**In 2023, the world has observed a historic milestone of over 6 million cases and 6000 deaths due to dengue virus (DENV) infection. South America (3880409 cases and 1925 deaths) and South Asia (1337918 cases and 3395 deaths) were hotspots with more than two-thirds of the global cases and deaths. Bangladesh (576.47) and Bolivia (342.01) reported the highest number of deaths per million population.**

**Theme:** SRHR SGBV (Sexual & Reproductive Health & Rights, Sexual and Gender-Based Violence)

**Title of the study:** Factors Associated with Menstrual Hygiene, Workplace Sanitation Practices, and Self-Reported Urogenital Symptoms among Female Workers in the Sylhet Division, Bangladesh

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**Background:**

The sanitation needs, preferences, access requirements, and utilization patterns vary among women, men, and other individuals (Elledge et al., 2018). Effective menstrual hygiene practices require women using clean materials to absorb or collect menstrual blood, which can be changed privately as needed during the menstrual period. This involves washing the body with soap and water as necessary and accessing safe and convenient facilities for disposing of used menstrual materials (Budhathoki et al., 2018). Poor menstrual hygiene management can adversely impact the health and psychosocial well-being of women and girls.

Menstruation and its management also carry significant social and cultural implications globally, affecting the lives of women and girls (Sumpter & Torondel, 2013). A study conducted in Dhaka's slums, the capital of Bangladesh, revealed that approximately 95% of women and 90% of adolescent girls routinely reused menstrual materials without adequate hygiene, leading to vaginal and urinary tract infections, and pregnancy complications (Ahmed & Yesmin, 2008). Furthermore, qualitative research on women's menstrual experiences in the workplace in Uganda highlighted significant concerns and discomfort related to urogenital symptoms (Hennegan et al., 2020).

***Problem Statement and Rationale***

The lack of access to reliable reproductive health information can result in girls and women, including adults, holding misconceptions about menstruation physiology and management. Cultural constraints and discriminatory gender roles exacerbate women's challenges during menstruation. In many cases, females are hesitant to share their issues, leading to various types of reproductive tract infections.

Limited research has explored adult women's menstrual practices, especially in the workplace. Despite increased recognition of menstrual health's importance, research and interventions have primarily targeted adolescents. Since working women spend substantial time in their workplaces, understanding their menstrual practices and related needs is crucial for identifying intervention opportunities. Examining women's menstrual practices in workplaces, alongside challenges related to urination that may increase the risk of urinary tract infections (Jagtap et al., 2022), would provide insight into potential causes of genital irritation in working women and inform enhanced menstrual support in the workplace.

***Hypothesis***

The self-reported urogenital symptoms are likely associated with the type and cleanliness of menstrual materials used, as well as infrequent handwashing and urinary restriction.

**Research Questions:**

* What are the menstrual care practices of working women in Sylhet Division, Bangladesh?
* What is the prevalence of self-reported urogenital symptoms among this population?
* What are the associations between menstrual care practices and self-reported urogenital symptoms?

**Aims and Objectives:**

The study aims to examine menstrual care practices, self-reported urogenital symptoms prevalence, and their associations among working women in Sylhet Division, Bangladesh.

The specific objectives are as given below:

* To assess the menstrual care practices of working women in Sylhet Division, Bangladesh.
* To assess the prevalence of self-reported urogenital symptoms among this population.
* To identify the associations between menstrual care practices and self-reported urogenital symptoms.

**Methods and Techniques:**

***Study design***

The proposed study will adopt a mixed-method approach, incorporating both qualitative and quantitative data collection methods.

***Study type***

Cross-sectional study

***Study population***

The study will focus on female workers in the Sylhet division.

***Study area***

The study will cover four districts within the Sylhet division of Bangladesh: Habiganj, Moulvibazar, Sunamganj, and Sylhet.

***Sampling design***

A two-stage cluster sampling technique will be employed, with 120 female workers sampled from each selected area. Details of sampling distribution are explained in Table 1.

**Table 1: Sample size estimation**

|  |  |  |
| --- | --- | --- |
| **District** | **Category of Workers** | **Total Sample** |
| Habiganj | Marketplace = 30  Healthcare facility = 30  School = 30  Tea/Stone daily worker =30 | 120 |
| Moulvibazar | 120 |
| Sunamganj | 120 |
| Sylhet | 120 |
| Total | | 480 |

***Conceptual Framework***

**Dependent Variable**

**Independent Variables**

Menstrual hygiene practices

Urogenital symptoms

**Socio-demographic variables**

* Urban and Rural Geographic Areas
* Administrative Districts
* Age Groups
* Educational Attainment
* Educational Level of Father/Husband/Partner
* Self-reported Economic Status
* Religious Affiliation
* Household Size
* Access to Mass Media
* Workplace type
* Poverty score
* Self-reported general health

**Cofounders**

***Data collection techniques, instruments, and measurements***

Quantitative data will be collected using a semi-structured questionnaire, while qualitative data will be obtained through an in-depth open-ended questionnaire. Thorough checks will be conducted to ensure data consistency, followed by coding, categorization, and cleaning. Data will be entered into a computerized database, ensuring data quality. Analysis will involve descriptive statistics and inferential tests, performed using the R programming language. Significance will be determined at a 5% level with a 95% confidence interval.

***Ethical consideration***

Ethical clearance will be obtained from Shahjalal University of Science and Technology, Sylhet, before commencing data collection. Informed written consent will be obtained from all participants before their involvement in the study.

**Expected Outcomes:**

Working women's extended presence in the workplace warrants further exploration to identify potential intervention strategies. Understanding their menstrual practices and associated challenges, such as urinary issues leading to UTIs, is essential for addressing genital irritation and enhancing menstrual support at work. This study aims to shed light on the prevalence of self-reported urogenital symptoms and factors like menstrual material cleanliness, handwashing frequency, and urinary restriction. By raising awareness of negative menstrual hygiene and workplace sanitation practices, this research underscores the need for interventions to promote cleanliness and address menstruation, urination, and handwashing needs at home and work. The findings will inform policymakers on creating accessible, clean, and affordable sanitation infrastructure to support women's urinary needs in the workplace and mitigate the burden of urogenital infections.

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