

Addressing Period Poverty and Enhancing Student Life

An Interactive Qualifying Project Report submitted to the Faculty of Worcester Polytechnic Institute in partial fulfillment of the requirements for the degree of Bachelor of Science.

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WPI

Worcester Community
Project Center

Report Submitted to:

Sponsors, First Worcester District
State Senator Robyn Kennedy
Legislative Aide Bryan Bates

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Abstract

Period poverty, the lack of access to menstrual products and hygienic facilities to use them, impacts 16.9 million menstruators in the United States and often forces people to choose between menstrual products and food (Michel et al., 2022). For our project, we developed recommendations to assist State Senator Robyn Kennedy in addressing the impacts of period poverty on students in Massachusetts. To accomplish this, we conducted 18 interviews with non-profit organizations, public school staff, and Massachusetts legislators. Additionally, we collected 22 survey responses from public school nursing staff and analyzed 26 pieces of legislation. We analyzed and compiled the data gathered through these methods into 10 key findings and 9 actionable recommendations for legislative and community efforts.

Meet the Team



Team Members with their Sponsors from the First Worcester District at the Massachusetts State House

Team Members

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Sponsors from First Worcester District:

State Senator Robyn Kennedy

Legislative Aide Bryan Bates

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Lastly, thank you to all of our interviewees; we appreciate your time and insight. Your dedication to combating period poverty has inspired us and fueled our commitment to the cause.

Grateful,

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Executive Summary

Period poverty represents a significant challenge to public health, human rights, and gender equality. Defined as the insufficient access to menstrual products and hygienic facilities to use them, period poverty is exacerbated by societal stigma and cultural taboos. According to the World Bank in 2022, an estimated 500 million women globally face challenges in managing their menstrual health. In the United States, 11.3 million menstruators struggle to afford menstrual products. This dilemma often forces them to choose between purchasing menstrual hygiene items or other essentials like food, emphasizing the severity of period poverty (Michel et al., 2022).

Impacts of Period Poverty and Current Efforts to Tackle them

Period poverty is a critical issue that leads to significant health and educational disparities. Individuals affected by period poverty face heightened risks of physical ailments, severe mental health issues, and disrupted educational pathways due to frequent absences. The challenges are compounded by societal stigma and financial constraints, making menstrual products unaffordable for many. These issues are aggravated by a lack of comprehensive policies and resources dedicated to addressing menstrual health, underscoring the need for interventions to alleviate the multifaceted impacts of period poverty.

In response to these challenges, efforts have been made to combat period poverty through legislative reforms, community initiatives, and involvement of nonprofit organizations. Landmark policies, such as Scotland's Period Products Free Provision Bill, have set international precedents, while legislation in specific US states has enhanced access to menstrual products in educational institutions. The dedication of nonprofits like Dignity Matters and Fihri has further advanced the cause, despite facing challenges in funding and scalability.

In Massachusetts, the I AM BILL holds particular importance. Having recently passed in the Senate (S.2491), and pending approval in the House (H.534), it aims to mandate the free provision of disposable menstrual products in public schools, shelters, and prisons.

Project Goal and Objectives

Our project aimed to understand the impacts of period poverty on students in Massachusetts and to identify effective strategies to alleviate these impacts for our sponsor, State Senator Robyn Kennedy. We completed four objectives to accomplish this goal; (1) We understood the impacts of period poverty on students and level of awareness within schools; (2) We identified successful strategies employed by organizations to combat period poverty; (3) We examined the "I AM BILL" and pieces of legislation enacted in other states.; (4) Developed recommendations for legislative and community initiatives. To accomplish these objectives, we conducted 18 interviews with non-profit organizations, public school staff, and Massachusetts legislators. Additionally, we collected 22 survey responses from public school nursing staff and analyzed 26 pieces of legislation. These methods led to 11 key findings and 9 actionable recommendations across 4 themes.

Findings

Challenges to Menstrual Education: The lack of menstrual education in Massachusetts, coupled with language barriers are significant challenges to menstruators. With fewer than 40% of schools offering detailed sexual education that includes menstrual health, the gap in knowledge is evident. Language barriers further hinder access to menstrual health information, especially for non-English speaking students, who make up about 14% of the Worcester school district.

Access to Menstrual Equity: Advancing access to menstrual equity involves navigating stigma and implementing innovative solutions. Nonprofits are combating societal stigma with period kits, enhancing the availability and normalization of menstrual support. Concurrently, affordable dispensing solutions can be used to address the challenge of inconveniently placed products, further increasing access to essential menstrual products.

Quality of Menstrual Products: Our research into free menstrual products at educational institutions reveals critical issues with their quality and environmental impact. Interviews indicate that the standard, one-size-fits-all products often lack comfort and functionality, deterring usage. Additionally, the environmental concern of these predominantly plastic products is significant, taking them around 500-800 years to biodegrade.

Findings Conclusion: The findings from our research into period poverty and menstrual equity in Massachusetts reveals critical challenges and promising solutions: (1) Closing the gap in menstrual education requires inclusive curriculum and multilingual resources; (2) Efforts by nonprofits combat stigma and improve product accessibility; (3) Ensuring the quality of menstrual products is essential for user comfort and environmental responsibility.

Recommendations

Awareness of Menstrual Health: Leveraging social media platforms like Instagram and Twitter, along with period tracker apps, can significantly increase awareness about menstrual care and combat stigma. Additionally, organizing extracurricular workshops about menstrual health can foster communication between parents and students.

Sustainable Solutions to Menstrual Equity: Encouraging the adoption of reusable menstrual

products like menstrual disks and period underwear will minimize costs and environmental impact. Advocating for the use of biodegradable menstrual products, such as bamboo-based alternatives, will reduce environmental harm. Implementing cost-effective plastic dispensers in schools will enhance menstrual product accessibility

Legislation for Menstrual Equity: Amending the SNAP/EBT Act to include menstrual products for purchase, designating menstrual products as janitorial expenses for public restrooms, and supporting nonprofits through legislation. These actions will ensure equitable access and dignity for all individuals.

Further Research for Menstrual Equity: Researching the economic impacts of period poverty and analyzing existing menstrual equity legislation are crucial steps. Understanding the economic implications can drive policy prioritization, while studying legislation effectiveness aids in identifying areas for improvement and advancing menstrual equity initiatives

Conclusion

We hope that these insights will guide Senator Kennedy's future endeavors aimed at promoting menstrual equity and advancing the I AM BILL. Such legislation, along with forthcoming initiatives, holds the potential to positively impact menstruators across Massachusetts, setting a precedent for similar efforts elsewhere.

Background

Period poverty, a term that might be unfamiliar to some, has a profound impact on millions of people worldwide (World Bank, 2022). People who menstruate, often face a monthly struggle not just against biology, but against societal ignorance, lack of resources, and deeply ingrained stigma. The absence of a basic item, a menstrual product, can rewrite the story of a young child's life, dictating whether they stay in school, remain healthy, or live with dignity.

In this chapter we explore period poverty as not just a health issue, but as a matter of human rights and equality. We begin by looking at period poverty's global prevalence, its effects on health and education, and the societal barriers that perpetuate it. As well, we explore organizational and legislative efforts to tackle period poverty.

Period Poverty

Period poverty refers to the lack of access to sanitary products, safe and hygienic spaces to use them, and the right to manage menstruation without shame or stigma. The World Health Organization defines menstrual health as encompassing physical, mental, and social well-being in relation to the menstrual cycle, not just the availability of menstrual products (World Health Organization, 2022). As of 2022, The World Bank estimates that at least 500 million women globally lack adequate facilities to manage their menstrual health.

± 500 M

“In total, an estimated 500 million lack access to menstrual products, and adequate facilities for menstrual hygiene management.”

- World Bank, 2022

Effective management of menstruation requires access to water, sanitation, hygiene facilities, affordable menstrual hygiene materials, information on good practices, and a supportive environment. The absence of these necessities impacts people's dignity, education, health, and safety (World Bank, 2022).

Beyond these practical needs, menstruators continue to face challenges that go beyond a lack of supplies or infrastructure. In numerous societies across Asia and Southern America, menstruation is constrained by cultural taboos and discriminatory social norms (Crawford & Waldman, 2022). This results in lack of information about menstruation, leading to unhygienic and unhealthy menstrual practices (CARE International, 2021). These societal constraints often result in body shaming, bullying, and as well gender-based violence, further deepening social inequalities.

± 11.3 M

An estimated 11.3 million low-income women in the US could not afford menstrual products in the past year, with half needing to choose between menstrual products and food.

(Journal of Global Health Reports, 2022)

In the United States, period poverty is a pressing issue, with 16.9 million menstruating individuals living in poverty. Two-thirds of these individuals struggle to afford menstrual products, half facing the tough choice between buying these essentials and food (Michel et al., 2022). This highlights the urgent need for comprehensive solutions addressing both the material and cultural dimensions of period poverty.

Impacts of Period Poverty

Period poverty has wide-ranging effects on both health and education. In this section we delve into the impacts of period poverty on physical health, mental health and educational impacts, particularly among students.

Physical and Mental Health

The lack of access to menstrual products is closely linked to various health issues. The Palgrave Handbook of Critical Menstruation Studies highlights a correlation between premenstrual syndromes, such as severe pain, headaches, swelling, and fatigue, and the absence of menstrual products (Bobel et al., 2020). Additionally, the scarcity of sanitary products adversely affects mental health. Research at BMC Women’s Health revealed that 48.4% of individuals experiencing period poverty also suffer from severe depression (Cardoso et al., 2021), a rate significantly higher than the general adult prevalence of Major Depressive Disorder, which stands at 5% (World Health Organization, 2023). These findings underscore the heightened mental health challenges faced by those experiencing period poverty.

Educational Outcomes

Period poverty also disrupts educational attendance and performance. A study by Attendance Works in 2014 revealed a link between period poverty and various health impacts, emphasizing the consequences of inadequate access to menstrual products (Ginsburg et al., 2014). The Palgrave Handbook of Critical Menstruation Studies further supports this, documenting the academic benefits of providing menstrual products to students. Extensive research, including a study by Chandra-Mouli & Patel (2020), has demonstrated a positive correlation between the provision of sanitary pads and improved school attendance. These findings highlight the critical importance of ensuring students have access to menstrual products to reduce absenteeism.

Correlation between Poverty and School Absences

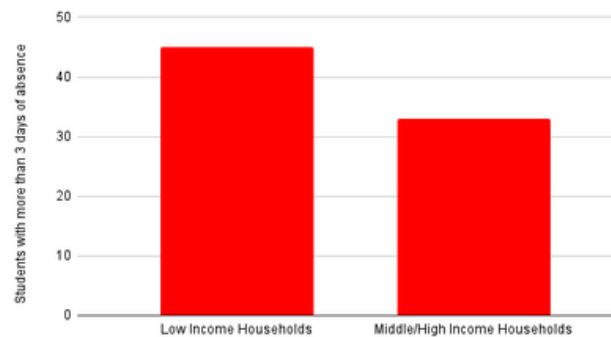


Figure 1: A 2014 Study conducted to show correlation between income level versus the percentage of students with more than 3 days of absence.

A 2013 study indicated that students from low-income backgrounds are 40% more likely to miss three or more days of school per month, a factor that significantly contributes to increased dropout rates and reduced college attendance opportunities (Ginsburg et al., 2014). This data points to a strong association between period poverty and academic achievement. Despite the profound impacts of period poverty, numerous barriers impede the efforts to address this critical issue effectively.

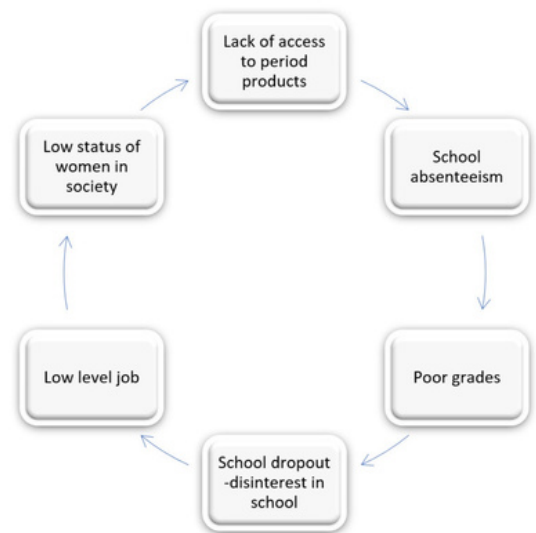


Figure 2: How period poverty can play out in the lives of menstruators (Michel et al., 2022).

Barriers to Menstrual Health

Menstrual hygiene management is crucial for reproductive health, yet individuals face significant obstacles due to sociocultural and financial barriers. The sociocultural barriers include lack of education, patriarchal attitudes, insecurities and stigma. Expensively priced menstrual products and products needed to ease menstruation contribute to the financial barrier.

Sociocultural Barriers

The insufficiency in education contributes significantly to sociocultural barriers, as highlighted on the National Library of Medicine, who note that medical students and residents often lack comprehensive training in sexual health and medicine, especially outside the domains of OB-GYN and Urology. (Beebe et al., 2021) This shortfall leaves them ill-equipped and less confident than necessary for providing optimal patient care. Consequently, if future healthcare professionals are not adequately educated on sexual health, it's unlikely that students will receive sufficient menstrual education.

Furthermore, patriarchal attitudes intensify these sociocultural barriers. Patriarchal norms frequently compel individuals who menstruate to hide their periods, bringing feelings of shame and embarrassment. This insecurity hinders menstruates from seeking assistance or access to essential menstrual products.

Financial Barriers

Menstrual hygiene products are priced excessively for how essential they are. "In a 28-day cycle, 16 tampons are used with the cost of one box of tampons averaging around \$8 and containing around 34 tampons per box, equaling a rough yearly cost of \$49.11 and a lifetime cost of \$1,964.33, not including pain killers, new underwear or clothing garments, new sheets or blankets, or any additional products to

ease care, like heating pads or foods" (Tabor & Delgado, 2022). The need to budget for menstrual products often competes with other essentials, such as food, housing, and healthcare. Fortunately, various organizations and government entities are actively working to overcome both sociocultural and financial barriers to support menstrual health.

\$ 1964

The lifetime cost of menstrual products amounts to \$1,964.33, not including additional products to ease menstrual care.

(Tabor & Delgado, 2022)

Current Efforts to Combat Period Poverty

In the fight against period poverty, efforts include legislative reforms, advocacy by not-for-profit organizations, and education initiatives—like transformative learning. In this section we explore this array of strategies, highlighting how policy shifts, community-driven initiatives, and the dedication of nonprofit organizations are working to combat period poverty.

Legislative Efforts

Efforts to address period poverty through legislative action have gained momentum globally. In 2020, Scotland set a benchmark for addressing period poverty when the Scottish Parliament passed the Period Products Free Provision Bill. This legislation made Scotland the first country to provide free menstrual products in educational institutions and community spaces (Tumin, 2022). This landmark legislation has inspired similar initiatives in other countries like New Zealand, France, Canada, and more (Rodriguez, 2021).

In the United States, the conversation around menstruation and public policy has advanced in

recent years. A notable step was the inclusion of a provision in the 2020 CARES pandemic relief bill. This allowed the use of pre-tax Flexible Spending Accounts for menstrual products. Some states, including California, Illinois, New York, Oregon, and Virginia, have taken proactive measures by mandating schools to provide free menstrual products, emphasizing the concept of menstrual equity (Crawford & Waldman, 2022).

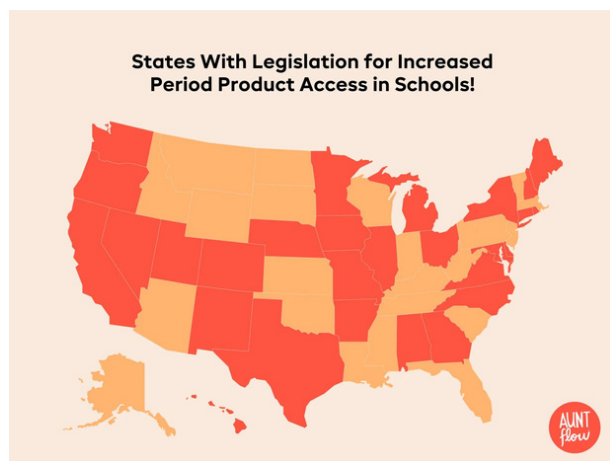


Figure 3: Map of United States with states highlighted in red. These states have legislation for increased period product access in schools. (Aunt Flow, 2024).

Given the slow pace of state legislative efforts, some communities took the issue into their own hands. For instance, Brookline, Massachusetts, became the first U.S. municipality to require free menstrual products in town-owned restrooms. Similarly, Los Angeles began a pilot program to provide free tampons and pads in city libraries (NBC Los Angeles, 2022).

Non-Profit Efforts

Numerous nonprofit organizations play a crucial role in addressing period poverty, each established primarily in response to this pressing issue. Each nonprofit adopts its unique approach to tackling period poverty. For the purposes of this research, we focus on nonprofit organizations that are doing exceptional work in Massachusetts.

Dignity Matters is one such organization that distributes menstrual products and other essential items. In 2022, they distributed almost 3 million items to individuals in need in Massachusetts. (Dignity Matters, 2023). Another nonprofit, the Alliance for Period Supplies, boasts a vast network across the United States. Through its Allied Programs, it distributes period supplies directly to individuals or through community partners (Alliance for Period Supplies, 2021). Hope & Comfort also plays a crucial role, focusing on providing a range of hygiene products to those in need (Hope and Comfort, 2023). However, all nonprofits, faces a common challenge: limited funding, which restricts their scalability.

Number of Items Distributed 2020 - 2022

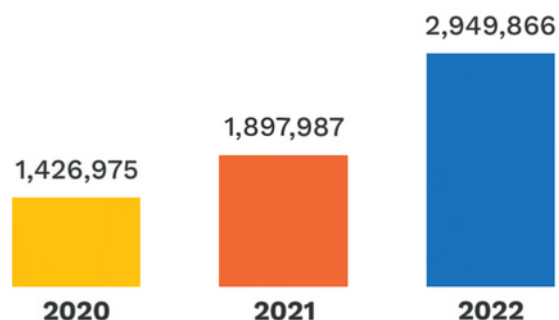


Figure 4: A graph showing the amount of essential items Dignity Matters has distributed in the years 2020-2022. These products include menstrual products, and undergarments. (Dignity Matters 2023).

Educational Efforts

Education plays a critical role in addressing period poverty, particularly through innovative approaches like transformative learning.

Transformative learning is an educational strategy, rooted in adult learning theories, goes beyond rote learning to encourage a critical examination of one's beliefs and values (Dirkx, 1998). It leverages personal experiences to promote growth and self-reflection, rather than merely following set guidelines.

Despite potential challenges due to varied community beliefs (Jenna, 2021), transformative learning thrives in smaller, intimate settings where detailed discussions can lead to a more personalized and impactful educational experience. This approach not only informs but also engages individuals, fostering a community proactive about menstrual health issues. Implementing transformative learning can thus cultivate a generation better equipped to understand and advocate for solutions to period poverty, fostering societal change from the ground up.

Senator Kennedy & the I AM BILL

Massachusetts State Senator Robyn Kennedy, representing the First Worcester District, has been an advocate for menstrual equity throughout her career in public service. Her membership in numerous committees dedicated to this cause underscores her commitment to advancing gender equality (Commonwealth of Massachusetts, n.d.).

A key focus of Senator Kennedy's advocacy is the advancement of the I AM Bill, a proposed legislative measure aimed at ensuring the availability of menstrual products in public institutions, such as schools, prisons, and homeless shelters (Massachusetts City Council, 2021). Originally introduced in 2019, the bill's progress was temporarily stalled by the onset of the COVID-19 pandemic in early 2020.

Despite this interruption, the bill was reintroduced and successfully passed by the Massachusetts Senate in October 2023. Advocates in the Senate and the House are currently concentrating on garnering support for its passage in the House, a step that would solidify access to essential menstrual products for those in need, reflecting a significant stride toward menstrual equity in Massachusetts. We discuss our methodological approach in the next chapter.

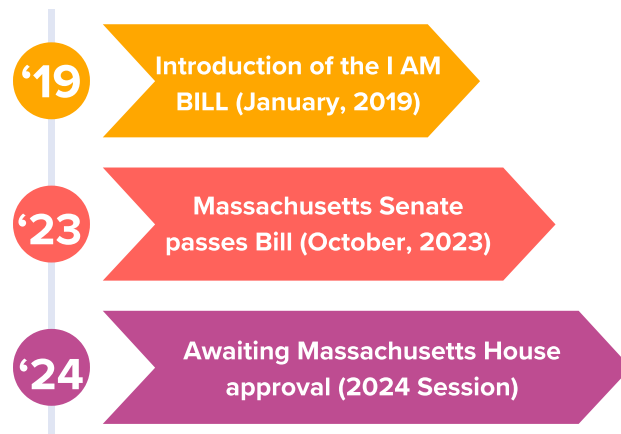


Figure 5: Timeline progression of the I AM BILL.

Methodology

Guided by State Senator Robyn Kennedy and her Legislative Aide Bryan Bates, this project aimed to understand the impacts of period poverty on students in Massachusetts. Its primary goal was to identify effective strategies to ensure equitable access to menstrual products, thereby enhancing the educational experience and well-being of students affected by period poverty. To achieve this goal we established four objectives:

Objective 1: Understand the impacts of period poverty on students and level of awareness within schools.

Objective 2: Identify successful strategies employed by organizations to combat period poverty.

Objective 3: Examine the "I AM BILL" and pieces of legislation enacted in other states.

Objective 4: Develop recommendations for legislative and community initiatives.

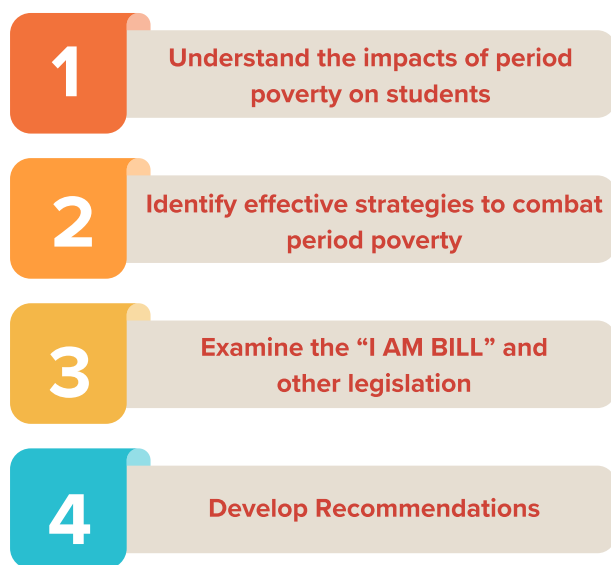


Figure 6: Overview of the established objectives of this project.

Our methodology encompassed stakeholder interviews, surveys, data analysis, and policy reviews, all aimed at gaining a comprehensive understanding of the impacts of period poverty and potential solutions.

Ethical Considerations & IRB

The topic of period poverty can elicit strong emotions and discomfort for some individuals, so we paid close attention to the ethical dimensions of our research. Adhering to the principles of informed consent, we provided all interviewees and survey respondents with clear information about the nature, purpose, and potential impact of their participation (see informed consent preamble, Appendix A). This project was reviewed and approved by the Institutional Review Board (IRB) at WPI.

Objective 1

To understand the impacts of period poverty on students and level of awareness within schools, we conducted interviews with nurses, wrap-around coordinators, professors, and student researchers at educational institutions (see interview questions in Appendix E). Utilizing snowball sampling, we asked our initial interviewees to recommend other individuals or organizations relevant to our study (Fowler, 2014). Focusing on the school environment was essential, as it is directly related to the experiences of student menstruators affected by period poverty. School staff, particularly nurses, possessed critical insights into the daily challenges these students face. Additionally, clubs and researchers engaged in menstrual health offered unique perspectives on the broader implications of period poverty within the educational setting.

Schools

North High School: Adrianna Buduski, a wrap-around coordinator shared her extensive experience with period poverty, offering a glimpse into the issue's daily magnitude.

Brockton Public Schools: Dr. Ann Linehan, the Nursing Consultant discussed her efforts to combat period poverty and highlighted the societal changes necessary for schools like Brockton to effectively address this issue.

A large Massachusetts public school system: We engaged with the nursing director and surveyed 22 nurses, uncovering surprising levels of awareness regarding period poverty within the school system.

Researchers

Dr. Tsitsi Masvawure: A WPI Professor conducting research on reusable period products, provided insights into potential approaches to tackle period poverty.

Makenna Eccles: A student researcher at the College of the Holy Cross working on promoting sustainable period products, shared strategies for educating the local community and raising awareness.

Clubs

The Period Agenda (TPA) at WPI: Alisa Gueco, President of TPA detailed the club's efforts to transition from paid to free menstrual product dispensers in female and gender-neutral bathrooms on campus. Our discussion with them yielded valuable information on the implementation's challenges and successes.

Each interview contributed essential insights into the current landscape of period poverty and the level of awareness surrounding this issue.

Objective 2

To identify successful strategies employed by organizations to combat period poverty, we interviewed non-profit organizations and companies producing innovative menstrual products (see interview questions in Appendix F) This method enabled us to gather in-depth insights into various initiatives aimed at alleviating period poverty.

Non-Profit Organizations:

Girls Inc.: Girls Inc. in Worcester, MA, is an organization dedicated to empowering young girls through education and support, including providing menstrual products. Our conversations with Taylor Rich, the Director of STEM and Leadership, unveiled their comprehensive programs and her personal insights on innovative strategies to tackle period poverty.



Figure 7: Students participating in after school programs at Girls Inc. in Worcester, MA (Girls Inc., 2024)

YWCA: The YWCA's Menstrual Health Advocacy Project exemplifies effective community engagement and policy advocacy for menstrual product accessibility. Insights from Patti Ovalles (Chief Program Officer), Kiesha Lamb (Director of Race and Gender Equality), and Michelle Santana (Director of Youth Development) provided a multi-dimensional perspective on their efforts to empower women and advocate for systemic changes.

Dignity Matters: Dignity Matters' approach to distributing menstrual products while maintaining dignity presented a compelling case study. Our discussion with Development Director Meryl Glassman emphasized the critical need to address societal stigmas alongside practical product distribution.

Fihri: Senator Kennedy introduced Fihri's initiative of distributing personalized period kits, offering a valuable perspective on combating period poverty.

CEO Ceylan Rowe's extensive experience enriched our understanding of the challenges faced by menstruators, underscoring the need for thoughtful interventions.

Alliance for Period Supplies (APS): Highlighted by Jennifer Gaines, Manager of National Engagement, APS's extensive network illustrated the power of collaboration in addressing period poverty on a national scale. Their model provided insights into effective partnership and community mobilization strategies.



Figure 8: APS' vast network of 120+ allied programs across the US that address period poverty in local communities (APS, 2024).

Free Period: Founder Kenzie Blackwell demonstrated their grassroots approach to product distribution through the Teal Circle Project, showcasing innovative methods for reducing stigma within educational settings—a key focus for our project.

Companies Producing Innovative Products

Unicorn: This organization's unique approach to enhancing product accessibility—by placing menstrual products in individual stalls and utilizing easy-to-manage dispensers—offered a fresh perspective. COO Ellen Ceynar shared valuable insights into their operational challenges and innovative solutions for product distribution.

Pads on a Roll: Our dialogue with CEO Penelope Finnie introduced us to a novel product solution and emphasized the logistical challenges in making menstrual products readily accessible in schools.

Through these insightful discussions, we collected information on current initiatives and identified key themes and effective strategies in combating period poverty.

Objective 3

To examine the "I AM BILL" and other pieces of legislation, we interviewed with legislators behind the "I AM BILL" and advocates striving for menstrual equity (see interview questions in Appendix G). Additionally, we explored past legislative efforts in various states to identify components that have led to successful enactment.

Legislators

State Senator Pat Jehlen: As the primary advocate since its first proposal in 2019, her continuous dedication offered a deep dive into the bill's evolution, challenges, and impacts. Our discussions shed light on the legislative journey and hurdles faced in combating period poverty.

House Representative Jay Livingstone: A member of the Massachusetts House of Representatives and an associate of the "I AM BILL," Livingstone is at the forefront of advocating for its passage in the current legislative session. His insights contribute to understanding the bill's trajectory and advocacy strategies within the House.

Advocates

Suzanne Herman of PeriodLaw: At PeriodLaw, the focus is on abolishing the tampon tax nationwide. Our conversation with Suzanne Herman, the Legal Director provided perspectives on effective legislation and strategies to alleviate period poverty.

Kyla Speizer at MassNow: As a Community Organizer of the organization that originally proposed the "I AM BILL," Speizer's insights offered a unique view on grassroots advocacy and legislative engagement.

Legislative Review

We compiled a comparative chart of legislation from various states aimed at addressing period poverty, highlighting key components and the legislation's scope (see Appendix B). This analysis helps identify successful strategies and commonalities among enacted laws.

Through structured interviews and legislative analysis, we gained knowledge of the factors contributing to successful menstrual equity legislation and the ongoing efforts to combat period poverty at both community and legislative levels.

Objective 4

Building on the insights gathered from our interviews across objectives 1-3, we devised a structured approach to synthesize this information. Utilizing a qualitative matrix, as per Fowler's methodology (2014), we organized the data derived from each interaction to systematically assess the strategies employed by various organizations to address period poverty and explore innovative solutions. This matrix allowed us to categorize qualitative data effectively:

- Awareness and Education: We evaluated initiatives aimed at increasing understanding and knowledge of menstrual equity.
- Sustainable and Accessible Solutions: Our analysis included a review of sustainable practices and accessible solutions for menstrual equity, assessing their feasibility, and impact.
- Legislative Initiatives: Discussions with interviewees highlighted innovative policy ideas that could further enhance menstrual equity.
- Opportunities for Further Research: We identified gaps in the current understanding and areas where additional research could contribute to more effective policies.

Upon analyzing the data and formulating our recommendations, we presented our report to our sponsors, Senator Kennedy and her Legislative Aide Bryan Bates. The feedback and insights from our sponsors were instrumental in refining our recommendations.

This methodical approach enabled us to thoroughly investigate period poverty in Massachusetts, combining data analysis, stakeholder interviews surveys, and policy review. Our goal was to understand the impact of period poverty on students, uncover innovative solutions, and propose actionable recommendations for impactful legislative and community initiatives. Our next chapter discusses our key findings.

Table 1: Summary of methods utilized in this project.

Methods	Number of Instances
Interview/ Nursing Directors	2
Survey/ Nurses	22
Interview/ Wrap Around Coordinators	1
Interview/ Researchers	2
Interview/ Non-Profit Organizations	6
Interview/ Companies	2
Interview/ Legislators	2
Interview/ Legal Advocates	2
Policy Review/ Bills on Menstrual Equity	26

Insights into Period Poverty

In this chapter, we delve into the issues surrounding menstrual health, with a focus on educational gaps, access to resources, and quality of products. By synthesizing insights from interviews, surveys, and secondary research, we highlight the challenges that contribute to period poverty and the stigma associated with menstruation.

Challenges to Menstrual Education

The absence of menstrual education amplifies the stigma surrounding menstruation and hinders menstruators' ability to seek assistance. Coupled with language barriers, these factors pose significant challenges in menstrual health education. In this section, we delve into our findings related to education that show the importance of menstrual education within the school environment.

Inadequate menstrual health education has led to a significant gap in students' knowledge regarding their menstrual health. (Finding #1)

As of 2020, only 38% of high schools in the United States were teaching the sexual education topics deemed necessary by the Centers for Disease Control and Prevention (Harvard Political Review, 2020). This lack of comprehensive education has resulted in widespread misunderstandings about reproductive health. Researchers Goldfarb and Lieberman have pointed out that forty percent of Americans hold misconceptions about crucial aspects of sexual health, including menstrual cycles (Goldfarb E., Lieberman L., 2021). Taylor Rich, the Director of STEM & Leadership at Girls Inc., has observed that the educational emphasis on sexual health has decreased, especially in light of the COVID-19 pandemic, leading to a diminished focus on sexual and menstrual health education among

middle and high school students (T. Rich, Director of STEM and Leadership, January 17, 2024).

Language barriers impact the accessibility of menstrual products. (Finding #2)

For students whose first language is not English, educational materials provided in English can become an obstacle. This challenge extends to the realm of education, hindering the comprehension of menstrual health information within school districts. Despite efforts to educate families and students about menstrual care, those with limited English proficiency often find it difficult to understand the provided information. This issue is particularly acute in immigrant families, leading to lack of menstrual health awareness (M. Santana, YWCA Director of Youth Development, Jan 19, 2024).

Approximately 14% of Worcester public school students are learning English as a second language, indicating a substantial portion of the student body might not fully access menstrual health education due to language constraints (NCES, 2021). For instance, Girls Inc. reported cases where young girls, upon learning about the availability of menstrual products in their schools, were surprised, having been previously unaware due to language barriers (T. Rich, personal communication, January 17, 2024).

Access to Menstrual Equity

There are a variety of factors that impede student access to menstrual products, these include the existence of a stigma surrounding menstruation, inconsistent stocking of period products, cultural barriers, gendered language, and poor location of menstrual products. To help mitigate these issues, some nonprofits are combating societal stigma with period kits, enhancing the availability and normalization of menstrual support. Concurrently, affordable dispensing solutions are being used to address the challenge of inconveniently placed products, further increasing access to essential menstrual products.

The stigma surrounding menstruation significantly hinders students' ability to seek assistance and access essential menstrual products. (Finding #3)

When interviewing Ms. Buduski, a wrap-around coordinator, she informed us that homeless youth often take menstrual products, reinforcing the erroneous belief that only individuals in dire circumstances require such aid. This misconception discourages a broader range of students from utilizing these vital resources (A. Buduski, North High School Wrap-Around Coordinator, January 31st, 2024).

Cultural beliefs further exacerbate this stigma, as noted by Makena Eccles, a student researcher from the College of the Holy Cross, and Ceylan Rowe, CEO of Fihri. They pointed out that certain cultural norms discourage the use of internal menstrual products due to fears of compromising one's virginity, thereby restricting product choices for menstruators and intensifying the stigma. (Makenna Eccles, Student Researcher at College of the Holy Cross, January 29th, 2024).

Additionally, Anne Lineman, the nursing consultant at Brockton Public Schools reported that students often feel too embarrassed to discuss their menstrual needs. This embarrassment is heightened when product dispensers are found empty, and nurses are unprepared to supply the necessary items, further amplifying the feelings of shame and discomfort associated with menstruation (Dr. Anne Lineman, Brockton Public Schools Nursing Consultant, February 6th, 2024).

Furthermore, the traditional, gendered language used to describe menstrual products, which can alienate menstruators who do not identify as female, limiting their participation in discussions about menstrual health. The National Conference of State Legislatures has proposed adopting more inclusive terms, such as "menstrual discharge collection

devices," to diminish stigma and encourage more open conversations about menstrual health (Easing Access to Menstrual Products, 2023).

Non-profit organizations (NPO's) help tackle period poverty with period packs and toolkits. (Finding #4)

Non-profit organizations are at the forefront of combating period poverty through creative community-driven initiatives. Among the six NPO's we interviewed, each employed a unique strategy to combat period poverty.

Taylor Rich at Girls Inc. and Ceylan Rowe, Founder of Fihri, have both facilitated the distribution of packaged menstrual products within the Massachusetts community (T. Rich, Director of STEM and Leadership, January 17, 2024). This initiative provides menstruators in need with easy access to products through a convenient grab-and-go method. Moreover, these kits not only offer practical support but also include uplifting affirmations aimed at destigmatizing menstruation among young menstruators.



Figure 9: A period palooza event at Girls Inc. of Worcester in collaboration with Fihri. At this event, participants pack sustainable period packs which are delivered to schools or non-profits in need. (Fihri, 2023).

Additionally, the Alliance for Period Supplies champions a toolkit approach, which tailors support by enabling menstruators to select specific products that cater to their individual needs (Jennifer Gains, 2023). While these kits and toolkits share similarities, each possesses a distinct design and assembly process, significantly enhancing the availability of menstrual products across various Massachusetts communities.

Another innovative strategy is the discreet signage employed by the Teal Circle Project, initiated by Free Period. This project uses teal circle stickers placed strategically in schools or shelters to subtly signal the presence of menstrual products, providing a stigma-free way for individuals to access the resources they require.



Figure 10: The stickers used by the Teal Circle Project to signal the presence of menstrual products. (Free., 2023).

The placement of menstrual products within public schools are often not accessible. (Finding #6)

Interviews with and nurses and wrap around coordinators at Massachusetts Public Schools have highlighted the varied and often inconvenient placement of free menstrual products across educational institutions. According to some nurses, these products are made available in the nurse's office, while others mention the school pantry or health services as distribution points. The Period Agenda has indicated that currently, these products are accessible only in certain women's and gender-neutral restrooms, with efforts underway to extend availability to all restrooms, including men's, to ensure inclusivity for transgender individuals.



Figure 11: A supply closet providing students with essential items like menstrual products, hygiene products, clothes, and more. This picture was take with permission at North High School.

However, Keisha Lamb, the Director of Race and Gender Equity at YWCA, shared that even when menstrual products are present in restrooms, their placement outside of individual stalls poses a significant accessibility issue. For someone in immediate need, having to leave the stall and potentially navigate to a different location, such as the nurse's office or another area within the school, is not a feasible solution. Just as toilet paper is considered an essential item within every stall, menstrual products should be equally accessible, ensuring immediate availability right at the point of need without any inconvenience or delay (K. Lamb, Director of Race and Gender Equity , January 19, 2024).

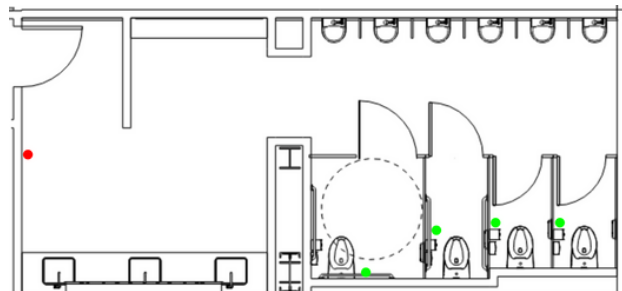


Figure 12: Layout of a Standard Communal Restroom. The red dot indicates the minimum recommended location for menstrual product dispensers. Green dots illustrate ideal placements, ensuring easy access to menstrual products just like toilet paper.

Plastic dispensers and baskets are less expensive alternatives to metal dispensers. (Finding #7)

Our discussions with Ellen Cynar, COO of Unicorn, have revealed that more affordable options for menstrual product dispensers, such as those made from plastic, offer a viable solution to reduce costs and simplify the installation process compared to the traditional, more expensive metal dispensers. The conventional metal dispensers average around \$500 per unit, plus additional costs for installation. In contrast, the plastic dispensers produced by Unicorn present a budget-friendly alternative, with units priced at approximately \$75 (including 100 ct menstrual products) and an installation time of merely 30 seconds, achievable by individuals without prior experience.



Figure 13: A Unicorn dispenser installed in a stall, right next to the toilet for easy access to menstrual products. (Unicorn, 2023).

In line with these findings, The Period Agenda, a student-led initiative at WPI focused on meeting the menstrual needs of the campus community, has adopted an innovative approach by introducing period baskets in women's and gender-neutral restrooms across the campus. These baskets, which can be acquired and set up for an initial cost of just \$10 to \$20, are an economical solution for providing accessible menstrual products. This shift towards more cost-effective dispensing methods underscores the potential for broader implementation across educational institutions, ensuring that menstrual products are readily available in every space/stall.

Quality of Free Menstrual Products

Investigations into free menstrual products at schools reveal issues with their quality and sustainability. Stakeholders have voiced concerns over the products' lack of comfort and functionality, as well as their environmental toll.

Free menstrual products often lack comfort and functionality. (Finding #8)

Interviews with The Period Agenda at WPI and nurses at Massachusetts Public Schools have revealed that the menstrual products available at many public institutions often fall short in terms of comfort and functionality. Typically, free period products include thin, one-size pads without wings and tampons with cardboard applicators. This one-size fits all approach doesn't work for menstruators. Ceylan Rowe, Founder of Fihri, explained that menstruators have diverse comfort preferences when it comes to menstrual products. Rowe noted the discomfort caused by cardboard applicators and the ineffectiveness of one-size-fits-all pads, which fail to accommodate the varying flow rates and menstrual cycles of individuals (C. Rowe, Founder of Fihri, January 19, 2024). Suzanne Herman, Legal Director at Period Law, agreed and emphasized the importance of wings on pads, pointing out their role in preventing leaks and providing peace of mind to users. The inadequacy of these products affects the individuals using them and leads to many remaining unused. As a result -

Public schools underestimate the severity of period poverty due to the underuse of inadequate products. (Finding #9)

Despite the significant impact of period poverty, affecting one in four menstruators in Massachusetts (Child Health Equity Center, 2024), there exists skepticism within a Massachusetts public school system regarding its prevalence. (Nursing Director, a Massachusetts Public School system, January 24, 2024). Although free menstrual products are distributed at schools, their lack of use contributes to this disbelief.

Free menstrual products are often not sustainable. (Finding #10)

Free menstrual products available at WPI and within Worcester Public Schools often contain plastic and are not biodegradable. Ceylan Rowe, the Founder of Fihri, underscored the significant environmental impact of these non-biodegradable products, sharing that as much as 90% of pads are made up of plastic (C. Rowe, CEO of Fihri, January 19, 2024). These pads could linger in the environment for 500 to 800 years, as a single pad containing the equivalent amount of plastic found in four supermarket bags (National Institutes of Health, 2019). In response to this environmental challenge, Rowe's organization formed a partnership with a company called Viv. Viv produces biodegradable products made from bamboo and corn fibers, which can decompose in as little as 150 days (Viv, 2023). Viv isn't the only company working to address the unsustainability of period products. Unicorn and Pads on a Roll produce organic cotton products that also biodegrade within a relatively short period, approximately 2 years.

Recommendations to Tackle Period Poverty

In this chapter, we present actionable recommendations aimed at tackling the multifaceted issue of period poverty. Drawing from data collected through interviews and extensive research, we explore strategies that encompass educational initiatives, product accessibility, legislative actions, and avenues for future research.

Awareness of Menstrual Health

In achieving menstrual equity, effective communication and education stand as pillars of progress. By harnessing the reach and accessibility of social media platforms and period tracker apps,

along with organizing extracurricular workshops, we can empower individuals with knowledge and foster open dialogue about menstrual health.

We recommend Non-Profit Organizations to utilize social media and period tracker applications to raise awareness of menstrual health. (Recommendation #1)

Incorporating social media platforms like Instagram or Tiktok, along with period tracker apps, can serve as effective tools for increasing awareness about menstrual care and reducing stigma. Nonprofit organizations like APS, Girls Inc., and YWCA, have successfully used social media to publicize their services, indicating its efficacy in reaching a wider audience. By encouraging open dialogue online, individuals can express their menstrual concerns freely, contributing to destigmatisation and promoting the discussion of menstrual health. Additionally, period tracker apps can provide accessible education on period poverty, especially to younger generations who are increasingly reliant on digital platforms for information.

We recommend the Department of Education to organize workshops about menstrual health, designed for both parents and students. (Recommendation #2)

Facilitating workshops within community outreach centers can foster communication between parents and children regarding menstrual health. As observed by Makenna Eccles, a student researcher at the College of the Holy Cross, such workshops have proven effective in creating a comfortable environment for parents and students to engage in open discussions about menstrual health. Extending the availability of these workshops throughout Massachusetts communities could offer a valuable platform for individuals to share personal experiences related to menstrual hygiene and overcome communication barriers within families.

Sustainable Solutions to Menstrual Equity

In this section, we address sustainable and accessible solutions for menstrual equity by advocating for the use of eco-friendly menstrual products and more economical dispensers in public schools. These recommendations aim to promote environmental sustainability and improve the accessibility of menstrual care within educational institutions.

We recommend encouraging the use of reusable and biodegradable products. (Recommendation #3)

Reusable products like menstrual disks and period underwear aim to create comfortable and cost-effective options. By investing in reusable products (one time cost of \$40 approx.), individuals can reduce long-term expenses associated with menstrual care and minimize environmental impact. The primary limitation of these products is their requirement for clean water for maintenance.

Drawing from Finding #10, Rowe states the necessity of legislating biodegradable options to reduce the ecological footprint of menstrual products made entirely of plastic. For example, bamboo-based products present a viable, eco-friendly alternative.

We recommend that public schools adopt more cost-effective dispensers to optimize the allocation of funds for menstrual products. (Recommendation #4)

We urge school systems to use affordable plastic dispensers to improve the availability of menstrual products, as highlighted in Finding #6. We recommend mandates for economical storage of menstrual products, such as plastic dispensers and baskets, to extend the reach of available funds. By lowering expenses, the use of plastic dispensers can enhance both the quality and accessibility of menstrual products in Massachusetts public schools. This recommendation is made in light of the observation that currently, schools and other public facilities predominantly use metal dispensers.

Table 2: Composition and Biodegradation Period of Menstrual Products

Type of Material	Time to Biodegrade
Plastic	500 - 800 Years
Bamboo/Corn	150 Days
Organic Cotton	2 Years

Table 3: Cost Comparison of Metal and Plastic Menstrual Product Dispensers

Type of Dispenser	Cost per Unit
Metal	\$500 + Installation Fees
Plastic	\$75, Including 100 ct of Products

Legislative Initiatives for Menstrual Equity

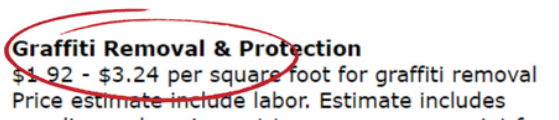
This section recommends legislative initiatives to promote menstrual equity. This includes amendments to existing laws, classification of menstrual products as a janitorial expense, and increased support for nonprofits combating period poverty.

We recommend including menstrual products as eligible items under the SNAP/EBT Act. (Recommendation #5)

Modifying the SNAP/EBT Act to permit the purchase of hygiene products would significantly acknowledge the indispensable nature of these items. Such an amendment would enable individuals who depend on food assistance programs to access essential menstrual products, thus alleviating the financial challenges associated with menstrual care. Currently, SNAP regulations restrict purchases to food, rent, utilities, and other such necessities (Mass.gov, 2024). Recognizing menstrual products as essential items and leveraging the existing infrastructure would simplify the process for legislators to enact this beneficial change.

We recommend classifying menstrual products as janitorial expenses, akin to the restocking of toilet paper and soap. (Recommendation #6)

By categorizing menstrual products as a janitorial necessity, their presence in all public restrooms would become mandatory. We recommend the Massachusetts Department of Education consider this adjustment. Such a policy change would standardize the availability of menstrual products in public school restrooms, ensuring that menstruators have the necessary access when required.



Graffiti Removal & Protection
\$1.92 - \$3.24 per square foot for graffiti removal
Price estimate include labor. Estimate includes

Figure 14: Excerpt from Worcester Janitorial Service Costs. Given that funding allocated for Graffiti Removal, surely essential items like menstrual products can be included (Worcester Janitorial Service Costs, 2021).

We recommend supporting non-profits tackling period poverty through legislation (Recommendation #7)

Legislation aiding organizations like the Alliance for Period Supplies (APS) can amplify their impact by leveraging existing networks. Such laws could offer financial assistance, resources, and recognition to these organizations. APS stands out as an excellent choice, with over 120 Allied programs nationwide for efficient product distribution. Legislative collaboration with APS could enable them to expand their operations and more effectively combat period poverty.

Further Research for Menstrual Equity

Two crucial areas for further research are understanding the economic impacts of period poverty and analyzing the effectiveness of existing menstrual equity legislation. By delving into these areas, policymakers and advocates can gain valuable insights to drive meaningful change.

We recommend research on the economic impacts of period poverty. (Recommendation #8)

To engage policymakers, it's crucial to highlight its economic implications. Drawing on insights from Ceylan Rowe, the Founder of Fihri, there is a necessity for research into the economic consequences of Period Poverty. Similar to how studies on the economic fallout of domestic violence have garnered significant policy attention, in-depth analysis of how Period Poverty affects workforce participation, education, and overall economic productivity could be a persuasive tool. By quantifying the costs associated with lost productivity, increased healthcare expenses, and hindered educational outcomes due to inadequate access to menstrual products, such research could provide a compelling case for policymakers to prioritize initiatives aimed at tackling period poverty.



We recommend further research on legislation passed for menstrual equity. (Recommendation #9)

Researching existing menstrual equity legislation would provide valuable insights into their effectiveness, identifying strengths, weaknesses, and areas for improvement. Understanding the landscape will reveal how impactful each piece of legislation was. This will identify gaps and best practices to help create clear and concise legislation.

Our comparative analysis of menstrual equity legislation across different states has unveiled various factors that contribute to the success of such laws (see Appendix B). Although our project did not extend to an examination of the funding strategies and implementation plans of these laws, we believe such an analysis is important. Key components of legislation that warrant further investigation include:

- Funding Mechanisms
- Enforcement Mechanisms
- Agencies Tasked with Implementation
- Education Levels Included
- Procurement of Menstrual Products
- Type of Menstrual Products Supplied
- Location of the Menstrual Products
- Menstrual Education Requirement

Conclusion

We hope that our insights into period poverty and the actionable recommendations for tackling this issue will inform and support Senator Kennedy's commitment to fostering menstrual equity through legislative and community initiatives. Our findings not only underscore the pressing need for reform but also lay out a clear path forward. By addressing educational gaps, improving access to menstrual products, and enhancing product quality and sustainability, there is an opportunity to make substantial progress in combating period poverty.

The pursuit of menstrual equity is not just a matter of health or education—it is a step towards upholding the dignity and rights of menstruators everywhere.

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