



## **Menstrual Disorders and Work Stress: Psychosocial Hazards among Female Workers**

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### **ABSTRACT / ABSTRAK**

The issues commonly faced by female workers are related to psychosocial hazards, which can lead to work stress among female workers. Unmanaged work stress can have negative effects on the health of female workers, one of which is menstrual disorders. This study aims to analyze the psychosocial hazards and the menstrual disorders frequently experienced by female workers. This research is a literature review, with Google Scholar used as the database for article searches. The literature search criteria in this study followed the PICOS approach. The results of this literature review indicate that work stress is associated with menstrual disorders in female workers. The most frequently reported stressor is workload, while the menstrual disorders experienced by female workers include premenstrual syndrome, dysmenorrhea, and abnormal menstrual cycles.

## **INTRODUCTION**

Career women or working women are those who engage in professional activities in various fields such as business, office work, and others, which are based on education, skills, and expertise. While working, they are promised career advancement, professional development, and wages for their work (Puspita, 2020; Vijayakumari, 2023). Women's involvement in the professional workforce has led to a positive shift in social perceptions of women, as they are now viewed as independent individuals. However, working women also face various challenges, both at home and in the workplace (Setyaningsih, 2023; Uddin, 2021).

A study by Vijayakumari (2023) highlighted several issues faced by working women, including perceptions that men are more competent than women, sexual harassment, unequal pay compared to men, lack of safety from physical violence, and insufficient family support. Another study indicated that dual responsibilities are the most common challenges experienced by working women. These dual responsibilities relate to fulfilling expectations from both their families at home and their workplaces (Niyaz, 2017).

Common issues faced by working women at home include feelings of guilt for not having enough time to care for their children and lack of support from their spouses (e.g., spouses not assisting with domestic tasks). At work, common challenges include dissatisfaction with supervisors' and coworkers' attitudes toward child-rearing responsibilities, as well as the lack

of family-friendly workplace policies (Kim and Kim, 2013). From these three studies, it can be concluded that the most common challenges faced by working women are related to psychosocial risks.

Psychosocial hazards refer to risks that arise from poor work design, organization, and management. These hazards can be found across all industry sectors and organizations, resulting from inadequate arrangements of work tasks, tools, facilities, and employment conditions. If not prevented or managed, psychosocial hazards can lead to work-related stress (Cobb, 2022). A study by Muis et al. (2021) revealed that 39.6% of female workers (n=48) in a bank in Makassar experienced severe work-related stress. These women also reported a decline in work performance due to their stress levels. Work-related stress poses risks to both the mental and physical health of female workers (Cooper and Quick, 2017).

One of the physical health risks associated with work-related stress among female workers is menstrual disorders. Menstruation is an important indicator of women's health, and menstrual disorders are linked to poor health outcomes (Poitras et al., 2024). Research by Indriyanti et al. (2019) found a correlation between work-related stress and menstrual disorders among tobacco farmers in Jember. Similarly, another study indicated that work-related stress is associated with menstrual pain (László et al., 2008). Types of menstrual disorders commonly linked to stress include irregular menstrual cycles, abnormal cycle lengths, prolonged menstruation, and heavy menstrual flow (Poitras et al., 2024). These menstrual disorders can reduce female workers' productivity (Ponzo et al., 2022).

Based on the explanation above, it can be concluded that psychosocial hazards in the workplace can pose health risks, including menstrual disorders. These menstrual disorders, in turn, can decrease the productivity of female workers, resulting in both material and non-material losses for the workplace. This study aims to: 1) Analyze the psychosocial hazards associated with menstrual disorders; and 2) Identify the types of menstrual disorders commonly experienced by female workers.

## METHODS

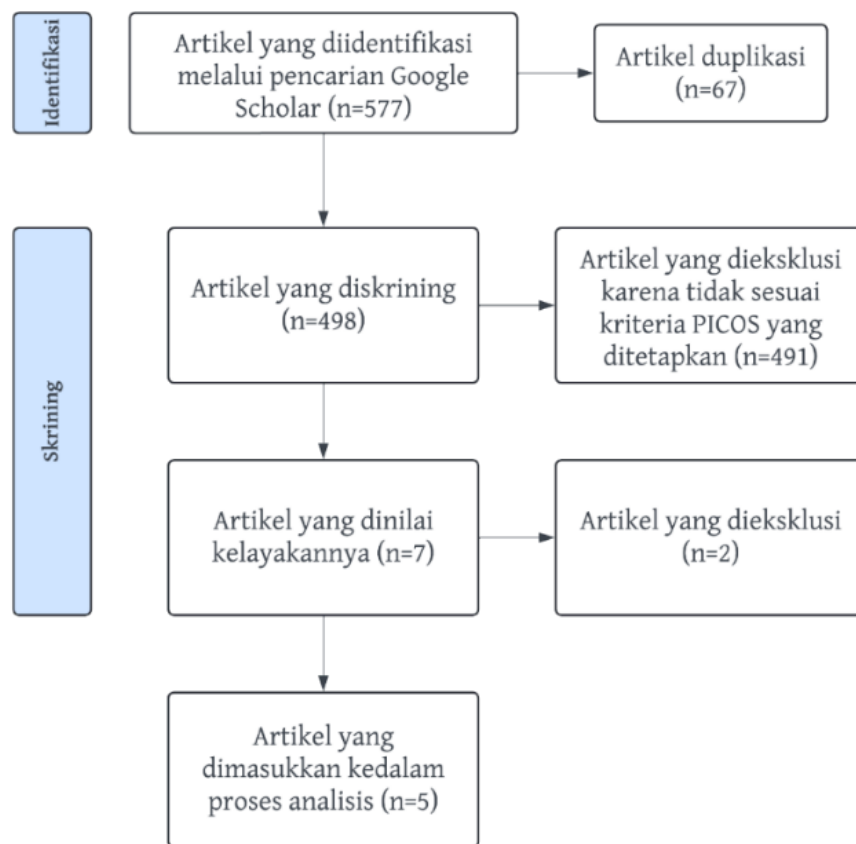
This study was conducted following the Preferred Reporting Items for Systematic Review and Meta-analysis (PRISMA) guidelines. Based on these guidelines, the researchers extracted information on titles, abstracts, introductions, methods, and results from research articles included in this literature review study.

The inclusion and exclusion criteria for this review study were determined using the PICOS (Population, Intervention, Comparison, Outcome, and Study type) approach, as presented in Table 1.

The literature search for this review utilized online databases, specifically Google Scholar. The search was conducted using several keywords, including "work stress" and "menstruation." Research articles included in this study were those published between January 2014 and August 2024. Additionally, the articles had to be freely accessible or categorized as open access.

The literature selection process involved screening titles, abstracts, and research subjects, which were then evaluated based on the predefined inclusion and exclusion criteria.

All filtered literature was uploaded to Zotero, followed by a duplication check. Subsequently, the full-text articles were screened to ensure they met the inclusion and exclusion criteria.



**Figure 1.** PRISMA Flowchart

## RESULTS

The article search process using Google Scholar resulted in a total of 557 articles. These articles were then checked for duplication using Zotero software. The duplication check found no duplicate articles, leaving 557 articles to be screened. The article search flow in this study followed the PRISMA Flowchart, as shown in Figure 1.

The titles and abstracts of all these articles were analyzed based on predetermined criteria, namely: (1) the study population consisted of female workers; (2) one of the interventions or independent variables was work stress; (3) one of the dependent variables was a type of menstrual disorder; and (4) the study used a cross-sectional approach. The analysis of the titles and abstracts resulted in 7 articles that proceeded to the eligibility analysis stage.

The feasibility analysis of articles aims to evaluate the methodological quality of each research article and determine the extent to which the studies address potential biases in their design, implementation, and analysis. Quality assessment in the studies was conducted using The Joanna Briggs Institute (JBI) Critical Appraisal Checklist for Analytical Cross-Sectional Studies. Articles included in the comprehensive analysis are those with a critical appraisal score

above 50%. The critical appraisal results conducted by two researchers identified two articles that would not be included in the comprehensive analysis because their final critical appraisal scores were below 50%.

From Table 2, it can be concluded that several studies found a relationship between work stress and menstrual disorders in various professions among female workers. These studies also highlighted that workload is a common stressor experienced by female workers. Menstrual disorders potentially caused by work stress include type A premenstrual syndrome, dysmenorrhea, and oligomenorrhea.

**Table 1.** PICOS Criteria

Parameter	Inclusion Criteria	Exclusion Criteria
Population	Female workers	
Intervention	Work stress	
Outcome	Menstruation	
Study type	Cross-sectional study	Systematic Literature Review, Literature Review, Meta-Analysis, and Research in Languages Other Than Indonesian and English

**Table 2.** Results of the Literature Review

Psychosocial Risks	Menstrual Disorders	Samples	Results	Authors
a. Workload	Premenstrual Syndrome:	Nurses at X Hospital in Bekasi (n=148)	a. The majority of nurses (89.9%) experience mild stress.	Yulianingsih & Agus, 2020
b. Conflict	a. Type A (Anxiety)		b. A total of 76.4% of nurses experience mild premenstrual syndrome symptoms.	
c. Lack of support	b. Type C (Craving)		c. The most commonly selected stressor by nurses is dealing with death and terminal conditions.	
d. Uncertainty regarding patient treatment	c. Type D (Depression)		d. The least commonly selected stressor is sexual harassment.	
e. Dealing with death and dying situations	d. Type H (Hydration)			
f. Organizational decisions	e. Other symptoms of premenstrual syndrome			
g. Inadequate preparation				
h. Sexual harassment				

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- e. The most common type of premenstrual syndrome experienced by nurses is type A, which is anxiety.
  - f. Type D premenstrual syndrome (depression) is the least commonly experienced syndrome among nurses.
  - g. Overall, there is a significant relationship with premenstrual syndrome (p-value = 0.002).
  - h. Work-related stress subscales associated with premenstrual syndrome include workload, conflict, lack of support, organizational decisions, and sexual harassment.

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<ul style="list-style-type: none"> <li>a. Role ambiguity</li> <li>b. Role conflict</li> <li>c. Quantitative workload</li> <li>d. Qualitative workload</li> <li>e. Career development</li> <li>f. Responsibility</li> </ul>	Dismenore	Sewing Machine Operator	<ul style="list-style-type: none"> <li>a. Sewing machine operators experience low to moderate stress levels (74.6%).</li> <li>b. A total of 37% of sewing machine operators experience dysmenorrhea.</li> <li>c. The most dominant stressors perceived</li> </ul>	Widianti, 2018
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			by sewing machine operators are qualitative workload and career development.	
			d. There is a relationship between high levels of work stress and the occurrence of dysmenorrhea, with a risk level 2.27 times higher compared to low to moderate stress levels.	
The specific causes of work stress were not mentioned.	Menstrual Cycle Disorders	Nurse	<p>a. The most common work stress experienced by nurses is severe work stress (51.6%).</p> <p>b. The most frequent menstrual cycle disorder among nurses is oligomenorrhea (menstrual cycle &gt;35 days).</p> <p>c. There is a significant relationship between work stress and menstrual cycle disorders in nurses (p-value = 0.000).</p>	Sonata & Sianipar, 2023
The specific causes of work stress are not	The specific menstrual disorders experienced by	Workers in the production department of a factory	a. The majority of factory workers who experience work-related stress	Novianti, 2023

explicitly mentioned.	the workers were not specified.		will have irregular menstrual cycles. b. Based on statistical calculations, there is a relationship between work-related stress and the potential for changes in the menstrual cycle (p-value = 0.024), with a potential of 4.75 times greater compared to workers who do not experience work-related stress.	
The specific causes of work-related stress are not mentioned.	The specific type of menstrual disorder experienced by the workers is not mentioned.	Tobacco farmers	a. A total of 21 tobacco farmers (58.3%) experienced moderate work-related stress. b. 66.7% of tobacco farmers experienced menstrual disorders. c. There is a significant relationship between work-related stress and menstrual disorders.	Indriyanti et al., 2019

**Sumber:** Data Primer, 2024

## DISCUSSION

The results of this literature review indicate that one of the common stressors faced by female workers is workload. Research conducted by Dahliana et al. (2023) shows a correlation between workload and work-related stress among female workers. Workload refers to the capacity of the body to handle tasks. The workload assigned to workers should be balanced

with their physical and psychological abilities. An imbalance in workload can lead to work-related stress. Work-related stress occurs when workers are unable to meet job demands due to a mismatch between their capabilities and the expectations of their work. Ultimately, work-related stress can have negative effects on both the physical and psychological health of workers (Dahlia et al., 2023; Hapsari, 2020).

Physiologically, the stress experienced by an individual affects the adrenal glands, which release cortisol hormone. An increase in cortisol levels reduces gonadotropin-releasing hormone (GnRH). GnRH influences estrogen and progesterone levels, leading to menstrual disorders. This review identified one of the menstrual disorders commonly experienced by female workers, which is premenstrual syndrome type A, characterized by anxiety. This occurs because cortisol can affect the neurotransmitter serotonin. Changes in serotonin levels can influence an individual's mood (Deviliawati, 2020; Jan, 2024).

The review also found that menstrual disorders caused by work-related stress include dysmenorrhea (painful menstruation). When an individual experiences stress, progesterone levels rise, causing uterine muscles to contract and resulting in menstrual pain. Another menstrual disorder is oligomenorrhea (a menstrual cycle longer than 35 days). This prolonged cycle occurs due to a decrease in estrogen levels in the body caused by stress (Deviliawati, 2020; Jan, 2024).

This literature review concludes that work-related stress is associated with menstrual disorders. One of the most common stressors experienced by female workers is workload. Based on these findings, workplaces should implement policies or programs to help balance the workload of female workers.

## CONCLUSION

This study shows that work-related stress is linked to menstrual disorders in female workers. Workload is the most common stressor experienced by female workers. The menstrual disorders frequently experienced by female workers include premenstrual syndrome, dysmenorrhea, and irregular menstrual cycles. The organization where these female workers are employed should focus on balancing their workload with their capabilities. One preventive measure is ensuring, during the recruitment process, that the physical and psychological abilities of individuals align with the demands of the job. In addition to individual capabilities, the knowledge and skills of the workers should also be suitable for the job. It is hoped that by doing so, workers will not perceive their workload as exceeding their capacity.

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