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Menstruation and its effects on women's mobility and social engagement in Afghanistan: insights from the 2022-2023 MICS survey

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Abstract

Background: Menstruation, a natural and vital aspect of women's health, affects millions worldwide. Yet, 30% experience abnormal uterine bleeding and related symptoms like pain, anxiety, and fatigue, profoundly impacting their lives. Cultural stigmas and inadequate menstrual hygiene management further isolate girls and restrict their daily activities.

Methods: Using a multistage sampling design, UNICEF's 2022-23 Afghanistan MICS survey analysed 23,568 households. The study used IBM SPSS version 29.0 to examine women's absenteeism due to menstruation, focusing on age, residence, education, and wealth index. Chi-square tests and odds ratios determined statistical significance.

Results: The study revealed that menstruation greatly affected women's daily routines in Afghanistan. Many women said they had missed social events, work, or school because of their period. The study also established that absenteeism was significantly associated with demography, age, place of residence, education level and wealth index using chi-square tests and odds ratios. The findings revealed that younger women, women from rural settings, and women with low education or low wealth index were more likely to have missed activities due to menstruation. The present study highlights the importance of intervention focused on MHH and reducing school absenteeism among Afghan women.

Conclusion: This study shows that menstruation has a major effect on women and girls' engagement in social, working, and learning activities in Afghanistan. Menstrual health concerns are not just a one-stop issue but involve education, environments, products, and policies. Interventions effectively improve women's quality of life, decrease absenteeism and increase access to education and employment opportunities.

Keywords: *Menstruation, school attendance, employment, menstrual hygiene, education, Afghanistan*

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Evidence in Context

- Menstruation significantly disrupts Afghan women's social, work, and educational activities.
- Absenteeism is linked to age, rural residence, low education, and lower wealth index.
- Younger women, rural residents, and those with less education or wealth are more affected.
- The study highlights the need for targeted menstrual health management interventions.

To view Article

Introduction

Menstruation is a normal biological function among women of reproductive age, but it is still stigmatised and poorly managed across the globe [1]. Even though every woman is a menstruate, the effects menstruation has on their daily lives are different depending on levels of education, access to affordable sanitary products, and even social acceptance. It's a fundamental aspect of reproductive health experienced by many women with variations in the duration and intensity of the menstrual cycle [2].

In the global society, abnormal uterine bleeding affects nearly one in every three women, and the symptoms mentioned above, like pain, fatigue, and anxiety, make it worse [3]. These factors in developing countries result in school and work absenteeism, hence affecting women's personal and career achievement.

The Multiple Indicator Cluster Surveys (MICS) have recently collected data on ladies and girls aged 15-49 years. The surveys show that in Sierra Leone (2017), Ghana (2018), Zimbabwe (2019), The Gambia (2019), and Bangladesh (2019), the rates of absenteeism at school, work, or social activities due to menstruation were 20%, 19%, 16%, 20%, and 8% respectively [4]. Likewise, studies conducted in Nepal, India, and Pakistan also reveal that due to social constraints and minimal knowledge of menstruation, women are bound and cannot come out of the home or engage in daily work. These challenges also go to Afghanistan, where structural and cultural factors are still a major problem for women's health and effectiveness [5].

In Pakistan and Afghanistan, many girls feel shameful and scared during their first menstruation, which was also reported in a study in Iran [6].The societal constraints and lack of information about menstruation result in social embarrassment; hence, the health of girls is compromised. This stigma leads to loneliness, inability to attend school, and limitations in academics, sports, and daily activities, which in turn leads to the partial or complete exclusion of girls from society [7]. On the occasion of Girls' Hygiene Day, Afghanistan renewed its commitment to teach girls about menstruation management and hygiene to eliminate the social stigma associated with menstruation. The 2019 theme, "It is time for action," underscores the call to action from families, schools, and communities to eradicate stigma and misconceptions about menstruation. This collective action aims to empower girls by providing equal opportunities for their overall development [8].

Different organisations like UNICEF have attempted to move in this direction. Their approach has included campaigns to stamp out these beliefs and effectively manage menstruation through education and the construction of facilities for this purpose [9]. Several measures include building especially tailored washroom facilities in schools and workplaces, establishing awareness campaigns, and ensuring the provision of reasonably priced sanitary items. These programs seek to reduce stigmatisation and increase knowledge to enable women to continue normal activities during menstruation.

Methods

Data Source and Study Variables

The data for this study were derived from the Afghanistan Multiple Indicator Cluster Survey (MICS) 2022-2023. The survey was conducted jointly by the UNICEF Afghanistan Country Office and the National Statistics and Information Authority (NSIA) to offer credible information on the health and social situation in the country. The MICS used a multistage stratified sampling in which households were selected from all 34 provinces in Afghanistan. Data was collected from August 2022 to February 2023 with 23,568 sampled households. This study targeted women of childbearing age, females between the ages of 15 and 49.

The survey employed four cross-sectional questionnaires explicitly developed for households, women, children under five years and children aged between 5 and 17 years. This study gathered information from the women's questionnaire, which comprised basic demographic information, health risk factors, and menstruation-related absence from work. The survey featured appropriate methodological strict etiquette that remains intact for data credibility. The survey received ethical clearance from the NSIA Technical Committee in July 2022 to conduct the study following international research ethics and data collection guidelines.

The dependent variable in this study was a binary variable that comprised menstruation-related absenteeism, which was women's inability to attend work, school, or social activities during their menstrual period. Independent variables included age, education, place of residence, wealth index, and provincial residence. These variables were systematically coded for statistical analysis so that patterns and antecedents of absenteeism across demographic and geographic contexts in Afghanistan could be determined.

Data Analysis

All statistical analysis was conducted using IBM SPSS version 29.0. The first research question was determining the relationship between menstruation-related absenteeism and the demographic variables. Chi-square tests evaluated statistical significance with a significance level of $p < 0.05$. Details of these associations were measured by odds ratios (OR) and 95% confidence intervals (CI). To obtain more detailed findings concerning cultural and infrastructural differences across the provinces of Afghanistan, an additional 34 chi-square tests were conducted.

Measures

The analysis of absenteeism due to menstruation was conducted among women 15–49 years of age using the data collected in the Afghanistan MICS 2022-2023 survey. Data collection used four composite questionnaires: the household questionnaire, the women's questionnaire, and two child questionnaires. This analysis used information collected from the women's questionnaire since it included demographic information and frequent absenteeism. The dependent variable was the number of days absent during menstruation, and the independent variables were age, place of residence, education, wealth status and provincial distribution.

Independent Variables

The independent variables in this study included demographic factors believed to affect menstruation-related truism. Age was categorised into 15–24 years, 25–34 years, and 35–49 years. The residence area was categorised into either urban or rural. Education levels were classified into pre-primary/primary, secondary and higher. The wealth index, a measure of economic status, was defined by the poor, middle, and wealthy groups. Finally, the provincial data described the geographical distribution of the phenomenon under study and allowed us to compare the study results in 34 provinces of Afghanistan.

Outcome Variables

The dependent variable was menstruation-related truancy, which was the inability of women to go to work, school, and social functions due to menstruation. This variable was then recoded as "yes" (able to attend activities) and "no" (unable to participate in activities). Those women who mentioned attending activities during menstruation were assigned to 1, while those who did not were assigned to 0.

The study also showed different trends in truancy, especially among female employees aged 15–24 years. This result implies that young women might have specific challenges, including a lack of information or access to products related to menstruation. Also, rural women had higher levels of absenteeism than urban women due to the infrastructural and cultural barriers common in rural settings.

This role was played by education since women with pre-primary or primary education had higher chances of experiencing absenteeism than women with secondary or post-secondary education. This difference shows why educational efforts should be used to lessen the effects of menstruation on activities.

The analysis of the results also revealed that economic inequalities impacted the level of absenteeism: women from low-income families had higher rates. Lack of access to hygiene products and menstrual-supportive facilities by economically disadvantaged groups is an indication of the existing systematic discrimination that leads to absenteeism during menstruation.

Lastly, the level of absenteeism was compared across Afghanistan's 34 provinces to identify the regional differences. The provinces with relatively higher rates of urban population density had lower rates, including Kabul province. In contrast, provinces with lower population density, including Khost and Paktika, had higher absenteeism rates. These results highlight the importance of the region's cultural expectations, availability of resources and infrastructure on menstruation-related truism.

Results

Table 1 also shows the percentage of women who said they were sometimes or often unable to attend work, school or social activities because of menstruation. Of the respondents, 27.5%

Claimed to be frequently absent from activities due to menstruation, while 72.5% said they were able to engage in such activities even during their period. From this discovery, it can be concluded that menstrual health challenges affect daily life since over a quarter of women report disruptions during menstruation. The high level of truancy suggests that there are institutionalised issues, such as cultural prejudice and poor menstrual practices, that are prevalent in Afghanistan and affect women the most.

Table 1: Distribution of women who did not attend social activities, school, and work due to menstruation

Characteristics	Frequency	Percentage
Yes	10666	27.5
No	28127	72.5

Table 2 presents an overview of the demographic characteristics of participants. Most women were aged 15–24 years (48.1%), followed by 25–34 years (28.6%) and 35–49 years (23.4%). Most participants resided in rural areas (82.4%), highlighting the significant urban-rural divide in Afghanistan. Educational attainment was low, with 83% of women having only pre-primary or primary education, 13.9% having secondary education, and just 3.1% achieving higher education. Wealth disparities were also apparent, with 41.4% categorised as poor, 22.9% as middle-income, and 35.7% as rich. These characteristics emphasise the compounded challenges rural, less educated, and economically disadvantaged women face.

Table 2: Distribution of Women's Background Characteristics

Characteristics	Frequency	Percentage
Age		
15-24 years	21315	48.1
25-34 years	12660	28.6
35-49 years	10366	23.4
Place of residence		
Urban	7895	17.6
Rural	36979	82.4
Education		
Pre-primary and primary	36784	83
Secondary	6174	13.9
Higher	1382	3.1
Wealth index		
Poor	18376	41.4
Middle	10148	22.9
Rich	15817	35.7

Table 3 shows the distribution of participants across Afghanistan's 34 provinces. Khost (4.3%) and Paktya (4.1%) contributed the most significant shares of respondents, while provinces such as Baghlan (2.2%) and Ghor (2.3%) had more miniature representation. This distribution provides a comprehensive geographic overview, allowing for examining regional disparities in absenteeism. Provinces with higher representation, particularly in rural settings, underscore the importance of focusing on localised interventions to address menstruation-related absenteeism.

Table 4 shows significant relationships between absenteeism and the socio-demographic characteristics of age, place of residence, education level, and wealth status. This showed that younger women aged 15–24 years had the highest number of days away from work due to their health status at 28.8%. This resulted from low literacy levels concerning menstrual health and the pressure that young women are usually subjected to. Rural women, in particular, cited infrastructural and cultural challenges for a 73.3% attendance rate. Education turned out to be significant, and women with pre-primary or primary education only had the highest absenteeism rate, at 73.7%. Likewise, women who belong to the low-income group were found to have higher levels of absenteeism than women who belong to the high-income group.

These findings provide the background to the current study, showing how poverty, low education,

And rural residence exacerbate the challenges that women face when managing menstruation. The research findings indicate the requirement for a multi-component strategy, including regular supply of cheap hygienic absorbents, educational initiatives, and non-stigmatisation of menstruation.

Table 3: Distribution of participants according to the thirty-four provinces of Afghanistan

Province	Number of participants (%)	Province	Number of participants (%)
Kabul	1578 (3.5)	Takhar	1107 (2.5)
Kapisa	1264 (2.8)	Kunduz	1194 (2.7)
Parwan	1465 (3.3)	Samangan	1123 (2.5)
Maidan wardak	1360 (3.3)	Balkh	1090 (2.4)
Logar	1506 (3.4)	Sar-e-pul	1271 (2.8)
Nangarhar	1523 (3.4)	Ghor	1051 (2.3)
Laghman	1354 (3.0)	Daykundi	1133 (2.5)
Panjsher	1347 (3.0)	Urozgan	1298 (2.9)
Baghlan	1008 (2.2)	Zabul	1337 (3.0)
Bamyan	1261 (2.8)	Kandahar	1634 (3.6)
Ghazni	1226 (2.7)	Jawzjan	1514 (3.4)
Paktika	1449 (3.2)	Faryab	1106 (2.5)
Paktya	1854 (4.1)	Helmand	1398 (3.1)
Khost	1923 (4.3)	Badghis	973 (2.2)
Kunarha	1352 (3)	Herat	1469 (3.3)
Nooristan	1361 (3)	Farah	1079 (2.4)
Badakhshan	1098 (2.4)	Nimroz	1166 (2.6)

Table 1S presents absenteeism rates across Afghanistan's 34 provinces, revealing significant provincial variations. Balkh province had the highest percentage, 76 per cent, followed by Badakhshan province, which had 63 per cent. In comparison, provinces like Kabul and Paktya had a comparatively low rate of 29 per cent and 35 per cent, respectively. Statistical significance was obtained in 31 provinces ($p < 0.001$), thus ensuring that absenteeism is not random but depends on regional factors such as culture and resource accessibility. The pronounced absenteeism in provinces like Balkh underscores the need for region-specific interventions that address local cultural norms and improve access to hygiene facilities. Conversely, provinces with lower absenteeism rates could serve as models for best practices, providing insights into effective interventions and community engagement strategies.

Table 2S examines the relationship between women's background characteristics (age, residence, education, and wealth index) and their province of residence. Provinces showed significant differences in how these characteristics influenced absenteeism. For example, Paktika, Urozgan, and Farah displayed high statistical significance across all traits ($p < 0.001$), underscoring a strong correlation between absenteeism and socioeconomic or educational constraints in these areas. Conversely, Nangarhar did not exhibit any significant results, suggesting unique contextual factors mitigating the impact of menstruation-related challenges in this province. The findings reveal that provinces with higher educational attainment among women had lower absenteeism rates. For instance, provinces like Kapisa and Panjshir, where secondary and higher education levels were comparatively better represented, also showed reduced absenteeism. The wealth index also played a pivotal role; wealthier provinces demonstrated a marked reduction in absenteeism, as women had greater access to menstrual health resources. These patterns underscore the importance of education and financial stability in enabling women to manage menstruation effectively and participate fully in their routines.

Table 5 looks at the proportion of women's education level and wealth index by provinces in 34 provinces in Afghanistan. The findings indicate increased differences in education and economic status, which affect menstruation-related absenteeism. The few provinces, such as Kabul and Panjshir, where a comparatively more significant number of women received secondary or higher education, had lower levels of absenteeism. On the other hand, high absenteeism rates were observed in provinces such as Paktika and Urozgan, where most women had no more than pre-primary education. This is made worse by wealth inequality because the poorest quintile is highly

Represented in provinces such as Badakhshan and Zabul, which also have high levels of absenteeism. On the other hand, provinces like Herat and Balkh, which have better education and financial capital, have better education and menstrual health profiles and lower absenteeism rates. These conclusions highlight the importance of provincial-level gaps in defining the opportunities to obtain education and menstrual health products.

Table 4: Chi-square analysis of women's background characteristics and women who did not attend social activities, work, and school due to menstruation

Characteristics	Women who did not attend social activities, work, and school due to menstruation	
	Yes	No
Age		
15-24 years	5645 (28.8%)	13974 (71.2%)
25-34 years	2802 (25.5%)	8172 (74.5%)
35-49 years	2219 (27.1%)	5981 (72.9%)
	Chi-square = 38.4; p-value = 0.001	
Place of residence		
Urban	2112 (31%)	4695 (69%)
Rural	8554 (26.7%)	23432 (73.3%)
Chi-square and P-value	Chi-square = 51.66; p-value = 0.001	
Education		
Pre-primary and primary	8371(26.3%)	23410 (73.7%)
Secondary	1814 (31.8%)	3896 (68.2%)
Higher	480 (36.9%)	821 (63.1%)
	Chi-square = 131.26; p-value = 0.001	
Wealth index		
Poor	4129 (26.3%)	11557 (73.7%)
Middle	2366 (26.3%)	6624 (73.7%)
Rich	4171 (29.5%)	9946 (70.5%)
	Chi-square = 46.84; p-value = 0.001	

Table 6 focuses on the relationship between education, wealth index, and the frequency of women attending work/school and social events. Married educated women in provinces such as Kapisa and Balkh had less absenteeism than in Paktika and Nooristan or other provinces with low education levels. This implies that education prepares women with knowledge on how to effectively deal with menstruation while at the same time preparing them to rebel against cultural beliefs that limit their participation during menstruation. The wealth index is used in attendance as well. Women in the wealthiest quintiles reported a higher attendance rate as they could afford sanitary products and had access to private hygiene facilities. On the other hand, women in the lowest wealth quintile, living in provinces such as Urozgan and Kunarha, reported higher chances of being affected by disruptions because of menstruation. This further highlight how poverty and illiteracy, especially in the rural and hard-to-reach areas, affect the ability of women to engage in daily activities.

Table 3S shows the chi-square test results of the relationship between menstruation-related absenteeism and background characteristics in Afghanistan's 34 provinces. The results indicate differences between provinces; most provinces show a statistically significant relationship between absenteeism and these characteristics ($p < 0.001$). In the case of age, young women (15–24 years) were more affected throughout the study, especially in provinces such as Badakhshan and Helmand, where cultural barriers and low literacy rates contribute to high levels of absenteeism. Younger women (15–34 years) were more likely to report absenteeism than women in the older age group (35–49 years), implying that older women have lower absenteeism, more flexibility or less pressure to attend activities. The place of residence also helped to determine the level of truancy, which was significantly higher in rural areas and in provinces such as Bamyan and Zabul, where there are almost no facilities for menstrual health.

Education was a strong predictor in provinces where women with secondary or higher education comprised a more significant percentage, recording significantly lower levels of absenteeism,

Such as Kabul and Herat provinces. On the other hand, provinces like Urozgan and Paktika, where pre-primary education is more common, had a much higher truancy, thus indicating the importance of education in reducing the effects of menstruation.

Table 5: Binary logistic regression analysis between women's background characteristics and women who did not attend social activities, work, and school due to menstruation

Characteristics	Women who did not attend social activities, work, and school due to menstruation.	
	OR and 95% CI	P-value
Age		
15-24 years	1	
25-34 years	1.15 (1.08-1.22)	0.001
35-49 years	1.05 (0.98-1.22)	0.16
Place of residence		
Urban	1	
Rural	0.95 (0.87-1.02)	0.15
Education		
Pre-primary and primary	1	
Secondary	0.83 (0.77-0.89)	0.001
Higher	0.63 (0.55-0.73)	0.001
Wealth index		
Poor	1	
Middle	0.99 (0.92-1.05)	0.76
Rich	0.92 (0.86-0.98)	0.01

Last, the wealth index exposed significant differences. The provinces with higher wealth indices had improved MHO and lower levels of absenteeism; in contrast, the provinces with lower wealth indices had higher levels of absenteeism, such as Kunarha and Badghis. This trend, therefore, reveals how poverty, resource constraints and the socio-cultural cultural barriers that limit women's participation during menstruation build on each other.

Table 6: Binary logistic regression analysis between provinces and women who did not attend social activities, work, and school due to menstruation

Province	OR and 95% CI	P-value
Kabul	0.22 (0.17-0.29)	0.001
Kapisa	0.36 (0.27-0.47)	0.001
Parwan	0.58 (0.44-0.77)	0.001
Maidan wardak	0.08 (0.06-0.10)	0.001
Logar	0.33 (0.25-0.43)	0.001
Nangarhar	0.36 (0.28-0.47)	0.001
Laghman	0.52 (0.39-0.69)	0.001
Panjsher	1.26 (0.91-1.73)	0.15
Baghlan	0.04 (0.03-0.05)	0.001
Bamyan	0.10 (0.08-0.14)	0.001
Ghazni	0.13 (0.10-0.16)	0.001
Paktika	1.58 (1.12-2.22)	0.008
Paktya	1.03 (0.77-1.37)	0.84
Khost	0.06 (0.05-0.08)	0.001
Kunarha	0.06 (0.05-0.08)	0.001
Nooristan	0.30 (0.23-0.40)	0.001
Badakhshan	0.05 (0.03-0.06)	0.001
Takhar	0.23 (0.18-0.31)	0.001
Kunduz	0.06 (0.04-0.08)	0.001
Samangan	0.15 (0.11-0.20)	0.001

Balkh	0.29 (0.22-0.38)	0.001
Sar-e-pul	0.35 (0.26-0.45)	0.001
Ghor	2.70 (1.70-4.28)	0.001
Daykundi	0.14 (0.11-0.19)	0.001
Urozgan	1.00 (0.73-1.37)	0.96
Zabul	0.56 (0.42-0.75)	0.001
Kandahar	0.15 (0.12-0.20)	0.001
Jawzjan	0.31 (0.24-0.40)	0.001
Faryab	0.02 (0.01-0.03)	0.001
Helmand	0.10 (0.07-0.13)	0.001
Badghis	1.02 (0.72-1.44)	0.88
Herat	0.17 (0.13-0.22)	0.001
Farah	1.37 (0.95-1.96)	0.08
Nimroz	4.62 (3.67-5.81)	0.001

The findings highlight the interconnection between absenteeism and socio-demographic characteristics, which exposes the double burden of women in rural, disadvantaged, and low literacy backgrounds. Governorates with improved educational facilities and economic solidity always record low levels of truancy, a clear signal of the impact of investment on such provinces. Large provincial variations also indicate the importance of culturally, economically and infrastructure-sensitive interventions. For instance, provinces like Kabul and Balkh are good examples of where proper MHH practices should be replicated. In contrast, provinces such as Zabul and Paktika should receive more attention concerning education and the provision of Hygiene products.

Discussion

This study gives a detailed description of the severely disruptive role of menstruation on women's everyday activities in Afghanistan and the extent to which it influences social interaction, work, and learning. The findings show a positive relationship between menstruation-related absenteeism and demographic characteristics like age, education, wealth index and residence. The study shows that younger women with low education levels, living in rural areas, and from low-income families were more vulnerable. These results demonstrate the systematic barriers that women have to overcome to adequately manage their menstruation and stress the need for holistic interventions that address these specific risks.

There was a significant and negative relationship between education and menstrual health outcomes. Employed women with a secondary education level and above had a lower incidence rate of absenteeism. This is most probably due to education since it empowers women with knowledge on how to deal with menstrual periods and fight cultural taboos. Besides, the women with education have chances to get jobs and earn money to buy the products and demand improvements in the situations in their society [10]. Places like Kabul and Herat provinces have been used as examples where increased educational attainment will help reduce menstruation-related truancy's impact. These results call for policy action to increase girls' education nationwide and to focus on schools in rural and hard-to-reach areas.

The wealth index was central to the attendance rates during menstruation. The study also found that women from wealthier households were less likely to miss school, work or social events due to menstruation because they could afford the necessary hygiene products and access to clean and hygienic facilities [11]. On the other hand, poor women from provinces like Paktika and Zabul had a double problem because they had little money and no proper means of transportation. Such economic differences suggest a need for specific economic solutions, including affordable menstrual products and free distribution in poor households. Women's economic empowerment could tackle other factors, such as providing other income-generating activities to the women, thus reducing their chances of absenteeism further [12].

The study shows that rural-urban differences are evident in absenteeism rates, especially for women in rural areas. In rural areas, the availability of menstrual health products and services,

Poor sanitation facilities and cultural taboos are still a major challenge for women. Some provinces with high levels of rural population, such as Bamyan and Nooristan, also reported high levels of absenteeism, underscoring the need for infrastructure development. Providing better sanitation in rural areas through clean and private toilets in schools and other workplaces is crucial in ensuring that women do not miss essential activities due to menstruation [13]. Therefore, closing the rural-urban divide will require consistent investment in rural areas' health, education, and other support structures.

The menstrual cycle remained a taboo and a stigma that affected women's ability to participate in most of their daily activities. Such taboos contribute to social exclusion and perpetuate the notion that menstruation is something that one must be ashamed of or hide [14]. Women in many provinces mentioned that they had missed social events due to restrictions from society and stigmatisation. Such profound cultural practices cannot be changed without community-level approaches; only awareness creation campaigns will help to eliminate the perception of menstruation as a taboo [15]. Working with local community, school and health facility authorities can assist in changing such cultural practices that are unfavorable for women and girls.

The research shows that women in different provinces of Afghanistan experience different forms of problems and have significant variations in the rates of absenteeism. Balkh and Badakhshan provinces, where teachers claimed high levels of truancy, explain how poor infrastructure, low literacy, and stigma interact. On the other hand, provinces such as Kabul and Herat, with better educational levels and wealth indexes, have better menstrual health. These disparities in the provinces indicate that the need for localized interventions is important to meet the needs of these provinces. To target the different groups appropriately, there is a need for differentiated education and support programs for those in rural areas and those in urban areas, according to the socio-cultural practices of each province [16].

Therefore, the results highlight the necessity of policy-level changes to target menstrual absence from school. School-based education on MHE can help girls manage their periods and the associated cycle and reduce the stigma that comes with it. These include the construction of better infrastructure, such as the provision of clean water, better toilets, and the availability of affordable sanitary products for girls [17]. There is a need for provincial equity in the distribution of free menstrual products, and therefore, the government and NGOs should work together to develop and implement the subsidy. Also, incorporating menstrual health into current healthcare delivery models might help to enhance women's health [18].

It is crucial to address the issues related to the day's girls miss school due to menstruation to promote gender equity in Afghanistan. Women must be able to attend school, work, or social functions during menstruation. Education, availability of resources, and eradicating cultural barriers can be ways through which the policymakers ensure that women are empowered to take on economic activities. Therefore, this study's findings call for stakeholders to pay attention to menstrual health as a fundamental aspect of women's rights and development. If women and girls can confidently manage their menstruation, it will empower them to improve society's education, health, and economic growth.

Strengths and Limitations

Several strengths are present in this study. First, the study employed a nationally representative sample from the MICS. The sample size increases the study's external validity to the general population of Afghanistan; the variations in socioeconomic, educational and cultural backgrounds are reflected across the 34 provinces. Moreover, the present study employs chi-square analysis and statistical tests to comprehensively evaluate the relationship between absenteeism and demographic variables. The research also fills the gap in understanding the provincial differences and sociocultural factors affecting menstruation-related truancy to guide policy measures.

Nevertheless, the study has its shortcomings. Since the study employs secondary data collected through the MICS, analysis is limited by the variables included in the survey. First, the lack of qualitative data means that issues that concern personal and cultural experiences of menstruation cannot be investigated to establish the extent of the barriers. Furthermore, the cross-sectional data limit the generalisation of the findings because they allow for estimating only concurrent associations. It is suggested that future studies should use more longitudinal data and employ quantitative and qualitative methodologies for a richer picture of the problem.

Conclusion

This paper shows how menstruation affects women and girls' social, educational, and economic participation in Afghanistan. Our results also show that younger women, rural residents, and those from a poor or low education background are more affected, suggesting that there are structural issues in MHH. Interprovincial differences also bring out factors of local culture, infrastructure, and lack of capital in determining these results.

Future research should attempt to overcome this study's shortcomings by using qualitative research paradigms to examine the subjective, relational, and cultural aspects of menstruation-related truancy. In-depth interviews and focus group discussions with the women and community members could give a better understanding of the challenges and enablers of MHH. Further, correlational research designs must be conducted to determine the causal link between absenteeism and socio-demographic variables so that the impact of menstruation on women's education and employment can be investigated in the long run.

Another promising direction for future research is to study the impact of existing interventions, including menstrual hygiene education programs, school infrastructure and facilities improvements, and subsidised product distribution to minimise pupil absenteeism. The findings could also be useful for comparative cross-regional studies of countries with a relatively high or low degree of investment in menstrual health. In addition, research that examines how gender interacts with other dimensions, including disability, ethnicity, and displacement, would offer a richer perspective on how specific subgroups of women and girls face menstruation-related issues.

Finally, research should focus on developing culturally sensitive approaches to reducing stigma and addressing menstrual health needs. This includes evaluating community-based interventions and exploring innovative solutions, such as eco-friendly menstrual products and mobile health initiatives, to reach remote and underserved populations. By expanding the scope of menstrual health research, future studies can contribute to more inclusive, evidence-based policies that address the diverse needs of women and girls globally.

Abbreviations

MICS: the Multiple Indicator Cluster Survey

NSIA: National Statistics and Information Authority

MHH: menstrual health management

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