version 3
09.02.2024

Appendix 6: Interview schedule

This interview schedule has been developed as a framework for discussion. Individual questions may differ depending on discussions with each participant. The interview questions will be attached to the information sheet to support valid consent, participant preparation and reduce anxiety around the interview process.

“Thank you so much for taking the time to participate in this interview. Before we begin, I would just like to remind you”:

- Your participation in this research is voluntary.
- You have the right to withdraw at any time during this interview.
- You have the right to withdraw your data for up to 14 days post interview (not including today).
- You can stop this interview for a break at any time (agree a way in which the participant would like to ask for a break).

Issue/topic	Possible questions	Probes
Introductions and rapport building	• Participants will be thanked for agreeing to meet with me. • I will engage in neutral, rapport-building conversation topics (such as asking participants how their day has been so far and checking the time they have available). • Revisit information sheet, confidentiality, and data protection. • If they still agree to participate, their signature will be sought on the consent form.	
Warm up/ discussion about periods	• What does the term menstruation mean to you? • Five words/phrases to describe periods (either written on post-its or shared verbally). • Why did you pick those words?	• Support understanding of what menstruation is if needed.
School experiences	• What is it like for you, having your menstrual cycle at school? • How does your menstrual cycle make you feel? • Do people talk about menstrual cycles at your school? What do they think?	• Tell me more about that. • How might you think/feel? • When do you face these challenges? • As you moved through school, into different year groups, did this change?

Issue/topic	Possible questions	Probes
	• What's it like experiencing your cycle at school? (before /during your period) What experiences have you had? • Can we talk about anything you find challenging or difficult about menstruating/ having your period in school?	• What was that like? • Can you provide some examples?
Engagement in learning	• Can we talk about how your menstrual cycle might impact your learning? • I wonder, are there times in your monthly cycle when learning and lessons are easier to engage in? • Are there times in your monthly cycle when engaging in lessons is trickier/harder? (e.g. listening to the teacher, doing work, doing homework) • How does your cycle impact the kinds of lessons you engage in? (are some lessons impacted more than others?) • What are the things you want staff to know are important for your learning throughout your cycle? • How does your monthly cycle impact your motivation to go to school?	• When might that be in your cycle? (before, during, after period?) • Does what you engage in at school change throughout the month? • Has this been the case throughout school? • Is there anything you avoid/do more of? • Can you tell me more? • How? • What was that like? • How did it make you feel?
School support and provision, in relation to: Understanding their menstruation experiences	• Can we talk about the part school might have played in how you understand your cycle? • How do you feel school helped you to make sense of your menstruation experiences? • Is there anything you would like to see change about the way menstruation is taught? Is there anything you would like to know about your cycle?	• When did you first learn about menstruation and who taught you about it? • If you were to receive support, what would you want it to look like? • Who would you have liked to have talked to you about periods? • How was that experience for you? • Can you tell me more about that? • Can you expand on that?
School support and provision, in relation to:	• Can we talk about what school does that is helpful when you are feeling the effects of your cycle?	• What does that support look like? • How was that experience for you?

Issue/topic	Possible questions	Probes
How their menstruation needs are addressed	• What are the things you want staff to know are important to help you when you are finding things tricky during your cycle? • What are the ways in which school helps you during your cycle? • What are the ways in which things could be different or better? • Are there period products available at school? How do you access them? How does this work for you?	• What might the ideal school do to support someone that's struggling during their cycle?
Debrief	• Participants will be given the opportunity to tell me anything else that they feel is relevant. • They will then be thanked for taking part, and asked the following questions: • How was this interview experience for you? • How have you been left feeling now? • Participants will be reminded of their anonymity and the right to withdraw within 14 days and of the contact details should they have any questions or concerns.	

Appendix 7: Ethical approval for the study



UNIVERSITY OF
BIRMINGHAM

Dear Dr Anthea Gulliford and Madalaine Nicol

RE: An exploration of adolescent girls' experiences of menstruation in relation to education experience and engagement.

Application for Ethical Amendment: ERN_1118-Feb2024

Thank you for your application for amendment to the above project, which was reviewed by the Humanities and Social Sciences committee.

On behalf of the Committee, I confirm that this amendment has full ethical approval.

Any adverse events occurring during the study should be promptly brought to the Committee's attention by the Principal Investigator and may necessitate further ethical review.

Please ensure that the relevant requirements within the University's Code of Practice for Research and the information and guidance provided on the University's ethics webpages (available at <https://intranet.birmingham.ac.uk/finance/accounting/Research-Support-Group/Research-Ethics/Links-and-Resources.aspx>) are adhered to.

Please be aware that whilst Health and Safety (H&S) issues may be considered during the ethical review process, you are still required to follow the University's guidance on H&S and to ensure that H&S risk assessments have been carried out as appropriate. For further information about this, please contact your School H&S representative or the University's H&S Unit at healthandsafety@contacts.bham.ac.uk.

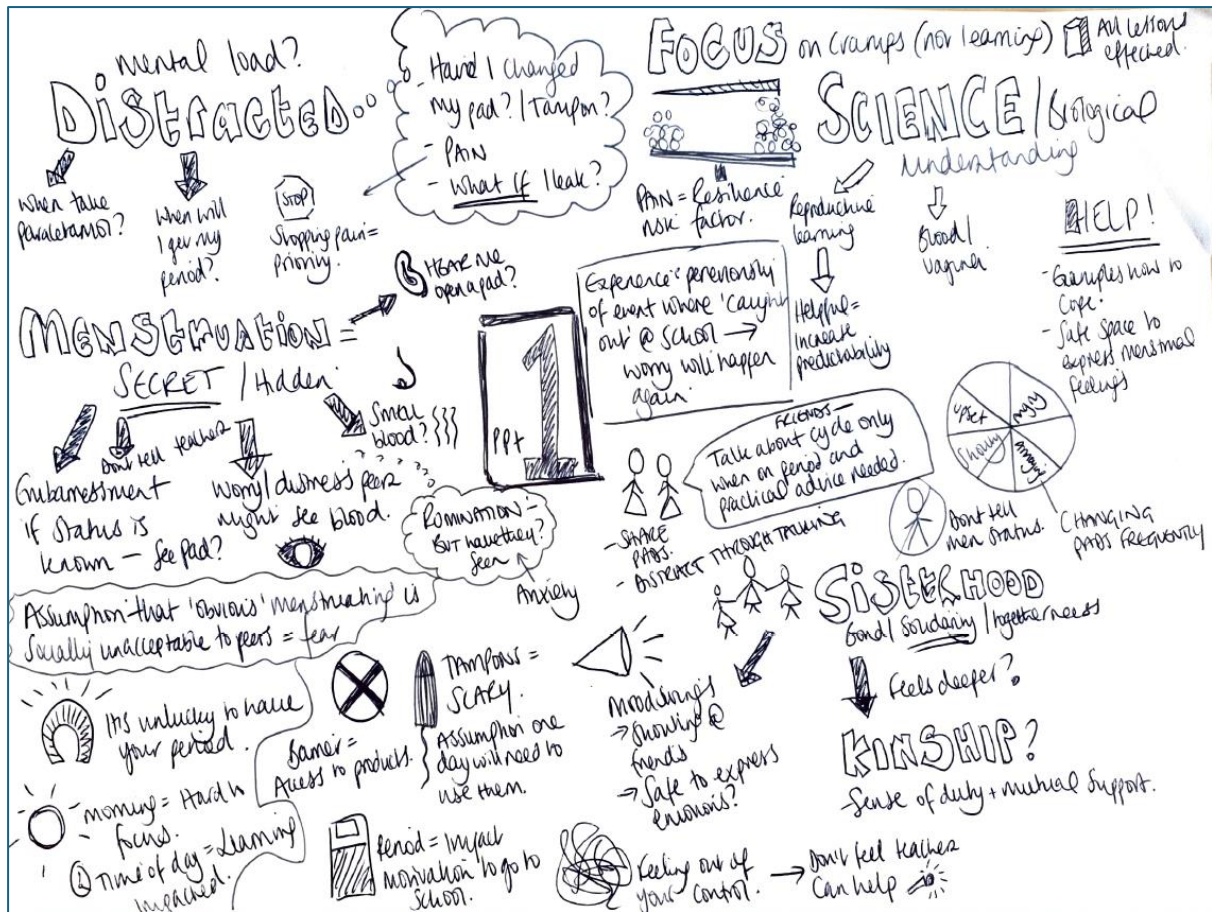
Kind regards,

The Co-Chairs of the Humanities and Social Sciences Committee

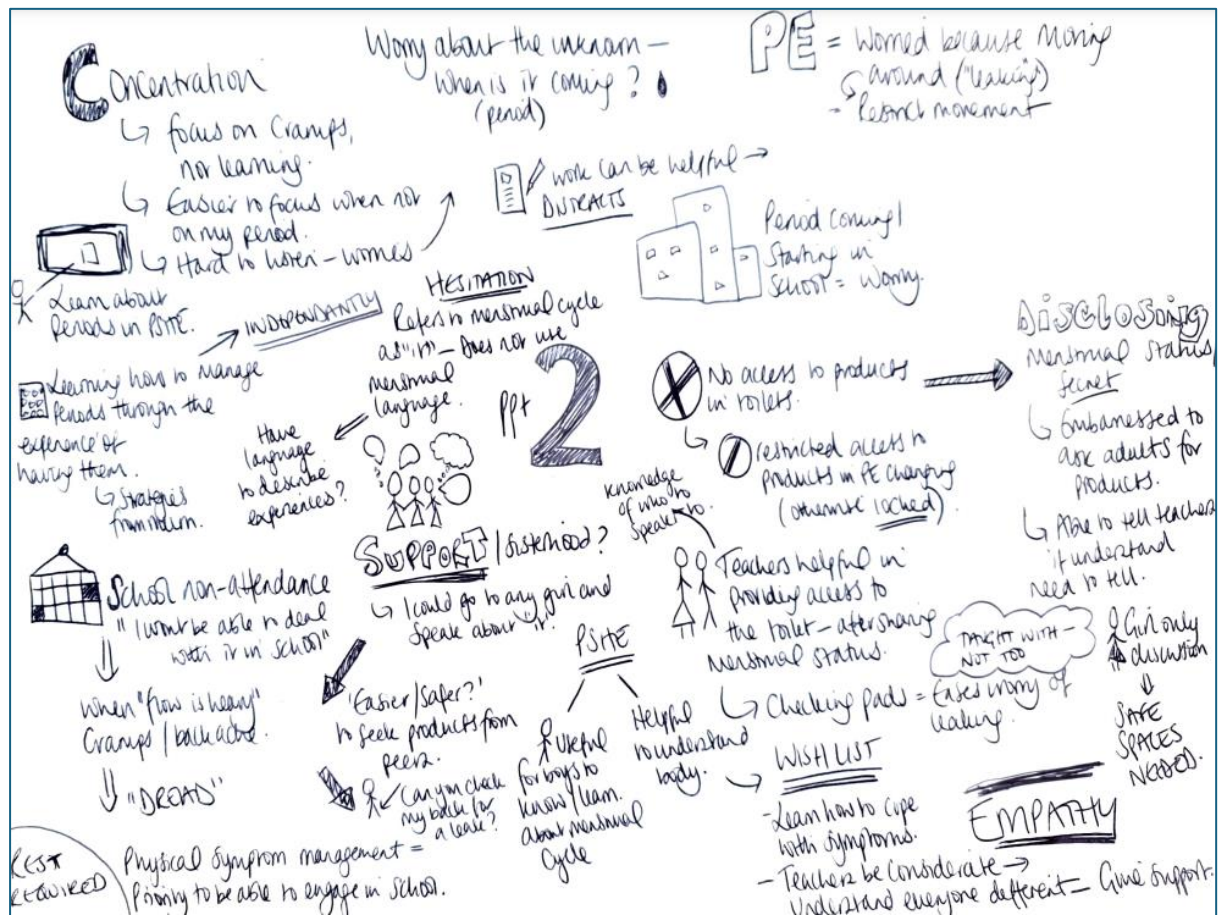
E-mail: ethics-queries@contacts.bham.ac.uk

Appendix 8: Familiarisation (initial ideas)

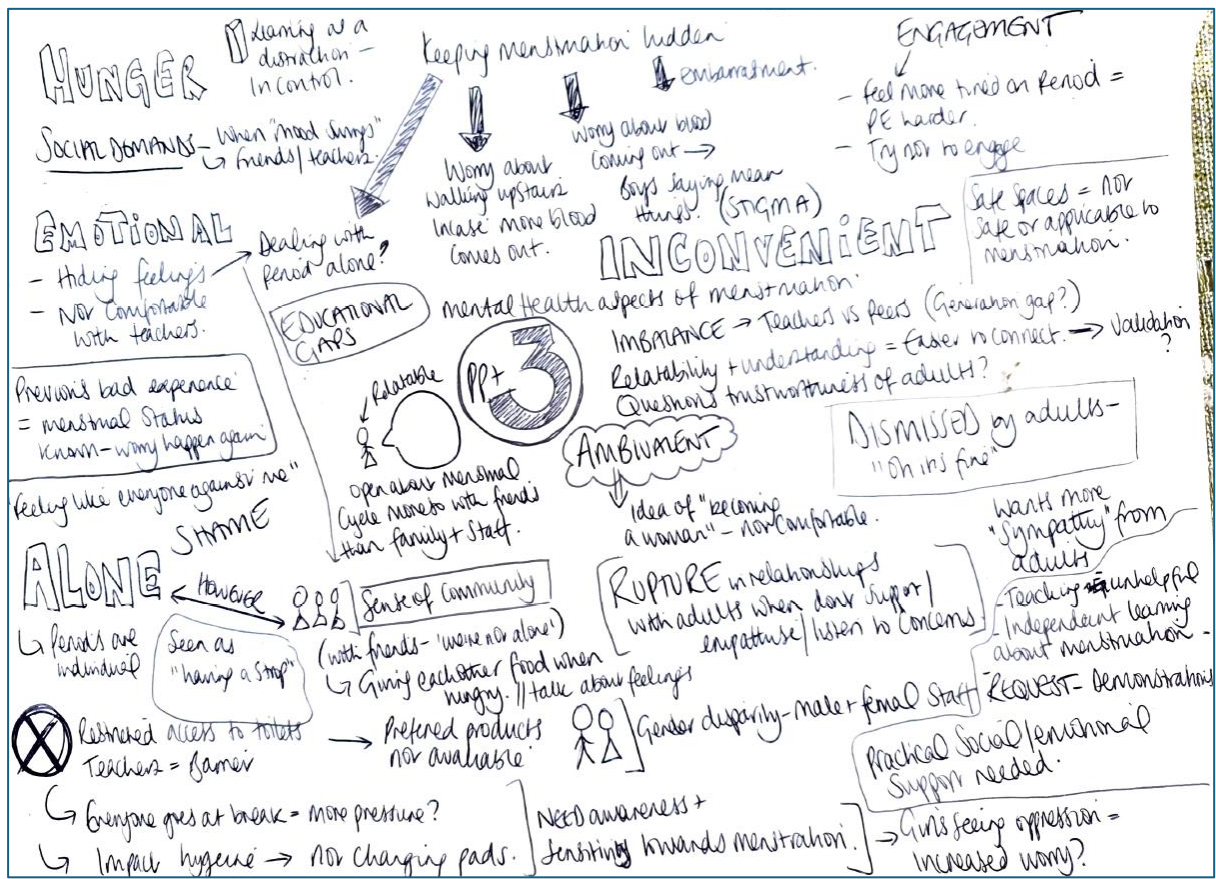
Familiarisation (Initial Ideas) – Participant 1



Familiarisation (Initial Ideas) – Participant 2



Familiarisation (Initial Ideas) – Participant 3



[illegible]

Appendix 9: Initial codes – Systematic coding

Datasets were worked through systematically and coded to capture my 'analytic take' on the data. NVivo 12 software facilitated the generation of initial codes (see below).

Name	Files	References
Anxiety around asking office staff for period products (barrier)	1	2
Avoidance of changing menstrual products due to barrier to facilities	1	1
Belief menstrual status must be hidden	1	2
Cognitive exhaustion	1	1
Concern and worry that other people can see your period	1	1
Concern that crying may be perceived as attention seeking	1	1
Concern that other people can smell your period	1	1
Concerns around leaking blood	0	0
Avoidance of movement to reduce blood flow during menstruation	1	1
Distracting thoughts about period management	1	2
Distress that others have seen blood on trousers	1	1
Embarrassment if leaking occurs	2	2
Fear (worry) of blood leaking at school	2	2
Feeling embarrassed when peers saw blood leaking	1	1
Increased movement results in increased worry about blood leaking	2	3
Main priority (worry) is not to leak blood	1	1
Previous experiences of blood leaking fuels worry	2	2
Worry that blood will leak onto chair	1	2
Worry that period will start in the middle of a lesson	1	1
Consideration of how discreet period products are to conceal menstrual status from peers	1	2
Continuous cognitive load in relation to menstrual concerns and management	1	1
Dealing with periods alone	2	4
Desire for a feeling of safety with adults	1	1
Desire for PE lesson accommodations when experiencing menstrual symptoms	1	1
Distrust of medical professionals	1	1
Engage in sensory strategies to distract from pain (cramps)	1	1
Engagement in strategies to hide sound of period products	2	2
Experience of reoccurring challenges	1	1
Fear around tampon use	2	3
Feeling unable to deal with menstrual symptoms in the school environment	1	1
Going to the toilet is important to change your period product	1	1
Going to the toilet is important to reduce worry of leaking	1	1
Hide menstrual status - sound of period product use	1	1

☐	☐	Independant education		0	0
	☐	Easier to access menstrual information independantly		1	1
	☐	Independant development of coping strategies during periods		1	1
	☐	Independant seeking of information (technological assistance)		1	1
	☐	Personal menstrual experience supports menstrual cycle understanding		1	1
	☐	Self-reliance to understand menstrual cycle independantly		1	4
	☐	Less social stigma experienced in comparison to parents generation		1	1
☐	☐	Lessons as supportive to menstrual symptom management		0	0
	☐	Enjoyable lessons can support menstrual symptoms through distraction		1	1
	☐	Learning can support distraction from period concerns		1	1
	☐	Learning supports menstrual difficulties because it is seen as something controllable		1	1
☐	☐	Menstrual Education and Awareness		0	0
	☐	Boys recieving teaching on female bodily changes was supportive		1	2
	☐	Distrust in school to provide menstrual education		1	1
	☐	Gender disparities in teaching		1	8
	☐	Girls are talked to about menstruation, not with		1	1
	☐	Lack of a breadth and personalised understanding (holistic)		1	1
	☐	Lack of period product knowledge impacting accessibility to period products		2	4
	☐	Lacking personal knowledge and insight (knowledge gap)		1	3
	☐	Learning about periods in relation to reproductive education supports menstrual understanding		1	4
	☐	Menstrual cycle education happens in PSHE		2	3
	☐	Menstrual health teaching is neglected		1	1
	☐	Menstrual learning happens in lessons only		1	1
	☐	Menstruation is not revisited - unhelpful teaching is instead		1	2
	☐	Preference for girl only groups to discuss the menstrual cycle		2	2
	☐	School do not discuss menstruation so it feels uncomfortable to discuss		1	2
	☐	School have not taught practical real life menstrual support		1	6
	☐	School teaching is not representative of real life experience		1	2
	☐	Schools have a focus on pregnancy and STIs over menstrual health		1	1
	☐	Schools teach a scientific understanding		2	4
	☐	Scientific understanding of menstruation		2	2
	☐	Taught about menstruation to pass exams, rather than understand own experiences		1	4
	☐	Taught within reproductive education (not in its own right)		1	3
	☐	Teaching about what happens biologically in female bodies was helpful		2	2
	☐	Teaching does not consider the SEMH element of periods		2	3
	☐	Teaching does not cover coping strategies		3	7
	☐	Teaching felt dismissive (based on biology)		1	4
	☐	Teaching is dehumanised - not relatable		1	2
	☐	Teaching is not dialogic - does not allow for discussion		1	1
	☐	Teaching limited to factual description		2	3
	☐	Teaching not helpful in understanding menstrual cycle		1	2
	☐	Wish for holistic teaching (real life implications of menstrual cycle)		1	1
	☐	Wish for practical support on what to do when menstrual cycle changes		1	1
	☐	Wish for teaching about the variation of menstrual experiences		1	1

☐	Menstrual understanding increases with age	1	1
☐	Menstruation symptoms experienced 1 week before and during period	2	2
☐	Mensural cycle & engagement in lessons	0	0
☐	Distracting thoughts regarding menstrual hygiene - changing period products	1	1
☐	Distracting thoughts related to pain management	1	1
☐	Easier to engage in learning during periods when learning is understood	1	1
☐	Easier to focus on learning when not expecting or on period	3	3
☐	Easier to focus on learning when physical pain (cramps) has reduced	1	2
☐	Engaging in strategies to 'ignore' worries to focus on learning	1	1
☐	Feeling sick during cramps is worrying	1	1
☐	Focus impacted by feeling sick whilst having cramps	1	1
☐	Focus varies throughout the day, dependant on menstrual cramps	1	1
☐	Hard to balance managing period symptoms with focusing on lessons	1	1
☐	Hard to focus when on period	1	1
☐	Hard to listen to learning because of physical pain and menstruation related worries	1	2
☐	Managing menstrual pain is a priority over learning	1	1
☐	Menstruation as a source of worry which distracts from lesson	1	2
☐	Mental load - always thinking about menstrual status	2	2
☐	Physical pain of periods impacting focus on lessons	3	7
☐	Motivation to engage in school	0	0
☐	Apprehension to attend lessons with unpreferred teachers during period	1	1
☐	Apprehension to deal with cramps and concerns at school	1	1
☐	Compulsory lessons are not missed due to period concerns whilst attending school	1	1
☐	Difficulty engaging in less preferred lessons	1	1
☐	Difficulty in the mornings to have the motivation to attend school when menstruating	2	2
☐	If in a good mood during menstruation - motivation to attend school is not impacted	1	1
☐	Intensity of menstrual discomfort impacts perceived ability to go to school	1	3
☐	Not wanting to be at school during menstruation	1	3
☐	'You're here but not mentally here' - when on your period in school	1	1
☐	Negative emotional experiences during menstruation	0	0
☐	Dissonance when experiencing heightened emotions	2	3
☐	Experience of mood swings	1	1
☐	Feeling emotional at school	2	3
☐	Feeling of helplessness - no point explaining to boys menstrual experiences	1	1
☐	Feeling trapped at school - Feeling no agency	1	2
☐	Feeling upset during menstruation and not knowing why	1	3
☐	Heightened emotional responses to stress during period	1	4
☐	Menstruation as a source of worry	1	1
☐	Not feeling in control	1	1
☐	Period pain makes you feel angry	1	1
☐	Periods perceived as frustrating	1	1
☐	Seeing peers experience obvious menstruation = increased anxiety	1	1
☐	Uncertainty (anxiety) around unknown menstrual status	4	8

☐	No period = No worry	1	1
☐	Normalisation of menstruation in sixth form (shift towards greater acceptance)	1	3
☐	Pads in toilets mean more able to hide menstrual status	1	1
☐	Peers without periods seen as lucky	1	1
☐	Periods are annoying	1	1
☐	Periods are annoying because of having to engage in frequent menstrual hygiene	1	1
☐	Periods are annoying because of the physical pain	1	1
☐	Periods impact clothing choices (period preparation)	1	1
☐	Periods perceived as an inconvenience	1	1
☐	Physical symptoms during menstruation	0	0
☐	Increased hunger	2	2
☐	Increased fatigue during menstruation	1	1
☐	Request for support from professionals that have an understanding of menstruation	1	1
☐	School Culture - Social expectations	0	0
☐	'Just get on with it' social expectation	2	8
☐	Menstrual cycle should not be talked about (social norm)	1	2
☐	Mixed messages from school - Menstrual cycle as important, but no opportunities to talk about it	1	1
☐	Social demands-pressure to participate regardless of menstrual discomfort	1	1
☐	School resources - Period products and facilities	0	0
☐	Disruption and misuse of menstrual health support systems impacts access to facilities	3	7
☐	Do not access period products from school because they are noisy	1	1
☐	Feel confident accessing period products in PE changing rooms	1	1
☐	Inconsistent period products available in school - cannot rely on them.	1	1
☐	It is helpful knowing there is a designated member of staff to talk to	1	2
☐	Lack of opportunity to discuss menstrual cycle with peers	2	2
☐	Period products available in the PE changing room	2	3
☐	Period products not available in main toilets	2	4
☐	Preferred period products not available	1	2
☐	Restricted access to period products and facilities	2	3
☐	School provide helpful access to pads in sixth form toilets	1	3
☐	Spaces to talk about feelings are seen to not be suitable for menstrual experiences	2	8
☐	Wish for a range of options for period products	2	2
☐	Wish for a time-out to access short breaks outside of lessons when cramps impact ability to focus	1	2
☐	Seeing others experience blood leaking = fuels anxiety	1	1

☐ Social interaction (general)		0	0
☐ Anxiety around being ridiculed for being on period		1	1
☐ Desire for solitude		1	3
☐ Experience social ruptures with peers		2	2
☐ Feeling of persecution during menstruation		1	1
☐ Menstrual cycle is not discussed at school		1	3
☐ Menstrual cycles are not discussed outside of lessons		1	1
☐ Menstruation is not discussed at school with peers		1	3
☐ Physical pain of periods impacts on social interactions		1	2
☐ Social interaction demands from peers heighten emotional dysregulation		2	2
☐ Talk to peers to distract from the pain (cramps)		1	1
☐ Social interactions with peers (boys)		0	0
☐ Boy peers have less empathy		1	1
☐ Boys are shocked by menstruation		1	1
☐ Boys do not talk about menstruation in school		1	1
☐ Boys do not understand menstruation		1	6
☐ Boys fuel stigma around the use of safe spaces to share experiences (barrier to their use)		1	1
☐ Boys ridicule the menstrual cycle		2	7
☐ Fear of being ridiculed by boys		1	1
☐ Not feeling listened to by boys		1	1
☐ Social interactions with peers (menstruators) - Helpful		0	0
☐ All girls can be approached for menstrual support		1	1
☐ Awareness of individual experiences of menstruation within friendship group		1	1
☐ Close friends at school are easier to talk to about menstruation than mother		1	1
☐ Close menstruating friends providing support by checking for 'leaking blood'		2	2
☐ Concern about vulnerable friends menstrual experiences		2	2
☐ Discussing menstruation with close friends increases personal menstrual acceptance		1	1
☐ Discussing menstruation with friends only when practical support is needed		1	1
☐ Empathy for other menstruators		1	1
☐ Friends as a support system		1	1
☐ Friends can provide emotional support during periods		2	5
☐ Friends provide safety and reassurance		1	1
☐ Implicit support from other menstruators		1	1
☐ It is supportive having close friends to discuss menstrual worries with		1	1
☐ Less menstrual stigma experienced with close friends		1	2
☐ Menstruating friends are more empathetic and relatable		1	1
☐ Menstruators have an implicit understanding of menstruation		1	2
☐ Menstruators have to look out for each other		1	1
☐ Peer influenced support and decision making		1	1
☐ Preference for sharing menstrual experiences with friends over teachers		1	1
☐ Preference to talk to menstruators because they 'go through it'		1	1
☐ Seek and provide practical support from menstruating peers		2	3
☐ Seek practical support from close friends		1	2
☐ Sense of community		1	1

☐	Signposting to useful menstrual information by peers		0	0
☐	Will discuss coping with menstruation with close friends only		1	2
☐	Social interactions with peers (menstruators) - Unhelpful		0	0
☐	Experience ridicule from younger girls when changing pads		1	2
☐	Girls speak to each other about menstruation		1	1
☐	Peers in PE changing room - barrier to menstrual hygiene (changing period products)		1	1
☐	Social pressure from peers to use tampons		1	2
☐	Social stigma from peers regarding period product choices		1	1
☐	Social interactions with school staff (general)		0	0
☐	Confiding in teachers RE menstruation is not comfortable		1	1
☐	Discomfort sharing menstrual status with teachers		2	3
☐	Distrust in teachers to support menstruation		1	2
☐	Fear that teachers will reveal menstrual status to others		1	1
☐	Feeling forced to engage in PE by teacher despite menstrual discomfort		1	2
☐	Generation gap between teachers and peers impacts perceived staff understanding		1	1
☐	Inconsistent support across teachers for accessing toilet breaks		1	1
☐	Lack of empathy from adults		1	2
☐	Menstrual concerns not listened to by adults		2	2
☐	Menstruation not seen as a reason to go to the bathroom by teachers- Facility access barrier		1	2
☐	Needing to share menstrual status with staff to access supportive facilities		3	4
☐	Reluctance to seek support from school staff		1	1
☐	Rupture in trust with teacher when menstrual needs are not supported		1	1
☐	School staff of both genders support access to toilets for menstrual hygiene		1	2
☐	Sharing of menstrual status with teachers perceived as embarrassing		1	2
☐	Social awkwardness when asking to go toilet		1	1
☐	Social interaction demands from teachers heighten emotional dysregulation		1	1
☐	Teacher's cannot help you during your period		1	1
☐	Teachers misinterpret behaviour (jump to conclusions)		1	1
☐	Uncomfortable questioning about need for toilet breaks by teachers		2	2
☐	Wish for school staff to be empathetic		2	2
☐	Wish for staff to share helpful strategies when dealing with menstrual symptoms		1	1
☐	Wish for staff to understand individualised experience of menstruation		1	1
☐	Wish for teachers to be attuned to menstrual needs and provide additional support		1	1
☐	Wish for teachers to have increased awareness		1	2
☐	Social interactions with school staff (male)		0	0
☐	Male teachers viewed as unempathetic		2	3
☐	Menstrual status is not shared with male teachers		1	2
☐	Sharing menstrual information with men feels 'weird'		1	1
☐	Social interactions with staff (female)		0	0
☐	Female teachers are more empathetic (implicit understanding)		1	4
☐	Unsure about whether it feels comfortable to talk to female staff		1	1
☐	Teacher empathy impacts motivation to engage in lessons		1	1

☒	Technological support		0	0
☒	Apps make tracking periods easier		1	1
☒	Signposting to useful menstrual information by social media		1	2
☒	Trying to understand your own menstrual cycle is hard		1	1
☒	Uncertainty about what is normal		1	5
☒	Uncertainty about when pain will stop		1	1
☒	Uncertainty about why feelings are experienced		1	2
☒	Worry about menstruation increases during PE lessons		1	1
☒	Worry of embarrassment arising from menstrual status becoming known by peers (through leaking)		2	2
☒	Worry that others can see your period products (pads)		1	1

Appendix 10: Sample of theme generation in relation to the theme “Desire to conceal menstrual status”

Phase	Activities
Familiarisation with the data	Excerpt from familiarisation doodle for participant 1: 
Generating codes	Example of generated codes: • Avoidance of movement in PE • Not liking walking long distances • Apprehension about increased movement between lessons • Apprehension about climbing stairs ‘In case it (blood) comes out of me’ • Anxiety around asking office staff for products • Concern and worry the other people can see your period • Concern the other people can smell your period • Hide menstrual status – sound of period product use • Apprehension about climbing stairs ‘In case it (blood) comes out of me’ • Apprehension about increased movement between lessons • Strategies to hide sound of period products • Considering how to hide period products when taking them to the toilet • Worry blood will leak at school • Worry about uncertainty of menstrual status at school • Worry that others will know you are on your period (and subsequently feel embarrassed)
Generating initial themes	Codes were clustered into a shared concept: Desire to conceal menstrual status
Developing and reviewing themes	I revisited the whole dataset and assessed candidate themes in relation to their initial fit and viability by considering them in relation to codes and then the full dataset; developed sub-themes associated with main themes and collapsed/split/retained or discarded themes as necessary.

Phase	Activities
	Initially, codes were clustered into the theme 'Desire to conceal menstrual status', however I felt this did not capture the nuances of meaning within the data. After reviewing the codes, I developed sub-themes associated with the main theme: • Strategies to conceal leaking blood • Conceal menstrual products • Discomfort sharing menstrual status with staff • Concern about leaking blood I then returned to the data again and felt that the emotional impact associated with concealing menstrual status was a significant emotional factor more associated with negative emotional experiences, whereas the current theme was associated with more practical factors associated with concealing menstruation. Therefore, 'concern about leaking blood' was moved to 'negative emotional experiences during menstruation'.
Refining, defining, and naming themes	The sub-theme within 'negative emotional experiences during menstruation' was later re-named to <i>"You've got so many extra things to worry about"</i>.
Writing up	I reported themes with the use of thematic maps and data extracts to address the research questions and tell an analytic story (see Section 4.1.4 and 4.1.2).

Appendix 11: 15-point checklist of criteria for good thematic analysis

See the below excerpt from (Braun & Clarke, 2006 p.96):

Table 2 A 15-point checklist of criteria for good thematic analysis

Process	No.	Criteria
Transcription	1	The data have been transcribed to an appropriate level of detail, and the transcripts have been checked against the tapes for 'accuracy'.
Coding	2	Each data item has been given equal attention in the coding process.
	3	Themes have not been generated from a few vivid examples (an anecdotal approach), but instead the coding process has been thorough, inclusive and comprehensive.
	4	All relevant extracts for all each theme have been collated.
Analysis	5	Themes have been checked against each other and back to the original data set.
	6	Themes are internally coherent, consistent, and distinctive.
	7	Data have been analysed – interpreted, made sense of – rather than just paraphrased or described.
	8	Analysis and data match each other – the extracts illustrate the analytic claims.
	9	Analysis tells a convincing and well-organized story about the data and topic.
Overall	10	A good balance between analytic narrative and illustrative extracts is provided.
	11	Enough time has been allocated to complete all phases of the analysis adequately, without rushing a phase or giving it a once-over-lightly.
Written report	12	The assumptions about, and specific approach to, thematic analysis are clearly explicated.
	13	There is a good fit between what you claim you do, and what you show you have done – ie, described method and reported analysis are consistent.
	14	The language and concepts used in the report are consistent with the epistemological position of the analysis.
	15	The researcher is positioned as <i>active</i> in the research process; themes do not just 'emerge'.

Appendix 12: Useful resources for signposting

Auditing resources	
UNICEF UNICEF guidance for monitoring menstrual health management.	https://washdata.org/sites/default/files/2020-11/UNICEF-2020-guidance-monitoring-MHH-v1.pdf
School guidance	
Shore Centre Talking about menstruation in the classroom guidance	https://www.shorecentre.ca/wp-content/uploads/Talking-about-Menstruation-in-the-Classroom.compressed.pdf
Healthy Optimal Periods for Everyone (HOPE) Website Includes information on policy, lesson plans and resources	https://www.ed.ac.uk/centre-reproductive-health/hope
Parent resources	
Nuffield Health The menstrual cycle and exercise Advice for parents of teenage girls	https://www.nuffieldhealth.com/article/menstrual-cycle-exercise-advice-for-parents-of-teenage-girls
Visual aids for learning – Changing my pad	https://www.nhs.uk/gsgc.org.uk/kids/resources/ot-activityinformation-sheets/visual-aids-for-learning-managing-periods-changing-my-pad/
Special educational needs	
University centre for excellence in developmental disabilities Period Education Guide	https://www.ohsu.edu/university-center-excellence-development-disability/period-education-guide
The University of Edinburgh Healthy Optimal Periods for Everyone (HOPE) Bloody Amazing	(Under 'menstruation and education') tab https://www.ed.ac.uk/centre-reproductive-health/hope

Periods and Neurodivergent Children: a resource for parents and carers	
National Autistic Society Menstruation and Autism Guidance	https://www.autism.org.uk/advice-and-guidance/topics/physical-health/menstruation