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## Access to Menstrual Resources as a Public Health Issue in the US and Scotland: A Narrative Review

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The objective of this paper is to answer the research question: in what ways is access to resources related to menstruation a public health issue in the United States (US) and Scotland? Resources will be understood to mean, for example, menstrual products, education, safe restroom facilities, and appropriate and accessible healthcare. The Social Ecological Model (SEM), a conceptual model consisting of four levels of consideration (individual, interpersonal, institutional/community, and societal), was used to structure a narrative review of the factors related to access to menstrual resources. The SEM offers a novel approach within Critical Menstruation Studies that leads to a better understanding of how access to resources affects menstrual health and the menstrual experience in the US and Scotland. This review is intended as an initial step towards collecting data about access to menstrual resources that can inform policy and legislation. It calls for advocates, activists, policymakers, and other interested stakeholders to explore opportunities for change at each of the levels of the SEM: individual, interpersonal, institutional/community, and societal.

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## Introduction

Menstruation and menstrual health have been the subject of research across a wide variety of disciplines, culminating most recently in the publication of the first handbook dedicated to Critical Menstruation Studies (Bobel, et al., 2020). However, discussions relating to menstrual and public health, particularly in the context of non-clinical research on Western nations, have not been well represented within the field until recent years; much of the more recent non-clinical studies are focused on menstruators in low and middle income countries (LMIC) (Sommer et al., 2020b). This focus on LMIC has, however, not precluded high income countries (HIC) from entering the conversation through policy, which indicates the need for an increased understanding of menstruation in HIC contexts (Barrington et al., 2021).

This paper explores access to resources related to menstruation in Scotland and the United States (US) through a public health lens: both are Western nations that are discussed less frequently in relation to access to resources when compared to LMIC. The recognition that a condition or problem is a public health issue removes the expectation that interventions addressing the problem are deferred to the level of the individual. In the context of access to menstrual resources, it elevates the conversation from a focus on the needs of individual menstruators to a focus on the interventions and policies that can improve access to menstrual resources for all. Critical Menstruation Studies is a growing field, and this is an exciting moment to expand the conversation to include a public health perspective. Public health often focuses on health inequalities and health equity (Priestley, 2021), which makes the topic of equitable access to menstrual resources a good fit for the application of a public health lens.

The US and Scotland have been chosen as sites of analysis due to their notable activism, policy, and practice in pursuit of equitable menstrual experiences for all menstruators. While the US and Scotland currently dominate policy conversations, they are not lone actors in this area. However, they were also selected to ensure a manageable scope for discussion, guided by the author's position as a US-based researcher contributing to a research group that is focused in part on the Period Products (Free Provision) (Scotland) Act (The Scottish Parliament and Parlamaid Na H-Alba, 2021).

This narrative review contributes to the broader conversation about access to menstrual resources. The Social Ecological Model (SEM) (Kilanowski, 2017; CDC, 2020; Mccammon et al., 2020) is utilized in this review as a conceptual framework that guides the reader through the major topics that influence access to resources related to menstruation. Topics are divided into four nested levels, which are: the individual, interpersonal, institutional/community, and societal (CDC, 2020). Within each level,

the major topics are introduced and briefly discussed within the contexts of the US and Scotland. This paper culminates in a discussion of the implications of the major topics present at each of these interconnected levels, as well as pinpointing opportunities for action that stem from them.

The research and writing for this paper took place entirely during the COVID-19 pandemic, which presented challenges for accessing research and resources pertaining to the Scottish context. Ideally, this research would have been supplemented by archival work in Scotland, but this was not a possibility given the pandemic restrictions. While some archival sources were secured through the assistance of Scotland-based researchers, it would have been most beneficial for this work to have been conducted first-hand. Resources are, therefore, a significant limitation of this study and future research into this topic would benefit from consulting Scottish archives and research institutions in person.

In both the US and Scotland, policy efforts have dominated the conversation surrounding menstrual equity and period poverty. Since 2015, the US has seen an increase in public advocacy and policy aiming to repeal state sales tax on menstrual products (i.e., the ‘tampon tax’), as well as the proposal of menstrual policy at the federal level (Weiss-Wolf, 2019; Meng, 2019; Meng, 2021a). In 2021, Scotland distinguished itself by passing a Bill to ensure free access to menstrual products for all menstruators in Scotland (The Scottish Parliament and Parlamaid Na H-Alba, 2021). For a more in-depth discussion of the implications of this Bill, please refer to the introduction of this Special Collection (Bildhauer, Røstvik and Vostral, 2022).

Policy, however, is only one piece of the puzzle for a successful public health approach. The US and Scotland are intriguing given their emphases on policy and their potential for a robust public health response to address access to menstrual resources. Both nations rely on a combination of national and local cross-sector efforts to identify and respond to public health problems (Public Health Scotland, 2021b). In the US, the Centers for Disease Control and Prevention (CDC), an agency under the US Department of Health and Human Services, is perhaps the most widely recognized nationally focused public health body. In Scotland, the newly created Public Health Scotland fulfills this role (Public Health Scotland, 2021b; Digital Communications Division (DCD), 2021; CDC, 2021b).

In the case of both the US and Scotland, this paper asks: in what ways is access to resources related to menstruation a public health issue? Resources in this case will be understood to mean, for example, menstrual products, education, safe restroom facilities, and appropriate and accessible healthcare.

## Definitions

In 2021, an expert group of consultants, academics, scientists, and practitioners released the first agreed upon definition of menstrual health as ‘... 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: 2). This definition closely mirrors the World Health Organization’s multifaceted definition of health (Hennegan et al., 2021). These definitions serve to remind us that while issues of health are often discussed and are, arguably, reduced to a physical construct, health concerns encompass a wide variety of influential factors. This reminder to view health as a rich combination of complex factors is particularly relevant when discussing menstruation, a biological occurrence that has been overly stigmatized and often only discussed in relation to the visible blood produced, as opposed to a focus on the unique lived experiences of menstruators.

Public health was defined by expert CEA Winslow as ‘the science and art of preventing disease, prolonging life, and promoting health through the organized efforts and informed choices of society, organizations, public and private communities, and individuals’ (CDC, 2021a: 1). This definition is promoted by the CDC (2021a) in the US, with a similar definition promoted by Public Health Scotland (2021a). As a field, public health focuses on and examines the broad experiences of health conditions and experiences within communities and populations, and considers the impact of both external and internal factors.

## Conceptual Model: Social Ecological Model

The framework used in this paper to investigate access to menstrual resources as a public health issue, SEM, is a conceptual model that explores the factors that directly and indirectly influence a concept or topic; it can be represented visually as a nested model with multiple levels, each level within the nest influences and is influenced by the others while also containing influential factors that are unique to that level (Kilanowski, 2017; CDC, 2020; Mccammon et al., 2020). The SEM thereby demonstrates the interconnected influences on health outcomes present at four main levels: the individual, interpersonal, institutional/community, and societal (CDC, 2020).

Using the SEM as a conceptual framework, this paper discusses the social determinants of health (SDOH) that were key to selection of the SEM factors explored through this narrative review (Office of Disease Prevention and Health Promotion et al., n.d.). SDOH are defined as ‘the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks’ (Office of Disease Prevention and Health Promotion et al., n.d.: 1). These include the five main domains of ‘economic stability, education access

and quality, health care access and quality, neighborhood and built environment, and social and community context' (Office of Disease Prevention and Health Promotion et al., n.d.: 1). These five domains determine the topics discussed in each section of this paper. It is important to note at the outset that the organization of these topics will be prioritized by level of the SEM; the chronology of topics is a secondary concern.

The SEM is a tool that assists public health researchers and practitioners in framing health conditions and experiences within communities and populations, while accounting for the impact of external and internal factors. The SEM is often utilized in public health studies to allow researchers to explore the nuanced factors that impact health outcomes, many of which exist externally to the individual. This model has recently been used to study young women's experiences with menstruation in Uttar Pradesh (Mccammon et al., 2020). The study utilizes the SEM to structure their qualitative analysis of life course interviews (Mccammon et al., 2020). The interviews are concerned with the challenges faced by this population related to menstruation at each level of the SEM, with the goal of informing potential level-specific interventions (Mccammon et al., 2020).

The study's use of the SEM to organize the analysis of its central question served as inspiration for the structure of this paper. While the aim here is not to produce interventions, the model does provide the means to divide the conversation into the constituent parts that are organized by the levels of the SEM: it provides a helpful structure to guide the narrative review (Mccammon et al., 2020). The application of the SEM to the discussion of the evolving conversation around access to menstrual resources in the US and Scotland is appropriate because it structures the analysis by broad themes, highlighting similar topics within each context in a manner that is easy to understand and that enables the analysis of factors impacting upon the treatment, experience, and history of menstruation in each of these two Western nations.

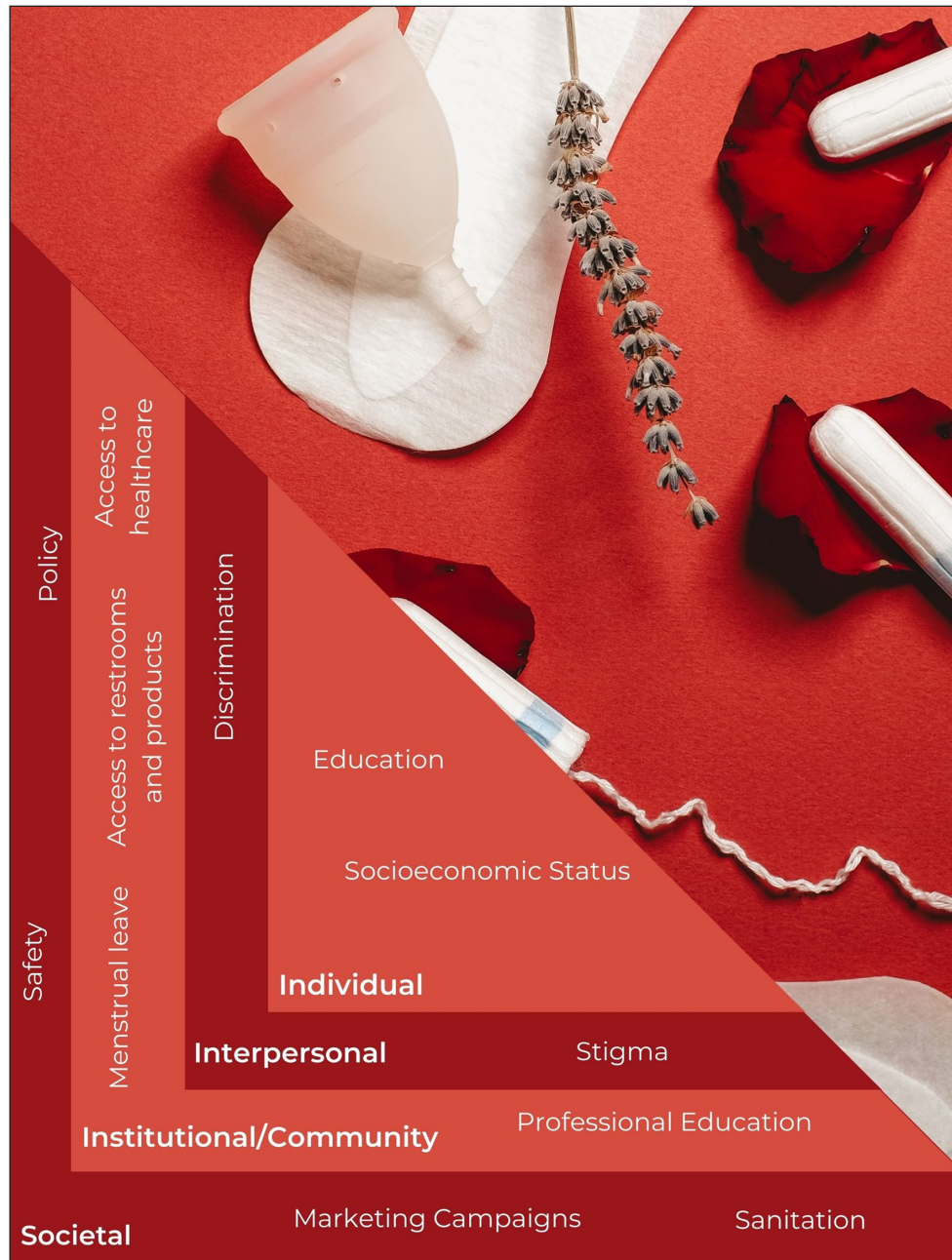
In terms of the original contribution of this article, a prior study by Sommer et. al (2015) has researched menstrual hygiene management in relation to public health in LMIC. While this paper also explores a menstruation-related topic through the lens of public health, it focuses on two Western nations and therefore provides a different scope and focus for analysis.

## **Results**

The main factors discussed in this paper are determined through the exploration of the literature, and these factors are arranged by level of the SEM. At the individual level, the factors are socioeconomic status and education, while at the interpersonal level, they are stigma and discrimination. At the institutional level, the factors are: access



to restrooms and products, menstrual leave, professional education, and access to healthcare. The societal level includes: marketing campaigns, safety, sanitation, and policy. This is summarized visually in **Figure 1**.

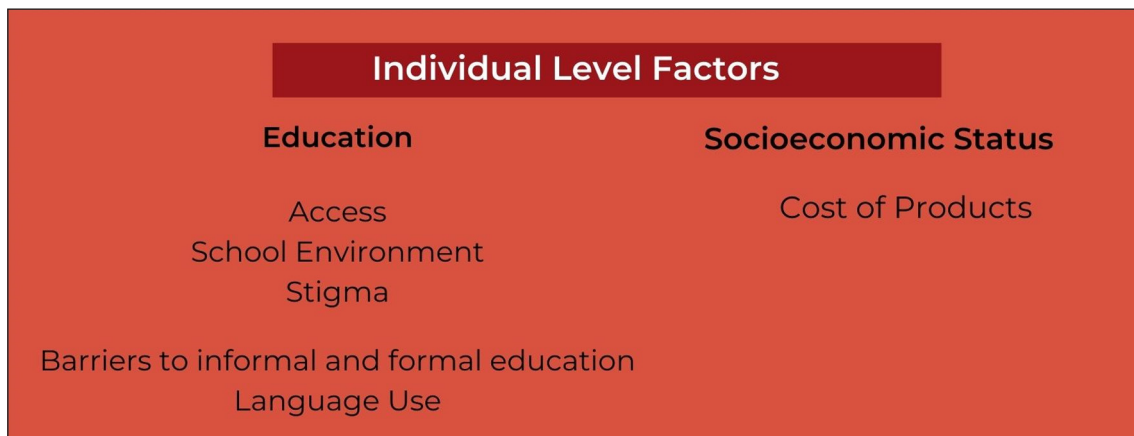


**Figure 1:** The main factors discussed in this paper arranged by level of the social ecological model. Text by the author, image by Canva.

The SEM allows us to examine the landscape surrounding these policies and conceptualizes that none of these factors exist independently. The following review is divided into the four levels of the SEM as depicted in **Figure 1**. Within each level, the main factors related to access to menstrual resources in the US and Scotland are discussed.

### ***Individual level***

The individual level addresses factors closely related to the experience of menstruation for each menstruator (**Figure 2**). At the individual level, menstrual resources include access to menstrual education, the ways in which information is conveyed, socioeconomic status and an individual's ability to afford resources such as menstrual care products (CDC, 2020).



**Figure 2:** The individual level factors discussed in this paper. Text by the author, image by Canva.

### ***Sexual health education***

Overall

Education refers to an individual's access to educational resources and the knowledge gleaned from these sources. Menstrual education, on the whole, leaves much to be desired (Stubbs, 2020). The stigma associated with menstruation can serve as a barrier and, if the surrounding adults lean into the prevailing discomfort around this topic, young menstruators can be left inadequately prepared for menarche (The Lancet Child Adolescent Health, 2018). Moreover, menstruation can serve as a barrier to formal education (The Lancet Child Adolescent Health, 2018). A 2018 article reported that 10% of UK 14–21 year-old girls faced period poverty which resulted in missed days at school (The Lancet Child Adolescent Health, 2018).

Within the context of school-based education, Stubbs and Sterling (2020) critique the focus on ‘uncontrollable hormones’ and the ways in which this focus may render menstruation a non-agentive state, whereby menstruators may be placed at the mercy of their physiology (Stubbs and Sterling, 2020). The authors’ overall critique lies with the highly variable nature of menstruation education; chief amongst their desires for an updated education is the repair of the rift between conversations around menstruation and those centered on reproduction. These, they argue, are often divorced from one another for the sake of comfort (Stubbs and Sterling 2020).

#### Sexual health education in the US

Sexual health education varies widely across states as well as between school districts in terms of requirements and the topics covered (Guttmacher Institute, 2021; Planned Parenthood, 2021a; Planned Parenthood, 2021b). As of 2021, more than half (28) of US States had mandatory provision of sex education in schools (Guttmacher Institute, 2021). Even so, the state of sexual health education in the US continues to vary across the 50 states (Guttmacher Institute, 2021). A 2020 study conducted in South Carolina reminds us that information and education about menstruation is shared informally as well as formally, with many of the participants identifying family members as sources of this information (Demaria et al., 2020).

#### Sexual health education in Scotland

Menstrual education has been an important topic of conversation for some time within the Scottish context. In 1977, Aberdeen newspaper the *Evening Express* reported that a local group had been created by women, for women, in order to specifically allow for educational opportunities about an identified gap: women’s health issues (Outhwaite, 1977). Sexual health education varied widely in focus and framing in Scotland in the late 1970s due to a lack of direct instruction and expectation from school district administrators at local and national levels (Wojtas, 1979). As a result of this lack of specific instruction to schools, the schools were given the responsibility to create programs, many of which incorporated a local health education Grampian television program called *Living and Growing* (Wojtas, 1979).

The content of sexual health education continued to be a focus of conversation throughout the 1990s. A 1992 study by the Health Promotion Research Trust delved into the discussion around menstrual health education in schools, looking at menstruation experiences and potential challenges in school settings (Mackie, 1992). This study found that ‘half the secondary schools involved have an unsympathetic attitude towards menstruation’ (Mackie, 1992: 1). This ‘attitude’ included inadequate and unavailable



toilets, a lack of available menstrual products, as well as an overall negative climate regarding menstruation that was created by certain teachers and male students (Mackie, 1992). The Health Promotion Research Trust used the results of their study to produce a guide titled 'Helping Girls Cope with Menstruation in School' which was directed at parents and teachers (Mackie, 1992). Education about menstruation can include conversations around such topics as unintended pregnancies and side effects such as premenstrual syndrome (PMS). A 1994 Press and Journal newspaper article reported on how the Scotland Family Planning Association specifically worked towards educating adolescent girls on this issue with its 1994 publication *Periods – What You Need to Know* (Press and Journal, 1994b). In 1992 the Aberdeen-based healthcare organization The Evening Primrose Office released a guide for menstruators that focused on PMS (Mackie, 1992). This same organization reported that in 1992 PMS was a reality for 93% of women (Mackie, 1992). In Scotland today, the guidelines for Relationships, Sexual Health and Parenthood (RSHP) education that were set in 2014 are mandatory for schools, except for those designated as denominational (Tingle, 2018).

### **Socioeconomic status**

Access to menstrual resources and socioeconomic status in the US

Socioeconomic status is a key factor impacting access to resources. The cost of products can be a barrier for menstruators, with problems of access exacerbated for individuals earning lower incomes, and specifically for transgender individuals due to overall higher rates of poverty when compared to the general US population (Atkins, 2020). It is estimated that in the US a menstruator will spend between \$70-\$120 on menstrual products annually (Weiss-Wolf, 2020). In a 2019 study of low-income cisgender female menstruators in the American South, researchers found that 64.3% of their sample had experienced period poverty, which they defined as 'needed menstrual hygiene products but did not have the money to buy them' in the past year (Sebert Kuhlmann et al., 2019: 241). Of those who experienced period poverty, 62.1% reported that they were affected either 'some months, but not all' or 'almost every month' (Sebert Kuhlmann et al., 2019: 241). Overall findings were that participants identified a need for improved access to menstrual resources (Sebert Kuhlmann et al., 2019).

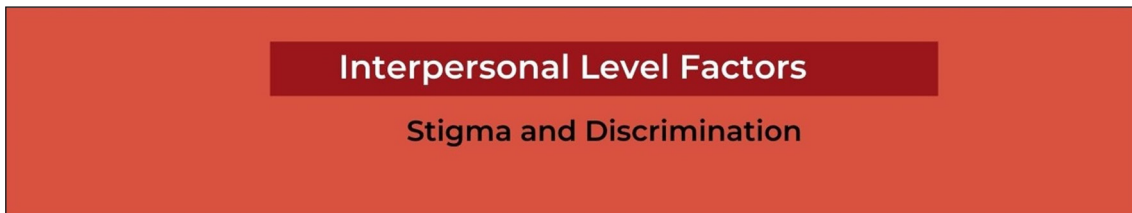
Access to menstrual resources and socioeconomic status in Scotland

In 2018, the Scottish Government partnered with the organization Young Scot to commission an online study of youth opinions about menstruation (Young Scot, 2018). Participants hailed from every local authority and were in the majority aged 11–24 years, with the analysis divided by those currently enrolled in formal education and those not

currently enrolled (Young Scot, 2018). Of those enrolled, 25.5% experienced challenges accessing menstrual products within the previous year, with 42.9% of them citing affordability as the primary barrier. Of those outside formal education who experienced challenges in accessing menstrual products in the previous year, 61% of this subset cited affordability as the primary concern (Young Scot, 2018). This study indicated that amongst youth and young adults, affordability and finances are significant concerns when accessing menstrual products (Young Scot, 2018).

### ***Interpersonal level***

The interpersonal level addresses factors related to relationships and actions between individuals (CDC, 2020). The most relevant factors for access to menstrual resources are stigma and discrimination (**Figure 3**).



**Figure 3:** The interpersonal level factors discussed in this paper. Text by the author, image by Canva.

### Stigma and discrimination

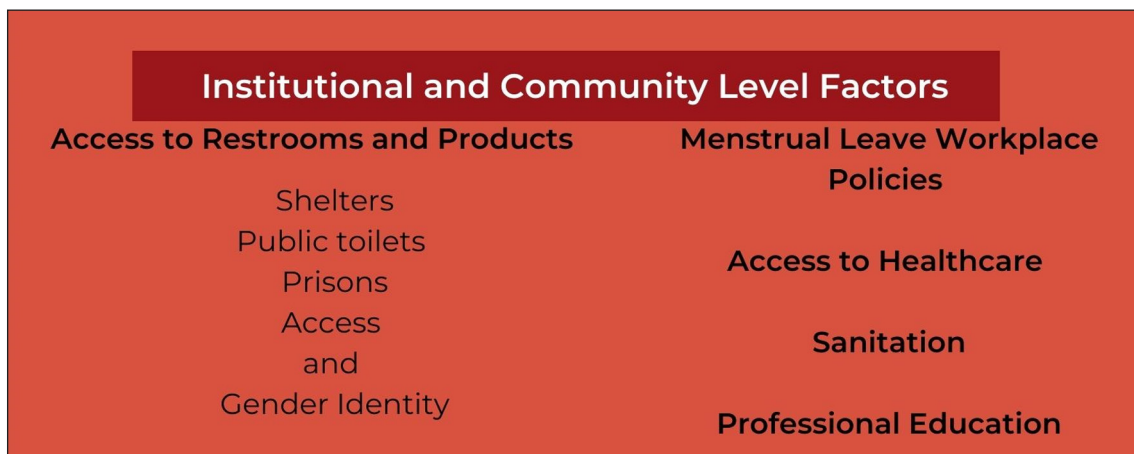
Johnston-Robledo and Chrisler found that the stigma and discrimination faced by (mainly US-based) menstruators can be understood as ‘hidden’ stigma, as both the symptoms and the products are often hidden (2020: 184). This theme of stigma includes emphasis on concealment, assumptions about menstruators, and avoidance (Johnston-Robledo and Chrisler, 2020). The concept of concealment is further promoted through advertisements for menstrual products that absorb the evidence: the blood (Johnston-Robledo and Chrisler, 2020). Stigmatizing conversations about menstruation also include assumptions about the attitude and mental state of menstruators (Johnston-Robledo and Chrisler, 2020).

Open conversations about menstruation are actively discouraged individually, interpersonally, and within institutions such as schools (Johnston-Robledo and Chrisler, 2020). Johnston-Robledo and Chrisler conclude that stigma against menstruation can be combatted through discussion, activism, and celebration, concluding their article on the note that: ‘challenging the stigma of menstruation and learning to appreciate, or at least not loathe, menstruation may have a positive impact on girls’ and women’s well-being as well as their social status’ (2020: 194).

A 2018 study found that over 30% of women in the UK reported experiences of menstrual stigma (Action Aid, 2018). The stigma faced by menstruators is related to power structures and the oppression of women and, as an extension, all menstruators (Steinem, 2020). In Scotland, Monica Lennon, a Member of the Scottish Parliament, has become a leader in the push to provide free period products and to combat the stigma directed towards those who experience menstruation. In 2020, she affirmed the importance of, as well as her own commitment to, addressing menstrual stigma (Specia, 2020; Davidson, 2020). The Scottish Government created the ‘Let’s Call Periods, Periods’ marketing campaign in 2020 to combat stigma through television, print and social media sources (Scottish Government, 2020).

### ***Institutional and community level***

The institutional and community level includes structures and institutions such as healthcare and restroom facilities, schools, and community level sanitation programs (CDC, 2020). In this review, menstrual leave, access to toilets, and menstrual products are all factors related to this level of the SEM and are visually represented in **Figure 4**.



**Figure 4:** The institutional and community level factors discussed in this paper. Text by the author, image by Canva.

### Menstrual leave

Menstrual leave policies are workplace policies that allow for absence due to menstruation (Levitt and Barnack-Tavlaris, 2020). Menstrual leave is not currently offered in the US or Scotland as a matter of national policy (Barnack-Tavlaris et al., 2019). In a study of US residents’ attitudes towards menstrual leave policy, it was found that 42% of the sample would support this type of policy without reservation (Barnack-Tavlaris et al., 2019). The UK company Coexist offers a monthly leave policy, designating one day for

specific menstrual leave, alongside a flexible and open environment that centers the embodied needs of its employees (Levitt and Barnack-Tavlaris, 2020). This policy was developed to allow for adjustments following feedback from those taking part in the leave policy, as well as their fellow non-menstruating co-workers (Owen, 2018).

Menstrual leave may entail both benefits and risks for menstruators. Benefits include open and honest communication within the workplace, ideally leading to a decrease in the stigma and taboo around these conversations. Risks include the very impact of this stigma, which could inadvertently lead to discrimination in the workplace—especially by non-menstruators (Levitt and Barnack-Tavlaris, 2020). When stigma is combined with sexism, leave may exacerbate gender norms and reductive perceptions of women as less competent in the workplace environment (Levitt and Barnack-Tavlaris, 2020).

Participants in the study carried out by Barnack-Tavlaris et al. reported mixed feelings about menstrual leave policies, with concerns around ‘special treatment’ for menstruators, policy honesty, and menstruators being subjected to stigma because of utilizing these leave policies (2019: 1365). Menstrual leave may, however, be beneficial for non-cisgender menstruators by not requiring them to manage menstruation in public spaces where they may feel unsafe (Levitt and Barnack-Tavlaris, 2020). One participant in Barnack-Tavlaris et.al.’s study, who was a transgender man, indicated that menstrual leave would allow him to take necessary time off for menstrual management without repercussions such as the potential for job loss (2019).

#### Access to healthcare

One of the identified requirements for achieving menstrual health is the ability to ‘access timely diagnosis, treatment and care for menstrual cycle-related discomforts and disorders, including access to appropriate health services and resources, pain relief, and strategies for self-care’ (Hennegan et al., 2021: 2). In a 2020 study of US-based menstruators, Sarah E. Frank found that barriers to accessing healthcare include: lack of training for healthcare providers, fear of stigma, discrimination, misgendering, as well as other negative personal experiences on the part of menstruators who are not cisgender (Frank, 2020). In Scotland, menstrual health was included in the 2021 ‘Women’s Health Plan’, which is a comprehensive plan to address a wide range of health concerns experienced by women (Christie, 2021; Minister for Public Health and Women’s Health and Sports, 2021). It is important to note that menstruation is not only an issue for women, and that the fight for improved menstrual health must be inclusive. Overall, this commitment to menstrual health on the part of the government is an important step towards improved menstrual health.

### Professional education

A 2020 study conducted by the Columbia Mailman School's Gender, Adolescent Transitions, and Environment (GATE) Program identified a significant gap in the education of future graduate level public health professionals (Sommer et al., 2020b). Their review of top US schools' public health curricula showed notable gaps around menstrual health (Sommer et al., 2020b). In response to their study, researchers at the GATE Program launched a freely accessible and comprehensive online course covering a wide variety of topics related to menstruation across the globe (Columbia Mailman School of Public Health, 2021). This represents an exciting step towards addressing gaps in professional education.

### Access to restrooms and products

Access to restrooms and toilets is a unique concern for menstruators; particularly those who are not cisgender, are homeless or are experiencing housing insecurity, are attending school, or are incarcerated.

#### *Public restrooms and toilets*

Access to restrooms for homeless menstruators—or for any individual menstruating while in public—is limited by the hours that businesses operate and, even when facilities are open, they may not offer restroom facilities within which menstruators can securely and hygienically manage their menses (Weiss-Wolf, 2017). In Scotland, public toilets are widely available, with some local councils charging a fee for use and others operating free of charge (Scottish Borders Council, 2021). Where required, the fee is small (for toilets run by the Scottish Borders Council paid toilets are 30 pence per visit at the time of this article's publication) but not insignificant (Scottish Borders Council, 2021). In 2019, 724 toilets were operated by councils but amidst budget cuts this number was projected to decrease (Williams, 2019).

#### *Shelter facilities*

Shelter facilities for those facing housing insecurity may include certain resources but gatekeep those same resources, such as showers (American Civil Liberties Union & Period Equity, n.d.). They may not create a safe, sanitary and, in the case of transgender men, inclusive environment (American Civil Liberties Union & Period Equity, n.d.). Exploring experiences of period poverty in Bristol, UK, Shalini Vora interviewed cisgender female menstruators who experienced housing insecurity. Some of those who used shelter resources reported a reluctance to discuss personal aspects of menstruation with shelter staff due to concerns over power imbalances and/or gatekeeping (Vora, 2020).

Furthermore, the restrooms available to those who are facing housing insecurity or who are in need of the restrooms offered by shelters, are not always safe (Weiss-Wolf, 2017). The findings of a 2020 study on the experiences of homeless menstruators in New York City echoed these concerns, with participants painting a grim picture of non-functional shared and public restrooms within shelters and public spaces, such as transportation stations. They reported difficulty accessing public toilets within private businesses and shower facilities due to limited locations and hours of access (Sommer et al., 2020a). Participants discussed a unique challenge facing homeless menstruators: access to some public resources is dependent upon the ability to appear as if one is housed (Sommer et al., 2020a). Vora (2020) argues that, while support for the donation of menstrual products exists in the US and UK, this does not ensure that menstruators who need to access resources, such as safe bathrooms, are truly able to do so. She also argues that much needs to be done to address the underlying factors that lead to homelessness, as well as the stigma faced by menstruators who manage their menstruation in public settings.

#### *Prisons and jails*

Another population whose access to menstrual products is dependent upon people in positions of power is those who are incarcerated. On the issue of withholding menstrual pads within US prisons, Chandra Bozelko (2020) shares her personal experiences of intentional and reinforced inequities that she faced and witnessed. These included a lack of adequate menstrual products, and an imbalance of power exacerbated by placing the means of safe, hygienic, and dignified menstrual management just out of reach for many inmates, particularly those who were not able to supplement their meagre payments with external funds. Bozelko positions this gatekeeping of menstrual products as yet another way in which women who have been incarcerated are stripped of their rights.

Tomi-Ann Roberts discusses the ways in which this gatekeeping appears to be widespread within the US incarceration system, with inmates going without necessary products or at times even changes of clothes when theirs become soiled (Roberts, 2020). Roberts gives many examples of the ways in which the mistreatment of female inmates in relation to menstruation is linked to intense feelings of shame amongst menstruators who are incarcerated (2020). Addressing some of these challenges, The Dignity for Incarcerated Women Act was proposed as was a United States Department of Justice rule (Weiss-Wolf, 2020). The rule was successfully passed in 2017 (Weiss-Wolf, 2020).

#### *Gender identity and safe access to menstrual resources*

Menstruation has often been discussed, treated, and studied as a 'cisgender woman's issue', when the reality is that the total population of menstruators includes individuals



who do not identify as cisgender (Chrisler et al., 2016). Prior studies have found that the gendered nature of restrooms (i.e., their segregation into the binary of ‘male’ and ‘female’) creates a specific challenge for those who do not identify with or see themselves accurately represented within these rigid, binary categories of gender, (Herman, 2013). The gendering of restrooms and the associated expectations related to gender within those spaces can create an unsafe environment and instances of harassment, arrest, and assault (Herman, 2013).

In a 2013 study, researchers analyzed data from a survey of 93 gender non-conforming and transgender individuals residing in Washington DC on issues of access to restrooms outside of their homes (Herman, 2013). Study respondents reported a range of access issues within work and school environments, with some going out of their way to plan bathroom usage in light of discriminatory co-workers or restrictive school schedules and the requirement to use only certain restroom facilities (Herman, 2013). Participants also reported that they would refrain from certain social activities or using shared spaces due to concerns around access to restroom facilities (Herman, 2013). Over half of the participants in this study reported developing health issues such as urinary tract infections (UTIs) and dehydration because of issues of access to restroom facilities (Herman, 2013).

To address some of these concerns, several US cities including Denver, New York, and Boston among others have implemented policies for gender non-conforming and transgender individuals to protect their rights to access the restrooms of their choice (Herman, 2013). A 2016 study of masculine-of-center and transgender individuals in the US found that the majority of participants identified men’s public restrooms as sources of concern in terms of personal safety, the ability to dispose of menstrual products, and comfort (Chrisler et al., 2016). As Weiss-Wolf notes, ‘for those who are transgender, a growing population in the overall homeless head count, the need for discretion, especially while menstruating, can be a matter of personal safety, or even life or death’ (Weiss-Wolf, 2017: 67). Atkins echoes a portion of this sentiment in her work, indicating that, ‘even if cost is a nonissue, using a men’s restroom can be daunting for those who have their period. The sound of opening a tampon or pad, or simply carrying one, can lead to unwanted attention’ (Atkins, 2020: 4).

A 2020 article interviewed transgender and non-binary individuals on a variety of topics related to menstruation. When asked about menstrual products, the feminization of the products was identified as a challenge (Frank, 2020). The way in which menstrual products are advertised and packaged can be an affront and a source of dysphoria for menstruators who are not cisgender (Atkins, 2020; Frank, 2020). In contrast, the THINX brand of reusable period underwear was well regarded due in part to their marketing as a transgender-friendly product; however, the higher cost of these products can be

a barrier (Frank, 2020). Within the sample of Frank’s study, participants preferred a variety of products including period underwear, tampons, menstrual cups, and pads (Frank, 2020).

Kenny Ethan Jones, a prominent model and activist who is also transgender, was quoted in a 2020 article discussing some of the challenges menstruators face: ‘I’ve definitely seen a positive shift with the discussion around women experiencing periods, but the stigma towards trans men, nonbinary and intersex individuals having them is still alive and well ... People are still reluctant to the idea that it’s not only women that experience periods’ (Atkins, 2020: 2).

### ***Societal level***

The societal level includes topics such as policies, procedures, laws, and campaigns related to menstruation (CDC, 2020). In Scotland, menstruation has been a topic of conversation closely related to safety, sanitation, as well as a campaign for free menstrual products. In the US, campaigns have centered more around the taxation of menstrual products (Weiss-Wolf, 2020), as well as a push for the provision of free menstrual products, which has been proposed in Congress, but has not yet passed (Meng, 2017b; Meng, 2019). These topics are visually represented in **Figure 5**.



**Figure 5:** The societal level factors discussed in this paper.

#### **Safety**

The safety of menstrual products has historically been a cause for concern. In the early 1980s, America encountered a new public health crisis: toxic shock syndrome (TSS), which is a sometimes-fatal condition experienced by menstruators who use tampons (Reame, 2020; Vostral, 2018). The realization that tampon usage could lead to TSS spurred the FDA and researchers to measure and label the absorbency of tampons

(Reame, 2020). Legislation has been proposed in the form of the Robin Danielson Feminine Hygiene Product Safety Act (H.R. 3865) which mandates testing and safety measures for products but it is yet to be passed (Reame, 2020).

Scotland, too, considered TSS a major health concern during the 1980s and 1990s. A 1991 Scottish newspaper article in the *Press and Journal* advocated for better protection in terms of sanitary product materials, as well as education about TSS risks that would be targeted towards younger women (Jacks, 1991). The article also addresses the lack of public discourse about these issues (Jacks, 1991).

In the UK in 1989, safety concerns centered on levels of chemicals in the paper linings of diapers and pads (Press and Journal, 1989). In response, The Women's Environmental Organization published a book that advocated for the production of sanitary products with no chlorine (Press and Journal, 1989). The UK government also tasked trade associations with investigating the allegations of high levels of dioxins (Press and Journal, 1989). However, the Swedish paper industry countered that the amount present was not dangerous (Press and Journal, 1989). In reference to these issues, Roger Freeman, Junior Health Minister at the time, stated that 'these levels are likely to present a negligible risk to women's health' (The Courier and Advertiser, 1989).

#### Sanitation

While this language is changing in favor of such terms as 'menstrual health', prior to this, much of the conversation about menstruation had centered the concepts of hygiene and sanitation (Hennegan et al., 2021). Historically, sanitation has been a major concern related to menstrual products, with the UK facing a sewage crisis throughout the 1990s (Margiotta, 1995; Pacitti, 1994a; Pacitti, 1994b; Press and Journal, 1992; Press and Journal, 1993). Sewage waste and education were key concerns central to menstruation discourse at the societal level in the 1990s within the UK and specifically within Scotland.

One of the major campaigns launched in the early 1990s was the 'Bag it and bin it' campaign launched in Grampian, specifically focusing on preventing residents from flushing materials such as menstrual products and condoms down the toilet (Pacitti, 1994a; Press and Journal, 1993). The Newburgh Action Group commented on a survey of the shoreline with a large amount of sewage—including menstrual products and plastic household items and materials—and advocated for infrastructure changes such as upgrading sewage facilities (Press and Journal, 1992). While the sewage issue was widespread, on the Grampian beach specifically it was reported that 'around three quarters of blocked drains in the region are caused by sanitary products which have been flushed away' and 'at least half a ton of condoms are flushed down toilets in Aberdeen each year' (Pacitti, 1994b). Although the sewage issue in Scotland was broad,

with various kinds of rubbish and sewage involved, interestingly much of the reportage focused on condoms and menstrual products, singling them out as key offenders amongst the trash (Margiotta, 1995).

In 1996, East of Scotland Water joined the conversation around sewage build-up by sending instructions to their customers about how to dispose of certain items, including menstrual products (The Courier and Advertiser, 1996). A 1998 newspaper article linked disposal of menstrual products with women's desire to be discrete in disposal—flushing versus using trash bins—as some companies continued to explicitly recommend flushing products (Coward, 1998). The article highlighted missed opportunities to educate menstruators about proper and safe disposal of menstrual products. One of the individuals interviewed for the article expressed specific concerns over the transmission of communicable disease from sanitary protection waste (Coward, 1998).

#### The tampon tax

'Tampon taxes' refer to 'regular sales tax applied to menstrual products—ranging from roughly 4–10% depending on the state tax code' (Weiss-Wolf, 2020). The US-based 'Stop Taxing Our Periods, Period' campaign began in 2015 in collaboration with *Cosmopolitan* magazine. The goal of the campaign was to create national-scale change and to begin a conversation at all levels: media and policy-wise. Different states and cities have since passed varied measures in response (Weiss-Wolf, 2020). Weiss-Wolf characterized the tampon tax as easy to understand, engaging, and relatable to the public (542). However, in an infographic on their website, the organization Period Law states that just over half of US States have successfully eliminated the 'tampon tax' (Period Law, 2022). While this is still a low number, significant progress has nevertheless been made since the initial 2015 US campaigns (Tax Free. Period., 2021).

In the United Kingdom, 'tampon tax' is a sales value added tax (VAT) of 5%, a percentage determined according to European Union (EU) rules prior to the United Kingdom's exit from the EU (Diamond, 2020). Beginning in 2015, the UK Government collected menstrual product VAT into a separate tampon tax fund designated to 'support women's organisations and charities' (Diamond, 2020:5).

#### National legislation

##### *Period products (free provision) (Scotland) Bill*

Scotland made history in 2020 with the proposal and passage of a groundbreaking law that cemented the right to free period products (Thornton, 2020). Scotland has required the provision of free period products within educational contexts since 2017 (Thornton, 2020). However, in April 2019, Monica Lennon MSP proposed the Period

Products (Free Provision) (Scotland) Bill (The Scottish Parliament, 2020). This Bill passed through all three stages of parliamentary review during 2020, and was passed as a Bill by Parliament with no MSPs voting against its passage on 24th November 2020 (The Scottish Parliament and Parlamaid Na H-Alba, 2021; The Scottish Parliament, 2021). On 12 January of 2021, the Bill reached the final stage of passage into law, becoming the Period Products (Free Provision) (Scotland) Act 2021. The aim of the Act is to make period products freely available at specific public sites/organizations (The Scottish Parliament and Parlamaid Na H-Alba, 2021).

The concept of free period products in the UK is not new. The first—short-lived—Free Sanitary Protection Campaign occurred in 1975 (Sebestyen, 1977). In 1994, activists called for the government to discuss and consider a provision that would provide free menstrual products through the National Health Service (NHS) (Evening Express, 1994) and The Labour Party advocated for free menstrual products to be made specifically available through the NHS (Press and Journal, 1994a). This plan was, however, opposed by many in the government on the basis of cost, though some were willing to concede on the issue of the burden of VAT (Evening Express, 1994; Press and Journal, 1994a).

#### *Federal menstrual equity legislation in the US*

Congresswoman Grace Meng (D-NY) has championed the federal legislation efforts around menstruation, introducing key menstrual equity Bills in 2017 and 2019. The Menstrual Equity for All Act of 2017 (H.R. 972) specifically centered on access to products for menstruators who were homeless, incarcerated, detained, low-income, utilized flexible spending accounts (FSA), or were employed by an organization with over 100 employees on record (Meng, 2017b). In 2019, Congresswoman Meng reintroduced a similar bill with expanded provisions, and specifically named requirements to provide free products for individuals who use Medicaid, students, and anyone using a public restroom at a public federal building (Meng, 2019). The 2019 Bill requires menstrual product provision in mid- to large- sized companies and in state prisons with federal funding (Weiss-Wolf, 2020).

In March 2021, Congresswoman Meng and 27 of her congressional colleagues appealed to President Joseph R. Biden to encourage a concerted focus on menstrual equity through such commitments as the establishment of a Menstrual Equity Task Force (Meng, 2021b). Congresswoman Meng has also introduced legislation that would specifically ensure access to menstrual products for all volunteers within the Peace Corps (Meng, 2021c). Congresswoman Meng has also introduced legislation around the ingredients of menstrual products with the Menstrual Products Right to Know Act, (Meng, 2017a), and legislation specifically around donated menstrual products,

titled the Good Samaritan Menstrual Products Act (Meng, 2021a). While none of the proposed acts have yet been passed into law, the Coronavirus Aid, Relief, and Economic Securities (CARES) Act included one part of the proposed policies: menstrual products were included in the list of products eligible for purchase through HSA and FSA accounts (Meng, 2021a; Weiss-Wolf, 2020).

#### *Marketing campaigns*

Activism and advocacy around menstruation and access to menstrual resources has become a popular topic in the US and Scotland over the past several years. In the US, this took the form of the 2015 'Stop Taxing Our Periods, Period' campaign, launched in relation to the tampon tax in the US (Weiss-Wolf, 2020). The Scottish Government launched the 'Let's Call Periods, Periods' campaign in 2020, a marketing campaign launched in relation to menstrual stigma (Scottish Government, 2020). These are just two examples of the use of social media to disseminate information and change opinions and thus policy around menstruation.

### **Discussion**

These examples demonstrate the multiple ways in which the construct of 'access to menstrual resources' is impacted by and enacted through the individual, interpersonal, institutional/community, and societal levels. Another way to view the SEM is through the lens of the social determinants of health and its five main domains, utilized to determine the most relevant factors for each level (Office of Disease Prevention and Health Promotion et al., n.d.).

At the individual level, socioeconomic status and education are the focus; they align with the SDOH domains of 'economic stability', 'education access and quality' (Office of Disease Prevention and Health Promotion, n.d.: 1). Socioeconomic status is a key factor because menstrual resources cost money (Scottish Borders Council, 2021; Weiss-Wolf, 2020) and lack of, or limited funds determine an individuals' ability to purchase menstrual products (Sebert Kuhlmann et al., 2019; Young Scot, 2018). Education and menstruation interact in multiple and intriguing ways, with menstruation serving as a potential barrier to menstruators' engagement with formal education, as well as a topic which is stigmatized to a point that bars its dissemination (The Lancet Child Adolescent Health, 2018). Stigma and discrimination prevents these conversations from being brought to the forefront, even in educational contexts (The Lancet Child Adolescent Health, 2018). Researchers interested in the pervasive nature of stigma have suggested that the best way to combat this is to have these conversations in public (Johnston-Robledo and Chrisler, 2020).



Not every menstruator has the opportunity to experience equitable menstruation. For menstruators who are not cisgender, fear of discrimination may bar them from accessing equitable health care in relation to menstruation (Frank, 2020). Furthermore, the social and community contexts which stigmatize transgender and gender diverse individuals directly impact upon the health of these individuals (Office of Disease Prevention and Health Promotion et al., n.d.). Concerns related to the menstrual experiences of menstruators who are not cisgender can also extend to the workplace and to public bathrooms/toilets, which makes the experience of menstruating in public markedly different and at times even dangerous for those who are not cisgender (Atkins, 2020; Chrisler et al., 2016; Herman, 2013; Weiss-Wolf, 2017). Homelessness compounds the issue of access, especially for menstruators who are transgender or gender nonconforming and are not afforded the safe and hygienic access to the shelter facilities that they may need to manage their menstruation (American Civil Liberties Union & Period Equity, n.d.).

For the broader public of menstruators, finding a restroom/toilet in public may be challenging, and dependent upon the availability and cleanliness of these facilities (Weiss-Wolf, 2017). The 'built environment' is thus a powerful social determinant of health which has a great deal of impact on the everyday lives of menstruators (Office of Disease Prevention and Health Promotion, n.d.: 1). Overall, the need to use public facilities puts menstruators at the mercy of others. The degree of vulnerability varies, from menstruators who find themselves occasionally in need of a public restroom while outside of their homes, to menstruators who are incarcerated and must rely fully on others for both facilities and supplies (Bozelko, 2020; Roberts, 2020). In the US, institutionally reinforced reliance on those in power to provide menstrual resources was found to lead to problematic instances of gatekeeping; this has inspired a policy change that has made products available and accessible within federally run prison institutions (Weiss-Wolf, 2020).

Safety and sanitation have proven to be important topics in the discussion of menstrual products. Product safety has been a topic of discussion in the US and Scotland throughout the last five decades, centering specifically on the lining of menstrual products (Press and Journal, 1989; The Courier and Advertiser, 1989), and on TSS contracted via tampons (Reame, 2020).

Policy can exist at both the institutional/community and societal levels depending on the audience for the policy. At the institutional level, workplaces can enact menstrual leave policies should they choose to. These policies have, however, not become popular in the US or Scotland (Barnack-Tavlaris et al., 2019). Even with a successful model at one UK company and data from one 2019 study that suggests US citizens are favorable

towards these potential policies, they are not without their challenges (Barnack-Tavlaris et al., 2019; Levitt and Barnack-Tavlaris, 2020; Owen, 2018). The potential for stigma and sexism-based discrimination against menstruators in the workplace complicates the implementation of these policies (Barnack-Tavlaris et al., 2019; Levitt and Barnack-Tavlaris, 2020).

On the societal level, countries across the globe such as Kenya, Ethiopia, Uganda, Zambia, and Botswana have included menstruation within policies that address a wide range of topics related to schools and workplaces, and to overall access to resources (Tax Free. Period., 2021; Tellier, 2017; Weiss-Wolf, 2019). A number of countries have also tackled taxes on menstrual products, including Canada, Australia, South Africa, Colombia, and Malaysia, India (Steele and Goldblatt, 2020; Tax Free. Period., 2021; Weiss-Wolf, 2019).

Most legislation around menstruation in the US and Scotland has focused on product provision and cost. In the US and UK, tampon taxes have been tackled in a variety of ways. For example, in the US, individual states have taken on the task of eliminating these taxes (Period Eq, 2021; Weiss-Wolf, 2020,). In the UK, while the taxes have not been eliminated, funds from these taxes have been earmarked for organizations whose target populations are women (Diamond, 2020). While a significant amount of legislation has been proposed in the US, including a Menstrual Equity for All Act, Scotland was, in 2021, a pioneer in passing legislation at the national level that ensured access to free products (Meng, 2019; Diamond, 2020).

The precise reasons behind this variation in success are difficult to pinpoint but are nevertheless striking. Notably, the vote that passed the Scottish Act was unanimous (The Scottish Parliament and Parlamaid Na H-Alba, 2021). This indicates a shift in the narrative across all levels of the SEM. A conversation around stigma and discrimination has been pervasive in the overall narrative: forces powerful enough to impact upon education, evoke fear and threaten violence for certain menstruators, and more broadly cloud the topic of menstruation in taboo. It is no simple feat to rise above such a pervasive atmosphere of stigma; the success that Scotland has had with this legislation should not be used to suggest that the issue of stigma has been resolved. The success of this legislation suggests that the pursuit of equitable menstrual experiences for all menstruators and the discussion of menstruation at the national level are promising first steps which indicate the potential for a shift in the conversation that could change the social context around menstruation in a positive manner (Office of Disease Prevention and Health Promotion et al., n.d.).

Access to menstrual resources in the US and Scotland is a complex public health issue. Given the complexity, there are many opportunities for future research to support

both advocacy and policy. Lara Owen's (2022) contribution to this Special Collection discusses the past and future of menstruation research, highlighting stigma as a key barrier for researchers within this field. It is therefore important to remain aware of the distinct challenges faced by those who choose to center their career on the topic of menstruation, lest this stigma continues to negatively impact researchers' careers (Owen, 2022). How we talk about menstruation is key as well, given the tendency—past and present—to speak of it as something that happens to other people but not to oneself (Bildhauer, 2021).

### **Implications**

Though by no means exhaustive, one aim of this paper is to provide insight into two countries where researchers, activists, advocates, and policymakers have been working towards a common goal of equitable access to menstrual resources. It is important to note that this paper is a narrative review and is not a systematic review of the literature; future research that provides a more formal systematic review could build upon this contribution.

This article is intended as an initial step to collect data that might inform policy and legislation related to access to menstrual resources. The key message of this article is the importance of recognizing the encouraging steps that have been taken towards creating equitable access to menstrual resources, while also holding space for the examination of the many barriers that continue to exist. Past and current policies have largely focused on issues of access to products, with a distinct financial undertone. Moving forward, both qualitative and quantitative research is needed to build a base of evidence to support policy that addresses the many factors related to menstruation that are not necessarily financially or product focused.

In the US and the UK, the groundwork has been laid for this type of work: Scotland's groundbreaking bill has demonstrated a progressive way forward for menstrual related policy work. To better understand how to replicate the success of this bill in other contexts, it will be imperative to monitor and evaluate the bill's intended and actual consequences. Robust research into the impact of this legislation over time will be important to translate policy into practice and extend it to other contexts.

### ***Call to action***

To translate theory and narrative into practice, it is helpful to think about different calls to action that could stem from these findings. The main call is to advocates, activists, policymakers, and other interested stakeholders to explore opportunities for change at each of the individual, interpersonal, institutional/community, and societal levels

of the SEM. Such changes will need to address a range of the ways in which we treat menstruators: individually, in schools, at work, in hospital, in prisons, in local contexts and across nations. This framing provides hope: it reminds us that change need not always be at the national level. When viewing this issue of access to resources through the SEM, it is possible to see how no intervention, campaign, or action is too small; interventions at any level can impact the overall conversation around menstruation. Countries across the globe that have incorporated menstruation into policy have cleared a path for those that have not yet done so. In relation to Scotland specifically, some of the policy initiatives inspired by the success of the passage of the Period Products Act are discussed in the introduction to this Special Collection (Bildhauer et al., 2022).

While one could focus on the fact that menstrual policies are not yet a global norm, a more useful exercise may be to focus on what has been accomplished as a potential roadmap for future policies. Change need not only exist at the level of policy: every individual and institution has an opportunity to make change. The example set by Columbia University last year in setting up a menstruation focused online course, highlights the opportunity presented by online education (Columbia Mailman School of Public Health, 2021). Not only is this an opportunity for professional development, it is also a useful public resource. Similarly, resources such as the Menstrual Health Hub make learning about menstrual health advocacy, activism, and advances in the field accessible and free to the public (Menstrual Health Hub, n.d.). The dissemination of information in a free and accessible manner is a key step towards a more equitable menstrual future.

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## Competing Interests

The author has no competing interests to declare.

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