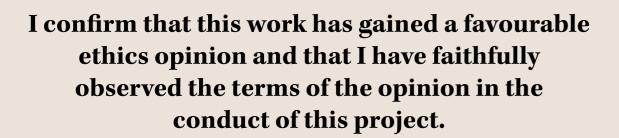
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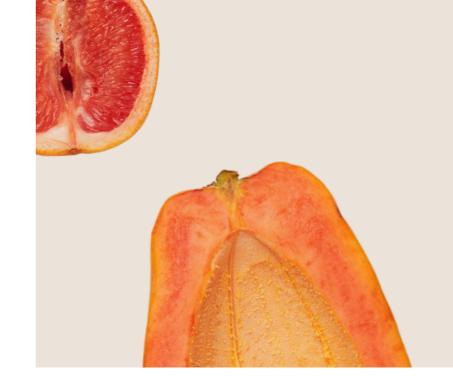




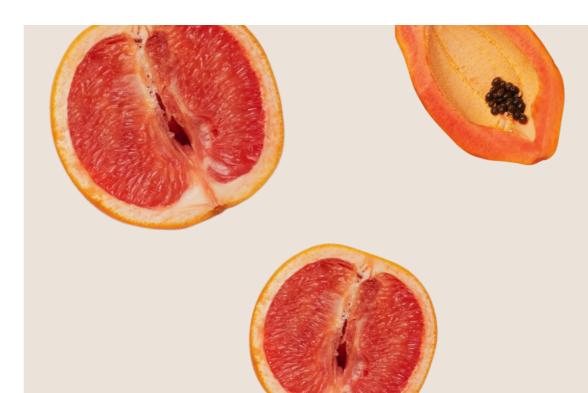
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Kate Cronin N0906758

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To what extent does the menstrual cycle impact an individual's wellbeing and productivity and can nutrition and exercise be optimised to achieve fulfilment and wellness.







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4

1. **INTRODUCTION**

"That time of the month"

The dread. The fear. But is it just an ovary-action?

Wellness is desired by all. But is optimal wellness achievable when you experience the menstrual cycle?

Exploring the growing trend of wellness and consumers wanting to be their best productive selves, it is important to factor in the hormone cycle and how this affects menstruators' emotions and well-being (Chopra, 2021).

This report will explore and investigate the lifestyle impacts that may occur due to the menstrual cycle. Secondary literature will provide essential understanding whilst primary research will delve deeper into consumer opinions and allow for a comprehensive analysis. Utilising theoretical and research frameworks will support and validate findings.

1.1 Rationale

A fundamental aspect of happiness and self-fulfilment is achieving wellness. Well-being and productivity have been studied by many researchers however many scholars have failed to address the impact of the menstrual cycle. This project will therefore investigate and assess the effect of the menstrual cycle on well-being and how the industry and consumers are affected by these proposed factors. The study aims to contribute to the investigation of menstruators' well-being.

1.2 Aims & Objectives

The primary aim of this research project is to investigate the impact the menstrual cycle has on an individual's well-being and productivity.

The research will achieve the following objectives: To debate the effects the menstrual cycle has on menstruating individuals. To examine the impact the menstrual cycle has on well-being and productivity.

To investigate how hormonal balance can be optimised through nutrition and exercise.

To expose gender bias and stigma in the workplace, and the consequences this may have.

To explore the lifestyle impacts menstruating face and how the industry is reacting to this.



2. LITERATURE REVIEW

To achieve research objectives and obtain knowledge of the female health and wellness industries, it is crucial to analyse existing literature. Secondary research will shape future investigations and expose gaps and limitations in current research. The following literature has been organised into relevant themes, all supported with applicable academic theories to contribute to achieving the research aims. The themes of female wellness, taboo, workplace, femtech, and cycle syncing provide relevant literature and hold significant importance in answering the research question.

This literature review has resulted in the identification of a research gap and is the driving force for a primary research investigation (Ridley, D. 2012).

2.1 The Wellness Blood Bath

As a consequence of social trends in the macro market (appendix 1), the industry is focussed on women's health. The female health sector is underfunded and under-researched. Subsequently, women's healthcare needs are not met. Women make up 51% of the global population, yet the healthcare system has been designed by men for men (GOV UK, 2022). Females are left confused and uneducated; more than 4 in 5 women have stated healthcare professionals have not listened to them, proving their needs and health concerns are unlikely to be met (GOV UK, 2021). However, with the value of the global wellness industry estimated at \$1.5 trillion, conversations surrounding female health are increasing (Callaghan et al., 2021).

Literature has uncovered the disadvantages women face which consequently impacts their well-being. Women are more likely to experience stress compared to males in the UK (Greenslade, 2021). Furthermore, the fem-tech app Clue revealed a correlation between stress and ovulation (Hendl and Jansky, 2021). Studies have discovered the menstrual cycle, especially the premenstrual phase in the cycle, can lead to a greater risk of depression (Endicott, 1993). The correlation between menstruating and an individual's well-being is obvious, yet the industry fails to acknowledge the negative implications that menstruators face, despite the macro trend of wellness.

Although the wellness needs of menstruators are currently unmet, the 2022 Female Health Strategy focuses on raising the profile of women's health, which implies female health is becoming recognised by experts and institutions (GOV, 2022). This has a trickle-down effect on consumers, who are educating themselves using social media, demonstrated by a 95% search increase on Pinterest of the term 'menstrual cycle chart' (Ward, 2022). Nevertheless, the industry and healthcare system should take responsibility for educating menstruators instead of consumers relying on social media platforms like Pinterest to learn about their menstrual cycle.

Feminist theory supports the idea that this power imbalance is deeply ingrained in society. Theorist Simon de Beauvoir states how "one is not born, but rather becomes, a woman" (1998, pp.114-120). Beauvoir suggests that women take a passive role in society and argues if men and women were equal in society then there would be greater benefits to all (Bauer, Heilbrun and Miller, 2001, pp.172-199). Despite the 2022 Female Health Strategy being published, previous poor government health strategies for women act as a constraint to the liberation and equality movement. The industry and wellness trend fails to strive for equality, therefore not achieving the potential benefits discussed by Beauvoir.

The feminist standpoint theory supports Beauvoir's theoretical ideas, as it shares the notion that society controls and produces all knowledge and power relations (Harding, 2004, pp.1–7). Women being part of an oppressed group in society results in a power imbalance and leaves women at a disadvantage in society. The standpoint theory is shown throughout the health sector. Patriarchy dominates society which leads to the outcome of women being uneducated about their health and needs.

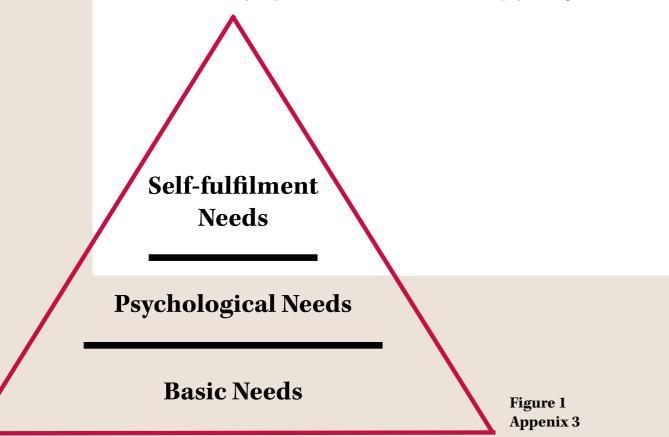


2.2 The Bloody Taboo

In spite of the rising conversation surrounding female health, taboo and stigma remain prominent. Studies have found people hold negative connations surrounding menstrual products (Roberts et al., 2002). The negative stigma surrounding menstrual health is deeply rooted in society. Historically, clinical trials have excluded women due to their menstrual cycle which exposes why women are uneducated and taboo exists globally (Liu and DiPietro Mager, 2016).

The stigma is portrayed throughout media, with brands using a blue liquid to represent period blood which contributes to the narrative that period blood is dirty and unhygienic (Gil, 2017). Ultimately the negative connotations that surround menstruation impact the mental health of menstruating individuals. Over half of 14-year-old girls feel embarrassed by their period (Tingle and Vora, 2018). With emotions of embarrassment and actions of concealment, the engrained menstrual stigma negatively affects menstruating individuals.

Maslow's Hierarchy of Needs refers to the five aspects all individuals need and require in their life to achieve fulfilment (1943). The pyramid framework identifies basic, psychological, and self-fulfilment needs that are all necessary to achieve satisfaction. Esteem is identified as one crucial need. It is vital that consumers have their self-esteem needs met. With studies showing young girls feeling ashamed of their period, this will negatively impact their self-esteem. This ultimately impacts their fulfilment in life and psychological needs.





Despite taboos being prevalent in society for centuries, today's social media is contributing to the banishment of period taboos. The hashtag '#PeriodTok' has over 750.9 million views on the video app TikTok, helping to reassure menstruators and normalise conversations regarding menstruation (2022). Baym explored the effects of online communities, suggesting how digital networks allow users to feel accepted (2015). Communities on social media allow menstruating individuals to feel secure and escape the stigma.

In addition, marketing campaigns are encouraging conversations to break down the taboo that is apparent in the industry, as seen by menstrual hygiene company Kotex who are investing \$2.5 million in a worldwide campaign to raise awareness of menstrual education (Khanom, 2022). Through raising awareness and education, stigma can be broken down (Tyler, 2020). Contemporary marketing campaigns sparking conversation can have the power to bring an end to the menstrual taboo.

However, regardless of marketing, stigma is still common. Scotland is the only country in the United Kingdom to legally provide free access to period products (GOV Scot, 2022). This demonstrates how stigma is intertwined and embedded in society as a result of gender oppression. It also proves that raising awareness online is not enough to change attitudes. With some menstruating individuals not having access to sanitary products and tax being added to period products, it reveals how stigma is still widespread in society (Olson et al., 2022).

Furthermore, conversations around 'menstrual leave' connotate negative opinions and are not accepted in the workplace, exhibiting how taboo still exists (Francis, 2022). This links to the following theme of women in the workplace.









2.3 Alexa Play '9-5' by Dolly Parton

As a result of existing period stigma, menstruators can be at a disadvantage in the workplace (Lampen, 2017). Investigations discovered that 33% of women won't discuss their menstrual health with their employer as they deem it to be unprofessional (Hutcheson, 2021). The workplace is a site where women are not comfortable talking about their periods, yet those who menstruate have additional emotional and physical labour to execute (Sang et al., 2021). Literature exposes the disadvantages menstruating individuals face in working environments, nevertheless over a third of women still do not tell the truth to bosses when their period results in a sick day (Bupa. 2017). With the upcoming rise of the 'she-covery', it is apparent workplaces must optimise environments for women (Wunderman Thompson Intelligence. 2022). The theory of motivation presents how satisfaction in workplace conditions will result in positive long-term effects (Herzberg, Mausner and Snyderman, 2017). Hence, if work scenarios considered women's well-being and health, the business itself would consequently benefit. Nevertheless, work environments leave women feeling uncomfortable and at a disadvantage (Karin, 2021). The industry cannot disregard how the menstrual cycle can be a barrier to optimum success in the workplace.

Theory states how job burnout can lead to individuals feeling immense exhaustion and attributes of failure. Ultimately these psychological and physical feelings have the repercussions of a decline in the quality of output (Maslach, 1998, pp.68–85). With burnout in the workplace already existing, it is apparent that individuals will become burnt out and fatigued due to managing the load of their menstrual cycle. Menstruationrelated health concerns cause a decrease in productivity in the work setting, increasing the risk of menstruating individuals becoming subject to burnout (Schoep et al., 2019).



Similarly, as mentioned in chapter 2.3, the menstruating individual's hierarchy of needs will be negatively impacted (Maslow, 1958). When employees are exhausted and not fulfilled in their workplace, their needs of self-actualisation are not met. Individuals will not feel empowered or have their basic psychological needs met when workplaces are not adequate for their menstrual cycle. Therefore, the desired outcome of productivity in the workplace is unlikely.

However, the self-determination theory argues against Maslow's hierarchy of needs, as the theory does not adopt a hierarchical system to an individual's psychological needs. Whereas Maslow states there is a ranking to basic needs, the evidence is weak as individuals may prioritise various psychological needs depending on their motivations (Marylene Gagne, 2014, pp.1–15).

Despite previous literature showing a negative viewpoint, positive adaptations in the workplace for menstruating individuals are evolving. A UK firm, Coexist, implemented a 'period policy' in their workplace to honour individuals' menstrual health and consequently positively impact their wellbeing (Morris, 2016). Consumers can hope the industry will follow suit from this movement, with 80% of women reporting experiencing presenteeism when menstruating (Schoep et al., 2019). Presenteeism is undesirable in the workplace as it results in a decrease in productivity as employees are not working to their maximum output (Johns, 2011). But academics have argued that presenteeism in the workplace is not a disadvantage due to it presenting an employee's dedication and commitment to their job (Cooper and Lu, 2019).

2.4 Will Fem-Tech Drown in the Crimson Wave?

Despite the disadvantages menstruators face, it has been found that fem-tech provides reassurance to menstruators, as it acts as an escape from the stigmas that surround menstruation (Karlsson, 2019). Predicted a market value of \$50 billion by 2025, the femtech industry will provide a space to reclaim menstruation (Frost & Sullivan. 2018). In spite of this, the fem-tech market value is a small sum compared to the significant value of female medical expenses, which approximately accumulate to \$500 billion annually (Wiederhold, B.K. 2021). This exposes the imbalance of investment for females' health.

Consumers desire personalisation. Consequently, this is a key area of investment for brands and therefore fem-tech companies have the opportunity to positively benefit menstruators' well-being (Frost & Sullivan. 2018). However, the current disadvantages the fem-tech industry poses to menstruators prevents the uptake of consumers. Literature argues the female body has become digitalised due to female technologies (Healy, R.L. 2020). **Consumers participate in fem-tech to track** their menstrual cycle and to reclaim their bodies (Karlsson, 2019). But academics declare there is a power imbalance between the industry and its users (Lupton, 2014). **Consumers desire education throughout** their monthly cycle without firms capitalising on their bodies and implying the primary purpose of menstruating is fertility (Hendl, T. and Jansky, B. 2021).

Fem-tech users have a growing concern for the inclusivity of technology. The applications have been argued to not be positioned for members of the LGBTIQ community, people with disabilities, and older age demographics (Hendl, T. and Jansky, B. 2021). Fem-tech has the opportunity to overcome gender norms but many applications and products in the market fail to do so (McMillan, 2021). The discourse of many fem-tech innovations fails to adopt an intersectional feminist approach (Costanza-Chock, 2018).

Contrary to these findings, a rise of female founders in the industry and inclusive developments are resulting in fem-tech becoming more culturally sensitive for subpopulations (Schwartz, 2022). The femtech industry must continue to acknowledge and appreciate the diversity in menstruating consumers to encourage exponential market growth.



2.5 Sync Your Cycle

The uptake of females investing in fem-tech has resulted in a rise of women becoming educated surrounding factors affecting their menstrual cycle. The term 'cycle syncing' refers to optimising your daily lifestyle to your hormones and menstrual cycle (Vitti. 2014). Despite studies proving that a maintained healthy lifestyle will significantly reduce menstrual cramps and side effects, the currently available fem-tech apps, and products do not expose this to users (Mysoor, 2018).

This results in the continuous lack of education surrounding female health as chapter 2.2 highlighted. Menstruating individuals will be impacted by the infradian rhythm, which can impact brain chemistry by 25% over the menstrual calendar (Vitti, 2020). But scientific studies to discover the implications this has on menstruators are yet to be carried out. Due to a lack of research, menstruators are at a disadvantage due to being unaware of the true benefits of the menstrual cycle.

Studies have concluded that maintaining good levels of exercise and nutrition throughout menstruation will result in a decrease in cramps, fatigue, mood changes, and other side effects (Bruinvels et al., 2020). Exercise is advised to minimise cramps, yet this comes under the same bracket of advice as a warm bath or shower (NHS, 2017). Demonstrating that advice for menstruating individuals is basic and generic, providing no optimal lifestyle benefits.

Advice given by the healthcare industry is vague and unsupported, due to the lack of research (Daley, 2008). Previous studies are limited in validity due to the majority of research participants being monitored in the beginning stages of their cycle.

Hormone levels are not at peak level in the follicular stage; therefore, the research does not acknowledge the effects menstruators experience when their hormones are at peak level when menstruating (Oosthuyse and Bosch, 2010).

Additionally, with women representing only 39% of the research sample in exercise studies, it is evident that the industry is unaware of how the menstrual cycle is impacted by exercise and nutrition (Costello, Bieuzen and **Bleakley**, 2014).

The concept of cycle-syncing highlights how exercise, nutrition, and various lifestyle changes can positively impact individuals throughout every stage of the menstrual cycle. Yet the lack of research is resulting in menstruators and healthcare professionals being unaware of the benefits it brings to the body and mind.

The self-determination theory focuses on how human beings have three basic needs which can determine and have the capability to improve psychological development and wellness. One need the theory identifies is competence, which refers to an individual gaining control of their own life (Ryan and Deci, 2017, pp.1-11). If individuals achieve the basic need of competence, then it can result in improved well-being as the individual feels in control of their daily life. Cycle syncing would allow individuals to gain power over their menstrual cycle and work in harmony with their hormones. Ultimately resulting in improved well-being as stated in the theory of self-determination.

women represent

of the research sample in exercise studies



2.6 Key Findings

1. Wellness wears a blindfold

Wellness is a hot topic but despite the influx in well-being, the menstrual cycle is overlooked and under-researched.

2. Hard at work or hardly working

Menstrual concealment in the workplace leads to unproductivity and presenteeism. Menstruators lack support and power regarding their menstrual cycle at work.

3. If you're not paying, you're the product

The fem-tech industry is growing, yet consumers aren't the priority of all fem-tech apps and products. Personalisation and education are valued by consumers.

4. Befriend your hormones

Who is the enemy? The uterus or society? A lack of science results in consumers and brands being unaware of the potential power hormones can provide to menstruators' lives.



2.7 Research Gap

Despite literature uncovering vast information surrounding well-being and menstruation, there are significant gaps in research in the field. A lack of research surrounding productivity and menstruation explains why individuals are unaware of how to cater their lifestyle to work in conjunction with their menstrual cycle. This distinguished gap in existing literature results in future research exploring the needs and desires of menstruating individuals and how their well-being and productivity are impacted by their menstrual cycle. A further investigation into this subject will uncover whether syncing an individual's lifestyle to their menstruation, particularly focusing on exercise and nutrition, will impact their productivity and well-being.





3. METHODOLOGY

3.1 Strategy

To gain an in-depth understanding and insight into the market and consumers, further research to build upon literature was necessary. Qualitative and quantitative data have been discovered through both secondary and primary methods. All methods were carefully considered and gathered essential data in various formats, all contributing to answering the research question.

Approaching research following Pattons' Mixed Methods Triangulation strategy (FIGURE) allowed for research to be comprehensively understood and data was converged from a variety of sources (1999). Adopting the Triangulation method in research is beneficial when there is a need to understand a broad phenomenon (Arnold and B Douglas Clinton, 2008, pp.21-25). Even though scholars argue triangulation can result in difficulty due to managing mass amounts of data, it is dismissed by the advantage of enhanced research findings of both qualitative and quantitative methods (Thurmond, 2001, pp.253-258).

This method allowed for all perspectives to be considered, especially when using a broad spectrum of research methods (Carter et al., 2014). Adopting a mixed methods approach to research minimised the limitations that qualitative and quantitative research methods pose individually (Rahman, 2016).

Academics argue the triangulation method may result in false interpretations due to the vast amount of data (Porter, 1989, pp.98-102). However, this limitation is outweighed by the benefit of triangulation standing as a framework to encourage in-depth analysis of broad data (Banik, 1993, pp.47). Approaching research with Pattons' strategy allowed for a comprehensive evaluation of all research.

The research followed a rhizomatic approach and data was analysed in a non-linear process to result in new perspectives and multidimensional research (Andrews, Squire and Tamboukou, 2013). Deleuze and Guattari state a rhizome refers to a new dimension of thinking in research that is unpredictable (1976). Implementing a rhizomatic method to research complemented the triangulation strategy, ultimately leading to a rigorous and reliable research approach (Deleuze and Guattari, 1981, pp.4–11).

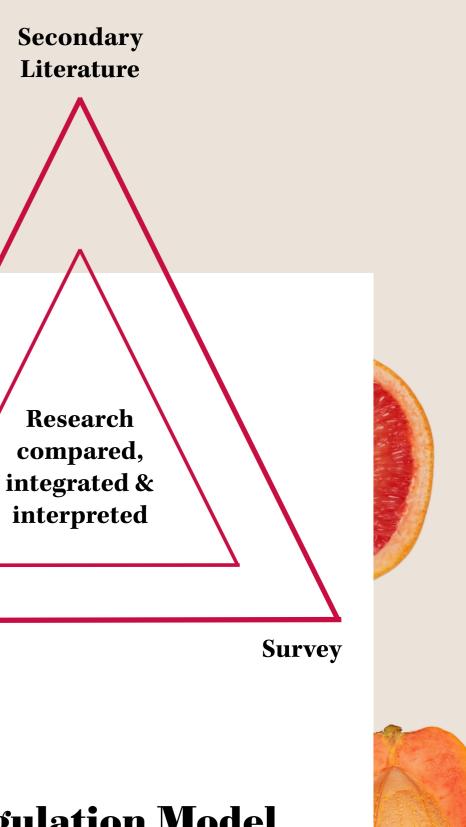
Secondary Literature

Triangulation Model

Interviews

Figure 2 **Appenix 4**





3.2 Sample

Research began broad and continuously analysing insights allowed for the sample to be narrowed down, to discover specific consumer and market insights.

Online survey: 108 respondents
Industry experts: 3 participants
Consumer interviews: 2 participants

The sample group is a wide variety of ages between 18 to 55, minimising the potential limitations of age bias being imposed. Ages under 18 and above 55 were not considered in the sample due to the nature of the project focusing on menstruating individuals, as well as ethical reasons.

A non-probability method of sampling has been used in this instance, using a convenience sample approach (Jackson and Shaw, 2009, pp.38–39). With an online questionnaire being distributed on social media and emailed through workplaces, a vast amount of individuals participated. Due to adopting a convenience sample approach, it can result in bias as participants are more likely to be passionate about the topic hence their motivation to participate (Sousa, Zauszniewski and Musil, 2004, pp.130-133). However, the method of simple random sampling was also adopted to make the sample unbiased and reliable.

Interviews adopted a purposive sampling method. A subjective sample ensured participants were relevant to the field and would contribute credible insight to answer the research question (Jupp, 2006). The purposive sampling acquires a homogenous method, which accumulated a sample of participants who share similar characteristics and associate with the same demographic groups (Etikan, Musa and Alkassim, 2016). Bias in homogenous purposive sampling is discussed to be obvious due to the participants having an interest in the research question however bias has been controlled by using theories and external data to support findings (Andrade, 2020).

Despite the sample being a varied demographic, there are some limitations that must be acknowledged when answering the proposed research question. The majority of the sample identify as female, and only a small proportion of the sample identified as non-binary and male. 5% of total survey respondents identified as male or nonbinary. Leading to key insights uncovered being from a female majority even though menstruation can affect all genders.

3.3 Positionality Statement

Throughout the research, my unconscious bias may impact my interactions and engagements. Reflecting on research methods, when liaising with industry experts I chose the individuals myself, allowing for my unconscious bias to impact the experts interviewed. As a feminist and individual who is impacted by their menstrual cycle, my stance and opinions have the potential to subconsciously affect my research methods and the individuals I engaged with. However, I minimised the possible implications of my bias by engaging with a varied sample of experts and distributing my primary research survey among a mixed community of participants.

Throughout my project, I had to acknowledge that I felt privileged to be investigating this research area as a middle-class white female. Because of my position as a researcher, I investigated intersectional feminist theories to gain knowledge and understanding of black female culture and minority groups (Hartsock, 2020).

As the position of the researcher, I acknowledge the reflexivity I hold as an insider because I share the same experiences as study participants, due to being a menstruating individual myself (Berger, 2013, pp.219-234). Although my position as an insider may result in unconscious bias, it ultimately positively impacts my research due to allowing me to liaise with research participants, leading to genuine and reliable findings. Even though scholars argue this poses limitations and bias, I ensured not to direct the discussions based on my own stance and feelings.



3.4 Secondary Research

Analysing secondary literature was essential to gain industry knowledge prior to collecting primary research, as well as using secondary sources to build upon primary findings. Using academic books, journal articles, and government data as well as contemporary methods such as podcasts and news articles provided a vast understanding of the research topic, all contributing to answering the research question.

To organise and structure secondary literature, the paradigm research funnel has been implemented to construct a methodological approach (Berthon, Nairn and Money, 2003). The model builds upon Kuhn's paradigm ideology, which refers to a set of beliefs and methodological processes (1976, pp.10-14).

Assembling research using the funnel approach (figure 3) encouraged initial research to address the macro market, which helped shape further research to investigate micro trends and specific markets. The funnel minimised potential bias in findings as sources used various methodological approaches and analysing the macro market acknowledged authors' assumptions.

Using an inductive structural approach was most suited for secondary research, allowing for rich data to be collected and given a refined focus. This bottom-up approach posed more benefits due to broadening initial secondary research, looking into the industry with a wide lens and allowing for a heuristic approach to shape findings (Parker and Vannest, 2012).

Utilising the research funnel, thematic clusters became apparent in secondary research findings. Categorizing findings into themes is a fundamental process to ensure future primary research is structured and can undertake constant comparison (Gibbs, 2018, pp.54–71).

Macro **Exploratory** research Strategic research **Tactical research Operational** research Micro

Figure 3 Appenix 5

3.5 Primary Research

3.5.1 Online Questionnaire

An effective primary research method conducted was an online questionnaire, gaining 108 responses that contribute to understanding the attitudes menstruating individuals hold toward their period and well-being. Secondary research helped structure the set of questions asked and ultimately the data retrieved from this questionnaire provides insight and direction when progressing with further primary research.

The survey gained a sample of 95% female, 3% male, and 2% non-binary respondents', all of a varied age range, resulting in diverse findings. Despite this, the responses collected are weighted toward a younger age demographic, with 76% of respondents aged 18-24. To diminish the potential bias this dominating age bracket may have, further primary research has been conducted liaising with an older age demographic.

The survey predominantly asked closed-ended questions to gather quantitative data. Closed questions minimise interpretation bias, furthermore, the data gathered is easier to code and analyse (Lydeard, 1991). Nevertheless, some questions were proposed to retrieve qualitative data to understand consumers' opinions. Howe's incompatibility thesis states how methodologies should not be mixed moreover qualitative and quantitative research should be situated individually (1998). Yet this is disregarded by many scholars. Parallels exist between both research methods, additionally, a holistic viewpoint is encouraged from a mixed methods approach (Onwuegbuzie and Leech, 2005).

Despite the benefits of conducting a questionnaire, it does result in selection bias, as participation in the survey is dependent on the respondent having access to a device that connects to the internet (Fricker, 2012).

3.5.2 Industry Expert Interviews

To develop upon findings discovered from the online questionnaire, interviews were conducted with multiple industry experts to gain insight and knowledge. Organising online interviews with 3 industry experts who are professionals in the industry was highly beneficial to the research. Specific questions were asked, leading to professional discussions relating to the research question.

- Bex Baxter
- Eleanor Riches
- Caroline Heaton-Tate

Interviews followed a semi-structured approach, as this allowed for reciprocity between the interviewee and interviewer, encouraging further discussion and in-depth responses (Kallio et al., 2016, pp.2954-2965). This method was most applicable when aiming to achieve the research objectives. Virtual interviews formed a relationship between the interviewer and respondent, enabling the researcher to probe and acquire more in-depth responses (Saunders, Lewis and Thornhill, 2019, p.324). Frequently engaging and participating throughout the participant's responses allowed for clarification, minimising the potential limitation of misinterpreted data (Galletta, 2012, pp.78).



Even though qualitative research is argued to be subjective by some scholars, this limitation is outweighed by the principle of interviews being an objective method of inquiry, focusing on the interaction and conversation between interviewer and interviewee (Svend Brinkmann, 2013, pp.4). **Conversations are essential in sharing sources** of knowledge, emphasising the importance of conducting interviews with experts and how significant the findings are to the research project (Svend Brinkmann, 2013, pp.3). The risks of bias have been minimised by the interviewer using appropriate body gestures and neutral responses during the interview yet still showing interest and attentiveness throughout (Saunders, Lewis and Thornhill, 2019, pp.324–333).

Consistent themes and clusters have been made apparent through coding qualitative data from expert interviews (Gibbs, 2018, pp.54–71). Categorising data systematically (appendix 7), whilst adopting an inductive approach minimised potential bias and increased validity in findings as all interviews were coded equally (Thomas, 2016).

3.5.4 Digital Ethnography

When triangulating data, as shown in figure 2, ethnography compliments this research approach due to the qualitative findings uncovered (Sharlene Nagy Hesse-Biber, 2011, p.162).

Therefore, following ethical practice, digital ethnography occurred as primary research. With digital media being part of the target consumers' everyday practice, examining their online behaviours and digital communities has delivered crucial insight (Pink et al., 2015, pp.2-17).

Following the ethnographic process of lurking, social spaces were visited with no form of interaction to gain insight into consumers' opinions without generating content in the community (Schlosser, 2005). Social media platforms, primarily YouTube and Twitter, were lurked. Particularly analysing the discourse in female communities. Despite some scholars holding the stance that no prominent feminist research method exists, ethnography is argued to be the most suitable method to research female perspectives, due to it providing a voice and space for oppressed groups (Harding, 1987, pp.162-164) (Stacey, 1988, pp.21-27). Digital ethnography allows for a multifaceted approach to research which is most applicable when exploring how women feel and behave (Ward and Delamont, 2020, pp.36–40).

A significant benefit to utilising digital ethnography in primary research is that the participants observed are more likely to act intimately with one another, due to being unaware of observation (Martin, Miller and Slater, 2002). This enables a true representation of opinions and behaviours to be coded in the target online communities.

Digital ethnography compliments other methods of primary research and the data gathered can be analysed alongside previous research. Observing and analysing consumers' behaviours in the social world holds significant relevance in research as it builds upon interviews and provides a complete overview (Svend Brinkmann, 2013, pp.48).





3.5.3 Consumer Interviews

Collecting qualitative data from menstruating individuals who are in the workplace and experience the potential lifestyle impacts of the menstrual cycle is beneficial to research and discovering consumer needs. Conducting semi-structured interviews with consumers allowed for qualitative data to be retrieved building upon previous primary findings. Information was collected by the interview method of interrogation, focusing on probing interviewees for their interests and dislikes (Walliman, 2021, pp.50–70).

To avoid bias from the interviewer inflicting their own opinions, a reflexive approach was adopted to allow for interviewees to have power in the interview and state their own opinions (Arsel, 2017).

Locating consumers in local shops in the sanitary products aisle using a simple random sample method was beneficial as it allowed for respondents to be picked without the interviewer's unconscious bias. Although the method of simple random sampling is representative of the population, it may be argued that findings may be generalised (Sergey Dorofeev and Grant, 2006, pp.2–18). However, to minimise this limitation, findings from consumer interviews have been analysed alongside other primary research findings and theories to provide validity.



4. DISCUSSION

THEME 1 4.1.1. Knowledge Is Power

Female hormones are like an orchestra. When one note is out of tune it affects the whole orchestra. When one hormone is uncontrolled, it will affect the whole body and daily outcomes. Research has uncovered the power hormones have on menstruators' bodies. Yet individuals are left in the dark and unaware.

As former literature discussed, the lack of conversation surrounding female health leaves menstruators confused. Interviewing experts highlighted the common opinion of how menstruation isn't spoken about enough. Caroline stated how "there's not enough out there to help educate people", which was similarly apparent when conversing with Bex who backed up this finding as she agrees "there's not enough research" (appendix 7.2). Lurking on social media backed up this finding, with YouTube comments stating, "as someone in the medical field, there is little research on menstruation" (appendix 10.1). Little scientific research on how the menstrual cycle impacts an individual's body and well-being prevents the industry to allow menstruators to understand their monthly cycle. Ultimately leading to the negative emotions that arise when the menstrual cycle is discussed.

Identified as a macro trend in the market, wellness is a priority for consumers and brands (appendix 1). Yet 92% of online questionnaire respondents claimed the wellness trend does not acknowledge menstrual health enough. Out of this sample, a following 76% find their period negatively impacts their well-being (appendix 9). Primary research has proven how individuals are left feeling at a disadvantage because of their monthly cycle and do not feel supported by brands despite the macro trend of wellness dominating the market since the COVID-19 pandemic (appendix 1).

"Knowledge is a power" is how Bex describes education around female hormones and the menstrual cycle (appendix 7.2). However, primary research suggests individuals feel powerless due to having little to no knowledge of their bodies. Findings have highlighted the power imbalance within the industry, drawing on the standpoint theory discussed in chapter 2.2.

With the majority of respondents feeling negatively impacted by their monthly cycle, an increase in education would allow for consumers to understand their anatomy and gain a sense of confidence instead of fear over their bodies. A comment posted on the 'Your Menstrual Cycle is your Superpower' TedTalk said "it's nice to hear something positive about periods" (10.2). This proves the lack of positivity surrounding the menstrual cycle.

92%

of online questionnaire respondents claimed the wellness trend does not acknowledge menstrual health

4.1.2 Stigma

Continuing from the lack of research and education, this is seen to be because of the negative stigma that still exists surrounding menstruation.Secondaryfindingshighlighted how stigma is still present in society and primary research findings correlated to this secondary literature. Digital ethnography saw individuals commenting "this unspoken rule of not talking about your period is actually a major hindrance in day-to-day life" and "kudos for having the courage to talk about this subject" (appendix 10.2). For stigma to be described as a "major hindrance" and for the public to thank individuals for speaking about menstrual health amplifies the fact stigma is extremely prevalent despite the macro trends in the market.

If stigma was decreased, the conversations and positivity surrounding menstrual health and the daily impact of menstruation would be openly spoken about more. Ultimately resulting in individuals understanding their bodies and being able to fulfil their daily lives regardless of menstruation. However, it is apparent this is not currently occurring due to taboos and a lack of education. This negativity has become apparent in the workplace, leading to the next discussion.

Secondary literature discussed the concept of presenteeism in the workplace when individuals were menstruating (Johns, 2011). Feelings of unproductivity and a lack of motivation when menstruating were frequent emotions described in primary research, which supports secondary findings. Primary research uncovered 81% of respondents find their period negatively affects their productivity.

When asked to explain strategies they implement to overcome negative effects, the most common answers were surrounding resting and sleeping. Respondent 74, a female aged between 18-24 answered "I usually get tired and lack energy so I plan my days so I can sleep longer and drink more coffee" (appendix 9).

This data from the online survey is supported by digital ethnographic findings. Multiple tweets on the popular social media app Twitter found users complaining about how they cannot be productive due to getting their period. One user tweeted "I was going to be productive today then boom my period comes" (appendix 10.5).

It is apparent that menstruators struggle to work to their best ability when menstruating due to lacking energy and feeling less capable to produce the same output of work as usual. These feelings are exacerbated due to periods being concealed in the workplace. 88% of survey respondents feel like menstrual health and periods are not normalised in the workplace which results in presenteeism and contributes to the pre-existing period stigma (appendix 9).

"this unspoken rule of not talking about day-to-day life"

your period is actually a major hindrance in

4.1.3 Productivity

Secondary literature discussed the concept of presenteeism in the workplace when individuals were menstruating (Johns, 2011). Feelings of unproductivity and a lack of motivation when menstruating were frequent emotions described in primary research, which supports secondary findings. Primary research uncovered 81% of respondents find their period negatively affects their productivity. When asked to explain strategies they implement to overcome negative effects, the most common answers were surrounding resting and sleeping. Respondent 74, a female aged between 18-24 answered "I usually get tired and lack energy so I plan my days so I can sleep longer and drink more coffee" (appendix 9).

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Despite individuals recognising their productivity decreases during periods of menstruation, the negative stigma, that has been discussed throughout this report, results in employees feeling like they have to conceal these feelings and not honour their menstrual cycle with a sick day. As the literature review highlighted, 'menstrual leave' sparks negative connotations in the workplace (Francis, 2022). Primary research confirms how the majority of individuals do not feel like they deserve a sick day at work to accommodate for their period. 58% of respondents will not take a sick day for their period as the most common answer found that it is not a substantial reason. Respondent 2 finds her period "doesn't feel like a valid/ socially acceptable reason to take a day off of work" (appendix 9). The frequent opinion of menstruation being an invalid reason to take a day off work shows how individuals feel ashamed and would rather hide their cycle in the workplace.

This data discovered through primary research shows the needs of menstruating individuals are not being met. The previous literature review discussed how the needs of menstruators are not met in the workplace due to environments not being tailored for individuals' menstrual health.

When conditions in the workplace do not facilitate for menstruators, it will impact their basic needs.





If individuals' basic needs are not being met, according to Maslow's Hierarchy of Needs, then individuals cannot continue to meet their psychological and self-fulfilment needs (1943). Primary findings support this framework as the workplace does not adapt surroundings for individuals to manage their well-being and productivity when menstruating. Therefore, with a lack of fulfilment, their level of motivation will be compromised due to their basic needs being unmet in the workplace.

An interview with Bex, who implemented a period policy in her workplace, supported this principle.

Implementing a period policy allowed for employees to "release some sort of pressure" and acknowledged productivity was a "byproduct" when individuals honoured their cycle (appendix 7.2).

Proving that when individuals respect their period and feel empowered by their monthly cycle, it can create greater benefits. In this scenario, the individuals' needs are being met, which Maslow argues will result in fulfilment, ultimately positively impacting the employee's wellbeing (1943).

Research findings show principles and stigmas in the workplace do not cater to the menstrual cycle, which has the consequence of negatively impacting individuals' wellbeing and productivity.

4.2.1. Power Not A Problem

Secondary literature how proved menstruators are advised to take over-thecounter drugs to deal with their menstrual cycle (NHS, 2017). Qualitative data from the primary survey unveiled common solutions to overcome period pains are "hot water bottles" and "painkillers". Respondent 9 tackles negative side effects by using "heat patches and painkillers to help me get on with day-to-day activities" (appendix 9). Similar findings arose in a consumer interview; Sarah commented how she will "take paracetamol and have a hot water bottle" as well as 'eat chocolate" when she experiences period pains (appendix 11.1). Analysing primary data proved how little respondents utilise nutrition and exercise to combat their period pains, with the majority wanting to rest and consume chocolate.

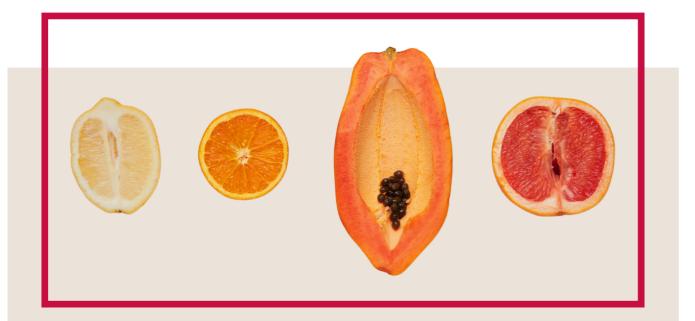
Interviewing experts showed contrasting opinions to consumers. Female health coach **Caroline clearly emphasised the importance** of nutrition and exercise throughout the menstrual cycle. From consuming "whole grain carbohydrates, so complex carbs rather than simple carbohydrates" and "having a really healthy gut" menstruating individuals can balance their hormones and improve their well-being when menstruating (appendix 7.3). Secondary literature stated how exercise and nutrition positively affect the menstrual cycle, but data is limited due to the lack of research (Bruinvels et al., 2020). Investigating primary data clearly demonstrated the gap in knowledge surrounding cycle syncing and using the menstrual cycle as a guidance system to improve well-being.

•once we begin to nurture and care for our cycle then it makes way for something new and beautiful"

THEME 2

The feminist standpoint theory, as discussed in the previous literature review, states how our knowledge is stemmed from society (Harding, 2004, pp.1-7). As chapter 2.2 identified, women and menstruators lack knowledge surrounding their bodies and cycles. Analysing public social media posts as ethnographic research highlighted how society views menstruation as a negative concept and the feeling of dread as a reoccurring emotion (appendix 10). Individuals online present themselves to feel defeated by their period and contribute to society's negative connotations of menstruating. This validates the feminist standpoint theory, as individuals adopt the feelings and knowledge that are prevalent in society.

However, industry experts suggest the notion that the menstrual cycle is a power rather than a problem. Since educating herself on female anatomy, Eleanor finds her monthly cycle to be "quite empowering" (appendix 7.1). This view is supported by Bex, who believes menstruators should "honour their cycle" as she passionately advocates the message that menstrual cycles are "not a sickness, it's a power" (appendix 7.2). The frequent language and adjectives used by experts such as "power" and "honour" when discussing the menstrual cycle resist societal norms and expectations of how a woman should feel when menstruating. This disregards the standpoint theory that society influences our knowledge, as experts have disregarded societal viewpoints and acquired knowledge without the impact of societal norms.



Elaborating on the emotions of empowerment, primary research indicated how there are advantages to the menstrual cycle with Bex describing one's cycle to be a "guidance system to optimum wellbeing" (appendix 7.1). This contradicts secondary findings as literature described the menstrual cycle to be "painful" and "inconvenient" (Tingle and Vora, 2018). Primary investigations signify the menstrual cycle to be an asset to menstruators, viewing it as a power and as a tool for optimal well-being. Digital ethnography supported expert findings, YouTube comments described there to be an "energy cycle that comes with menstruation" and once we begin to "nurture and care for" our cycle then it "makes way for something new and beautiful" (appendix 10).

The menstrual cycle has multiple lifestyle and well-being benefits when one works alongside their cycle rather than against it. Yet this was not highlighted by secondary literature due to the lack of research and education in the industry. With expert knowledge of nutrition and exercise, the menstrual cycle can become an empowering asset that can boost productivity and well-being, rather than a lifestyle hindrance.

4.2.2 Commercialisation

Negative emotions and stigma have become apparent surrounding the menstrual cycle.

When investigating these negative emotions, it became apparent how individuals are noticing obstructions in their daily life due to their menstrual cycle but are unaware of how to overcome these implications. The survey showed that 65% of respondents use fem-tech apps and products to monitor their menstrual cycle. However, out of this 65%, only a further 66% of them do not purposely change their diet when they menstruate (appendix 9). Interviewing a consumer, who also uses fem-tech apps to track her cycle, supported this finding as Laura states she doesn't track her diet throughout her menstrual cycle, presenting the common finding that menstruators only track their bleeding on their cycle rather than tracking their lifestyle and diet (appendix 11.2).

Interviews with experts in the industry supported this finding. Caroline has found her clients "don't track anything", and "they're not tracking their food, they're not tracking their exercise". Her advice is for menstruators to "become an investigator of their own bodies" (appendix 7.3).

Research has highlighted how there are advantages to the menstrual cycle, with Bex describing the cycle to be a "guidance system to optimum wellbeing" (appendix 7.2). But this empowering viewpoint is not present in the fem-tech industry. Users of fem-tech applications are not encouraged to track their diet or exercise. This leads to the question of what the benefit of fem-tech apps is to the users. Secondary literature discussed the growing concern fem-tech brings to the commercialisation of women's bodies and online privacy issues (Healy, R.L. 2020). In addition, Eleanor recognised that the increase in fem-tech products contributes to the "increasing the gender health gap" as not all menstruators can financially afford products available in the market. This is backed up by secondary findings discussed in 2.5 as fem-tech products and services are already argued to exclude members of oppressed groups in society (Hendl, T. and Jansky, B. 2021).

However, Eleanor disregarded this negative standpoint with the opinion that the benefits of commercialisation outweigh the risks as "fem-tech is now filling this information gap with commercial products" (appendix 7.1). Nonetheless, primary research did not support this opinion due to the majority of respondents using fem-tech but not gaining an advantage out of their use. Sarah disclosed she only tracks her period using fem-tech but said "it would be beneficial to track other things and understand my cycle, but I guess I've just never thought about that" (appendix 11.1).

Findings have highlighted how fem-tech has a huge opportunity to benefit menstruators, as the majority of the sample do use femtech applications and products already. Yet this same group of respondents do not gain lifestyle advantage or increased knowledge from fem-tech apps.

5. THE BLOODY INSIGHTS



1. Periods are a power.

Positivity surrounding the menstrual cycle is lacking. Menstruators need to be taught about how they can honour and work with their cycle to unlock their full potential. Individuals should feel empowered by their monthly cycle and take full advantage of the lifestyle benefits it can bring.

2. It's the day job.

Stigma results in the workplace avoiding discussion around periods. Menstruators lack a sense of power in their workplace and suffer in silence. Conversations and acknowledgment of the menstrual cycle need to become common. Both workplaces and menstruators will benefit from an increase in productivity as a result of this.

3. Don't digitalise the uterus.

Fem-tech can provide huge benefits, but consumers are becoming skeptical regarding the commercialisation of their bodies. Additionally, oppressed groups in society can feel excluded from the fem-tech industry. Menstruation should encourage empowerment and the fem-tech community should contribute to this.

DON'T CRAMP OUR STYLE







1. You can't always go with the 'flo'.

Period tracking apps have the opportunity to empower and educate their consumers. Tailored and personalised advice that encourages menstruators to learn about their cycle and work in harmony with their hormones will be most beneficial to the consumer. With technology continuously advancing, the fem-tech industry should strive to empower menstruators and take advantage of how technology can cater to the menstrual cycle.

2. Period Productive.

Menstruators are not satisfied in the workplace. It's time for work environments to honour the menstrual cycle and accommodate to menstruating individuals' hormone cycle and needs. Wellness is a key need for menstruators. Workplaces can introduce innovative spaces and initiatives to tailor the work environment for menstruating individuals. Altering workspaces and supporting the menstrual cycle at work will boost the well-being of employees, ultimately increasing productivity. Employees will reciprocate the treatment they receive.

3. Have you taken paracetamol?

Acknowledging the benefits of nutrition and exercise throughout different stages of the menstrual cycle is crucial to empower menstruators. Brands need to educate consumers and deliver scientific advice. Consuming hormone-happy foods and moving the body throughout the different stages of the menstrual cycle has significant lifestyle benefits. Ditch over-the-counter drugs and allow brands to support menstruators and their bodies.



This report successfully highlighted the lack of empowerment and education that surrounds the menstrual cycle. Evidence from research answered the study's primary aim, discovering that menstruators feel ashamed and unproductive, which impacts their goals of achieving optimum well-being.

Therefore, the industry needs to continue to explore the impacts of the menstrual cycle and promote the insight that hormones and the menstrual cycle are an asset to one's lifestyle. A fulfilled daily life where maximum productivity and wellness are achieved is possible for menstruators when their cycle is enhanced through the power of nutrition, exercise, and education. The findings answering the proposed research question, suggest a number of important actions for future developments in the menstrual health and wellbeing market.





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