



Menarche and the Experience of First Menstruation Among Girls in Jordan: Timing, Needs and Required Responses

2025

Abstract

[Draw your reader in with an engaging abstract. It is typically a short summary of the document.
When you're ready to add your content, just click here and start typing.]



Menarche and the Experience of First Menstruation Among Girls in Jordan: Timing, Needs and Required Responses

I. Introduction

The preparation of this paper came within the mandate of the Higher population Council's objectives to improve the sexual and reproductive health of the population and in support of achieving the goal of the Jordanian National Strategy for Reproductive and Sexual Health 2020-2030, which is the comprehensive availability of integrated reproductive and sexual health services and information to contribute to achieving the well-being of individuals and families in Jordan, as well as in support of achieving the third goal of the Sustainable Development Agenda 2030 which aims to ensure that everyone enjoys healthy lifestyles and well-being at all ages. Specifically, target 3-7 "ensure universal access to sexual and reproductive health-care services", including for family planning, information and education, and the integration of reproductive health into national strategies and programs.

This paper is not about the biological aspects of menarche rather than a review of global and national data and research findings on the timing of first menstruation and its hygiene management as well as measures that parents and health and education service providers may adopt to address the needs and rights of menstruating girls, to make this natural process safe and healthy for every girl, everywhere, and the required government support in terms of providing the necessary supplies at reasonable prices, especially for the vulnerable groups.

II. Timing of Menarche

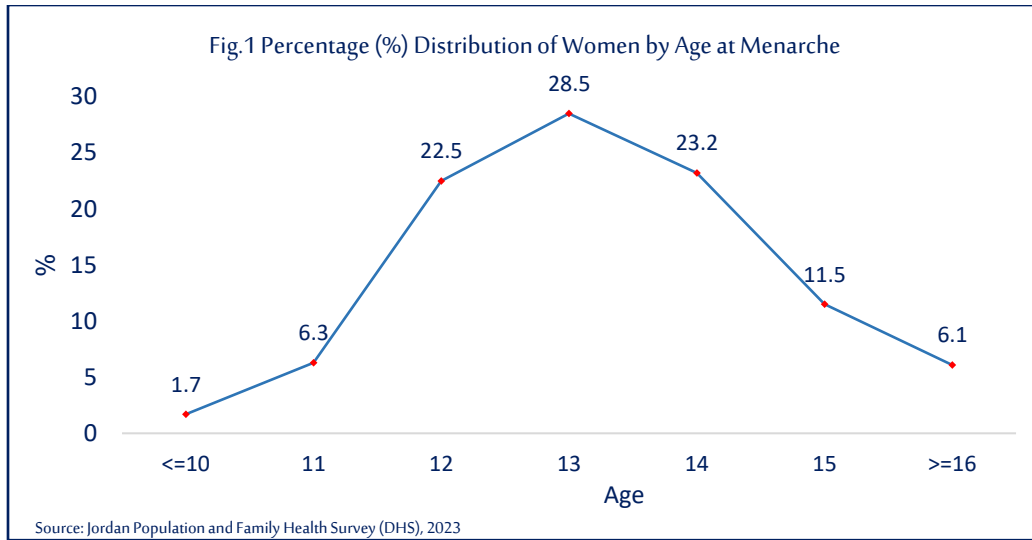
Menarche refers to first-time monthly cycle or menstruating. The onset of menarche delineates the beginning of sexual maturity in adolescent girls, marking an important milestone during puberty when girls become capable of becoming pregnant. Menarche is an important element of the sexual and reproductive health and rights (SRHR) which are an essential part of universal health coverage (UHC). Countries, like Jordan, moving towards UHC need to consider how the SRHR needs of their population are met throughout the life course, from infancy and childhood through puberty and adolescence and into adulthood and old age¹.

Although every girl's body has its own biological schedule, menarche usually begins between ages 12 and 13 and it may happen at a younger or older age. As of 2019, the Demographic and Health Survey (DHS-8) woman's questionnaire standardly started to ask women about age at first menstruation². Jordan last DHS questionnaire of 2023 included a question to women in reproductive age on how old they were when they had their first menstrual period. The results in the bell-shaped Fig. 1, show that by age 13 around 60% of women in Jordan have had their first-time menstruation, with 8% by age 11 or younger and 6% at age 16 or older³.

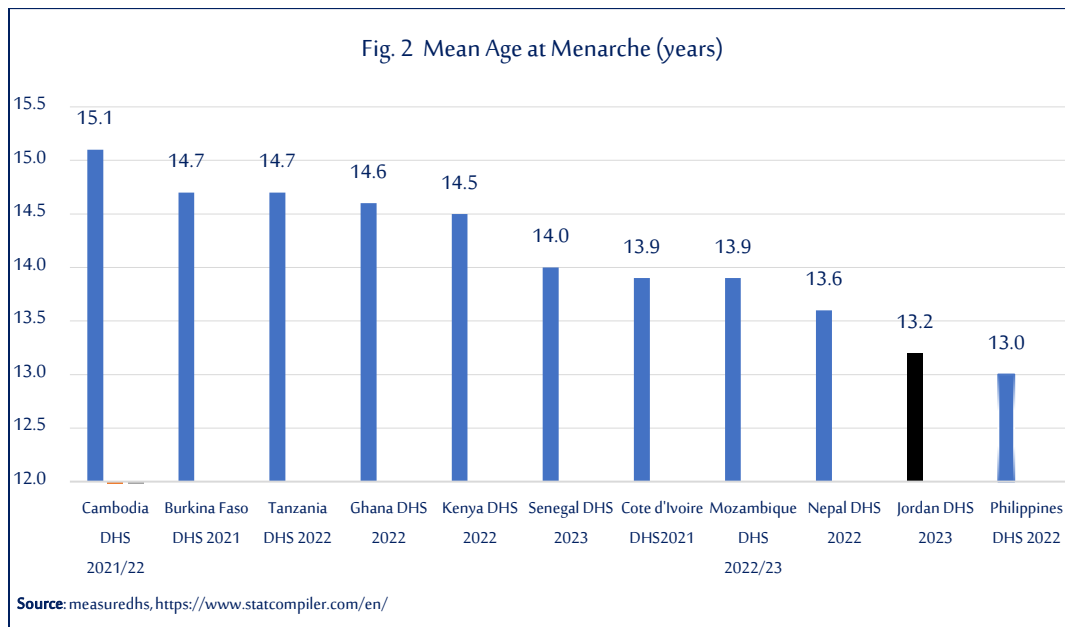
¹ UNFPA, SEXUAL AND REPRODUCTIVE HEALTH AND RIGHTS: AN ESSENTIAL ELEMENT OF UNIVERSAL HEALTH COVERAGE Background document for the Nairobi summit on ICPD25 – Accelerating the promise, 2019.

² <https://blog.dhsprogram.com/dhs-8-questionnaires/>

³ Jordan Department of Statistics, Results of Jordan 2023 Demographic and Health Survey (JPFHS).



The mean age at menarche can also be calculated from DHS data on age at menarche. Fig. 2 shows the average age at first menstruation among women aged 15-49 years in countries that have recently conducted a DHS survey⁴. The lowest age is in the Philippines (13.0 years), compared to 13.2 years in Jordan⁵, while the highest is 15.1 years in Cambodia.



⁴ <https://www.statcompiler.com/en/>

⁵ Jordan Department of Statistics, Results of Jordan 2023 Demographic and Health Survey.

III. Early Menarche and Early Menopause

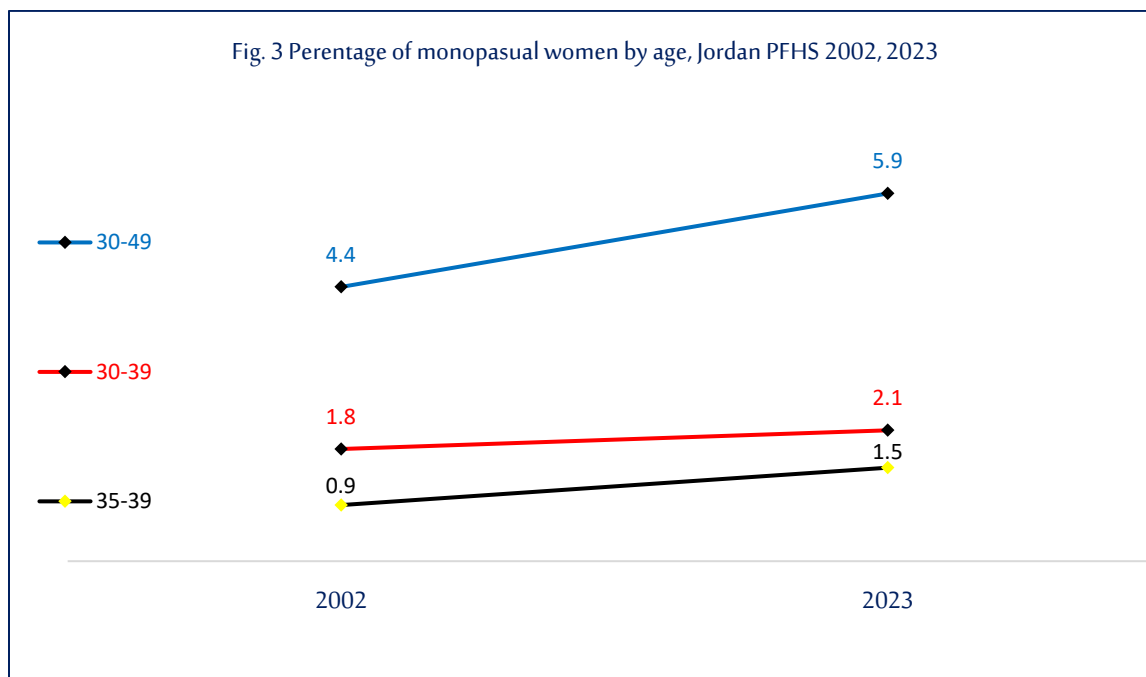
Two questions need to be addressed here. The first, is whether the onset of menarche is becoming earlier in Jordan among the new generation, i.e., experienced earlier by younger women? The statistics in Table (1) show that the mean age at menarche is the lowest among women in the youngest age group 15-19 years (12.9 years) compared to 13.2-13.3 years for all other older age groups. Additionally, 63.4% of women 15-19 years have had their menarche by age 13 years compared with 59% of all women age groups between 20-49 years. Moreover, while 16.3% of women aged 15-19 years have had their menarche by age 11 years, only 7.1% of older women 45-49 years had. Overall, the youngest age group has earlier menarche than all older age groups. Which may indicate a change in the incidence of menarche at earlier ages among the new generations compared to older generations and this result calls for research on the factors behind an earlier menarche.

Table (1) Percent distribution of women age 15-49 by age at menarche and mean age at menarche by current age- Jordan DHS 2023								
Current age	Age at menarche							Mean age at menarche
	<10	11	12	13	14	15	≥16	
15-19	5.3	11	20.1	27.0	27.9	4.4	4.2	12.9
20-24	0.7	7.1	25.9	27.6	23.0	9.9	5.9	13.2
25-29	1.9	6.7	24.0	29.0	21.6	10.4	6.4	13.3
30-34	1.6	7.6	20.3	29.7	21.3	12.6	6.7	13.3
35-39	2.3	4.5	21.9	28.1	24.4	11.1	7.5	13.3
40-44	1.7	6.4	21.5	29.2	24.4	12.3	4.4	13.2
45-49	1.3	5.8	23.9	27.6	23.5	11.8	5.9	13.3
Total	1.7	6.3	22.5	28.5	23.2	11.5	6.1	13.3

The second question is concerned with the relationship between time of menarche and time of menopause. A study tried to answer this question on whether parity and the timing of menarche are associated with premature and early natural menopause. The study found that early menarche (≤ 11 years) is a risk factor for both premature menopause (final menstrual period < 40 years) and early menopause (final menstrual period 40–44 years), a risk that is amplified for nulliparous women⁶.

⁶ Gita D. Mishra, Nirmala Pandeya, Annette J. Dobson, Hsin-Fang Chung, Debra Anderson, Diana Kuh, Sven Sandin, Graham G. Giles, Fiona Bruinsma, Kunihiro Hayashi, Jung Su Lee, Hideki Mizunuma, Janet E. Cade, Victoria Burley, Darren C. Greenwood, Alissa Goodman, Mette Kildeveald Simonsen,

In Jordan, data from the Population and Family Health Surveys for the years 2002-2023, as shown in Fig. (3) indicate a trend toward an increase in menopause at younger ages. This may suggest a potential relationship between early onset of menstruation and early menopause. However, in-depth studies and analyses are required to confirm this correlation. This issue will be addressed in a separate paper on menopause scheduled on HPC research agenda for next year



IV. Harmful Beliefs And Practices Associated With Menarche⁷

In some region of the world, young feminist activists have been leading grass-root campaigns and initiatives, including in social media, to challenge stigma, taboos, gender inequality and period poverty⁸. These activists are significantly contributing to making clear that menstrual experiences of women and girls are not homogenous but shaped by intersecting factors such as age, gender, race, disability, economic, social, migration and other status and contexts, be it in peace, conflict, disaster or within a health crisis where women and girls may lose access to SRH services.

Hans-Olov Adami, Panayotes Demakakos, and Elisabete Weiderpass. Early menarche, nulliparity and the risk for premature and early natural menopause. *Human Reproduction*, Vol.32, No.3 pp. 679–686, 2017.

⁷ Shah SF, Punjani NS, Rizvi SN, Sheikh SS, Jan R. Knowledge, Attitudes, and Practices Regarding Menstrual Hygiene among Girls in Ghizer, Gilgit, Pakistan. *Int J Environ Res Public Health*. 2023 Jul 21;20(14):6424. doi: 10.3390/ijerph20146424. PMID: 37510656; PMCID: PMC10378792; Swenson, I., & Havens, B. (1987). Menarche and Menstruation: A review of the Literature. *Journal of Community Health Nursing*, 4(4), 199–210. https://doi.org/10.1207/s15327655jchn0404_3

⁸ Period poverty describes the struggle many low-income women and girls face while trying to afford menstrual products. The term also refers to the increased economic vulnerability women and girls face due the financial burden posed by menstrual supplies. These include not only menstrual pads and tampons, but also related costs such as pain medication and underwear. Source: <https://www.unfpa.org/menstruationfaq#Period%20Poverty>

While we should celebrate these achievements, we still have a long way to go to achieve menstrual health for all concerned. Around the world, every month, two billion girls and women menstruate, but gender inequality, poverty and other forms of marginalization mean the world has still not adapted to become period-friendly, and in a humanitarian crisis, these inequities are greatly exacerbated⁹. Women and girls who menstruate continue to face barriers in the realization of their menstrual health that are deeply rooted in stigma and harmful stereotypes regarding menstruation, reinforcing patriarchal and discriminatory systems and societies, and resulting in denial of their human rights and further gender inequality¹⁰.

For instance, the stigmatization of menstruation as something shameful and in need to be hidden often results in women and girls experiencing menstruation negatively, impacting their ability to make informed choices on aspects related to their menstrual health, from seeking to learn more about their menstrual cycle and accessing sexual and reproductive health services, to understanding the use of menstrual products^{11,12}. The lack of adequate water, toilet facilities and sanitation in schools meeting the needs of menstruating girls affect their access to and attendance at school. Prohibitions to attend religious gatherings and requirements of isolation continue to impact, in many contexts, women and girls' ability and right to make free choices about their participation in cultural, social, economic and public life.

Likewise, the harmful belief and practice, in many societies, that a girl is ready for marriage after her first menstrual cycle, exposes them to a heightened risk of child, early and forced marriage, sexual violence and early and unintended pregnancies, jeopardizing their education and economic opportunities, violating their rights and putting their lives in danger. Also Bodily autonomy, nondiscrimination and gender equality are beneficial to everyone, not just women and girls, there are economic gains such as effective treatment of premenstrual syndrome could potentially contribute \$115 billion to the global economy, for example, while failing to meet the menstruation needs of girls can lead to school discontinuation, limited employment opportunities, and a cycle of intergenerational poverty¹³. Period poverty is not only an economic issue, but a social and political one as well. For instance, some advocates have called for menstruation products to be taxation exempt. Such efforts in India have resulted in the elimination of tax on menstrual pads and tampons¹⁴.

V. Management of Menstrual Hygiene and Barriers

The World Bank estimates that at least 500 million women and girls globally lack access to menstrual products and adequate facilities for menstrual cycle hygiene management, and a similar number lacks the economic resources to cover the cost menstrual hygiene products. To effectively manage their menstruation, girls and women require access to water, sanitation and hygiene

⁹ <https://www.unfpa.org/news/5-reasons-why-menstruation-support-critical-humanitarian-crisis>

¹⁰ Drzewiecki, J., Jin, R., Concina, G., & the JRS Global Education Team (28 May 2024). The State of Menstrual Health & Hygiene (MHH) in JRS – 2024 report. Jesuit Refugee Service.

¹¹ van Lonkhuijzen, R. M., Garcia, F. K., & Wagemakers, A. (2022). The Stigma Surrounding Menstruation: Attitudes and Practices Regarding Menstruation and Sexual Activity During Menstruation. *Women's Reproductive Health*, 10(3), 364–384. <https://doi.org/10.1080/23293691.2022.2124041>

¹² https://plan-international.org/srhr/menstruation/?gad_source=1&gclid=Cj0KCQjw8--2BhCHARIsAF_w1gwwy8QrrD_9_KtbjqjGP7V8VoB69mcC6EDdp7YEtRfddv7Bq1ZqpEaAvbvEALw_wcB

¹³ <https://www.unfpa.org/news/5-reasons-why-menstruation-support-critical-humanitarian-crisis>

¹⁴ <https://www.unfpa.org/menstruationfaq#Period%20Poverty>

facilities, affordable and appropriate menstrual hygiene materials, information on good practices, and a supportive environment where they can manage menstruation without embarrassment or stigma¹⁵.

In the context of the SDGs, a first set of indicators to monitor progress on menstrual health and hygiene globally were recently introduced by the World Health Organization and UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (WASH). Among the universally agreed human rights¹⁶ that can be undermined by women's and girls' treatment during menstruation is the right to health. Women and girls may experience negative health consequences when they lack the supplies and facilities to manage their menstrual health. Stigma associated with menstruation can also prevent women and girls from seeking treatment for menstruation-related disorders or pain, adversely affecting their enjoyment of the highest attainable standard of health and well-being¹⁷.

However, menstrual health is key in ensuring that individuals have control over their bodies and can make informed decisions about their reproductive health. Globally the estimations show that over the lifetime of a person who menstruates, they could easily spend three to eight years menstruating, during which they might face menstruation-related exclusion, neglect or discrimination¹⁸.

In the Arab region, gender inequality, discriminatory social norms, cultural taboos, poverty, and lack of basic services affect girls' and women's lives and their ability to meet their menstrual health and hygiene needs in a dignified manner. Jordan is no exception to this, with widespread challenges that women and girls face in accessing quality sanitary products, stigma-free information on menstruation and adequate WASH facilities. [Girls with disabilities](#) are at a further disadvantage in terms of accessing menstrual products and healthcare services - their reproductive health is frequently deprioritized within their households, at times resorting to extreme solutions such as hysterectomies to relieve parents, often left without information and support, from the concerns of having to deal with their daughters' periods.

Recent research on Jordan adolescents revealed that menstrual management is a challenge for many girls and young women and menstruation affects the daily activities of more than half (56%) of them. It found that more than half of them felt embarrassed (39%) or afraid (14%) to ask family members to buy menstrual supplies on their behalf due to cost and shame. About three-fifths (57%) of adolescent girls reported that their schools had adequate menstrual management facilities; while the rest of the girls indicated that there are very few sanitary facilities and waste disposal bins, the lack of adequate privacy, and the lack of water. Girls with disabilities reported that they were least able to access school facilities (44%), sometimes due to the lack of health facilities equipped for people with special needs and sometimes due to the lack of teaching assistants who could support them¹⁹.

¹⁵ JENNIFER J. SARA, CAREN GROWN, SARAH KEENER, GAIA HATZFELDT & GLORIA KUOH. Menstrual health and hygiene empower women and girls: How to ensure we get it right, World Bank Blog, MAY 28, 2021.

¹⁶ The universally agreed human rights that can be undermined by women's and girls' treatment during menstruation includes : The right to health, The right to education, The right to work, The right to non-discrimination and gender equality, The right to water and sanitation.

¹⁷ UNFPA, Menstruation and human rights - Frequently asked questions, May 2022.

¹⁸ <https://www.unfpa.org/menstruationfaq#Period%20Poverty>

¹⁹ Presler-Marshall, E., Oakley, E., Jones, N., Luckenbill, S., Alheiwidi, S., Baird, S., ... and Alshammari, F. (2023) 'Sexual and reproductive health, information and services: opportunities and challenges for marginalised young people in Jordan'. Policy brief. London: Gender and Adolescence: Global Evidence.

Another research conducted in 2022 in Jordan by UNFPA titled “Period Poverty- Menstrual Hygiene Management and Access in Jordan” showed that 90% of the participants agreed that puberty as an experience was difficult, embarrassing, frightening, and shocking. Most participating mothers confirmed that they try to educate their daughters and sisters at the time of puberty and share their experiences to make things easier for them. Most of the participants confirmed that they shared the fact that they reached puberty and details about their menstrual cycle with their mothers first, followed by grandmothers, older sisters, and then female relatives and friends, and 95% of participants confirmed that they do not feel comfortable declaring that they are going through the menstrual cycle. Some pretend to continue exercising their daily activities normally despite the pain and the exhaustion they are feeling while others try to conceal period pain saying they suffer stomach ache or types of pain in other body parts.

At the national level, states have adopted different measures to address menstruation, through the reduction or elimination of taxation of menstrual products, the improvement of women and girls’ access to information and knowledge about menstrual hygiene, support to access quality menstrual products or the introduction of paid menstrual leave for women experiencing painful periods. Few of the DHS-8 surveys asked about menstrual hygiene, specifically materials used during menstruation and whether women [were able to wash and change in privacy and used appropriate materials during their last menstruation²⁰](#). Data users should note that what qualifies as “appropriate materials” may vary depending on the country.

Jordan 2023 DHS asked ever-married women ages 15-49 years whose most recent menstrual period was in the past year about what menstrual hygiene materials such as reusable sanitary pads, disposable sanitary pads, tampons, menstrual cup, cloth, toilet paper, and/or cotton wool they were using. The results show that the majority of Jordanian women use appropriate hygiene materials, i.e., among ever-married women aged 15–49 whose most recent menstrual period was in the past year, only 4% used reusable sanitary pads and 96% used disposable sanitary pads to collect or absorb blood. As for the patterns by background characteristics, the results by governorate show that women in Aqaba (17%), Madaba (14%), Irbid (13%) and the North Region (10%) are most likely to have used reusable sanitary pads. Use of disposable sanitary pads is highest among women in the wealthiest quintile (98%) and lowest among women in the middle wealth quintile (95%), while the differences by age, education and nationality in using disposable pads were very small.

VI. Estimating the Cost of Menstrual Products

The financial situation is the main factor that determines the access of women and girls to menstrual pads of good quality compared to the quantity of consumption. “There are baby diapers that are sold per kilo, we remove their sides and use them. Because my period is heavy and it continues like this for ten days straight, one pack of menstrual pads is not enough and I can’t afford buying more, especially because I also have 3 adolescent girls who also get their period” (Mother of three adolescent girls, 48 years old, Zarqa Governorate). Fifty percent of the participants reported that they use between one and a half to two packs, which may constitute a huge financial burden on the family's income when there is more than one girl who has hit puberty in the house. The price of sanitary pads reached two Jordanian Dinars compared to less than one Jordanian Dinar in the past, depending on the quality of the pad. Some women may resort to using children’s diapers as they are highly absorbent. On the other hand, sanitary pads are not affordable for everyone, which may force women and girls to trade quality for the price. Most women use

²⁰ https://www.statcompiler.com/en/?ucc=&ic=WS_MHYG_W_PRIV&scl=1000&dt=0&pt=0&ss=0&lvlRnk=0&brk=Natural&si=WS_MHYG_W_PRIV&sbv=

poor-quality products, and any savings would be spent on treatments for infections that they suffer due to the poor quality of the product²¹.

Sanitary pads are not affordable for everyone and the household's financial situation is one of the main factors impacting women and girls ability to access good quality products - *"As a mother with four daughters and not being able to provide for their needs I try to give them any piece of fabric, but that made me very sad as I was afraid it would affect their bodies"*, Fatima said. Trading quality for the price is not the only possible implication of period poverty though - in particularly vulnerable situations, like that of Fatima and Aya's family, the economic burden of menstrual health management can have even more extreme implications, like early marriage²². Fatima admitted that, as she could not save enough money to cover the menstrual health needs for her and all her daughters, this contributed to her decision to marry off the eldest two daughters under 18 years old. In addition to the limitations that the husband imposed on the purchase of pads, they also could not take showers as they had neither soap nor the authorization to use the heater to warm up water.

Another aspect of menstruation is the access to hygienic commodities and the cost associated with obtaining such commodities for low-income families. To investigate this issue in Jordan, we searched the prices of menstruation brands of pads available in the Jordanian market. The brands vary by number of pads and prices; therefore, we calculated the average price per pad in order to estimate the cost incurred by the female user. Moreover, to estimate the monthly and annual cost, we have assumed an average number of menstruating days per cycle and the average number of pads needed every day. Table (2) below shows the results of this analysis. On the average, the family spends 26 JD on menstruation pads per user annually.

Table (2) Estimation of Annual Cost of Menstruation Pads Per One User in Jordan

Average Number of Menstruating Days per Month	Average Number of Daily Pads Required	Total Number of Pads Per Month	Number of Monthly Cycles Per Year	Total Number of Pads Per Year	Average Market Price Per Pad (JD)	Total Annual Cost Per User (JD)
4	5	20	13	260	0.10	26*
* Exchange rate of JD against the USD is 1.41, thus the total annual cost per user is 37 USD.						

The estimate of the national annual cost of pads for all women is also possible by using available data on number of Jordanian females 10-49 years, % non-amenorrheic by age, no. menstruating by age, % currently pregnant by age, no. of pregnant women by age, no. of non-pregnant women by age, no. of menstrual cycles per year, total annual no. of all women cycles, median postpartum amenorrheic months, no. of postpartum amenorrheic months, total net annual no. of women cycles, av. no. of menstruation days, av. no. of pads per day, total annual no. of all women pads, and average annual cost of pad. However, the result of these calculation is not shown here, but statistics drawn from recent National Account show that Jordan spent 25.3 million JD on female hygiene diapers in the year, which constitute 0.16% of total national spending.

VII. What Need To Be Done

²¹ https://jordan.unfpa.org/sites/default/files/pub-pdf/period_poverty_policy_paper_en.pdf

²² <https://jordan.unfpa.org/en/news/menstrual-health-human-right-reality-period-poverty-jordan>.

Menstrual health is an integral part of sexual and reproductive health and rights. It is an important determinant for the realization of all human rights of women and girls in all their diversity, the achievement of gender equality and the Sustainable Development Goals. To reach these goals, it is critical that policy makers, practitioners and other relevant actors adopt a comprehensive, multi-sectoral and full life cycle approach to menstrual health, grounded in human rights.

In Jordan UNFPA strives to improve menstrual health for the most vulnerable refugees and host communities. Aya [1²³] is a 14 years old Jordanian girl living in Amman who attended an [initiative launched in 2022 in the capital city, as well as Madaba and Karak](#)²⁴, coupling awareness raising sessions on physical changes during puberty and menstruation with cash assistance. In partnership with the mobile company Umniah, UNFPA's implementing partner loaded electronic bracelets with small amounts and distributed them to the sessions' participants to be used in shops for the purchase of menstrual products. Importantly, such an approach requires the implementation of a wide range of international human rights obligations by states, in particular those related to²⁵:

- Further analysis of timing of menarche by governorate and nationality needs to be carried out.
- Addressing the stigma, harmful stereotypes and gender-based discriminatory social norms and practices impacting the menstrual experiences of women and girls, including groups of women and girls facing multiple and intersecting forms of discrimination.
- Creating an enabling environment where women and girls in all their diversity are empowered to exercise their autonomy to make informed choices about their lives and bodies, including their menstrual health, free of stigma, violence and discrimination.
- Ensuring women and girls have access to justice and remedies for violations of their sexual and reproductive health and rights, including rights related to menstrual health.
- Working with girls and boys, women and men to break down taboos and barriers when it comes to menstrual health, training teachers and health staff to run awareness-raising sessions about periods, supporting girls and young women to access quality menstrual products that meets their needs, and working with schools to construct girl-friendly latrines, with areas to wash and change menstrual pads.

Additional actions may include:

- Promoting reproductive health concepts and information, including menstrual cycle issues, within educational curricula and extracurricular activities, and activating the role of school health directorates in both the Ministry of Health and the Ministry of Education;
- Strengthening dialogue between parents and their adolescent children in the field of reproductive and sexual health issues;
- Raising the awareness of families of girls with disabilities on ways to deal with menstruation;

²³ UNFPA Jordan | Menstrual Health as a Human Right - The Reality of Period Poverty in Jordan.

²⁴ <https://jordan.unfpa.org/en/publications/menstrual-hygiene-management-monitoring-analysis-report>.

²⁵ https://plan-international.org/srhr/menstruation/?gad_source=1&gclid=Cj0KCQjw8--

2BhCHARIsAF_w1gwwy8QrrD_9_KtbjqjGP7V8VoB69mcC6EDdp7YErtfddV7Bq1ZqpEaAvbvEALw_wcB

- The possibility of the government supporting menstrual management supplies by reducing the taxes imposed on them as medical supplies to make them available at reasonable prices for everyone;
- Supporting poor families through National Aid Fund programs, taking into account covering the cost of menstrual management supplies when estimating the values of cash aid to beneficiary families;
- Including menstrual management issues within awareness initiatives and programs related to reproductive health implemented by relevant authorities and providing financial support for these programs;
- Strengthening the role of religious and media institutions in raising awareness of reproductive and sexual health issues.