“It Is Because of Poverty”: Menstrual Equity and Transactional Sex in Kenya

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Point Loma Nazarene University 2024

Abstract

Addressing the complex challenges of menstruation in Kenya, this research focuses on the intertwined issues of period poverty and the disturbing occurrence of transactional sex for obtaining menstrual products. Completing focus groups and elite interviews with 281 individuals in the fall of 2023, this study analyzes the menstrual experience in rural and urban areas of Kenya. Highlighting the lived experiences of women and girls and risk factors for engaging in transactional sex, this research advocates for accessible menstrual health management beginning with systemic change.

Introduction

Approximately half of the world's population experiences menstruation at some point in their life. According to the World Bank, at any given moment, over 300 million individuals are on their period[1]. Menstruation, sometimes referred to as a 'period,' refers to the regular discharge of blood and tissue from the lining of the uterus, often characterized by symptoms such as painful cramps and fatigue.[2] Menstruation occurs every 21-35 days for most individuals, starting at menarche (the first time an individual menstruates), beginning between 10-16 years of age[3]. For many women and girls, managing this natural biological process is a significant challenge. Lack of access to necessary menstrual hygiene products, education on menstrual health, and facilities required for effective menstrual hygiene management (MHM) is defined as period poverty[4]. According to the World Bank, approximately 500 million individuals are experiencing period poverty[5]. High stigma and shame frequently surrounding menstruation compounds the effects of period poverty, amplifying the resulting systemic inequity, including decreased access to educational and social opportunities. However, despite the profound impact and scope of period poverty, it has been chronically under-researched globally, with potentially devastating consequences[6].

The research presented in this paper is a continuation of a 2023 research project on the menstrual experience of women in Kenya, which focused on demographic variances in the menstrual experience and highlighted the deeply troubling reality of the prevalence of transactional sex (TS) for essential menstrual hygiene products[7]. Transactional sex is a complex topic but can be defined as "noncommercial, non-marital sexual relationships motivated by the implicit assumption that sex will be exchanged for material support or other benefits" [8]. Frequently motivated by a lack of economic equality or social opportunity, transactional sex may occur as the means by which individuals gain access to basic needs. Given over half the global population experiences menstruation and that period poverty is common in many parts of the world, comprehending the scope of the occurrence of transactional sex for menstrual products is necessary for understanding menstrual equity.

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[1] "Menstrual Health and Hygiene." World Bank, May 12, 2022. https://www.worldbank.org/en/topic/water/brief/menstrual-health-and-hygiene.

[2] "About Menstruation." Eunice Kennedy Shriver National Institute of Child Health and Human Development. Accessed March 18, 2024. https://www.nichd.nih.gov/health/topics/menstruation/conditioninfo.

[3] Lacroix, Amy E., Hurria Gondal, Karlie R. Shumway, and Michelle D. Langaker. "Physiology, Menarche." NIH U.S. National Library of Medicine, March 11, 2023. https://www.ncbi.nlm.nih.gov/books/NBK470216/#:~:text=Menarche%20typically%20occurs%20between%20the,thought%20to%20play%20a%20role .

[4] Jaafar, Hafiz, Suraya Yasmin Ismail, and Amirah Azzeri. "Period Poverty: A Neglected Public Health Issue." *Korean Journal of Family Medicine* 44, no. 4 (July 20, 2023): 183–88. https://doi.org/10.4082/kjfm.22.0206.

[5] "Menstrual Health and Hygiene." World Bank, May 12, 2022. https://www.worldbank.org/en/topic/water/brief/menstrual-health-and-hygiene.

[6] Jaafar, Ismail, and Azzeri, "Period Poverty," 183–88.

[7] McHugh, E. (2023). Realities of Menstruation: Kenya. *Point Loma Nazarene University*.

[8] Stoebenau, Kirsten, Lori Heise, Joyce Wamoyi, and Natalia Bobrova. "Revisiting the Understanding of 'Transactional Sex' in Sub-Saharan Africa: A Review and Synthesis of the Literature." *Social Science & Medicine* 168 (November 2016): 186–97. https://doi.org/10.1016/j.socscimed.2016.09.023.

Statement of Research

For this project, researchers traveled to Nairobi, Kenya, partnering with grassroots nonprofit Nazarene for She to effectively and sensitively collect data on the menstrual experience of women in Kenya. The research team traveled to rural and urban areas, interviewing approximately 280 individuals from Nairobi and surrounding areas. This research study explores the menstrual experience and continued stigmatization of menstruation in Kenya, with a demographic regional analysis focusing on the occurrence of transactional sex for menstrual hygiene products.

Literature Review

The Menstrual Experience

Academic literature on the menstrual experience in Kenya, although limited, underscores the prevalence of shame, and the lack of necessary water, sanitation, and hygiene (WASH) facilities. Because of a deep stigma often attached to menstruation in many cultures, including Kenya, the monthly bleeding is frequently treated as a source of shame. Stigma associated with menstruation frequently results in the bullying of school girls or women who have bled through their clothes[9].

Access to WASH facilities is an essential aspect of menstrual health management (MHM)[10]. Slums, or 'informal settlements', according to the UN definition, are highly over-crowded urban areas lacking WASH facilities with hazardous and substandard housing[11]. Currently, approximately 1 in 8 individuals live in slum-like conditions[12]. Access to WASH facilities, as well as a method to control bleeding and menstrual-related pain, is necessary to allow women and girls to effectively manage their menstrual health[13].

Inadequate access to MHM has numerous negative consequences. For example, lack of access to MHM is strongly related to school attendance, in many circumstances causing individuals to be forced to skip a certain amount of school during each cycle. School absenteeism eventually places individuals too far behind to catch up, contributing to girls dropping out of school[14]. Low educational achievement of girls and women is highly prevalent in low-income countries, associated with outcomes including decreased earnings and living standards and increased risk for child marriage. Additionally, low levels of

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[9] Austrian, Karen, Beth Kangwana, Eunice Muthengi, and Erica Soler-Hampejsek. "Effects of Sanitary Pad Distribution and Reproductive Health Education on Upper Primary School Attendance and Reproductive Health Knowledge and Attitudes in Kenya: A Cluster Randomized Controlled Trial." *Reproductive Health* 18, no. 1 (August 31, 2021). https://doi.org/10.1186/s12978-021-01223-7.

[10] "Menstrual Hygiene." Centers for Disease Control and Prevention, May 26, 2023. https://www.cdc.gov/hygiene/personal-hygiene/menstrual.html.

[11] Amegah, A. Kofi. "Slum Decay in Sub-Saharan Africa." *Environmental Epidemiology* 5, no. 3 (May 20, 2021). https://doi.org/10.1097/ee9.0000000000000158.

[12] UN-Habitat, *SDG Indicator 11.1.1 Training Module: Adequate Housing and Slum Upgrading* (Nairobi: United Nations Human Settlement Programme, 2018). https://unhabitat.org/sites/default/files/2020/06/indicator_11.1.1_training_module_adequate_housing_and_slum_upgrading.pdf.

[13] "Menstrual Health and Hygiene." World Bank, May 12, 2022. https://www.worldbank.org/en/topic/water/brief/menstrual-health-and-hygiene.

[14] Miiro, George, Rwamahe Rutakumwa, Jessica Nakiyingi-Miiro, Kevin Nakuya, Saidat Musoke, Juliet Namakula, Suzanna Francis, et al. "Menstrual Health and School Absenteeism Among Adolescent Girls in Uganda (MENISCUS): A Feasibility Study." *BMC Women's Health* 18, no. 1 (January 3, 2018). https://doi.org/10.1186/s12905-017-0502-z.

education are correlated with lower levels of knowledge concerning sexual health, increasing risks for poor sexual health management[15].

The prohibitive expense of menstrual hygiene products, coupled with rates of extreme poverty, poses a significant risk to the menstrual equity of women and girls in Kenya. An estimated 65% of women in Kenya are not able to afford menstrual pads or similar products[16]. In 2023, women reported one packet of sanitary towels cost 50-120 Kenyan shillings, equivalent to 35-85 US cents[17]. During an average cycle, two packets of sanitary towels are necessary for most individuals[18]. In 2024, almost half of the population of Kenya lives at or below the poverty line, defined as 2.15 USD or less per day[19] [20]. The cost of sanitary towels is a sizable portion of a family's monthly income and a burden that might not frequently be prioritized.

Discussion on Transactional Sex

Previous research associated with PLNU found that 94.7% of study participants in Nairobi, Kenya knew someone who had participated in transactional sex (TS) for menstrual products. Due to the sensitive nature of this topic, it was clear to researchers that women were frequently referring to themselves[21]. Additionally, a research study in Kenya found two-thirds of individuals using menstrual pads received them from sexual partners[22].

These findings highlight the severe impact of period poverty and the lengths to which women and girls are forced to go to obtain essential menstrual products. Transactional sex is strongly correlated with rates of alcohol use disorder, intimate and non-intimate partner violence, poor mental health and self-esteem, and unplanned pregnancies, and has significant implications for rates of HIV and AIDS[23] [24]. Women aged 15-24 have over twice the risk of contracting HIV compared to men of the same age range,

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[15] Wodon, Quentin, Claudio Montenegro, Hoa Nguyen, and Adenike Onagoruwa. "Missed Opportunities: The High Cost of Not Educating Girls." United Nations Girls Education Initiative , July 2017. https://www.ungei.org/publication/missed-opportunities-high-cost-not-educating-girls#:~:text=Too%20many%20girls%20drop%20out,for%20their%20community%20and%20society.

[16] Menstrual Health in Kenya | Country Landscape Analysis. Accessed March 18, 2024. https://menstrualhygieneday.org/wp-content/uploads/2016/04/FSG-Menstrual-Health-Landscape_Kenya.pdf.

[17] McHugh, Realities of Menstruation (2023).

[18]http://www.healthmarketlinks.org/resource-center/afri-can-trust-empowering-women-and-girls-through-affordable-sanitary-pads

[19] "UNFPA Kenya." UNFPA Kenya | United Nations Population Fund. Accessed March 18, 2024. https://www.unfpa.org/data/KE.

[20] "Poverty and Inequality." World Development Indicators. Accessed March 19, 2024. https://datatopics.worldbank.org/world-development-indicators/themes/poverty-and-inequality.html#:~:text=Poverty%20measured%20at%20the%20international,than%203%20percent%20by%202030.

[21] McHugh, Realities of Menstruation (2023).

[22] Phillips-Howard, Penelope A., George Otieno, Barbara Burmen, Frederick Otieno, Frederick Odongo, Clifford Odour, Elizabeth Nyothach, et al. "Menstrual Needs and Associations with Sexual and Reproductive Risks in Rural Kenyan Females: A Cross-Sectional Behavioral Survey Linked with HIV Prevalence." *Journal of Women's Health* 24, no. 10 (October 2015): 801–11. https://doi.org/10.1089/jwh.2014.5031.

[23] Jiwatram-Negron, Tina, Sarah Peitzmeier, Melissa Meinhart, Natalia Vasiliou, Danil Nikitin, and Louisa Gilbert. "Associations between Transactional Sex and Intimate and Non-Intimate Partner Violence: Findings from Project Wings of Hope." *Journal of Family Violence* 38, no. 1 (2023): 161–73. https://doi.org/10.1007/s10896-021-00353-7.

[24] Stoebenau, Kirsten, Stephanie A Nixon, Clara Rubincam, Samantha Willan, Yanga ZN Zembe, Tumelo Tsikoane, Pius T Tanga, et al. "More than Just Talk: The Framing of Transactional Sex and Its Implications for Vulnerability to HIV in Lesotho, Madagascar and South Africa." *Global Health* 7, no. 1 (September 2011): 34. https://doi.org/10.1186/1744-8603-7-34.

with epidemiological research connecting transactional sex as contributing to the disproportion of this statistic [25].

Because of what is viewed as the transactional nature of the exchange, in local communities, transactional sex is typically viewed differently than prostitution. The term "transactional sex" was coined in the 1990s to capture the nuance of this type of sexual exchange, which differs from prostitution. This distinction was necessary for examining patterns of HIV transmission and understanding the complex motivations behind these exchanges[26]. Although limited, most literature on this topic is located in Sub-Saharan Africa (SSA). However, the occurrence of TS has been analyzed as an effect of poverty, with research noting TS in areas including rural communities of West Virginia and North Carolina of the US[27] [28].

An article published in 2016, defines existing literature on transactional sex as encompassing three main motivations or paradigms. These paradigms consist of pure 'stereotypes', with the possibility of individual circumstances combining paradigms. The first paradigm is 'sex for basic needs', involving goods, cash, or other benefits linked to survival [29]. The second paradigm is 'sex for improved social status', defining the actions of women as looking for benefits outside of survival such as educational achievement or increased social status, which may be influenced by globalization[30]. The third paradigm is 'sex and material expressions of love'.This paradigm reflects the expectation that romantic or sexual relationships in an African context might require a certain level of gift-giving or exchange to be viewed as acceptable among peers [31].

However, since this research focuses on the menstrual experience of women and girls in Kenya, it will center on the first paradigm, 'sex for basic needs'. This focus is particularly relevant when considering the severe impact of period poverty and its connection to transactional sex. Given the disproportion of women and girls contracting HIV and AIDS compared to their male peers, it is surprising that more research does not exist on the occurrence of transactional sex for menstrual products.

Underrepresentation of Women in Scientific Literature

The lack of research regarding the connection between transactional sex (TS) and the basic needs of women and girls during menstruation highlights a significant gap in scientific literature. Despite some studies on this topic, more research is needed to fully understand the challenges faced by women and girls in areas of poverty, specifically how period poverty drives them to engage in transactional sex for menstrual products. This paper aims to address this gap and contribute to the existing body of research by

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[25] Stoebenau et al., "Revisiting the Understanding of 'Transactional Sex,'" 186–97.
[26] Alaribe, Nancy. "Socio-Religious and Cultural Discourse on Gender and Human Trafficking: Perspectives on Globalization in Nigeria." *Handbook of Research on Present and Future Paradigms in Human Trafficking*, May 20, 2022, 199–214. https://doi.org/10.4018/978-1-7998-9282-3.ch013.
[27] MCD Stoner et al., "The Relationship Between Economic Deprivation, Housing Instability and Transactional Sex Among Women in North Carolina (HPTN 064)," *AIDS and Behavior* 23, no. 11 (November 2019): 2946-2955, https://doi.org/10.1007/s10461-019-02611-8.
[28] Allen ST et al., "Correlates of Transactional Sex Among a Rural Population of People Who Inject Drugs," *AIDS and Behavior* 24, no. 3 (March 2020): 775-781, https://doi.org/10.1007/s10461-019-02612-7.
[29] Alaribe, "Socio-Religious and Cultural Discourse," 199–214.
[30]Alaribe, "Socio-Religious and Cultural Discourse," 199–214.
[31] Wamoyi, Joyce, Lori Heise, Rebecca Meiksin, Nambusi Kyegombe, Daniel Nyato, and Ana Maria Buller. "Is Transactional Sex Exploitative? A Social Norms Perspective, with Implications for Interventions with Adolescent Girls and Young Women in Tanzania." *PLOS ONE* 14, no. 4 (April 2, 2019). https://doi.org/10.1371/journal.pone.0214366.

providing deeper insights into the menstrual experiences and struggles of women in Kenya. The existing gaps in the literature are symptomatic of a greater systemic issue of dismissing the experience of women in social and medical research. In the United States, it was not until 1993 that the inclusion of women in clinical trials was mandated by federal law via a section of the NIH Revitalization Act [32]. Exemplifying this reality, when investigating the academic literature surrounding sexual behavior and the HIV/AIDS pandemic in Africa while writing this article, I came across a scientific article on this topic. Written as recently as 1996, this article outlined the precedent of excluding female participants in research studies on this topic. This research article underscores the perspective of eliminating women from survey methodology as not providing valuable or pertinent perspectives:

> ...The principal danger with using survey methodology to collect data on sexual behavior is that respondents may simply say what they think researchers want to hear and that without elaborate probing, such methods may lead to a serious undercount of the true situation (Bleek, 1987). Women are believed to be particularly prone to giving normative answers. Indeed, women are sometimes excluded from surveys altogether for fear that their responses will be worthless.[33]

Despite the clear issues in this quality of research, the irony of excluding female participants in a discussion of sexuality and HIV and AIDS is striking. This reality is perhaps built on the empirical assumption that it is best to understand women as simply 'not men', or to define them as merely weaker versions of men or 'deformed men'[34], thereby largely excluding them from a body of research that inherently belongs to them[35]. This research aims to contribute to academic literature, in part, by advocating for the inclusion and recognition of the experiences of women and girls.

The systematic underrepresentation of women's voices in scientific literature pertaining to this subject has a significantly negative ethical connotation, given the serious implications of this disregard. The implications of women's voices being devalued in a conversation intrinsically pertaining to them in such recent history is deeply troubling, casting light on how significant issues including menstrual equity have been inadequately addressed. The complex interrelations between menstrual equity, HIV/AIDS risk among young women, and the broader context of gender inequities in health and socio-economic systems call for a multi-faceted and inclusive approach to public health and social justice. Empowering women and girls, addressing systemic barriers, and ensuring gender-sensitive policies and interventions are essential steps towards achieving greater equity and well-being for all individuals in society.

This literature review highlights the multifaceted challenges faced by women and girls in Kenya regarding menstrual health management. It details the impact of period poverty, including stigma, lack of WASH facilities, and the significant financial burden of menstrual products. The review also explores the

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[32] "History of Women's Participation in Clinical Research." National Institutes of Health. Accessed March 19, 2024. https://orwh.od.nih.gov/toolkit/recruitment/history#:~:text=Between%201989%20and%201993%2C%20inclusion,as%20Subjects%20in%20Clinical%20Research.

[33] Cohen, Barney, and James Trussell, eds. " Preventing and Mitigating AIDS in Sub-Saharan Africa: Research and Data Priorities for the Social and Behavioral Sciences." *National Research Council (US) Panel on Data and Research Priorities for Arresting AIDS in Sub-Saharan Africa* National Academies Press (US) (March 28, 1996). https://doi.org/10.17226/5177.

[34] Tatiana Tsakiropoulou-Summers and Katerina Kitsi-Mitakou, eds., Women and the Ideology of Political Exclusion: From Classical Antiquity to the Modern Era, October 16, 2018, https://www.taylorfrancis.com/books/edit/10.4324/9781315177113/women-ideology-political-exclusion-tatiana-tsakiropoulou-summers-katerina-kitsi-mitakou?refId=a96aeb0d-3f38-4495-9056-ca6ab12497d2&context=ubx.

[35] Nagel, Joane. "Ethnicity and Sexuality." *Annual Review of Sociology* 26, no. 1 (August 2000): 107–33. https://doi.org/10.1146/annurev.soc.26.1.107.

serious consequences of transactional sex for menstrual products, driven by economic necessity, and the systemic underrepresentation of women's experiences in scientific research. Addressing these interconnected issues requires a comprehensive approach that improves access to menstrual products, enhances menstrual health management, and ensures the inclusion of women's voices in research and policy-making. These efforts are crucial for tackling significant inequities and improving the well-being of women and girls in society.

Methods

Demographic Breakdown

To better understand the menstrual experience and the occurrence of transactional sex, I and a team of researchers traveled to Nairobi, Kenya, in November 2023. From November 6 through 24, we conducted elite interviews and focus groups in Nairobi and its surrounding areas. During this time, we visited five slums—Korogocho, Mathare, Kangemi, Kibera, and Kangware—and three rural communities—Kitui, Kajado, and Narok. We interviewed a total of 287 individuals: 210 from the slums and 77 from rural areas. Of these participants, six were men and the remaining 281 were women.

The average age of participants was 33.84 years. The youngest was 18, per the research license associated with this study, while the maximum age was 66 years. The standard deviation was 10.78 years. The tribal background of participants included Luhya, Massai, Kamba, Kikuyu, Kukura, Luo, Kisii, Burji, Taita, Kalenjin, and Tharaka. The tribal background of participants had the highest variance in the slums and informal settlements, with the majority being Luhya, Kamba, Kikuyu, Kisii, and Luo. The rural countryside areas had significantly less variance of tribal background. In Narok, the primary tribal group present was Massai. In Kitui and Kajado, Kamba, Luo, and Tharaka were most present.

The average years of education of participants was 10.39 years, while the median was 12. The mode was 8; the standard deviation was 4.7. The least amount of education was 0, with this being the most frequent amongst the Massai women in rural countryside areas. The highest amount of education was 21 years.

It is worth noting for future reference that during interviews, the terms used to reference slums and the countryside often differed from what might be expected, particularly for individuals from a Western context compared to a local context. For example, slums were referred to as ‘informal settlements’ or ‘rural-urban’ areas, while the countryside was simply called ‘rural’. This sometimes led to confusion when an area was referred to as 'rural,' but the context usually clarified the intended meaning.

Data Collection

A total of 46 interviews were completed. Most of these interviews were conducted in focus groups, ranging from 2 to 32 individuals at one time. The median participant size was five individuals, while the mean was 7.88. The larger focus groups were not ideal, decreasing the ability to have a fully effective quantitative analysis via the Likert scale, but were frequently necessary due to logistical issues. Interviews were conducted with the assistance of Kenyan translators and research assistants. Typically, participants with a higher level of education spoke some English, but translation from English to Swahili was necessary in most circumstances. When conducting interviews at one location in Narok with Massai women, additional translators were found with local partnering organizations to translate from Massai to Swahili, which then was translated from Swahili to English.

Questionnaire

To standardize the data obtained, interviews were based on a questionnaire created prior to research collection in Kenya. The questionnaire was created with a Likert scale to enable efficient data analysis and standardization. Questions included demographic information such as age, tribe, years of education, and age of menarche. Other questions were included such as how individuals learned about their period, products used in menstrual hygiene, and if or how openly menstruation is discussed within their family. Additionally, questions were asked specifically for mothers about their daughter's experiences, providing an alternate perspective and insight into any generational shifts.

Method of Analysis

The data was analyzed using themed content analysis. First, responses from physical questionnaire sheets were transcribed into Excel. Using the Likert scale and interview notes, themes were identified and coded from the responses. For recorded elite interviews, the transcription software Notta was used, which was then checked for errors. After thoroughly reviewing the data, themes were coded and extracted again. Additionally, numerical demographic data was systematically analyzed to calculate the mean, median, and standard deviation, and other relevant metrics.

Data Analysis

Systematically analyzing data, several key aspects of the menstrual experience became apparent as high-impact factors with the menstrual experience of women in Kenya and the occurrence of transactional sex for menstrual products. Specifically, many essential aspects of MHM make it difficult for women and girls to engage in work, school, or social activities. The reality of these needs couples with various factors, creating the occurrence of TS for menstrual hygiene products.

Insights into Menstruation

High Cost of Menstrual Products

A significant theme of the menstrual experience of women in Kenya included the prohibitive cost of menstrual products. When questioned on the affordability of products, 99% of women responded that menstrual hygiene products are extremely expensive. Types of products used by women included rags, cotton wool, blankets, towels, sanitary towels (i.e. pads), mattresses, reusable pads, and tampons. The accessibility of products significantly impacts the ability of women to engage in work, school, or social activities. When questioned on this during a focus group in Kanguari, a woman stated: "If you have a sanitary towel, you can go. But if you don't have you stay at home" (G2, slum). Other women in this focus group emphatically agreed with this, another woman adding, "You stay indoors because you can't walk outside" (G2, slum). One woman described:

> pads are more safe, when you're wearing a rag do not feel comfortable because always having to push it. you don't go far when wearing a rag, but with pads you can go everywhere you want. Always checking on self to see if it messed up (G34, slum).

However, due to the prohibitive expense of products, women must often choose between buying sanitary products and food for their families or other necessities. Because of this, the costs of sanitary products appear to be a cost that many families do not support.

Limited Availability of Products

Especially in rural areas, women described menstrual products as being very limited in availability. When questioned on this scarcity, a woman described: “In [the] village [it is] not very easy, very few shops often care, even if [you] have money [you] might not be able to get” (G26, rural). Women noted menstrual products were usually out of stock in stores. When discussing menstrual products in Narok, Massai women had no familiarity with products such as tampons but sometimes used washable pads. Some women described that menstruation “Always prevented [social] attendance, because [I] don't have pads”, other women added they only“Go to church if they have pads” (G27, rural). Massai women in Narok described using holes in the ground of a separate house while menstruating to collect the blood, outlining that during the day: “you dig a hole and sit on it to collect blood for sometimes 12 hours” (G27, rural). At night, women described wearing the skin of an animal to cover themselves, oiling it so that blood would not stick to it. In informal settlements, products appeared to have a higher rate of availability, but women described that “having the money is the problem” (G36, slum).

Missed Opportunities

Women noted significant period pain as impacting their ability to engage in daily activities, describing “If you have bad cramps you can't go, some people are weak” (G2, slum). Methods for pain management included drinking warm water or placing a hot water bottle on the abdomen, drinking herbs, eating pineapple, or taking painkillers. However, when mentioning painkillers most women also brought up their prohibitive expense. One group of women outlined “not everyone can afford them...some people can't buy and don't use painkillers, they just endure till the pain goes away” (G1, rural). One young woman described that due to the cost she “doesn't take drugs, just struggle[s]” (G5, slum). Women detailed symptoms in addition to cramps, including vomiting, dizziness, and headaches. One girl described being "in so much pain I can't go to school for 3-4 days and don't know who to tell" (G31, slum). When questioned whether menstruation affected her ability to engage in her usual activities, another woman described that her “cramps were so bad couldn't go to [work] but also lots of blood” (G3, slum), underscoring the reality of how pain management and lack of menstrual hygiene products affect the ability of women to engage in their regular activities while menstruating. Asking the same question to women aged between 20-21, some girls described not attending school or work during the first 1-2 days of their period“because of cramps and bleeding” (G5, slum). This reality echoed throughout responses.

Lack of WASH facilities

Maureen, the leader of a partnering nonprofit, Nazarene for She, outlined the impact of the lack of waste facilities such as garbage bins to dispose of menstrual products. The difficulty of waste management was also brought up by women at a school in Kitui, stating:

> especially in slum areas [there is] nowhere to dump pads. We have to carry them around...[We] need even a bin to throw them away in....it is a basic need...All public schools should have a bin to throw away pads, not even this location has bins (G26, rural).

A particularly vocal individual even stated, “[we]need [a] policy to...have a place to throw away pads” (G26, rural). In public places, women and girls consistently lack proper WASH facilities, which negatively impacts efficient menstrual hygiene and social opportunities.

Taboo and Shame

One of the most frequent and significant realities immediately apparent was the taboo and shame surrounding having a period. A girl is shamed if her period bleeds through her clothes. One participant described this, stating: “It is embarrassing when it leaks...People stare at you, women will run to you and cover you because it is shameful because it is a private thing” (G1, rural). Other women agreed, a participant outlining that the first time she got her period, she was “scared and ashamed” (G1, rural). Women in Kitui described, “People want to make us feel it's weird to have a period” adding “When [we] talk about having periods [we are] shamed”(G26, rural). Women in Kawangware repeated this, one individual describing how she “Feels a lot of shame...around periods” (G34, slum). Other women echoed this describing “There is...shame attached to having a period (G35, slum). When asking women in Narok how openly menstruation was discussed, most responded that the topic is not discussed, detailing “Women are ashamed to talk about it, [it is] kept secret. Their parents never spoke about it so they are ashamed” (G27, rural). Another woman added that she “Can't talk about it with her husband, [she] feel[s] very ashamed”. Continuing the focus group, another woman described it as a“‘bad omen’ to talk about periods” (G27, rural).

Many women noted the connotation between having a period and being considered ‘unclean’. This appeared especially prevalent in more rural areas which tended to be more traditional. In informal settlements, there typically appeared to be less adherence to traditions which also included this particular taboo. A woman living in the slums described that “in [the] past when on period not supposed to sleep in the same bed with my husband, because of taboo because of blood” (G35, slum). However, in the rural area of Narok, Maasai women described they do not have sex with their partners if they are menstruating, telling their partners that “they are ‘dirty’ if they try to have sex” (G27, rural). Women described that “When you are on your period, you stay in a different house than your husband. If you have sex with your husband, he will have back pain. If you have sex, you will have a heavy period” (G27, rural).

The taboo of women and girls being ‘unclean’ while menstruating sometimes appeared to extend to them being barred from entering certain places while on their period. Some women stated they are not permitted to enter sacred places, including churches or places of worship, a woman describing there are “some places [you] don't go when menstruating” (G35, slum). The extent of this varied occasionally, with some women still attending worship but not entering the most sacred places or participating in rituals such as communion. Researchers on this project developed the understanding this perspective may be an ‘older way’ or more traditional perspective, which has been leaving.

In addition to these taboos, most women lacked knowledge of their period before experiencing it, but younger women appeared more likely to have basic knowledge of periods before menarche. Women noted learning of periods typically from schools, mothers, or friends. Some girls described being scared when first starting their period thinking “their stomach had burst” (G25, rural). Several women described how they first learned about periods when a girl in their class started her period*:*

> in class 6 [a] girl had [her] period but didn't know about it so they were all scared and gave her a cover for her waist. The teacher sent the boys outside and taught us about menstruation. The girl was screaming "I'm ill" (G1, rural).

Occurrence of Transactional Sex for Menstrual Products

“It is because of poverty”

When questioning participants on the occurrence of TS for menstrual products, the phrase “it is because of poverty” was heard verbatim repeatedly. In Kangemi, a woman described “Some students have sex to obtain pads because of poor background” (G11, slum). In Mathare, women described this TS occurring “Because of poor background” adding “parents have no jobs [so] they can't provide” (G32, slum). Underscoring this when profiling individuals who are in most need, the project assistant stated:

> When we enroll them, there is this question that we ask...for the past...week, how many times have you missed a meal? You'll find the majority of them two to three, two to three without food. And a hungry person you can imagine, they become vulnerable. That's why the informal settlement...is the most vulnerable (G42, 22:56, slum. Nov 22, Kangemi).

Poverty appeared to be the primary, and perhaps most obvious, reason for the occurrence of transactional sex. Speaking to women at school in the countryside, one defined TS as ‘not normal’, but that "it is because of poverty. It happens because of money", another woman adding "Some of them survive through that" (G1, rural).

Regional Demographic

When questioned if they knew an individual who had participated in transactional sex for menstrual products, approximately 90% of individuals interviewed responded that they did. However, when questioned on the level to which this is normal, most individuals in rural areas responded it is ‘not normal’ while in slums, most individuals described TS for menstrual products as ‘definitely normal’. Although the risk for TS may be present in all areas, this risk is especially increased in slums, i.e. informal settlements. This theme was articulated during an elite interview with a project assistant from a local nonprofit DREAM, when outlining where her organization finds vulnerability for TS most acute:

> We feel like in the [informal] settlement, that is where the vulnerability is, and that is what makes the girls vulnerable to HIV and AIDS. Because, when they are trying to sustain themselves, they end up in risky behaviors and maybe exchanging sex for money that makes them contract HIV and AIDS (G42, 01:27, slum. Nov 22, Kangemi).

Detailing regional demographics with the highest likelihood of women engaging in TS, the project assistant stated:

> For someone staying in Kangemi, they are maybe seven times more vulnerable and at higher risk compared with the girl who lives in Kalacha [note: rural] or Karen [note: wealthy suburb] ... [those] the parents are, they have a stable income. For the people living in Kangemi, it's just hand to mouth, trying to survive each day at a time (G42, 22:12, slum. Nov 22, Kangemi).

Asking a male interviewee about the occurrence of TS, he also described TS as occurring most frequently within informal settlements:

> You know sometimes in Kenya you have a problem, you have a problem about jobs and that's why you see all these things happen around the slums because the slums [are] where you have a lot of poverty. So sometimes even they are bought for their parts and they return sexual favors. So that's [what is] happening around them (G44, 01:14, rural).

This same individual went on to describe how TS is “not common in rural areas. It is only around towns...because maybe the girls need something. The pads, yeah...But it is because of poverty. So [in] rural areas [it] is not common. (G44, 02:19, rural) Women and girls living in slums, ie, informal settlements, frequently appear to be more at risk for transactional sex compared to women and girls living

in rural areas of the countryside. When asked about TS for menstrual products, a woman in Kitui described “In [the] country [it is] not common, but in other counties it is more common” (G26, rural). During a focus group in Korogocho, a woman outlined that “four friends [were] pregnant” after engaging in TS for menstrual products. Another woman added her “friend had sex for pads from [a] boda man and got pregnant” (G28), describing what became apparent to be a relatively common theme of how boda-boda or ‘motorcycle’ men which provide transport, are frequently individuals in their communities that engage in transactional sex. Speaking with women in Mathare, a woman described “Girls go to boda-boda men to give them pads. Girls have gotten pregnant” (G31, slum). When first questioned on TS, the guide immediately responded that: “First off, it is driven by poverty and mostly it happens around the slums" specifying “Sometimes young girls are forced to give sexual favors because maybe a man do[es] something for them” (G44, 00:35, rural). In part, the limited availability of products available for sale in rural areas may contribute to the disparity of TS for menstrual products in slums versus rural countryside.

In part, the limited availability of products available for sale in rural areas may contribute to the disparity of TS for menstrual products in slums versus rural countryside. Additionally, many girls in rural areas get married much younger than those in slums and thus rely on their husbands for their necessities. In contrast, girls in slums are often single and more likely to rely on obtaining "boyfriends" to provide for their needs. Because of this, in rural areas transactional sex might occur within a domestic relationship while TS in slum areas occurs outside such a relationship.

Age

While questioning individuals on the occurrence of transactional sex, it became apparent that younger age is associated with an increased risk of vulnerability. When questioning how TS is viewed in their community, women responded that individuals engaging in TS“get judged because [they are] still young” continuing "[they] will not tell anyone. But some girls will get pregnant, [they] will have early marriages. Once you are pregnant you will be fixed to be married”. A woman who appeared to be a leader in their community indicated “During 15-19 years this is most common to happen. If the boyfriend can't or doesn't want to marry she is given away to an old man” (G1, rural). One of the male interviewees supported this stating “When girls go out, they don't have the security like the women have...they are vulnerable to anything” (G44, 03:20, rural).

Sometimes, in public schools, girls received free pads, although this was certainly not a universal experience. However, during school breaks, these girls are not provided with menstrual products. The leader of the local nonprofit, Nazarene For She, described the lack of access to menstrual products during the summer break leads to an increase in early pregnancies, resulting in girls failing to return to school. When questioned if they knew anyone engaging in TS for menstrual products a woman in Kangemi described that her“sister did when [she was] 14 and got pregnant” (G6, slum). This was described as occurring within the context of girls living in poverty engaging in transactional sex for menstrual products. When girls failed to have access to necessary menstrual products, to be able to attend school without the constant stress of bleeding through their clothes, they often fell into TS as a means to obtain basic necessities, continuing the cycle of poverty.

When speaking to women about menstrual products for their daughters, a woman described "You work hard and struggle for her to buy so she won't go in other ways" (G1, rural). When speaking to women from DREAM, they also outlined that providing menstrual products is an essential way to prevent

girls from engaging in transactional sex. Describing their provision of menstrual hygiene products, the women stated:

> It's part of empowering girls because we believe when we offer them the menstrual pad they are not vulnerable to just maybe hook up with the boda boda guys just to be able to get the 50 shillings to go and buy sanitary pads.

Continuing, she articulated:

> We say when we empower girls they have more bargaining sex, you know, you cannot be vulnerable so that maybe someone offers you 10 shillings and you feel like you owe that person a favor simply because they have helped you at your point of vulnerability. (G42, 06:54. Nov 22, Kangemi).

Influence of Community and Tradition

A significant reason for a higher risk of TS that was suggested is how in the rural countryside, there are frequently stronger communities and the presence of tradition, contributing to the safety of women and girls. But in slum regions, where there is extreme overpopulation and a constantly changing demographic, there was described to be a lack of community. Describing this, the project assistant from DREAM stated:

> Here in Nairobi, these are the slum areas, the ones we are telling you about... But [in the countryside] the population there is not much because maybe you can find one neighbor is living here, the other one [there] because they have land and so the population there is scarce. But...here...we are so many people living within one place. And that's why we are saying the people in this area...are...more vulnerable...because at the end of the day...in the rural area there, they know each other. But here we've come from different ethnicities, different backgrounds...nobody knows the other person (G42, 24:24).

The difficulty presented by this was articulated by a man interviewed, stating “Once you get in urban areas, there are people of different tribes. That's why the girls end up getting lost” (G44, 06:13). Describing what occurs during disputes in rural areas vs. informal settlements, the project assistant continued to outline:

> At least in the rural area, they know each other...but here, because of the population, we don't know all our neighbors. And people keep on moving. Some are moving from one informal settlement to the other. It's...crazy. Keeping up with the population here is difficult (G42, 25:24, Nov 22, Kangemi).

This demographic reality was continuously supported during interviews. Most individuals living in the country were of the same tribe. Or, when at locations such as schools, the same two to three tribes. While interviewing individuals in the slums, the tribal background was significantly more varied.

During an elite interview, while discussing the occurrence of transactional sex with a driver near Nakuru, the man emphasized the loss of values from tradition as, in his opinion, contributing to increased risk for TS in the slums, stating: “That is why I think you have so many calamities and all these problems in the city. Because people are living very different from who they really are” (G45, 01:09:26). Questioning a tour guide in his mid-30s during an elite interview in Nakuru about TS, he also emphasized the perspective that the level of community and tradition in rural areas compared to informal settlements plays a part in protecting women, describing:

> In rural areas, [there are] values the parents gave to their children, not only the girls, even boys. Like for me, I'm old enough, but there's something that my mom can't let me do. There's something that we are taught from the time we are young" (G44, 05:15, rural).

Unpacking this, he outlined:

> A man who stays in [a] rural area is more discreet than a person living in [an] urban area... In urban areas, they don't have those barriers. They are not controlled. But here, there is something that I cannot do when my mom is around...because...she's watching....Because there will be a problem...those are the kind of borders I am telling you we are taught here" (G44, 07:49).

The man, in part, attributed this to the idea that individuals living in urban areas "lose their tribe identity"(G44, 07:49). Also adding that "Girls were not allowed to go out freely unless they were accompanied by their brothers or maybe an elder person...So a girl is more protected mostly in rural areas" (G44, 04:25). He specified this protection is "something that is a tradition, not even religious" (G44, 11:05).

Continuing, he described that in urban areas "you find different tribes staying at the same place" resulting in values "not passed to the young people". He attributed this to his perception that

> Most of the parents...stay in rural areas. So urban areas, [are] just young people, [who] go to stay in Nairobi or maybe other towns. So when they don't have any parents near them, they end up developing bad behavior" (G44, 22:55).

Moreover, he stated: "In rural areas, parents are so protective to girls...When it comes to urban areas...they just move. They are not protected like the rural areas (G44, 03:20).

Additionally, although most rural areas had lower occurrences of TS for menstrual products, they were conversely significantly more likely to practice female genital mutilation (FGM). Although illegal, FGM, which refers to the partial or complete removal of female genitalia, is still frequently practiced, largely in rural areas, as part of tradition. For example, every Massai woman interviewed in Narok during this study had undergone FGM. Especially from a medical perspective, FGM is known as having significant undisputed harmful effects on women, although many such tribes continue to practice it in secret[36]. It is therefore interesting to consider how the influence of tradition has the potential to create negative as well as positive outcomes. Understanding how to effectively advocate for the rights of women involves the integration of various aspects of community and tradition (for instance, in keeping rates of TS down) while leaving objectively harmful practices in the past like FGM.

Parental Negligence

The level of negligence or involvement of parents (or guardians) was a repeated defining theme for whether women and girls engage in TS for menstrual products. One girl noted knowing of a classmate whose father was no longer alive, "her mom works at night so she sleeps with men for pads" (G26, rural). A man interviewed outlined this, stating: "When a girl is not protected, obviously there will be early pregnancies. Or maybe early marriages" (G44, 03:20) He described this way:

[36] Shakirat, Ganiyu O, Muhammad A Alshibshoubi, Eldia Delia, Anam Hamayon, and Ian H Rutkofsky. "" *Cureus*, September 4, 2020. https://doi.org/10.7759/cureus.10250.

> In rural areas, we have parents. Parents are very strict. Parents are always very strict...A girl is not allowed to be out tonight, so by evening, she should be at home. That protects them. So parents...protect girls very much (G44, 02:19, rural).

When asked about the occurrence of TS for menstrual products, a woman in Kitui outlined her perspective that "poverty and parental negligence are the main reasons" (G26, rural).

The reality of the crucial need for parental involvement was exemplified during a home visit to a girl living in the slums of Kangemi, who had recently turned 15 years old. While her story was translated sentence by sentence, she cared for her newborn. She explained how not having a safe relationship with her mother and not feeling comfortable asking her father for menstrual products led her to engage in TS with her boyfriend for menstrual products, becoming pregnant. The translator told this girl's story:

> She was in school...She used to stay with her biological mum. Her biological mom didn't love her so much, she had a favorite kid but [she was] not [the] favorite. So her father loved her, that is what was creating hatred between her and her mother. It got to the point where if she needed things she asked [her] dad. It came to [the] point [where it was] even shameful even to ask for [a] sanitary towel from my dad. That is how I met the father of my child.

Continuing, she narrated:

> I came and got pregnant with my body. [...] My pregnancy drove me crazy. When I was in school, I was missed, [I] would faint. My dad said if you know you're pregnant you can't stay in my house. So I packed my things and left.

Ending her story, the girl expressed: "The father of my child [...] when we found [out] I was pregnant he stopped supporting me" (G41, slum). The story of this girl is repeated in the experiences of many women.

To decrease the risks of women and girls engaging in TS, women from DREAM outlined several strategies:

> The best preventative for a girl so she does not feel like she needs to engage or should engage in [TS] is education and parental gap. Making sure she feels comfortable with her parents...Educating her and educating the family. That...[menstruation] is not something to be embarrassed about (G42, 30:43. Rural, Kangemi).

One woman emphasized the importance of teaching individuals: "It's not a shame to have menses. It is not a shame to try and ask for [a] sanitary pad. We should not be ashamed just to come to you and just say, I really need some sanitary pad[s] (G42, 29:14. Rural). Describing how to accomplish this she outlined: "We start with just one girl at a time" (G42, 30:43). She, along with a significant number of women suggested men must and should be included in conversations surrounding menstruation, to decrease stigma surrounding menstruation. Specifically, women highlighted that there should be menstrual health education to both males and females in school, not separating the two genders entirely during sex education. Emphasizing this, a woman stated "Even young men should be educated" referring to them as "not understanding of issues" (G26, rural), with women in the focus group agreeing with her, adding that employers "Should be more understanding" (G26, rural).

Gendered Difference in Perspective of Transactional Sex

Although only six men were officially interviewed, as opposed to 281 women, it appeared significant there was often a gendered contrast in how transactional sex was first addressed. Questioning

men on the likelihood and occurrence of TS, men typically first underscored TS as occurring for reasons other than necessity, a sentiment that was mentioned only three or four times by women. Men verbalized a perspective that appeared to often dismiss the occurrence of TS, defining it as motivated by greed. Discussing this perspective, the guide described: "Girls, they love money so much...They love money, so they end up engaging themselves in those sexual practices. Because they are mad, they need to be done. They are to be done, expensive hair to be done" (G44, 26:27, rural). When first discussing the occurrence of TS, the guide mentioned it as a means for individuals to: "maybe getting their hair done or maybe being taken for a meal. Others find young men or old men paying rent for young girls. They are given those presents" (G44, 00:45, rural). He highlighted "They want [an] expensive phone...The...peer pressure, that madness. That's what is causing such things" (G44, 26:27, rural). Emphasizing "peer pressure is causing that problem" and TS is "not solely for poverty", he described that in "urban areas...[on] Friday, maybe a girl wants to be taken out, so you will find herself doing those things because you want to be taken out. (G44, 26:27, rural). Although the occurrence of TS is likely impacted by peer pressure and heightened consumerism in a globalized world, focusing solely on the occurrence of TS outside of necessity dismisses an entire empirically recognized category of TS: to fulfill basic needs.

During a focus group with four men from the community from which nearly every woman interviewed described the occurrence of TS for basic needs as a reality of poverty leading to early pregnancies, men appeared less cognizant of this occurrence. When first questioned on TS, men emphasized a lack of impulse control on the part of girls: "When we have the early pregnancies, mostly at an early stage, the ladies don't know how to control themselves...they end up just doing sex because when you feel something, you just do" (G46, 03:46. Slum, Kanguari). They defined early pregnancies as "around 14, 15" (G46, 03:37). During this same conversation, an older man went on to describe risks during a disco matanga, or a funeral celebration:

> mostly this pregnancy comes during to know the disco matanga[37]. Whereby someone died....So the music, people have to come and enjoy themselves during the final night. During that time, that moment...people sneaked... And it's true, I sneaked....So I think that's the moment girls always get pregnant. (G46, 04:30. Slum).

However, the man also noted that:

> The boys have the advantage because she's there alone...Mostly the boy takes advantage, it's not that really easy for a lady...Because...you might be having a crush on a girl, but ... at the moment you have seen her, so you see that you let me grab you the opportunity (G46, 05:14, slum).

These conversations sharply contrasted with women from their communities, who defined the occurrence of transactional sex as the means many girls use to obtain menstrual products. Although a significantly smaller proportion of research participants, men generally appeared much less cognizant than might be expected of the realities of the occurrence of TS compared to what was expressed by women, taking implications less seriously.

Potential Ineffectiveness of Free Condoms Compared to Menstrual Products

[37] Carolyne Njue, Helene ACM Voeten, and Pieter Remes, "Disco Funerals: A Risk Situation for HIV Infection among Youth in Kisumu, Kenya," *AIDS* 23, no. 4 (February 20, 2009): 505–9, https://doi.org/10.1097/qad.0b013e32832605d0.

When discussing how free condoms are provided by the government, most women stated that free pads would be significantly more effective in helping women. Women described a stigma present, especially in informal settlements, against using condoms. A woman in Korogocho said “Husbands don't want to use [protection] sometimes” (G28, slum). Another woman in Kawangware emphasized this stigma, stating “Nowadays men don't use condoms, only a few”. Adding “[She] doesn’t think men can't afford the condom, they are capable of affording it”. Rather, she described not using a condom as a method a man might use with a partner “to test that girl” and as a means of “taking advantage of girls just to see how simple you are”. Additionally, she outlined often “the girl will end up agreeing for her to be safe”, because “If you resist, depending on the place you are why in most cases will hear of cases like someone was found dead”. Or if not that and they have

> gone to [a] hotel...and the girl rejects [the] boy, then the boy will decide to leave the girl there without paying. The girl is then in trouble. [She] will ... probably have to clean the hotel or end up being used by other workers at the same place (G35, slum).

Asking if they believe the government should provide free pads, every woman interviewed agreed. One group yelled this response, a woman then expressed “Having a period is not a choice. Having free condoms is negative” and is “not useful compared to pads" (G1). A few women suggested free condoms had a negative effect for women, empowering men to “take advantage [of women] because they are available and free” (G35, slum). Some women described that the use of condoms might primarily serve to protect the interests of men, while free period products might increase the protection of women: “The government considers...HIV more than...not wanted pregnancies, they don't care about periods because [they] don’t think it's their business”. But, suggested individuals they “start sex drive at [the] same time as [their] period, so [the government] should consider [periods] (G26, rural). A woman expressed she was “Confused as to why condoms availability they can afford condoms (G27, rural). A different woman outlined: “Pads are much more effective. Only the pads. They have free condoms in public schools but should also give free pads to women. [It] would help prevent pregnancies or STDs” (G34, slum). When asking women if they believed free pads would decrease the likelihood of child pregnancies and STDs, 98% agreed or strongly agreed they believed free menstrual products would. This overwhelming consensus is significant in emphasizing the realities women face that are inadequately addressed and may be unwittingly exacerbated by the prevalence of condoms.

Discussion

This research has explored the menstrual experience of women and girls in different regions of Kenya, focusing on the intersection of menstruation, period poverty, and transactional sex (TS) for menstrual hygiene products. In short, this study underscores the significant obstacles to menstrual equity. High levels of shame and taboo surrounding menstruation amplify the repercussions of individuals failing to have access to menstrual products and systemic inequities, leading to decreased access to educational and social opportunities.

Additionally, the study underscores a critical intersection between menstrual equity and the occurrence of transactional sex (TS), which is empirically associated with a significantly increased risk for HIV and AIDS. As cited earlier in this paper, women aged 15-24 have more than double the risk of contracting HIV and AIDS compared to their male peers, which has a sobering alignment with the most

at-risk demographic outlined during this analysis[38]. This study evaluates the deeply troubling prevalence of TS in the context of menstruation, outlining significant factors of vulnerability for women and girls. Found at the root to be a reality of poverty, factors including age, parental presence, community and tradition, and regional demographics, can strongly influence the likelihood of individuals falling into TS as a means to access necessities.

The sharply contrasting perspective of men on the prevalence of TS for menstrual hygiene products exemplifies how existing policies, created with research that empirically focuses on men while muting the voices of women, enable an environment that frequently fails to create policies that protect and advocate for women. The systematic underrepresentation of women's voices in scientific literature, especially on topics intrinsically related to them, highlights a significant ethical concern. This disregard has serious implications, contributing to the inadequacy of solutions for addressing menstrual equity and associated risks. Stigma related to menstruation is no justification for the systemic disregard for its impact on the lives of women globally. Despite the significant impact of period poverty, it remains chronically under-researched, indicating a gap in global health research and policy development.

The factors discussed may simply be touching the surface of the complexity of the menstrual experience of women and girls in Kenya. This study took place over just a couple weeks, further research is needed that can occur over a longer timeframe. Additional research is needed in other locations internationally where there is any occurrence of poverty to gain a larger comprehension of the realities of menstrual equity and the occurrence of TS for menstrual hygiene products, to inform policymakers, and to reconsider policies to address the occurrence of poverty. The effects of period poverty are likely felt internationally, the scope of which is yet to be grasped.

The intersection of menstrual equity, transactional sex for menstrual products, and the broader context of gender inequities in health and socio-economic systems calls for an urgent, multi-faceted, and inclusive approach to public health and social justice. Empowering women and girls, addressing systemic barriers, and ensuring gender-sensitive policies and interventions are essential steps towards achieving greater equity and well-being for all individuals in society.

Larger implications

Across the globe, women frequently bear the cost of poverty. This is particularly true for women in the middle of their lives - according to the World Bank, women and girls of reproductive age are significantly more likely to live below the poverty line compared to their male peers [39]. In areas of conflict, women are 7.7 times more likely than men to live in extreme poverty[40]. The results of this study imply inequity surrounding menstruation might significantly contribute to this statistic. The analysis underscores the global and multifaceted impact of menstrual inequity, transcending beyond the individual

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[38]Stoebenau et al., "Revisiting the Understanding of 'Transactional Sex,'" 186–97.

[39] Munoz Boudet, Ana Maria, Paola Buitrago, Benedicte Leroy De La Briere, David Newhouse, Eliana Rubiano Matulevich, Kinnon Scott, and Pablo Suarez-Becerra. "Gender Differences in Poverty and Household Composition through the Life-Cycle: A Global Perspective." *Policy Research Working Paper* 8360 (March 2018). https://doi.org/10.1596/1813-9450-8360.

[40] 2024, 8 March. "1 in Every 10 Women in the World Lives in Extreme Poverty." UN Women – Headquarters, March 8, 2024. https://www.unwomen.org/en/news-stories/press-release/2024/03/1-in-every-10-women-in-the-world-lives-in-extreme-poverty#:~:text=increasingly%20heavy%20burden%3A-,1%20in%20every%2010%20women%20in%20the%20world%20lives%20in,to%20live%20in%20extreme%20poverty.

level to highlight systemic issues that affect communities and societies at large. Built on studies that empirically dismiss the experiences of women it is clear existing legislation must be updated to advocate for the rights and needs of individuals that form the basis for society. Many methods for aid and poverty alleviation may not have adequately comprehended effects on women.

Efforts to alleviate poverty and improve health outcomes for women should address the root causes of inequity, and ensure women have a voice in the creation of solutions that affect their lives. The inadequacy of existing legislation to fully address the needs and rights of women, as highlighted by the disregard for women's experiences in many studies, calls for a comprehensive review and update of laws and policies. Advocacy for menstrual equity and gender-sensitive health policies must be grounded in empirical evidence that takes into account the diverse experiences and needs of women and girls. Women's voices in all arenas must be amplified to enable systemic change. As described by Madeleine K. Albright “Participation in politics is the way we end violence against women." [41]. Gloria Orwoba, a Kenyan senator has exemplified this reality in bringing to light issues including menstruation especially affecting women. Currently, Orwoba is working towards “drafting a bill calling on the Kenyan government to provide an annual supply of sanitary pads to all schoolgirls and incarcerated women.” [42]

The UN’s Sustainable Development Goals, created to eradicate poverty by 2030, fail to mention period poverty, menstruation, or any of their synonyms[43]. As described by the UN, addressing issues affecting women are essential: “the empowerment of women and girls is not just a goal in itself, but a key to sustainable development, economic growth, and peace and security” [44]. Menstrual equity is a basic right and must be treated as such.

Continued education is needed on menstruation for all individuals, decreasing the shame and stigma associated with menstruation. A UN estimate details that if education, fair and equal wages, family planning, and social benefits were prioritized by governments over 100 million girls and women could escape poverty by 2035, increasing domestic GDP by 20 percent through all regions. However, despite this, gender equity programs comprise only 4 percent of official development assistance [45]. Individuals working in this sector have an ethical and professional burden to ensure the well-being of women is supported in poverty alleviation efforts. However, menstrual products are not recognized as a basic necessity by all governments. This is exemplified in that menstrual products are still taxed in most countries, including wealthy democracies, like the United States. Although the Kenyan government is one

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[41] “Gender, Women and Democracy.” National Democratic Institute, July 17, 2023. https://www.ndi.org/what-we-do/gender-women-and-democracy.

[42] Musambi, Evelyne. “With Stained Pants, Kenyan Senator Gloria Orwoba Fights Menstruation Taboo.” PBS, March 8, 2023. https://www.pbs.org/newshour/world/with-stained-pants-kenyan-senator-gloria-orwoba-fights-menstruation-taboo.

[43] “Our Common Agenda and the Sustainable Development Goals (SDGs).” United Nations. Accessed March 19, 2024. https://www.un.org/en/common-agenda/sustainable-development-goals.

[44] “‘Standing up for Women’s Rights and Development Is Standing up for the Global Good,’ Deputy Secretary-General Tells Women’s Commission at Session’s Opening | Meetings Coverage and Press Releases.” United Nations. Accessed March 25, 2024. https://press.un.org/en/2010/wom1775.doc.htm.

[45] 2024, 8 March. “1 in Every 10 Women in the World Lives in Extreme Poverty.” UN Women – Headquarters, March 8, 2024. https://www.unwomen.org/en/news-stories/press-release/2024/03/1-in-every-10-women-in-the-world-lives-in-extreme-poverty#:~:text=increasingly%20heavy%20burden%3A-,1%20in%20every%2010%20women%20in%20the%20world%20lives%20in,to%20live%20in%20extreme%20poverty.

of the few nations that does not tax menstrual products as of 2004, as illustrated in this study simply removing taxes is insufficient to make MHM products accessible to women and girls[46].

Increased free menstrual hygiene products should be available in places including schools. As described during this analysis, access to menstrual products may substantially empower women and girls, decreasing the occurrence of TS and thus decreasing rates of HIV and AIDS, sexual violence, and child pregnancies. In turn, this may increase the level of access of women and girls to education, breaking cycles of poverty, and substantially improving the lives of women and girls and subsequently all of society. As described during a UN-published analysis, addressing the root cause for TS is necessary to create meaningful change: "The emphasis should be placed not on eliminating transactional sex but rather on identifying the conditions and circumstances in which transactional sex imparts risk" [47]. Free access to products required for menstrual hygiene management is not just a "freebie" but a means to enable systemic change. The occurrence of TS only underscores the experiences of menstruating individuals.

This study's implications extend far beyond the specific context of Kenya, offering insights into the global challenge of menstrual equity and its intersections with poverty, health, and gender inequity. It calls for an integrated approach that addresses the root causes of inequity, ensures women have a voice in creating solutions, and promotes comprehensive policies and community initiatives to support menstrual health and equity worldwide. Existing national and international legislation must recognize the reality of systemic issues relating to poverty as potentially intrinsically related and thus resolved via the empowerment of women.

[46] Diana Baptista, Nita Bhalla, and Lin Taylor, How the Fight Against the Tampon Tax Failed to fix Period Poverty, May 24, 2023, https://www.reuters.com/article/women-health-periods/long-read-how-the-fight-against-the-tampon-tax-failed-to-fix-period-poverty-idINL1N34I248/.

[47] Joint United Nations Programme on HIV/AIDS and STRIVE, *Transactional Sex and HIV Risk: From Analysis to Action* (Geneva: Joint United Nations Programme on HIV/AIDS, 2018). https://www.unaids.org/sites/default/files/media_asset/transactional-sex-and-hiv-risk_en.pdf.

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