

# Amenities and accommodations for minorities in STEM

## A Proposal for Free Menstrual Sanitary Products

Barien Gad, Illinois Institute of Technology\*

Spring 2021 SoReMo Fellowship Project Final Technical Report

## Contents

<b>Abstract</b>	<b>1</b>
<b>Introduction</b>	<b>2</b>
<b>Background</b>	<b>2</b>
<b>Analysis of Current Environment</b>	<b>4</b>
<b>Data Collection</b>	<b>5</b>
<b>Proposal</b>	<b>6</b>
<b>Conclusion</b>	<b>11</b>
<b>License</b>	<b>11</b>
<b>Acknowledgements</b>	<b>12</b>

## Abstract

This report will discuss why Illinois Tech needs to join other universities in bringing about adequate access to free menstrual sanitary products on their campus to ultimately combat period poverty amongst their students.

Period poverty is defined as the inadequate access and disposal of menstrual sanitary products and affects one in ten college women currently in the United States. Period poverty disproportionately affects students of color, low-income students, and first-generation students.

While the critical targets in this project are women and the research and literature used to defend this report was data collected on women, it is just as important to accommodate for non-female menstruating students by supplying menstrual sanitary products in gender-neutral bathrooms as well.

With a total student population of 7,792 students and a reported 37% female ratio, approximately 2,833 menstruating individuals are attending Illinois Tech and approximately 288 of those are currently experiencing a form of period poverty. Access to menstrual sanitary products is a form of inclusion and accommodation of the minority population at IIT. Illinois Tech struggles with a difficult gender ratio and should be pioneering efforts

---

\*[Contact the author.](#)

to support its women and gender minority students in succeeding by cultivating a supportive environment that caters to their natural biological needs.

The primary stakeholder is the institution that is to fund the effort. Supporting students by providing adequate access to menstrual sanitary products ultimately combats long-term implications of period poverty such as mental health, financial stress, and stigmas surrounding menstruation.

The purpose of this project is to propose efficient and sustainable methods the university can implement to bring about free menstrual sanitary products and study the impact on the community.

## Introduction

This report will discuss why Illinois Tech needs to join other universities in bringing about adequate access to free menstrual sanitary products on their campus to ultimately combat period poverty amongst their students.

Period poverty is defined as the inadequate access and disposal of menstrual sanitary products and affects one in ten college women currently in the United States. Period poverty disproportionately affects students of color, low-income students, and first-generation students.

While the critical targets in this project are women and the research and literature used to defend this report was data collected on women, it is just as important to accommodate for non-female menstruating students by supplying menstrual sanitary products in gender-neutral bathrooms as well.

With a total student population of 7,792 students and a reported 37% female ratio, approximately 2,833 menstruating individuals are attending Illinois Tech and approximately 288 of those are currently experiencing a form of period poverty. Access to menstrual sanitary products is a form of inclusion and accommodation of the minority population at IIT. Illinois Tech struggles with a difficult gender ratio and should be pioneering efforts to support its women and gender minority students in succeeding by cultivating a supportive environment that caters to their natural biological needs.

The primary stakeholder is the institution that is to fund the effort. Supporting students by providing adequate access to menstrual sanitary products ultimately combats the long-term implications of period poverty such as poor mental health, financial stress, and stigmas surrounding menstruation.

The purpose of this project is to propose efficient and sustainable methods the university can implement to bring about free menstrual sanitary products and study the impact on the community.

## Background

### Illinois State Laws:

In 2018, under the Illinois Public Act 100-0163, all public schools were required to “make feminine hygiene products available, at no cost to students, in the bathrooms of school buildings.

The General Assembly finds the following:

1. Feminine hygiene products are a healthcare necessity and not an item that can be foregone or substituted easily.
2. Access to feminine hygiene products is a serious and ongoing need in this State.
3. When students do not have access to affordable feminine hygiene products, they may miss multiple days of school every month.
4. When students have access to quality feminine hygiene products, they can continue with their daily lives with minimal interruption.”

In this section, I will defend and elaborate on each point stressed in the bill and discuss how Illinois Tech can have an impact in growing and improving future legislative decisions.

Menstrual sanitary products are basic human necessities.

The general assembly argues that menstrual sanitary products are considered health care necessities because they cannot be “foregone”. Not only is this true, but it is a crucial factor in why the university needs to consider free menstrual sanitary products. Like toilet paper and toilet seat covers, supplying MSPs supports the personal health of students.

While Illinois’s commitment is commendable, it is not enough. The state chooses when to identify sanitary products as essential. Illinois still currently taxes menstrual sanitary products at a rate of 6.25% because it is considered a luxury item in the capitalist market. MSPs do not even fall under the discounted 1% medical necessities taxation. Titled the tampon tax, the unjust taxation of MSPs decreases accessibility among lower-income groups.

98% of Illinois Tech students receive some form of financial aid. The support students need for the education on campus is clear, and if the university is truly committed to supporting their academic success past a financial level, Illinois Tech should supply its bathrooms with the necessary menstrual sanitary products to ensure equal support. Access to menstrual sanitary products is a form of inclusion and accommodation of the minority population at IIT.

Menstrual sanitary product expenses cause students to miss school.

The general assembly next argues that the affordability of hygiene products causes students to miss academic learning time. Especially when it comes to academia, research suggests there are harmful implications for students who experience period poverty. More specifically students and their ability to attend school due to access to menstrual sanitary products. A 2019 study sponsored by [Thinx and PERIOD \[2019\]](#) to better understand period poverty among students found that “ more than 4 in 5 teens have either missed class time or know a classmate who missed class time because they did not have access to period products,” [[Thinx and PERIOD, 2019](#)] again reiterating the consequences of period poverty. By providing proper access to MSPs, the university will eliminate students’ inability to attend classes due to inadequate access to menstrual sanitary products.

Menstrual sanitary products influence the daily lives of students.

The general assembly finally argues that access to MSPs supports students and their daily lives by minimizing interruptions such as stress about where they will get their next MSP or how long they have been using their current MSP. The same 2019 research conducted by [Thinx and PERIOD \[2019\]](#) discovered that “61% have worn a tampon or pad for more than 4 hours because they did not have enough access to period products (puts them at risk of infection and TSS)” [[Thinx and PERIOD, 2019](#)]. The minimal interruption the Illinois general assembly refers to is the risk of developing Toxic Shock Syndrome, a rare bacterial infection with a high mortality rate of 30 to 70 percent. Inadequate access to menstrual sanitary products is not only harmful to the health of individuals but is deadly. If the university is to adopt free menstrual sanitary products in its public bathrooms, then like condoms they would serve to protect the health of students.

## Forging Accomplishments on a National Level

Currently, multiple European countries have passed bills making all menstrual sanitary products free of expense. In November of 2020, Scotland became the first country to make all MSPs free under the *Free Period Products Bill* after a study following 2000 students revealed that 1 in 4 students experienced a form of period poverty [[Wamsley](#)]. That same research found that 71% of women between the ages of 14 to 21 experienced embarrassment when purchasing menstrual sanitary products. The population includes college-aged women stressing the social stigmas associated with MSPs. Again, nearly three-fourth of college-aged students are embarrassed to purchase basic health necessities.

Most notably, Scotland started by funding all universities and schools for free MSPs before moving onto the entire country. The bill also discusses the impact of menstruation on student attendance. The research

supporting the bill found approximately half of the surveyed students intentionally missed school because of their menstrual cycles. Similar to Illinois, Scotland defends supplying free MSPs by identifying them as basic human rights. In the bill titled Period Products (Free Provision) (Scotland) Bill, Scotland is provided with 98 reasons to implement free menstrual sanitary products varying from increasing access among disabled populations to the need for MSPs in academic settings. Since Scotland, many countries have followed in their footsteps.

It is extremely important to understand the influence academic institutions have on working towards free menstrual sanitary products on a national level. Ultimately it is clear that the first step in nationally providing free MSPs is to provide them in academic institutions.

New Zealand recently followed suit and announced all academic institutions would be required to provide free menstrual sanitary products, in hopes of eventually transitioning their mission to a national level. Countries such as New Zealand and Scotland notice the impact academic institutions have on supplying MSPs.

Providing menstrual sanitary products on campuses undoubtedly academically supports menstruating students by caring for their uncontrolled basic human needs.

The pattern of initially supplying academic institutions and then upgrading to a national level signifies the impact academic institutions have on achieving the ultimate goal of free MSPs. By partaking in the mission, Illinois Tech will be one of many universities in the United States to stand ground and show their commitment to providing access to equal learning opportunities.

## **The global waste impact of menstrual sanitary products**

Another common concern revolves around waste caused by menstrual sanitary products. Menstrual sanitary products are currently a large contributing factor to plastic waste. I suggest that while it can be more expensive, the university should be mindful of its global footprint and opt for biodegradable sanitary napkins if budgeting allows.

Traditional sanitary napkins are composed 90% of plastic, and the time which it takes for the products to degrade is longer than the lifespan of any individual. It is the environmental implications of MSPs that are encouraging reusable menstrual sanitary products such as diva cups. While there are more environmentally friendly products being produced by companies focusing on minimizing plastic waste in plastic wrapping and applicators, the expenses associated with products can be used to argue against their use.

Part of providing free MSPs is about battling the stigmas that surround periods. Stigmas surrounding menstruation perceive women as “dirty” and incompetent during their menstrual cycles. They create harmful stereotypes around women’s behavior and invalidate their experiences and emotions as byproducts of “PMS.”

Research already proves increased anxiety among individuals who struggle to have proper access to basic needs limited to housing and food. Period poverty is directly correlated with mental health well-being [[Cardoso et al., 2021](#)].

The biggest challenge in supplying menstrual sanitary products is ultimately the cost institutions are burdened with. The same way institutions bear the financial burden of toilet paper and toilet seat covers, they should be expected to fund menstrual sanitary products.

Ultimately in an academic setting, while it is important to be mindful of the plastic footprint, accessibility will almost always win. Until more efforts are made to produce affordable environmentally-friendly menstrual sanitary products, the waste produced by MSPs is worth the positive impact free MSPs will have on its student body.

## **Analysis of Current Environment**

Illinois Tech does not currently accommodate the menstruating student population’s needs.

A quick analysis of the Meis campus reveals:

- The only location providing free menstrual sanitary products is the Health Wellness center located in the IIT Tower south of campus.
- Bathrooms located at McCormick Tribune Campus Center and John T. Rettaliata Engineering Center are one of the multiple buildings on campus to not have any form of dispensing machine.
- Existing dispensers located in older buildings are coin-operated which is not accessible to a population of students that rely on virtual currency.
- In the 2019 Spring Provost Forum, there was mention of renovating bathrooms in the Stuart building but no mention of properly supplying MSPs.
- None of the on-campus apartments or dorms are stocked for emergency uses of MSPs.
- There is no Greek House on campus that formally funds MSPs for their members.
- On-campus convenient store 7/11 located in McCormick Tribune Campus Center upcharges for sanitary products approximately by 100%.



Figure 1: On campus 7/11 located at McCormick Tribune Campus Center. The photograph was taken Monday April 26th at 11:08 AM by Elizabeth Karagiannes

*Products are open, unorganized, and bring about general health concerns. It is unclear whether items are intentionally priced, regardless it is morally corrupt to profit off basic human needs when there is already limited accessibility due to cost.*

## Data Collection

When deciding how the university should go about implementing free menstrual sanitary products, I reached out to institutions that have already accomplished the mission on a wider scale. While not every university currently has implemented a free MSP program some of the country's biggest institutions like The University of Texas, The University of Washington, and Purdue University have. When reaching out to different institutions to understand their efforts, I primarily looked at places that had somewhat developed programs. This limited my options seeing as supplying free menstrual sanitary products is ultimately a new effort that is still being adapted. Even with the schools in which I did get in contact with there were difficulties in getting proper numbers because of poor record-keeping option On-Campus.

Most prominently, I modeled our plan after the University of Washington as they have had their program since 2016 and have a larger set of data.

I reached out 4 universities and asked the same questions:

1. Do you supply free menstrual sanitary products?
2. When did you begin supplying free MSPs?
3. What was the motivating factor behind supplying free MSPs?
4. Where does the funding for free MSPs come from?

5. Are there multiple parties involved in supplying MSPs?
6. How many bathrooms on campus are being supplied?
7. What method of distribution is used?
8. What is the estimated annual cost of the program?
  - a) Has it been increasing or decreasing as the program grows?
9. What products does the university supply?
  - a) Generic tampons? Sanitary napkins? Etc.
10. Do you plan to continue supplying free MSPs in the foreseeable future?

The University of Washington of Response made by Amanda Dassoff, Marketing & Outreach Specialist, Building Services Department (Custodial & UW Recycling).

1. Yes, since 2016 the institution has been supplying
2. 2016 was the first year of the program, which included a trial period
3. “In 2016, two female UW students approached BSD with a proposal to provide free menstrual products at the University of Washington. The department explored the option and began a pilot of free menstrual products in certain locations in 2017. The pilot program received positive reviews from students and became a permanent program. The program is based on conscious consumerism, or only taking what is needed to ensure sustainability. In all gender and woman’s restrooms, there are signs with links to a page that shows the restrooms on campus with free menstrual products. I’ve attached one of the signs for reference.”
4. “The Building Services Department (which oversees Custodial Services and UW Recycling) currently has a free menstrual product program in 90 restrooms across 60 buildings on the UW Seattle campus. 12 of these restrooms are all-gender restrooms. Other departments service residential life and athletics buildings.”
5. Yes, “the UW Food Pantry is offering free menstrual products to their customers. Our student center, the Husky Union Building (the HUB), also offers free menstrual products in the building.”
6. 90 bathrooms across 60 restrooms
7. “Our custodians monitor and re-stock the menstrual products if they are getting low. As part of their daily service, they refill restroom items like hand soap, toilet paper, and paper towels. Since they already provide that service, it is easy for them to restock the free menstrual products as well.”
8. The initial investment focused on the dispensers costing around 25,700. Annually supplying MSPs is around \$20,000 a year.
9. Generic tampons and sanitary napkins.
10. Yes, the program is developed in a manner that encourages sustainability and growth for the long term.

## Proposal

The university should attempt a trial period where they provide free menstrual sanitary products in public bathrooms on campus.

It is important to survey the current climate of Illinois Tech through a survey targeting the pre-assumed menstruating population of women. The goal is to have an initial metric to look at. After the implementation of MSPs during the trial, formal data should be collected to understand the impact on the community. Collected data has large implications for future use by outside institutions in decision-making. The field has very little research and even fewer data collected on the effects of providing free MSPs.

## Important factors

The following factors were researched and accounted for in this study:

- American Disability Act
  - Locations of dispensers in bathrooms need to be accessible by all, it is best to locate MSP dispensers at the same height as soap dispensers to abide by ADA guidelines

- Add braille signs on bathroom doors to differentiate between supplied bathrooms
- Supply bathrooms located on the first floor for quick and convenient access
- Environmentally Friendly Products
  - If allowed for with a proper budget, the university should opt for tampons and sanitary napkins packaged in cardboard to minimize plastic waste

## Main Campus Buildings

1. Selecting Locations: McCormick Tribune Campus Center, John T. Rettaliata Engineering Center, Herman, Galvin,
  - It is important to select easily accessible locations with gender-neutral bathrooms and that have high foot traffic.
2. Dispenser
  - Clear acrylic dispensers
    - Purchased at a rate of \$285 individually.
    - The alternative option is to repurpose acrylic dividers previously used for social distance restrictions and build the dispensers



Figure 2: Dispensers at the University of Washington. The image was shared by Amanda Dassoff, Marketing & Outreach Specialist, Building Services Department.

3. Signs to indicate free MSPs
  - Signs should be clear and place at the door of every bathroom stocked
  - Campus maps should reflect which bathrooms are stocked and which are not by adding a symbol.



Figure 3: The University of Washington advertises the location of the supplied bathroom using a website.

## On-Campus Housing

1. Community MSP box

- Runs purely on the honor system where a pay box is placed next to a community basket. This is for accessibility and all funds will be used to repurchase products as directed by building RAs.

## On-Campus Food Pantry

1. If the university were to start an on-campus food pantry to support students, it should regularly supply MSPs.

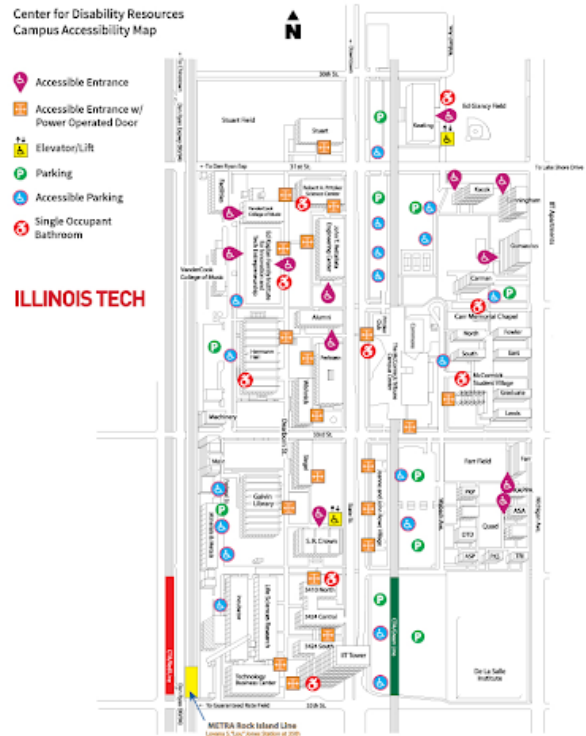


Figure 4: The map of Illinois Tech’s Mies Campus Map above was obtained from the Illinois Institute of Technology website on May 26th, 2021.

Maps such as the above should be redesigned to include a sign that indicates stocked bathrooms.

## Implementation Steps

This section contains a detailed six-step implementation process proposal.

1. Survey the current environment to understand accessibility among student types at IIT. The following questions are suggested:
  - a. Are you an undergraduate student or graduate student?
    - i. Undergraduate, Graduate
  - b. Do you live on campus?
    - i. Yes, No
  - c. What is your Gender Identity
    - i. Open text box
  - d. Do you use sanitary napkins?



- i. Yes, No
- e. On average, how much do you spend on sanitary products per semester (i.e. in a period of 4 months)?
  - i. \$1, \$2,\$3,\$4,\$5,\$6,\$7,\$8,\$9,\$10, Other - fill in
- f. What do you feel is a justifiable price for a sanitary napkin?
  - i. Fill in
- g. Which of the following menstrual sanitary products do you use most frequently?
  - i. Sanitary Napkins (Pad)
  - ii. Tampon
  - iii. Liners
  - iv. Reusable Diva Cups
  - v. Other - fill-in
- h. Are you aware of locations on campus where you can receive free sanitary napkins?
  - i. Yes, No
- i. Are these locations convenient for you?
  - i. Yes, No
- j. How often do you find yourself in need of sanitary napkins and not having access to them?
  - i. Likert scale: 1 Never to 7 All the time
- k. How often do you find yourself asking close friends for sanitary napkins?
  - i. Likert scale: 1 Never to 7 All the time
- l. How often do you find yourself providing sanitary napkins to your friends and family?
  - i. Likert scale: 1 Never to 7 All the time
- m. To what extent do you agree or disagree with this statement: It is important to have easy access to sanitary products.
  - i. Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
- n. To what extent do you agree or disagree with this statement: It is difficult to access sanitary napkins during class.
  - i. Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
- o. To what extent do you agree or disagree with this statement: It is easier to access male contraceptives on campus than female sanitary products.
  - i. Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
- p. How useful would you find free sanitary napkins in bathrooms on campus?
  - i. Likert scale: 1 Not useful to 7 Extremely useful
- q. How satisfied are you with the availability of sanitary products on campus?
  - i. Likert scale: 1 Extremely dissatisfied to 7 extremely satisfied
- 2. Implement free MSPs in previously listed locations
  - a. Abide by A.D.A Guideline codes in locating dispensers at the same height as soap dispensers.
  - b. Ensure the presence of trash cans in all bathrooms for proper disposal.
  - c. Advertise to students that MSPs are now supplied through a formal email to the student body.
  - d. Any bathrooms with remaining dispensers are to be taped off.
    - i. Removing the dispensers can be difficult if it is attached to the structure of the wall.
- 3. Collect MSP usage
  - a. Janitorial staff should be given an additional spreadsheet formatted as follows to ease the tracking of usage on campus. Tracking should be done to study how frequently dispensers are used and to analyze needs on campus.

Location	Bathroom type: Circle response	Date	Number of Sanitary Napkins remaining	Number of generic tampons remaining
McCormick Tribune	Women's Gender			
Campus Center	Neutral			
John T. Rettaliata	Women's Gender			
Engineering Center	Neutral			
Galvin Library	Women's Gender			
	Neutral			

Location	Bathroom type: Circle response	Date	Number of Sanitary Napkins remaining	Number of generic tampons remaining
...	...	...	...	...

4. Collect feedback
  - a. QR codes should be attached to dispensers encouraging students to provide formal feedback on their experiences with the products and supplies.
  - b. Similar questions to the original survey should be asked to compare collected data.
  - c. The survey should be simple and convenient for students to complete.
  - d. The survey should focus on areas of improvement.
5. Include more bathrooms
  - a. Grow the number of supplied bathrooms by 2 bathrooms every year until all of campus is completely stocked.
6. Collect more feedback
  - a. The survey serves to reassess the new campus environment and community.

## Estimated Cost for Illinois Tech

Table 2: Gender Ratio Between University of Washington and Illinois Institute of Technology 2020

Institution	Total number of students	Number of menstruating students	Gender ratio	Combined
University of Washington	32,046	17,304	54%	0.167
Illinois Tech	7,792	2,883	37%	0.167

Table 3: University of Washington Total Cost

Year	Dispenser quantity	Sanitary napkins	Generic tampons	Total cost
2017	13	8,250	N/A	N/A
2018	N/A	62,000	101,000	\$20,202.93
2019	90	54,500	50,000	\$19,282.39

Remarks on the data from the tables above:

- One thing to note about this data – there was a price increase on all HOSPECO products from 2018 to 2019.
- The information from 2017 isn't complete and is missing metrics.
- 2020 numbers are not included because of low student retention on campus due to COVID-19.
- The department was eligible for a 1.5% annual rebate from their vendor per their previous contract. This rebate had a cost savings of \$15 – 20,000 annually for the Building Services Department.

The Building Services Department (which oversees Custodial Services and UW Recycling) currently has a free menstrual product program in 90 restrooms across 60 buildings on the UW Seattle campus. 12 of these restrooms are all-gender restrooms.

Table 4: Illinois Institute of Technology Trial Period Estimated Costs

Item	Quantity	Cost
Dispenser	4	\$1,140
Sanitary napkins	9101.5	(combined below)
Generic tampons	8,350	\$3,320.16
		Total cost: \$4,460.16

- The university should be prepared to negotiate a rebate that encourages discounts.
- The listed estimate assumes that the usage is consistent among IIT students and UW students.

## Conclusion

Stigmas around menstruation stem from silencing the experiences and challenges of women. Supporting students on campus surpasses providing academic support, it includes adequately catering to their basic health needs. If the university is looking to support its women and gender minority students in hopes of combating the gender ratio, a supportive environment must be built to cater to their specific needs.

This is an opportunity for the university to model its mission of equal access to education by committing to the health needs of its students. The goal of this project is to improve the experience of menstruating students and is not designed to formally profit the institution, however, there are endless benefits if Illinois Tech joins within the upcoming year.

This is an opportunity for the university to collect formal data on MSP access and grow the limited research on period poverty. The publications from the collected data will be used in the future to defend proposals like this. Most importantly it is an opportunity for Illinois Tech to model how future universities are to go about implementing free menstrual sanitary products on the campus.

As mentioned earlier, the influence academic institutions have on period poverty-related legislation is clear. Collected data can be used to influence different state laws and serve as a reminder as to the pressing issue period poverty is.

For less than \$5,000 the university can ease the experiences of 288 students. Access to menstrual sanitary products is a form of inclusion and accommodation of the population at IIT.

## License

The author of this technical report, which was written as a deliverable for a SoReMo project, retains the copyright of the written material herein upon publication of this document in [SoReMo Reports](#).



## Acknowledgements

The author is grateful to the University of Washington's Building Services for their time and efforts in sharing their collected data on usage across campus. Thank you Dr. Mars Hicks for supporting the project and idea in the initial stages. Thank you to Dr. Carly Kocurek for their innovative ideas and mention of external factors to account for such as the American Disability Act. Thank you to Michael Pelsmajer for feedback on alternatives for implementing the products. Finally, thank you Dr. Sonja Petrović for her patience, kindness, support, and guidance throughout the entirety of this project.

## References

- L. D. Cardoso, A. M. Scolese, A. Hamidaddin, and J. Gupta. Period poverty and mental health implications among college-aged women in the United States. *BMC Women's Health*, 21(14), 2021. doi: <https://doi.org/10.1186/s12905-020-01149-5>.
- Thinx and PERIOD. The widespread impact of period poverty on US students. *State of the Period.*, 2019.
- L. Wamsley. Scotland becomes 1st country to make period products free. National Public Radio, 2020, November 25. URL <https://www.npr.org/2020/11/25/938893768/scotland-becomes-first-country-to-make-period-products-free>.