

Perspective

Advancing Women's Access to Menstrual-Friendly Toilets towards Ending Period Poverty: A Public Health Imperative in the Philippines

Jerico B. Ogaya^{1,2,*} , Ryan C. Guinaran^{3,4} , Catherine P. Alesna⁵, John Don Opina⁵, Shaila A. Pilo⁶ Vic Arthur R. Masliyan³, Christian Joseph Ong⁷, Pearl Irish V. De Paz⁸, Carina Joane V. Barroso⁹, Rheajane A. Rosales¹⁰, Analyn C. Españo¹¹, and Don Eliseo Lucero-Prisno III^{12,13,14}

- ¹ Department of Medical Technology, Institute of Health Sciences and Nursing, Far Eastern University, Manila, Philippines
- ² Center for University Research, University of Makati, Makati City, Philippines
- ³ AIDS Healthcare Foundation Philippines, Quezon City, Philippines
- ⁴ Benguet State University Open University, La Trinidad, Benguet, Philippines
- ⁵ Southern Leyte State University, Sogod, Southern Leyte, Philippines
- ⁶ Leadership and Youth Advocacy Development Program, Benguet, Philippines
- $^{\scriptscriptstyle 7}$ Department of Biology, College of Science, De La Salle University, Manila, Philippines
- 8 School of Nursing and Health Sciences, Biliran Province State University, Naval, Biliran, Philippines
- 9 College of Nursing, Bukidnon State University, Malaybalay City, Philippines
- ¹⁰ College of Nursing and Health Sciences, Samar State University, Catbalogan City, Philippines
- 11 Office for Research, Development and Extension Services, Eastern Visayas State University, Tacloban City, Philippines
- 12 Department of Global Health and Development. London School of Hygiene and Tropical Medicine, London, United Kingdom
- ¹³ Research and Development Office, John B. Lacson Foundation Maritime University, Molo. Iloilo, Philippines
- 14 Research Services Office, Palompon Institute of Technology, Palompon, Leyte, Philippines

Correspondence: jericoogaya13@gmail.com

Abstract

Menstrual health and hygiene (MHH) remains critically neglected in the Philippines despite its fundamental role in promoting the well-being, dignity, and empowerment of women and girls. This persistent lapse disproportionately impacts the well-being, education, and social mobility of women and girls across the country. Deep-rooted stigma, outdated land-use practices, and a lack of gender-sensitive planning have resulted in fragmented and inconsistent menstrual hygiene infrastructure. While promising initiatives—such as localized policies, educational campaigns, and innovative digital tools like period tracking apps—have begun to surface, these efforts remain isolated, lack scalability, and often face resistance from conservative sectors. This perspective article highlights the urgent need to mainstream MHH within the country's public health and development frameworks. By institutionalizing gender-sensitive sanitation infrastructure, ensuring privacy and dignity in public spaces, and adopting inclusive tools such as the Menstrual-Friendly Public Toilet (MFPT) Toolkit, the Philippines can begin to dismantle systemic barriers in advancing access to MFPT. Tackling period poverty is an integral step towards building a more equitable and inclusive society for all.

Keywords

menstruation, period poverty, public toilets, menstrual-friendly public toilet, infrastructure, hygiene, WASH, Philippines

INTRODUCTION

Menstruation is an innate and cyclic physiological process among females, experienced by almost half of the global population (Critchley et al., 2020). This regular cycle underscores the need for a life-course approach to understanding menstruation and its multifaceted impact on women and their well-being (Hennegan et al., 2022). Access to clean, safe, and menstrual-friendly toilets is not merely a matter of comfort or convenience it is a critical public health and gender equity issue that needs to be addressed with urgency, especially in



developing countries (World Health Organization [WHO], 2024). Globally, however, access to menstrual-friendly toilets is still very limited, particularly in the urban centers (Nguyen et al., 2025). This gap is often attributed to various issues, and one of which is stigmatization. This scenario is also reflected in the Philippines, where menstruation remains heavily stigmatized, resulting in systemic neglect of the unique needs of women and girls in policy discourse and social development initiatives (Cifalph, 2024). Consequently, the country's inadequate menstrual hygiene management (MHM) infrastructure—particularly in public toilets and sanitation facilities—has placed a disproportionate burden on women and girls. From schools and workplaces to public markets and transport hubs, the lack of menstrual hygiene facilities reinforces an additional layer of vulnerability and inequality, compromises health, and hampers the productivity of menstruating individuals.

As the world progresses toward achieving the United Nations' Sustainable Development Goals (SDGs), particularly SDG 3 (Good Health and Well-being), SDG 5 (Gender Equality), and SDG 6 (Clean Water and Sanitation), addressing menstrual hygiene should be integral to national public health planning. However, despite growing awareness of MHM, many Filipino women, particularly those from marginalized communities, continue to struggle with inadequate access to clean water, soap, private spaces, and disposal facilities. The consequences of poor MHM go beyond physical discomfort—they include increased risks of infections, school and work absenteeism, mental health burdens, and the perpetuation of harmful gender norms. In areas affected by conflict or natural disasters, such as those frequently experienced in the Philippines, menstrual hygiene becomes even more difficult to manage, exacerbating the vulnerability of women and girls (Limpoco, 2025).

The menstrual hygiene infrastructure in the Philippines is characterized by stark differences between the three main regions of the country—Luzon, Visayas, and Mindanao— due to geographic challenges, political inertia, outdated planning practices, and enduring cultural taboos, all of which underscore the urgent need for improvement (Poledario et al., 2024). In Luzon, for instance, particularly in Masbate and Metro Manila, schoolgirls face challenges in terms of unreliable access to water, unclean facilities, no proper disposal mechanisms for menstrual materials, and inadequate latrines (Ellis et al., 2016). In contrast, South Central Mindanao has exhibited better and more well-maintained facilities, allowing schoolgirls to better manage their menstruation activities. It is worth noting, however, that despite the shortcomings in the country's menstrual hygiene infrastructure, schoolgirls in the Philippines receive support from peers and teachers, allowing them to leave the classrooms temporarily to change or rest (Evans, 2023). This situation implies that, despite their relatively low quality, menstrual hygiene facilities in the Philippines are somehow accessible to women and are still being actively used. Another study also found that, among public secondary schools in Manila, the quality of school toilets did not affect the frequency of changing napkins among students (Katsuno et al., 2019). This suggests that, regardless of facility standards, students continue to access and utilize school toilets for menstrual needs, pointing to a persistent reliance on available infrastructure—even when substandard.

With these backdrops in mind, it is critical to develop and implement inclusive sanitation policies that prioritize menstrual hygiene and empower women and girls through infrastructure and education. This article explores the urgent need to address menstrual hygiene through inclusive sanitation policies, highlights the socio-cultural and infrastructural barriers that persist, and offers a way forward for advancing women's access to menstrual-friendly public facilities in the country.

Gender Disparities and the Feminization of Public Health Neglect

Gender inequality is a persistent global issue, with women often bearing the brunt of systemic gaps in public welfare. This disparity is especially visible in public health and healthcare, where women face significant challenges in accessing essential medical and reproductive services. In low- and middle-income countries (LMICs), over two-thirds of women have limited access to healthcare due to a range of factors, including marital status, household responsibilities, and the number of children they care for (Terefe et al., 2025). In central Malawi, for instance, deeply rooted traditional gender roles—often internalized and upheld by women themselves—continue to limit their ability to seek public healthcare (Azad et al., 2020). Among other solutions like localized policies, innovative digital tools, and grassroots campaigns, education emerges to be the key solution.



In the Philippines, these gendered disparities are just as evident, especially given the country's already strained healthcare system. Low-income women, in particular, face steep obstacles in accessing universal health coverage, with factors like socioeconomic inequality, entrenched gender norms, and age compounding the problem (Alcovindas et al., 2022). Filipino mothers and pregnant women are also especially vulnerable, with those who give birth at home often struggling to receive appropriate postnatal care (Yamashita et al., 2014). These growing challenges faced by women in healthcare point to a troubling trend—the feminization of public health neglect. At its core, this issue is fueled by social and economic inequities: gender and age discrimination, traditional roles and expectations, and limited access to resources. Among the most overlooked aspects is menstrual health, an intimate and essential part of women's healthcare that remains inadequately addressed in both policy and practice in the Philippines. Education is thus the key solution proposed to counter these self-inflicted barriers, a conclusion that other similar studies have also arrived at.

Policy and Legal Landscape: Gaps and Opportunities

The legal framework of menstrual health in the Philippines is embedded within the Responsible Parenthood and Reproductive Health Act of 2012 (Republic Act No. 10354). This legislation aims to comprehensively bolster the country's reproductive health services, which include family planning and contraception, among other things (Cabral, 2013). Although this law was passed, it met significant opposition from the country's conservative groups, an issue that persists even today. Recent legislative efforts, such as House Bill 6811, have also been undertaken in addition to RA 10354 to address menstrual hygiene concerns directly. House Bill 6811 aims to appropriate funds to provide free menstrual products to students in public schools or in public health centers. This house bill is complemented by Senate Bill No. 2658, which proposes providing free menstrual products not just to public school students but also to indigent women.

There has been progress in terms of bold initiatives. In fact, recent menstrual health legislation in the Philippines is not limited to the national level, however, as municipalities and provinces have taken the initiative towards addressing the issue. In 2022, for instance, La Union became the first province in the country to implement a "Menstruation Privilege". This initiative allows female government employees to work from home for two days during their menstrual periods (Dilim, 2022). On the other hand, at the city/municipal level, cities like Manila have instituted the Manila Gender and Development Code, which also includes a provision that allows a 12-day annual menstrual or menopausal leave for women. This code is for women working in private establishments who have at least rendered one year of continuous service. Likewise, the municipality of Aklan has also implemented benefits for menstruating women via Ordinance No. 2022-214 alongside menstrual lectures for the youth to increase awareness about menstruation problems (Cifalph, 2024).

The legislative framework of menstrual health in the Philippines, however, faces a myriad of issues. Firstly, despite the intentions of the legislation, there are still some observed gaps in the service delivery of RA 10354 (Manaloto, 2014). These gaps are likely due to the opposition that RA 10354 has met, especially from Catholic Church communities, having caused delays over the implementation of the Republic Act (Estrada et al., 2024). These tensions highlight the complex intersection between faith-based institutions and public health policymaking. Notably, a study by Avenido et al. (2013) found that higher public confidence in the Church is positively associated with greater life satisfaction and quality of life, suggesting that the Church could meaningfully enhance public health outcomes if it adopts a more affirming stance toward gender equity.

Innovative Solutions and Community Empowerment in MHM

Addressing menstrual health management (MHM) in the Philippines requires a multipronged approach that leverages both technological innovation and grassroots-level community involvement. Recent years have witnessed the emergence of promising tools and campaigns aimed at breaking taboos, educating communities, and providing practical support to menstruating individuals, especially school-aged girls and those in marginalized sectors. One notable innovation is the Oky Philippines period tracker app. This app was



co-created by Filipino women alongside UNICEF, the Department of Education (DepEd), the Department of Health (DOH), and other relevant agencies (Oky Period Tracker Launch, 2023). This provides evidence-based information on menstruation, with emphasis on Filipino cultural sensitivities, and also includes content tailored for indigenous and Muslim communities. The Oky Philippines period tracker app has been integrated into various DepEd initiatives, such as the Comprehensive Sexuality Education and WASH in Schools, that aim to enhance menstrual health literacy among Filipino youth (Oky Period Tracker App, 2023). Community-driven efforts, on the other hand, include the collaboration between Action Against Hunger and local schools to launch a Menstrual Hygiene Management (MHM) campaign in Zamboanga del Norte (Somodio & Sandajan, 2023). This initiative involves the distribution of dignity kits, interactive learning sessions, and capacity-building workshops for teachers and parents. These activities aim not only to raise awareness about menstrual hygiene but also to foster supportive environments where menstruation is normalized rather than stigmatized.

Meanwhile, local women's groups, youth organizations, and barangay health workers have also begun taking active roles in promoting MHM through peer education, advocacy campaigns, and lobbying for better WASH facilities. AIDS Healthcare Foundation (AHF) Philippines and Girls Act Philippines have been proactive in addressing menstrual health through its community-based HIV and sexual health programs. They help fill service and education gaps through grassroots efforts, youth mobilization, and rights-based programming. In several outreach and educational events, AHF has integrated the distribution of sanitary products such as sanitary pads, hygiene kits, and period underwear with HIV prevention tools, recognizing the intersection of menstrual health and sexual and reproductive rights. These community-led efforts are instrumental in creating a ripple effect, influencing public attitudes and fostering policy support for sustainable menstrual health interventions. Synergistically, these innovative solutions and community empowerment strategies can form a potent force to address the multidimensional challenges of period poverty in the Philippines. By combining digital tools, institutional support, and grassroots advocacy, the country is now geared towards building a more inclusive and responsive MHM ecosystem— one that advances long-overdue gender equity and social justice.

Rethinking Public Toilet Designs: A Gender-Inclusive Vision

Implementing gender inclusivity and MHM-mindedness in Philippine public toilets entails three key factors: (1) the inclusion of women in the planning process of public toilets, (2) integration of gender-sensitive toilets in urban planning, (3) and privacy and security for the users. The lack of women's involvement in the design of public sanitary infrastructure often leads to male-oriented 'neutral' public toilets that exacerbate existing gender disparities and inappropriate standards that prevent the proper catering to their individual needs (Suri, 2018; World Bank Group, 2020). Conversely, the inclusion of women in the planning process of public toilets, or infrastructure in general, has been attributed to improvements in meeting diverse needs, such as availability, accessibility, safety, and dignity (Lewkowitz & Gilliland, 2024). This is primarily attributed to the benefits of lived experiences towards the betterment of public sanitation infrastructure, as planners and engineers are often male and have limited perspectives regarding the needs of women. Furthermore, the participation of women in these processes allows for improved sustainability of sanitation infrastructure and facilities, allowing them to maintain quality for longer periods (Dey, 2020). This is a common issue that persists even for male-oriented public toilets. Furthermore, the inclusion of women in the planning process of gender-inclusive cities is also a crucial component towards a country achieving SDG 11, as one study advocates (Rampaul & Magidimisha-Chipungu, 2022).

In conjunction with the inclusion of female perspectives, the inclusion of gender-sensitivity concepts and gender-sensitive toilets in urban planning is also crucial towards better addressing the menstrual hygiene needs of women in the Philippines. Public toilet policy's inclusion in general land use planning is



argued by one study to be crucial towards meeting the bodily function needs of women, who are typically disproportionately affected compared to men when it comes to sanitation issues, and potentially improving education and development goals (Greed, 2016). These benefits are most apparent and evident in developing countries, where slums are commonplace. Despite these benefits, however, developing countries similar to the Philippines still largely ignore the need for having toilets (Sikka, 2014). The situation is worse for gender-sensitive toilets, which have lower priority compared to normal toilets or sanitation facilities. This lack of the concept of gender-sensitive toilets in land use planning is beneficial to the Philippines, however, as it leaves room for better planning and more seamless integration based on the experiences of both similar developing countries, particularly in the Asian and ASEAN region, and developed countries. Also, a major obstacle in tackling MHM-related disparities affecting adolescent girls and women is identifying the appropriate institutions or bodies accountable for providing sufficient and MHM-friendly facilities in workplaces and different settings (Sommer et al., 2016).

One significant way of including gender-sensitive concepts in land use planning is through the adoption of Menstrual Friendly Public Toilets (MFPTs) in the Philippine context. In particular, the MFPTs designs and guidelines of the Menstrual-Friendly Public Toilet (MFPT) Toolkit (2024) from the Menstrual-Friendly Public Toilet Working Group are recommended. This toolkit is available and useful for students, researchers, citizens, and everyone regardless of background and is highly applicable for a variety of contexts and fields, most significantly of which being in sanitation, public health, and land use planning. This toolkit defines MFPTs as toilet infrastructure that allows for the comfortable management of menstrual activities and may be composed of one or more stalls in a standalone structure or inside a building. The toolkit provides tools and guidelines for the audit of public toilets on their menstrual friendliness, which it recommends that practitioners do first before the construction/renovation of public toilets.

Table 1 presents the basic attributes, menstrual-friendly features, and other inclusive characteristics of the four main types of toilets: single-stall squat, multi-stall squat, single-stall Western, and multi-stall Western. Basic features of toilets mainly include signage, basic hygiene equipment, such as soaps and towels, and safety features, which include doors, sufficient light, and locks for privacy. According to the toolkit, making these toilets more inclusive entails comfortable changing components in the overall space, such as mirrors, shelves, and door hooks; the presence of easily-accessible menstrual products; and menstrual product disposal. For greater inclusivity, the toolkit recommends that public toilets also contain additional components, particularly location-specific safety features (solid doors, proper outside lighting, and attendants) and inclusive designs (such as grab bars and appropriate spaces for wheelchairs and baby seats).

It is worth noting that the toolkit emphasizes security in all types of toilets for all purposes. Toilet security, including access to proper hygiene services and facilities, is also an essential component of women's lives that is often not taken into account or overlooked for broader health concerns and toilet construction (Sachan, 2022). Alongside the participation of women in land-use planning, the integration of gender-sensitive toilets in land use planning practices is crucial for women in low-income areas, Inadequate sanitation puts them at risk of harassment, violence, and psychosocial stress (O'Reilly, 2015). Toilet security increases confidence, reduces anxiety, prevents harassment, and promotes dignity among women, with well-designed toilet infrastructure also linked to increased usage, improved menstrual health management, and overall well-being of women (Schmitt et al., 2018). Technologies have been explored to achieve these goals in third-world countries. One study in particular explored the viability of facial recognition software approaches using camera feeds, which has shown a promising accuracy of 95.84% (Kristiyani & Wijayanto, 2022). Implementation of this technology will greatly benefit the safety systems of universities, offices, and government buildings in developing countries like the Philippines. Other studies in developed countries, on the other hand, such as one from a South Korean startup, offer Al-based toilet privacy solutions that don't require cameras, further increasing the level of privacy, confidence, and safety among female toilets (Kajal, 2024).



Table 1. Basic and menstrual-specific components per toilet type (Menstrual Friendly Public Toilet Toolkit Guidance Note, 2024)

Toilet Type	Basic Features	Mainstreamed Menstruation-Specific Components	Additional Components
Single- stall squat	Signages	Comfortable space for changing materials (mirror, shelf, door hook)	Location-specific safety features (solid external door, external lighting, attendant)
	Basic hygiene equipment (hand dryer/paper towel, soap, bucket/faucet, garbage bin, bucket/pipe, squat toilet, water tap/bucket/toilet roll)	Menstrual products (basket with/ free products/product dispenser)	Inclusive design (wheelchair- accessible space, grab bars, changing table/baby seat)
	Safety Features (Internal lighting, openable window, wall vent/fan, door with lock)	Menstrual product disposal	
Multi-stall squat	Signages	Comfortable space for changing materials (mirror, shelf, door hook)	Location-specific safety features (solid external door, external lighting, attendant)
	Basic hygiene equipment (hand dryer/paper towel, soap, bucket/faucet, garbage bin, bucket/pipe, squat toilet, water tap/bucket/toilet roll)	Menstrual products (basket with/ free products/product dispenser)	Inclusive design (wheelchair- accessible space, grab bars, changing table/baby seat)
	Safety Features (Internal lighting, openable window, wall vent/fan, door with lock)	Menstrual product disposal	
Single-stall Western	Signages	Comfortable space for changing materials (mirror, shelf, door hook)	Location-specific safety features (solid external door, external lighting, attendant)
	Basic hygiene equipment (hand dryer/paper towel, soap, bucket/faucet, garbage bin, bucket/pipe, Western toilet, water tap/bucket/toilet roll)	Menstrual products (basket with/ free products/product dispenser)	Inclusive design (wheelchair- accessible space, grab bars, changing table/baby seat)
	Safety Features (Internal lighting, openable window, wall vent/fan, door with lock)	Menstrual product disposal	
Multi-stall Western	Signages	Comfortable space for changing materials (mirror, shelf, door hook)	Location-specific safety features (solid external door, external lighting, attendant)
	Basic hygiene equipment (hand dryer/paper towel, soap, bucket/faucet, garbage bin, bucket/pipe, Western toilet, water tap/bucket/toilet roll)	Menstrual products (basket with/ free products/product dispenser)	Inclusive design (wheelchair- accessible space, grab bars, changing table/baby seat)
	Safety Features (Internal lighting, openable window, wall vent/fan, door with lock)	Menstrual product disposal	

CONCLUSION

Menstrual hygiene should no longer remain a peripheral concern in the Philippines' public health agenda. Ending period poverty in the country is not merely a matter of improving sanitation, it is a public health imperative and a basic human rights obligation. Fragmented grassroots initiatives and promising innovations should be extrapolated across all regions—necessitating a systemic reform to drive a transformative impact nationwide. Sustainable progress demands a paradigm shift that fully integrates menstrual health into landuse planning, education, public health, and governance, with women's active participation at every level. This includes institutionalizing gender-sensitive and menstrual-friendly infrastructure across public and private spaces and embedding menstrual hygiene at the core of development strategies. Prioritizing the rights and biological needs of women is not optional but essential for achieving the sustainable development goals and ensuring inclusive and equitable public service.

Author Contributions

J.B. Ogaya: Conceptualization, Data curation, Investigation, Writing - original draft, Writing - review and editing; **R.C. Guinaran:** Conceptualization, Data curation, Formal analysis, Investigation; **C. P. Alesna:** Visualization, Writing - original draft, Writing - review and editing; **J. D. Opina:** Data curation, Visualization, Investigation, Writing - original draft, Writing - review and editing; **S.A. Pilo:** Investigation, Formal analysis, Writing - review and editing; **V.** A. R. Masliyan: Visualization, Investigation, Data curation; **C. J. Ong:** Data curation, Formal analysis, Visualization, Writing - review and editing; **P. I. De Paz:** Data curation, Investigation, Writing - original draft, Writing - review and editing; **R. A. Rosales:** Data curation, Investigation, Writing - review and editing; **A. C. Españo:** Writing - review and editing, Formal analysis, Visualization; **D. E. III Lucero-Prisno:** Conceptualization, Data curation, Project administration, Supervision

Funding

This paper was supported by a grant from the AIDS Healthcare Foundation (AHF) Philippines.

Ethical Approval

The author declares no involvement of humans or animals, and no informed consent is needed.

Competing interest

The author declares no conflicts of interest.

Data Availability

Not applicable.

Declaration of Artificial Intelligence Use

During the preparation of this work the authors used ChatGPT to further enhance the language and readability of the paper. After using this tool/service, the authors reviewed and edited the content as needed and takes full responsibility for the content of the publication.

Acknowledgment

We would like to extend our utmost gratitude to the AIDS Healthcare Foundation (AHF) Philippines and Global Health Focus (GHF) for their generous support to the completion of this paper. This work would not have been possible without their steadfast commitment to advancing public health and promoting gender equity.

REFERENCES

- Alcovindas, M.M.M., Cruz, P.L.S., Inoc, P.B.V., Racho, P.E.G., Serrano, M.M.A., & Faller, E. M., (2022). Access to Health Services Among Low-Income Women in the Philippines: A Review. International Journal of Research Publication and Reviews, 03(12), 1701–1711. https://doi.org/10.55248/gengpi.2022.31252
- Avenido, J., Valmores, S., & Cabardo, R. (2013). Confidence in the Church and its Impact on the Quality of Life. Recoletos Multidisciplinary Research Journal, 1(1), 1–9. https://doi.org/10.32871/rmrj1301.01.01
- Azad, A. D., Charles, Á. G., Ding, Q., Trickey, A. W., & Wren, S. M. (2020). The gender gap and healthcare: associations between gender roles and factors affecting healthcare access in Central Malawi, June–August 2017. Archives of Public Health, 78(1). https://doi.org/10.1186/s13690-020-00497-w
- Cabral, E. (2013). Reproductive health law in the Philippines. Journal of the ASEAN Federation of Endocrine Societies, 28(1), 26–29. https://doi.org/10.15605/jafes.028.01.06
- Cifalph. (2024, May 28). UP-CIFAL Philippines advocates for period visibility through period poverty forum CIFAL Philippines. https://cifal.up.edu.ph/up-cifal-philippines-advocates-for-period-visibility-through-period-poverty-forum/
- Critchley, H. O. D., Babayev, E., Bulun, S. E., Clark, S., Garcia-Grau, I., Gregersen, P. K., Kilcoyne, A., Kim, J. J., Lavender, M., Marsh, E. E., Matteson, K. A., Maybin, J. A., Metz, C. N., Moreno, I., Silk, K., Sommer, M., Simon, C., Tariyal, R., Taylor, H. S., Wagner, G. P., ... Griffith, L. G. (2020). Menstruation: science and society. American Journal of Obstetrics and Gynecology, 223(5), 624–664. https://doi.org/10.1016/j.ajog.2020.06.004
- Dey, P. D. (2020). Gender Transformative planning for urban sanitation in India. In Springer eBooks (pp. 47–56). https://doi.org/10.1007/978-981-15-1543-9 5



- Dilim, J. N. (2022, October 21). La Union is 1st province in PH to implement 'Menstruation Privilege'. Philippine Information Agency. Retrieved May 6, 2025, from https://mirror.pia.gov.ph/news/2022/10/21/la-union-is-1st-province-in-ph-to-implement-menstruation-privilege?utm_source=chatqpt.com
- Ellis, A. E. A., Haver, J. H. J., Villasenor, J. V. J., Parawan, A. P. A., Venkatesh, M. V. M., Freeman, M. C. F. M. C., & Caruso, B. a. C. B. A. (2016). WASH challenges to girls' menstrual hygiene management in Metro Manila, Masbate, and South Central Mindanao, Philippines. Waterlines, 35(3), 306–323. https://doi.org/10.3362/1756-3488.2016.022
- Estrada, M. a. G., Cheng, K. J. G., & Lacaza, R. M. (2024). Legal changes and evidence on unmet need for contraception, Philippines. Bulletin of the World Health Organization, 102(11), 778–785. https://doi.org/10.2471/blt.23.290577
- Evans, Rebecca Ruth Lane .(2023). A comparative study of menarche and menstruation knowledge and experiences of girls aged 16-19 years old in low-resource settings of the Philippines and the United Kingdom. PhD thesis, University of Warwick. http://webcat.warwick.ac.uk/record=b3985899~S1
- Greed, C. (2016). Taking women's bodily functions into account in urban planning and policy: public toilets and menstruation. Town Planning Review, 87(5), 505–524. https://doi.org/10.3828/tpr.2016.35
- Hennegan, J., Bukenya, J. N., Makumbi, F. E., Nakamya, P., Exum, N. G., Schwab, K. J., & Kibira, S. P. S. (2022). Menstrual health challenges in the workplace and consequences for women's work and wellbeing: A cross-sectional survey in Mukono, Uganda. PLOS global public health, 2(7), e0000589. https://doi.org/10.1371/journal.pgph.0000589
- Kajal, K. (2024). South Korean firm introduces non-camera Al systems for enhanced restroom privacy. Interesting Engineering. https://interestingengineering.com/innovation/ai-powered-solution-for-restrooms

 Katsuno, C., Gregorio, E. R., Lomboy, M. F. T. C., Nonaka, D., Hernandez, P. M. R., Estrada, C. a. M., Pimentel, J. M. T., Bernadas,
- Katsuno, C., Gregorio, E. R., Lomboy, M. F. T. C., Nonaka, D., Hernandez, P. M. R., Estrada, C. a. M., Pimentel, J. M. T., Bernadas, R. M. G. C., & Kobayashi, J. (2019). Quality of public school toilets and the frequency of changing sanitary napkins among students in public secondary schools in the City of Manila, Philippines. Tropical Medicine and Health, 47(1). https://doi.org/10.1186/s41182-018-0131-8
- Kristiyani, D., & Wijayanto, A. W. (2022). Preserving Women Public Restroom Privacy using Convolutional Neural Networks-Based Automatic Gender Detection. Proceedings of the International Conference on Data Science and Official Statistics, 2021(1), 31–42. https://doi.org/10.34123/icdsos.v2021i1.29
- Lewkowitz, S., & Gilliland, J. (2024). A Feminist Critical Analysis of Public Toilets and Gender: A Systematic Review. Urban Affairs Review. https://doi.org/10.1177/10780874241233529
- Limpoco, N. (2025, May 15). Addressing Menstrual Inequity in Disaster Zones: A Critical Step Toward Gender Equality.

 AVPN. https://avpn.asia/resources/blog/addressing-menstrual-inequity-in-disaster-zones-a-critical-step-toward-gender-equality/
- Manaloto, R. (2014). The Philippine Reproductive Health Legislation: Politics beyond Metaphysics. Asian Bioethics Review, 6(4), 343–358. https://doi.org/10.1353/asb.2014.0037
- Menstrual Friendly Public Toilet (MFPT) Toolkit Guidance Note. (2024). MFPT Working Group. Columbia University. New York. Retrieved from https://www.publichealth.columbia.edu/file/15926/download?token=VWNfxgv3
- Nguyen, A., Maroko, A. R., Blake, S., Sugita, E., Fazzioni, N. H., Lomboy, M. F. T. C., Bukenya, J., Cole, H. V. S., Gregorio, E. R., Hopper, K. J., & Sommer, M. (2025). Exploring the availability and accessibility of menstrual friendly public toilets (MFPTs) in urban spaces: A global multi-city audit study. Health & Place, 103412. https://doi.org/10.1016/j. healthplace.2025.103412
- O'Reilly, K. (2015). From toilet insecurity to toilet security: creating safe sanitation for women and girls. Wiley Interdisciplinary Reviews Water, 3(1), 19–24. https://doi.org/10.1002/wat2.1122
- Oky Period Tracker App launch highlights the importance of menstrual health information for Filipino adolescents (2023, May 31). Commission on Population and Development Region X. . Retrieved from https://region10.cpd.gov.ph/oky-period-tracker-app-launch-highlights-the-importance-of-menstrual-health-information-for-filipino-adolescents/?utm_source
- Oky Period Tracker launch highlights the importance of menstrual health information for Filipino youth. (2023, May 26). UNICEF Philippines. Retrieved from https://www.unicef.org/philippines/press-releases/oky-period-tracker-launch-highlights-importance-menstrual-health-information
- Poledario, S.J.A., Condes, K.A., Chan, N.K.V., & Sypongco, A.G. (2024). Menstrual hygiene management among secondary high school students. International Research Journal of Science, Technology, Education, and Management, 4(3), 132-146. https://doi.org/10.5281/zenodo.13901399
- Rampaul, K., & Magidimisha-Chipungu, H. (2022). Gender mainstreaming in the urban space to promote inclusive cities. The Journal for Transdisciplinary Research in Southern Africa, 18(1). https://doi.org/10.4102/td.v18i1.1163
- Sachan, P. (2022). Toilet Security and Gender: Addressing the Pandemic Vulnerabilities (pp. 371–376). https://doi.org/10.1007/978-981-19-0460-8 37
- Schmitt, M., Clatworthy, D., Ogello, T., & Sommer, M. (2018). Making the case for a Female-Friendly toilet. Water, 10(9), 1193. https://doi.org/10.3390/w10091193
- Sikka, G. (2014). The case of missing toilets in Sardar Sarovar dam resettlements in Vadodara, Gujarat. GeoJournal, 81(2), 257–266. https://doi.org/10.1007/s10708-014-9617-z
- Sommer, M., Chandraratna, S., Cavill, S., Mahon, T. & Phillips-Howard, P. (2016). Managing menstruation in the workplace: an overlooked issue in low- and middle-income countries. International Journal for Equity and Health,15. https://doi.org/10.1186/s12939-016-0379-8
- Somodio, E., and Sandajan, J. (2023). Shaping Healthy Communities through Inclusive Menstrual Hygiene Management.

 Action Against Hunger. https://actionagainsthunger.ph/shaping-healthy-communities-through-inclusive-menstrual-hygiene-management/
- Suri, Anshika. (2018). Women and the urban sanitation challenge: Tracing an intersectional relationship. Retrieved from: https://tuprints.ulb.tu-darmstadt.de/id/eprint/7478



- Terefe, B., Workneh, B. S., Zeleke, G. A., Mekonen, E. G., Zegeye, A. F., Aemro, A., Tekeba, B., Tamir, T. T., Wassie, M., & Ali, M. S. (2025). Uncovering women's healthcare access challenges in low- and middle-income countries using mixed effects modelling approach: Insights for achieving the Sustainable Development Goals. PLoS ONE, 20(1), e0314309. https:// journal.pone.031430
- World Bank Group. (2020). Designing Gender-Inclusive Cities that Work for All. World Bank. https://www.worldbank.org/en/ news/press-release/2020/02/12/designing-gender-inclusive-cities-that-work-for-all
- World Health Organization. (2024, August 15). Menstrual health is a fundamental human right. https://www.who.int/europe/
- news/item/15-08-2024-menstrual-health-is-a-fundamental-human-right Yamashita, T., Suplido, S. A., Ladines-Llave, C., Tanaka, Y., Senba, N., & Matsuo, H. (2014). A Cross-Sectional Analytic Study of postpartum health care service utilization in the Philippines. PLoS ONE, 9(1), e85627. https://doi.org/10.1371/journal. pone.0085627

How to cite this article: