

The Effect of Refugee Camp Design and Infrastructure on Gender-Based Violence

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Executive Summary

Gender-Based Violence (GBV) occurs at higher rates in refugee camps and settlements than in other settings. The absence of adequate GBV programming combined with limited WASH infrastructure create an environment where GBV is more likely to occur. Infrastructure improvements have the potential to alleviate GBV in refugee camps by increasing feelings of safety, reducing exposure, and decreasing isolation from the community. Refugee camp design and infrastructure improvements are limited in their ability to address IPV incidents occurring within households and providing substantial deterrents for GBV committed against individuals without legal status in their host country. Infrastructure improvements and gender-segregated programming, however, can increase distrust, making proper implementation crucial to success.

Introduction

Refugee camps provide vital emergency housing and services to large displaced populations, but gender-based violence (GBV) is more pronounced within these settlements. Refugee camp infrastructure design can overcome some of these challenges. It can reduce GBV by providing comprehensive WASH infrastructure and reducing isolation via communal spaces. With limited data collection and reporting mechanisms, designing effective GBV programming in refugee camps is a challenge for practitioners. Infrastructure, however, cannot address IPV that occurs within households and has a limited impact on cultural norms. This policy brief outlines the most effective refugee camp infrastructure and design elements for reducing GBV and offers recommendations for its implementation.

Refugee/IDP Camps

Refugee camps are “temporary facilities” that assist “people who have been forced to flee their homes due to war, persecution, or violence.”¹ With the barriers to resettlement mounting, refugee camps have evolved into “long-lasting, multifaceted human settlements” for displaced populations.² Humanitarian actors note that refugee housing should be “safe and secure” while leaving flexibility to adapt to the context.³ More frequently, guidance encourages refugee/IDP camps to be used as a last resort for temporary, immediate housing needs.⁴

Gender-Based Violence (GBV)

GBV is a gendered “spectrum of violence” inclusive of “domestic violence, human trafficking, harmful traditional practices.”⁵ In refugee settings, GBV is a “life-threatening health and protection issue” that causes “sexual, physical, mental, and

¹“What Is a Refugee Camp? Definition and Statistics | USA for UNHCR.” Accessed February 16, 2026. <https://www.unrefugees.org/refugee-facts/camps/>.

²Dantas, Abdon, and Miguel Amado. “Refugee Camp: A Literature Review.” *Journal of Urban Planning and Development* 149, no. (2023): 03123003. <https://doi.org/10.1061/JUPDDM.UPENG-4311>.

³UNHCR. “Safe and Secure Settlements.” July 26, 2025. <https://emergency.unhcr.org/emergency-assistance/settlement-and-shelter/guidance-settlements/safe-and-secure-settlements>.

⁴“What Is a Refugee Camp? Definition and Statistics | USA for UNHCR.” Accessed February 16, 2026. <https://www.unrefugees.org/refugee-facts/camps/>.

⁵Simon-Butler, Andrew, and Professor Bernadette McSherry. *Defining Sexual and Gender-Based Violence in the Refugee Context*. 2019.

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economic harm.”⁶ Ultimately, GBV is rooted in patriarchal systems in both conflict and non-conflict settings, meaning that it disproportionately impacts women while still being inclusive of men.⁷

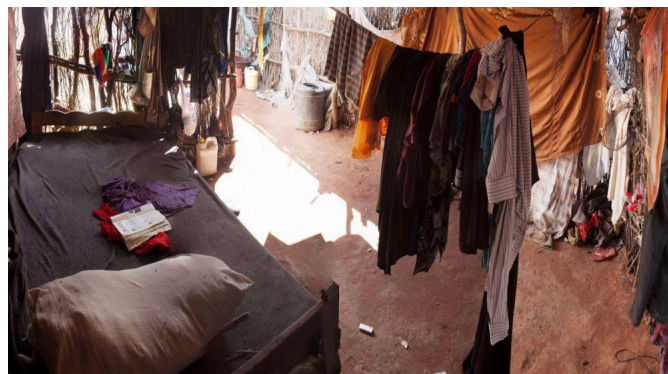
Refugee Camp Design and Infrastructure

Refugee camp design includes the services, layout, spacing, and community resources provided in the settlement.⁸ In practice, refugee camp design focuses on accommodating the number of refugees in need of services and meeting basic human needs,⁹ but the UN considers transportation, irrigation, energy, information, and communications as infrastructure.¹⁰ For the purposes of GBV, WASH facilities, and the lighting used, are the most relevant aspects of infrastructure.¹¹ The absence of “clean water, functional toilets, waste management systems and menstrual hygiene supplies” exacerbates GBV.¹²

GBV In Refugee Camps and Settlements

Cultural and Gendered Norms

The lack of programming addressing cultural norm attitudes justifying sexism facilitates environments that encourage GBV, which are exacerbated by conflict and refugee settings.^{13,14,15} This increases experiences of gender-based discrimination by disrupting gendered norms, particularly the notion of men as the provider, leading to the equation of masculinity with violence.^{16,17,18,19} Stigma factors into whether women will seek GBV care because women who experience GBV are viewed as “loose,” threatening their family’s privacy and the stability of their marriages.²⁰



Source: Matias Costa/IRC/Panos. Panoramic Interior Composite Image of Shukri Ali Aden’s Dwelling in the Hagadera Refugee Camp in Dadaab, Kenya. She Flew from Somalia in 1992. She Belongs to a Women’s Group Who Run a Bakery and Sell Their Goods in the Refugee Camp. Dadaab Is the World’s Largest Refugee Camp on the Border between Kenya and Somalia. The Majority of Refugees Come from Somalia. For the Past 20 Years, Ongoing Violence Has Resulted in Millions of People Leaving Somalia. Over 400,000 Somali Refugees Live in Dadaab, the Largest Refugee Camp in the World, Located in Eastern Kenya. With Funding from the European Commission’s Humanitarian Aid and Civil Protection Department (ECHO), the IRC Runs Hagadera Hospital, Which Cares for 120,000 of These Refugees by Providing Medicines to Help Reduce the Transmission of Diseases, as Well as Treatment, Such as the Removal of Cataracts, That Dramatically Improves Quality of Life. The IRC Also Helps Women to Start Businesses so They Are Able to Buy Firewood and Avoid the Risk of Sexual Violence That Comes

Camp and Settlement Structural Factors

Presence of camp security and distance from the nearest police station are associated with higher rates of GBV,²¹ with additional research demonstrating that women rarely seek help from police on their own.²² Research suggests that over half (70%) of GBV reports in refugee camps take place at the victim’s home.²³ While refugee camps have short-term protection shelters in the case of GBV, these spaces can only hold a few individuals and are temporary.²⁴ While the WASH Handbook stipulates that refugee camps should have separate toilet facilities for men and women, in practice, this is not always consistent.^{25,26} Concerns about sharing bathrooms and spaces with unknown men result in some women choosing to sleep outside instead.²⁷ Off-site water infrastructure and limited lighting also contribute to

⁶UNHCR US. “Gender-Based Violence.” Accessed February 23, 2026. <https://www.unhcr.org/us/what-we-do/protect-human-rights/protection/gender-based-violence>.

⁷“What Is Gender-Based Violence (GBV)—and How Do We Prevent It? | The IRC.” August 13, 2025. <https://www.rescue.org/article/what-gender-based-violence-and-how-do-we-prevent-it>.

⁸UNHCR. “Principles & Standards for Settlement Planning.” June 26, 2025. <https://emergency.unhcr.org/emergency-assistance/settlement-and-shelter/guidance-settlements/principles-standards-settlement-planning>.

⁹Aburamadan, Rania, Claudia Trillo, and Busisiwe Chikomborero Ncube Makore. “Designing Refugees’ Camps: Temporary Emergency Solutions, or Contemporary Paradigms of Incomplete Urban Citizenship? Insights from Al Za’atari.” *City, Territory and Architecture* 7, no. 1 (2020): 12. <https://doi.org/10.1186/s4010-020-00120-z>.

¹⁰Martin. “Goal 9: Industry, Innovation and Infrastructure.” United Nations Sustainable Development, n.d. Accessed March 10, 2026. <https://www.un.org/sustainabledevelopment/infrastructure-industrialization/>.

¹¹“Shining a Light: How Lighting in or around Sanitation Facilities Affects the Risk of Gender-Based Violence in Camps.” Oxfam Policy & Practice, 2018. <https://policy-practice.oxfam.org/resources/shining-a-light-how-lighting-in-or-around-sanitation-facilities-affects-the-risk-of-gender-based-violence-in-camps>.

¹²Abuzerr, Samer, Hani Hamdan, and Jinan Charafeddine. “A Qualitative Study on Gendered Wash Insecurity and Health Outcomes among Internally Displaced Populations in Conflict-Affected Context.” *BMC Public Health* 26, no. 1 (2025): 80. <https://doi.org/10.1186/s12889-025-25777-4>.

¹³Krause, Hannah, Jeffrey Freeman, Nancy Glass, and Shannon Doocy. “Effectiveness of Interventions, Programs and Strategies for Gender-Based Violence Prevention in Refugee Populations: An Integrative Review.” *PLoS Currents* 8 (April 2016): ecurrents.dis.3a465b66f9327676d61eb8120eaa5499. <https://doi.org/10.1371/currents.dis.3a465b66f9327676d61eb8120eaa5499>.

¹⁴Jensen, Mie A. “Gender-Based Violence in Refugee Camps: Understanding and Addressing the Role of Gender in the Experiences of Refugees.” *Inquiries Journal* 11, no. 02 (2019). <http://www.inquiriesjournal.com/articles/1757/gender-based-violence-in-refugee-camps-understanding-and-addressing-the-role-of-gender-in-the-experiences-of-refugees>.

¹⁵Kisaakye, Peter, Stella Muthuri, George Odwe, et al. “Experiences of Childhood Violence and Violence Perpetration and the Association with Inequitable Gender Norms and Violence Justification in Humanitarian Settings in Uganda.” *Global Public Health* 20, no. 1 (2025): 2531914. <https://doi.org/10.1080/17441692.2025.2531914>.

¹⁶Jensen, Mie A. “Gender-Based Violence in Refugee Camps: Understanding and Addressing the Role of Gender in the Experiences of Refugees.” *Inquiries Journal* 11, no. 02 (2019). <http://www.inquiriesjournal.com/articles/1757/gender-based-violence-in-refugee-camps-understanding-and-addressing-the-role-of-gender-in-the-experiences-of-refugees>.

¹⁷Krause, Ulrike. “A Continuum of Violence? Linking Sexual and Gender-Based Violence during Conflict, Flight, and Encampment.” *Refugee Survey Quarterly* 34, no. 4 (2015): 1–19.

¹⁸Jensen, Mie A. “Gender-Based Violence in Refugee Camps: Understanding and Addressing the Role of Gender in the Experiences of Refugees.” *Inquiries Journal* 11, no. 02 (2019). <http://www.inquiriesjournal.com/articles/1757/gender-based-violence-in-refugee-camps-understanding-and-addressing-the-role-of-gender-in-the-experiences-of-refugees>.

¹⁹Listo, Romy. “Preventing Violence against Women and Girls in Refugee and Displaced Person Camps: Is Energy Access the Solution?” *Energy Research & Social Science* 44 (October 2018): 172–77. <https://doi.org/10.1016/j.erss.2018.05.012>.

²⁰Muuo, Sheru, Stella Kagwiria Muthuri, Martin Kavao Mutua, et al. “Barriers and Facilitators to Care-Seeking among Survivors of Gender-Based Violence in the Dadaab Refugee Complex.” *Sexual and Reproductive Health Matters* 28, no. 1 (2020): 1722404. <https://doi.org/10.1080/26410397.2020.1722404>.

²¹Dahie, Hassan Abdullahi, Mohamed Maalim Dakane, and Bashir Said Hassan. “Prevalence, Patterns, and Determinants of Gender-Based Violence among Women and Girls in IDP Camps, Mogadishu-Somalia.” *Journal of Migration and Health* 8 (January 2023): 100193. <https://doi.org/10.1016/j.jmh.2023.100193>.

²²Horn, Rebecca, Karin Wachter, Elsa A. Friis-Healy, Sophia Wanjku Ngugi, Joanne Creighton, and Eve S. Puffer. “Mapping Complex Systems: Responses to Intimate Partner Violence Against Women in Three Refugee Camps.” *Frontiers in Human Dynamics* 3 (February 2021). <https://doi.org/10.3389/fhumd.2021.613792>.

²³Dahie, Hassan Abdullahi, Mohamed Maalim Dakane, and Bashir Said Hassan. “Prevalence, Patterns, and Determinants of Gender-Based Violence among Women and Girls in IDP Camps, Mogadishu-Somalia.” *Journal of Migration and Health* 8 (January 2023): 100193. <https://doi.org/10.1016/j.jmh.2023.100193>.

²⁴Krause, Ulrike. “A Continuum of Violence? Linking Sexual and Gender-Based Violence during Conflict, Flight, and Encampment.” *Refugee Survey Quarterly* 34, no. 4 (2015): 1–19.

²⁵Jensen, Mie A. “Gender-Based Violence in Refugee Camps: Understanding and Addressing the Role of Gender in the Experiences of Refugees.” *Inquiries Journal* 11, no. 02 (2019). <http://www.inquiriesjournal.com/articles/1757/gender-based-violence-in-refugee-camps-understanding-and-addressing-the-role-of-gender-in-the-experiences-of-refugees>.

²⁶Freedman, Jane. “Sexual and Gender-Based Violence against Refugee Women: A Hidden Aspect of the Refugee ‘Crisis.’” *Reproductive Health Matters* 24, no. 47 (2016): 18–26.

²⁷Ibid.

GBV, particularly among female youth populations as they travel to retrieve water for families.²⁸

Stress/Psychological Factors

Research suggests that individuals in refugee camps experience PTSD and associated symptoms at higher rates than refugees in other types of settlements.²⁹ PTSD could drive higher cases of GBV, though a causal relationship is not identified.³⁰ Despite the absence of a causal link, emotional and psychological abuse remains the second most prevalent form of GBV,³¹ with estimates showing that 60.9% of refugee women experience controlling behavior from a partner.³²

***“Ten-year-old girls have reported
GBV in refugee/IDP camps.”***

At-Risk Populations

- 1. Young Women and Girls:** Women and girls ages 15-24 are three to four times more likely to experience GBV in refugee settings than women in other age groups,^{33,34} with just under half (42.3%) of reported cases of GBV occurring among victims twenty years of age or younger.³⁵ Ten-year-old girls have reported GBV in refugee/IDP camps.³⁶
- 2. Socioeconomic Status:** Female refugees living in poverty are more likely to experience physical and sexual abuse, even leading to reliance on survival sex.³⁷ The reliance on external aid also makes theft

and violent crime more common, particularly if women are the primary aid receivers.³⁸ The results of reducing GBV through work programs are mixed,³⁹ as additional research notes that the type of work women complete within the household might put them at a greater risk of GBV.⁴⁰

Infrastructure Mechanisms for GBV Mitigation

WASH Infrastructure Increases Feelings of Safety

The primary way refugee camp design and infrastructure alleviates gender-based violence (GBV) is through increasing feelings of safety. Doors, locks, and lighting in latrine areas contribute to women feeling safer when using the bathroom^{41,42,43} because it reduces the risk of sexual assault, rape, and other forms of GBV.⁴⁴ Sharing a latrine with five households or fewer decreases fears of GBV,⁴⁵ while separate latrine facilities for boys and girls encourage girls to remain in school longer before marriage.^{46,47} Increasing the distance between men's and women's facilities also contributes to higher feelings of safety.⁴⁸ Lighting access is influenced by the gender dynamics of the refugee camp setting, so lantern or flashlight distribution programs must take into account which family members receive the device. Dispersing portable lighting to each household in a camp setting might not increase women's access to lighting because patriarchal family structures dictate that male family members distribute resources.⁴⁹

Decreasing Distance to Water Sources

Distances between housing and water sources leaves women and girls more vulnerable to attack because they are the primary water collectors in

²⁸Logie, Carmen H., Moses Okumu, Madelaine Coelho, et al. "Water Insecurity and Sexual and Gender-Based Violence among Refugee Youth: Qualitative Insights from a Humanitarian Setting in Uganda." *Journal of Water, Sanitation and Hygiene for Development* 12, no. 12 (2022): 883–93. <https://doi.org/10.2166/washdev.2022.236>.

²⁹Al-Hourani, Dalia, Mahmoud Al-Wriekat, Rocio Lmas-Ramos, and Ines Lmas-Ramos. "Traumatic Symptoms Among Syrian Refugees in Host Countries: A Comparative Study of Jordan and Spain." *Societies* 15, no. 11 (2025). <https://doi.org/10.3390/soc15110295>.

³⁰Krause, Ulrike. "A Continuum of Violence? Linking Sexual and Gender-Based Violence during Conflict, Flight, and Encampment." *Refugee Survey Quarterly* 34, no. 4 (2015): 1–19.

³¹Dahie, Hassan Abdullahi, Mohamed Maalim Dakane, and Bashir Said Hassan. "Prevalence, Patterns, and Determinants of Gender-Based Violence among Women and Girls in IDP Camps, Mogadishu-Somalia." *Journal of Migration and Health* 8 (January 2023): 100193. <https://doi.org/10.1016/j.jmh.2023.100193>.

³²Muuo, Sheru, Stella Kagwiria Muthuri, Martin Kavao Mutua, et al. "Barriers and Facilitators to Care-Seeking among Survivors of Gender-Based Violence in the Dadaab Refugee Complex." *Sexual and Reproductive Health Matters* 28, no. 1 (2020): 1722404. <https://doi.org/10.1080/26410397.2020.1722404>.

³³Tadesse, Gebresilassie, Fantahun Andualem, Gidey Rtbe, et al. "Gender-Based Violence and Its Determinants among Refugees and Internally Displaced Women in Africa: Systematic Review and Meta-Analysis." *BMC Public Health* 24, no. 1 (2024): 2851. <https://doi.org/10.1186/s12889-024-20329-8>.

³⁴Logie, Carmen H., Moses Okumu, Madelaine Coelho, et al. "Water Insecurity and Sexual and Gender-Based Violence among Refugee Youth: Qualitative Insights from a Humanitarian Setting in Uganda." *Journal of Water, Sanitation and Hygiene for Development* 12, no. 12 (2022): 883–93. <https://doi.org/10.2166/washdev.2022.236>.

³⁵Dahie, Hassan Abdullahi, Mohamed Maalim Dakane, and Bashir Said Hassan. "Prevalence, Patterns, and Determinants of Gender-Based Violence among Women and Girls in IDP Camps, Mogadishu-Somalia." *Journal of Migration and Health* 8 (January 2023): 100193. <https://doi.org/10.1016/j.jmh.2023.100193>.

³⁶Muuo, Sheru, Stella Kagwiria Muthuri, Martin Kavao Mutua, et al. "Barriers and Facilitators to Care-Seeking among Survivors of Gender-Based Violence in the Dadaab Refugee Complex." *Sexual and Reproductive Health Matters* 28, no. 1 (2020): 1722404. <https://doi.org/10.1080/26410397.2020.1722404>.

³⁷Simon-Butler, Andrew, and Professor Bernadette McSherry. *Defining Sexual and Gender-Based Violence in the Refugee Context*. 2019.

³⁸Krause, Ulrike. "A Continuum of Violence? Linking Sexual and Gender-Based Violence during Conflict, Flight, and Encampment." *Refugee Survey Quarterly* 34, no. 4 (2015): 1–19.

³⁹Maxi Leila Robbers, Gianna, and Alison Morgan. "Programme Potential for the Prevention of and Response to Sexual Violence among Female Refugees: A Literature Review." *Reproductive Health Matters* 25, no. 51 (2017): 69–89. <https://doi.org/10.1080/09688080.2017.1401893>.

⁴⁰Logie, Carmen H., Moses Okumu, Madelaine Coelho, et al. "Water Insecurity and Sexual and Gender-Based Violence among Refugee Youth: Qualitative Insights from a Humanitarian Setting in Uganda." *Journal of Water, Sanitation and Hygiene for Development* 12, no. 12 (2022): 883–93. <https://doi.org/10.2166/washdev.2022.236>.

⁴¹Abuzerr, Samer, Hani Hamdan, and Jinan Charafeddine. "A Qualitative Study on Gendered Wash Insecurity and Health Outcomes among Internally Displaced Populations in Conflict-Affected Context." *BMC Public Health* 26, no. 1 (2025): 80. <https://doi.org/10.1186/s12889-025-25777-4>.

⁴²Navarrete, José. A qualitative research of humanitarian workers' perceptions of preventing Gender-Based Violence (GBV) in the Cox's Bazar refugee camps, Bangladesh. *Artículos de Investigación*. 2019, 45–74. <https://doi.org/10.15332/25006681/5286>.

⁴³De Lange, Rink, Annick Lenglet, Jean Francois Fesselet, et al. "Keeping It Simple: A Gender-Specific Sanitation Tool for Emergencies." *Waterlines* 33, no. 1 (2014): 45–54.

⁴⁴Osman, Mai Izeldeen. "Gender Dimension of Water Sanitation and Hygiene Program (WASH) Interventions in South Sudanese Refugee Camps." *The Ahfad Journal* 37, no. 2 (2020): 33–43.

⁴⁵"Shining a Light: How Lighting in or around Sanitation Facilities Affects the Risk of Gender-Based Violence in Camps." *Oxfam Policy & Practice*, 2018. <https://policy-practice.oxfam.org/resources/shining-a-light-how-lighting-in-or-around-sanitation-facilities-affects-the-ris-620605/>.

⁴⁶Hasan, Md. Beyond Hygiene: The Impact Of WASH Infrastructure AND Safety Perceptions On Adolescent Girls' School Attendance In Rohingya Refugee Camps. 2025.

⁴⁷"Guidelines for Integrating Gender-Based Violence Interventions in Humanitarian Action." IASC, August 2015. https://gbvguidelines.org/wp/wp-content/uploads/2015/09/TAG-wash-08_26_2015.pdf.

⁴⁸"Shining a Light: How Lighting in or around Sanitation Facilities Affects the Risk of Gender-Based Violence in Camps." *Oxfam Policy & Practice*, 2018. <https://policy-practice.oxfam.org/resources/shining-a-light-how-lighting-in-or-around-sanitation-facilities-affects-the-ris-620605/>.

⁴⁹Ibid.

Case Study: Bidi Bidi Refugee Settlement, Uganda

A team of researchers designed a MHM friendly WASH infrastructure system based on extensive community feedback. Coined the Cocoon Mini, the facility provides a latrine, solar lighting, bathing facility, water access, and menstrual product disposable bin. The Cocoon Mini is a locked structure with privacy doors and walls. The team launched a pilot program within the Bidi Bidi Refugee Settlement, surveying participants after using the Cocoon Mini. 94% of menstruators reported that they approved of the Cocoon Mini after the pilot. Each unit costs \$360 USD in materials and labor, making the Cocoon Mini a scalable, community-accepted solution to WASH infrastructure that can also be applied to GBV.

Source: Beeman, Aly, Joseph Kwesiga, Nicole Ippoliti, et al. "Using Human-Centered Design to Co-Design Dedicated Menstrual Health Spaces with People Who Menstruate in Bidi Bidi Refugee Settlement, Uganda: Learnings for Further Adaptation and Scale in Humanitarian Settings." *BMC Women's Health* 23, no. 1 (2023): 1–16.

164418761 <https://doi.org/10.1186/s12905-023-02421-0>.

refugee communities.^{50,51,52} Time spent travelling to the nearest water sources can decrease school attendance among younger girls, which can put them at a higher risk of future GBV.⁵³

Reducing Reliance on Firewood

Providing fuel and upgraded solar-powered cookware can reduce the reliance on firewood for essential activities in refugee camps.⁵⁴ Decreasing the distance travelled to access energy reduces the risk of GBV in refugee camps because it reduces exposure.⁵⁵

Social Spaces: Promoting Community

Creating clustered social spaces near refugee camp shelters facilitates the formation of kinship among refugees.⁵⁶ Female refugees describe losing community support systems as a major barrier to seeking help when GBV occurs.⁵⁷ Creating spaces where women feel safe to engage in community life decreases opportunities for isolation, alleviating the risks of GBV.^{58,59,60} Survivors report turning to NGO safe spaces within refugee camps to cope.⁶¹

Programming and Reporting Mechanisms

Expanding options for programming and reporting can mitigate the impacts of GBV among survivors.⁶² Digital apps and AI systems can expand support options for survivors, increasing the likelihood of receiving GBV programming.^{63,64} This allows personnel to identify individuals in need of support and target programming based on available data.

Limitations of Refugee Camp Infrastructure

Addressing Experiences of IPV in the Home

Women living in refugee camps report that their husbands were the main perpetrators of IPV, meaning WASH infrastructure improvements may not directly reduce IPV cases.⁶⁵ While there is a link between adequate housing and well-being, there is not enough evidence to suggest that housing improvements would reduce GBV.⁶⁶ Infrastructure and design improvements can reduce isolation, but it can be difficult to rebuild the community that refugees found back home.⁶⁷

Cultural Norms and Intergenerational Violence

In communities where GBV is frequent and normalized, introducing programming during

⁵⁰Osman, Mai Izeldeen. "Gender Dimension of Water Sanitation and Hygiene Program (WASH) Interventions in South Sudanese Refugee Camps." *The Ahfad Journal* 37, no. 2 (2020): 33–43.

⁵¹"Guidelines for Integrating Gender-Based Violence Interventions in Humanitarian Action." IASC, August 2015. https://gbvguidelines.org/wp/wp-content/uploads/2015/09/TAG-wash-08_26_2015.pdf.

⁵²Lukasiak, Miriam, Jack Palmieri, Pia Svensson, Gilbert Tumwine, and Anette Agardh. "Exploring Perceptions and Experiences of Gender-Based Violence among Women in a Refugee Camp Setting in Uganda—A Qualitative Study." *PLOS ONE* 19, no. 12 (2024): e0314972. <https://doi.org/10.1371/journal.pone.0314972>.

⁵³"Guidelines for Integrating Gender-Based Violence Interventions in Humanitarian Action." IASC, August 2015. https://gbvguidelines.org/wp/wp-content/uploads/2015/09/TAG-wash-08_26_2015.pdf.

⁵⁴Thomas, Peter James Matthew, Sarah Rosenberg-Jansen, and Aimee Jenks. "Moving beyond Informal Action: Sustainable Energy and the Humanitarian Response System." *Journal of International Humanitarian Action* 6, no. 1 (2021): 21. <https://doi.org/10.1186/s41018-021-00102-x>.

⁵⁵Bradley, Tamsin, and Katherine Liakos. *Using Energy Programming to Address Violence Against Women and Girls in Humanitarian Settings*. n.d.

⁵⁶Al-Homoud, Majd, and Samarah Ola. "Socio-Spatial Adaptation and Resilient Urban Systems: Refugee-Driven Transformation in Zaatari Syrian Refugee Camp, Jordan." *Urban Science* (Basel, Switzerland) 9, no. 4 (2025): 133. <https://doi.org/10.3390/urbansci9040133>.

⁵⁷Lukasiak, Miriam, Jack Palmieri, Pia Svensson, Gilbert Tumwine, and Anette Agardh. "Exploring Perceptions and Experiences of Gender-Based Violence among Women in a Refugee Camp Setting in Uganda—A Qualitative Study." *PLOS ONE* 19, no. 12 (2024): e0314972. <https://doi.org/10.1371/journal.pone.0314972>.

⁵⁸Abuzerr, Samer, Hani Hamdan, and Jinan Charafeddine. "A Qualitative Study on Gendered Wash Insecurity and Health Outcomes among Internally Displaced Populations in Conflict-Affected Context." *BMC Public Health* 26, no. 1 (2025): 80. <https://doi.org/10.1186/s12889-025-25777-4>.

⁵⁹Navarete, José. A qualitative research of humanitarian workers' perceptions of preventing Gender-Based Violence (GBV) in the Cox's Bazar refugee camps, Bangladesh. *Artículos de Investigación*. 2019, 45–74. <https://doi.org/10.15332/25006681/5286>.

⁶⁰De Lange, Rink, Annick Lenglet, Jean Francois Fesselet, et al. "Keeping It Simple: A Gender-Specific Sanitation Tool for Emergencies." *Waterlines* 33, no. 1 (2014): 45–54.

⁶¹Lukasiak, Miriam, Jack Palmieri, Pia Svensson, Gilbert Tumwine, and Anette Agardh. "Exploring Perceptions and Experiences of Gender-Based Violence among Women in a Refugee Camp Setting in Uganda—A Qualitative Study." *PLOS ONE* 19, no. 12 (2024): e0314972. <https://doi.org/10.1371/journal.pone.0314972>.

⁶²International Review of the Red Cross. "Enabling Access or Automating Empathy? Using Chatbots to Support GBV Survivors in Conflicts and Humanitarian Emergencies." December 1, 2025. <http://international-review.icrc.org/articles/enabling-access-or-automating-empathy-using-chatbots-to-support-gbv-survivors-in-conflicts-and-humanitarian-emergencies-930>.

⁶³Spencer, Sarah W., and Caroline Masboungi. *Artificial Intelligence In Gender-Based Violence In Emergency Programming: Perils AND Potentials*. n.d.

⁶⁴The Frontier Technologies Hub. "AI-Enhanced GBV Reporting — Frontier Tech Hub." Accessed April 20, 2026. <https://www.frontiertechhub.org/pilot-portfolio/ai-gbv-chatbot>.

⁶⁵Lukasiak, Miriam, Jack Palmieri, Pia Svensson, Gilbert Tumwine, and Anette Agardh. "Exploring Perceptions and Experiences of Gender-Based Violence among Women in a Refugee Camp Setting in Uganda—A Qualitative Study." *PLOS ONE* 19, no. 12 (2024): e0314972. <https://doi.org/10.1371/journal.pone.0314972>.

⁶⁶Bradley, Tamsin, and Katherine Liakos. *Using Energy Programming to Address Violence Against Women and Girls in Humanitarian Settings*. n.d.

⁶⁷Lukasiak, Miriam, Jack Palmieri, Pia Svensson, Gilbert Tumwine, and Anette Agardh. "Exploring Perceptions and Experiences of Gender-Based Violence among Women in a Refugee Camp Setting in Uganda—A Qualitative Study." *PLOS ONE* 19, no. 12 (2024): e0314972. <https://doi.org/10.1371/journal.pone.0314972>.

an ongoing crisis becomes more difficult.^{68,69} Refugees also noted that cultural norms can prevent GBV programming from having its intended impact,⁷⁰ as many are hesitant to talk about GBV, even during programming.⁷¹ This reluctance to discuss GBV leads to gaps in data availability in refugee settings. While proxies such as the fear of GBV help capture the situation in refugee camps, the absence of precise data acts as a barrier to program design and implementation.⁷² Additionally, GBV programming often targets women, which neglects to counter notions of toxic masculinity among male refugees.⁷³

Legal Status of Refugees and Displaced Populations

Without legal status in their host country, refugees have options for legal accountability, which can only be fully addressed through the country's immigration processes. Without legal status in a host country, there is no strong legal deterrent preventing GBV against refugees.⁷⁴ Combined with a lack of economic resources to win a legal battle, refugees are more vulnerable.⁷⁵ A lack of legal protection is also associated with decreased levels of reporting within communities that are already unlikely to discuss their experiences.^{76, 77}

Negative Effects

Increase Fears of GBV

When lights are installed without addressing the distance women and girls need to travel to access latrines, men tend to congregate around women's facilities.^{78,79}

Public lighting can make women and girls easier targets when travelling at night,⁸⁰ meaning that partial lighting still causes fears of GBV.⁸¹ Any approach to lighting improvements must be comprehensive, taking into account cultural norms when deciding if public lighting or personal lanterns are the best approach.⁸² Poor quality latrine infrastructure can increase fears of GBV because men can watch women when they use the bathroom through broken windows or doors.⁸³ Investment in high-quality latrines, while costly upfront, reduces risks of GBV, ensures latrines are reliable, and reduces repair expenses in the long-term.^{84,85}

Increase Distrust

Providing services and aid to the women of a household can create distrust and erode community relationships.⁸⁶ This distrust can increase gender-based violence because access to materials and aid makes them a target for theft.⁸⁷

Case Study: Dzaleka Refugee Camp, Malawi

In the Dzaleka Refugee Camp, a community-based website repository contains a wide range of reporting and legal resources for refugees. This includes legal representation and documentation assistance. The webpage also directs community members to a 24/7 GBV hotline for immediate assistance on the home page. Users can also access job posting and programming information in one convenient place.

Sources: Services, Dzaleka Online. "Resource Hub - Dzaleka Refugee Camp." Dzaleka Online Services, April 25, 2026. <https://services.dzaleka.com/resources>.

The Frontier Technologies Hub. "AI-Enhanced GBV Reporting — Frontier Tech Hub." Accessed April 20, 2026. <https://www.frontiertechhub.org/pilot-portfolio/ai-gbv-chatbot>.

⁶⁸Schuller, Mark. "'Pa Manyen Fanm Nan Kansa': Intersectionality, Structural Violence, and Vulnerability Before and After Haiti's Earthquake." *Feminist Studies* (College Park, United States) 41, no. 1 (2015): 184-210,241-242.

⁶⁹Navarrete, José. A qualitative research of humanitarian workers' perceptions of preventing Gender-Based Violence (GBV) in the Cox's Bazar refugee camps, Bangladesh. *Artículos de Investigación*. 2019, 45-74. <https://doi.org/10.15332/25006681/5286>.

⁷⁰Ibid.

⁷¹"Shining a Light: How Lighting in or around Sanitation Facilities Affects the Risk of Gender-Based Violence in Camps." *Oxfam Policy & Practice*, 2018. <https://policy-practice.oxfam.org/resources/shining-a-light-how-lighting-in-or-around-sanitation-facilities-affects-the-ris-620605/>.

⁷²Cavill, Sue, Jeanne Vidal, Brian Reed, Jonathan Rouse, and Julie Fisher. *Lighting, WASH, and GBV in Camp Settings*. Oxfam International, 2018.

⁷³Lukasiak, Miriam, Jack Palmieri, Pia Svensson, Gilbert Tumwine, and Anette Agardh. "Exploring Perceptions and Experiences of Gender-Based Violence among Women in a Refugee Camp Setting in Uganda—A Qualitative Study." *PLOS ONE* 19, no. 12 (2024): e0314972. <https://doi.org/10.1371/journal.pone.0314972>.

⁷⁴Navarrete, José. A qualitative research of humanitarian workers' perceptions of preventing Gender-Based Violence (GBV) in the Cox's Bazar refugee camps, Bangladesh. *Artículos de Investigación*. 2019, 45-74. <https://doi.org/10.15332/25006681/5286>.

⁷⁵Lukasiak, Miriam, Jack Palmieri, Pia Svensson, Gilbert Tumwine, and Anette Agardh. "Exploring Perceptions and Experiences of Gender-Based Violence among Women in a Refugee Camp Setting in Uganda—A Qualitative Study." *PLOS ONE* 19, no. 12 (2024): e0314972. <https://doi.org/10.1371/journal.pone.0314972>.

⁷⁶Navarrete, José. A qualitative research of humanitarian workers' perceptions of preventing Gender-Based Violence (GBV) in the Cox's Bazar refugee camps, Bangladesh. *Artículos de Investigación*. 2019, 45-74. <https://doi.org/10.15332/25006681/5286>.

⁷⁷"Shining a Light: How Lighting in or around Sanitation Facilities Affects the Risk of Gender-Based Violence in Camps." *Oxfam Policy & Practice*, 2018. <https://policy-practice.oxfam.org/resources/shining-a-light-how-lighting-in-or-around-sanitation-facilities-affects-the-ris-620605/>.

⁷⁸Ibid.

⁷⁹Navarrete, José. A qualitative research of humanitarian workers' perceptions of preventing Gender-Based Violence (GBV) in the Cox's Bazar refugee camps, Bangladesh. *Artículos de Investigación*. 2019, 45-74. <https://doi.org/10.15332/25006681/5286>.

⁸⁰"Shining a Light: How Lighting in or around Sanitation Facilities Affects the Risk of Gender-Based Violence in Camps." *Oxfam Policy & Practice*, 2018. <https://policy-practice.oxfam.org/resources/shining-a-light-how-lighting-in-or-around-sanitation-facilities-affects-the-ris-620605/>.

⁸¹Bradley, Tamsin, and Katherine Liakos. *Using Energy Programming to Address Violence Against Women and Girls in Humanitarian Settings*. n.d.

⁸²"Shining a Light: How Lighting in or around Sanitation Facilities Affects the Risk of Gender-Based Violence in Camps." *Oxfam Policy & Practice*, 2018. <https://policy-practice.oxfam.org/resources/shining-a-light-how-lighting-in-or-around-sanitation-facilities-affects-the-ris-620605/>.

⁸³Ibid.

⁸⁴Ibid.

⁸⁵Sommer, Marni, Suzanne Ferron, Sue Cavill, and Sarah House. "Violence, Gender and WASH: Spurring Action on a Complex, under-Documented and Sensitive Topic." *Environment & Urbanization* 27, no. 1 (2015): 105-16. <https://doi.org/10.1177/0956247814564528>.

⁸⁶Schuller, Mark. "'Pa Manyen Fanm Nan Kansa': Intersectionality, Structural Violence, and Vulnerability Before and After Haiti's Earthquake." *Feminist Studies* (College Park, United States) 41, no. 1 (2015): 184-210,241-242.

⁸⁷Ibid.

Community-based approaches and consultations can be used to determine who should have access to portable lighting and which public areas should have communal lighting, reducing the risk of distrust-related GBV.⁸⁸

Recommendations

As refugee crises continue to persist long-term, the following infrastructure adaptations can make refugee camps better-suited to prevent GBV in the long-term:

1. *Expanding Community-Spaces and Short-Term Protection Shelters*: Public spaces are essential to reducing isolation and rebuilding the community within refugee and displaced populations.⁸⁹ Humanitarian actors must ensure that refugee settlements meet basic needs, but leave room to add community resources after the initial emergency phases in case populations remain in the camp long-term. GBV protection shelters are often too small to meet the needs of a refugee population, despite being noted as a source of support.⁹⁰ To reduce isolation within refugee camps, actors should ensure that short-term protection shelters are evenly distributed throughout the settlement so that all residents are within walking distance of at least one shelter.
2. *Increased Reporting Facilitated by AI and Digital Platforms*: AI can increase GBV monitoring by providing counseling and programming services to GBV victims via chatbots while streamlining data collection.⁹¹ Decreased reporting prevents humanitarian organizations from collecting accurate data on GBV to design effective programming.^{92,93} Mobile apps and digital platforms can anonymously collect data, allowing for reporting without compromising a survivor's standing within their community like traditional accountability mechanisms.⁹⁴ Digital platforms also allow refugees to access services in areas where humanitarian physical presence is limited. AI-facilitated GBV programming, however, does come with risks. Primarily, AI-based responses can threaten data privacy, generate inaccurate output, and contain gendered biases. Thus, AI should be implemented in consultation with communities and feminist organizations.⁹⁵
3. *WASH Infrastructure: Novel Approaches to Latrine Safety and Lighting*: The Bidi Bidi Cocoon Mini case study demonstrates that low-cost comprehensive WASH infrastructure exists in the humanitarian space, but there is a lack of uptake despite its scalability. While the Cocoon Mini has primarily been deployed to improve menstrual health and hygiene, its main features also alleviate GBV, making similar solutions a model for other refugee settings.⁹⁶ Additionally, the Cocoon Mini utilizes a solar lighting system that avoids the pitfalls of lanterns or other community lighting solutions.⁹⁷

⁸⁸“Shining a Light: How Lighting in or around Sanitation Facilities Affects the Risk of Gender-Based Violence in Camps.” Oxfam Policy & Practice, 2018. <https://policy-practice.oxfam.org/resources/shining-a-light-how-lighting-in-or-around-sanitation-facilities-affects-the-ris-620605/>.

⁸⁹Al-Hourani, Dalia, Mahmoud Al-Wriekat, Rocío Llmas-Ramos, and Ines Llmas-Ramos. “Traumatic Symptoms Among Syrian Refugees in Host Countries: A Comparative Study of Jordan and Spain.” *Societies* 15, no. 11 (2025). <https://doi.org/10.3390/soc15110295>.

⁹⁰Lukasiak, Miriam, Jack Palmieri, Pia Svensson, Gilbert Tumwine, and Anette Agardh. “Exploring Perceptions and Experiences of Gender-Based Violence among Women in a Refugee Camp Setting in Uganda—A Qualitative Study.” *PLOS ONE* 19, no. 12 (2024): e0314972. <https://doi.org/10.1371/journal.pone.0314972>.

⁹¹DeGraw, Erin. “Using AI to Track Gender-Based Violence.” *Think Global Health*. Accessed April 19, 2026. <https://www.thinkglobalhealth.org/article/using-ai-track-gender-based-violence>.

⁹²Muuo, Sheru, Stella Kagwiria Muthuri, Martin Kavao Mutua, et al. “Barriers and Facilitators to Care-Seeking among Survivors of Gender-Based Violence in the Dadaab Refugee Complex.” *Sexual and Reproductive Health Matters* 28, no. 1 (2020): 1722404. <https://doi.org/10.1080/26410397.2020.1722404>.

⁹³Asgary, Ramin, Eleanor Emery, and Marcia Wong. “Systematic Review of Prevention and Management Strategies for the Consequences of Gender-Based Violence in Refugee Settings.” *International Health* 5, no. 2 (2013): 85–91. <https://doi.org/10.1093/inthealth/ih009>.

⁹⁴DeGraw, Erin. “Using AI to Track Gender-Based Violence.” *Think Global Health*. Accessed April 19, 2026. <https://www.thinkglobalhealth.org/article/using-ai-track-gender-based-violence>.

⁹⁵Spencer, Sarah W., and Caroline Masbouni. *Artificial Intelligence In Gender-Based Violence In Emergency Programming: Perils AND Potentials*. n.d.

⁹⁶Beeman, Aly, Joseph Kwesiga, Nicole Ippoliti, et al. “Using Human-Centered Design to Co-Design Dedicated Menstrual Health Spaces with People Who Menstruate in Bidi Bidi Refugee Settlement, Uganda: Learnings for Further Adaptation and Scale in Humanitarian Settings.” *BMC Women's Health* 23, no. 1 (2023): 1–16. 164418761. <https://doi.org/10.1186/s12905-023-02421-0>.

⁹⁷“Shining a Light: How Lighting in or around Sanitation Facilities Affects the Risk of Gender-Based Violence in Camps.” Oxfam Policy & Practice, 2018. <https://policy-practice.oxfam.org/resources/shining-a-light-how-lighting-in-or-around-sanitation-facilities-affects-the-ris-620605/>.