

THE RELATIONSHIP OF JOB FATIGUE AND MENSTRUAL CYCLE IN SLEMAN POLICE POLICE WOMEN IN 2023

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Abstract

Background: The impact of continuous irregular menstrual cycles can cause reproductive system disorders which can be associated with an increased risk of various diseases such as ovarian cancer, breast cancer and infertility. In general, menstrual cycle disorders in women are caused by work fatigue for working women. **Research Objective:** To determine the relationship between work fatigue and the menstrual cycle of Sleman Police Women in 2023 **Research Method:** The research approach used in this research is cross-sectional. The population in this study was 100 policewomen from the Sleman Police. The sample required is 51 respondents. The sampling technique for respondents used a simple random sampling technique. The instrument in this research was to use a questionnaire. **Researchers used the Chi Square test** **Research Results:** The results of statistical tests show that the P value = 0.015 means $p \text{ value} < \alpha (0.05)$ so it can be concluded that there is a relationship between work fatigue and the menstrual cycle in Sleman Police Women in 2023. From the analysis results, the OR value is 5.333, meaning that work fatigue is mild 5.3 times more likely to experience regular menstrual cycles compared to heavy work fatigue. **Conclusions and Suggestions:** There is a relationship between work fatigue and the menstrual cycle in Sleman Police Women in 2023. It is hoped that the Sleman Police will take into account workers' rest time to minimize the occurrence of work fatigue so that they can increase work productivity.

Keywords: Fatigue, Menstruation

Introduction

Menstruation is a natural process that occurs in every young woman, where bleeding occurs which is indicated by the uterine organ functioning properly. Menstruation is the physiological circulation of blood and through the vagina the mucosal tissue of the non-pregnant uterus beneath which there is hormonal control and its recurrence without any sign of pregnancy during the reproductive period. Menstruation can generally last 5-7 days and the average blood loss during menstruation is 35-50 ml without any clots (Kusmiran, 2016).

One of the reproductive health problems that is generally felt by women and is a major problem in society is menstrual disorders. Menstrual disorders are a common problem and affect women's quality of life, especially among young adults. There are several types of menstrual disorders, including menstrual disorders. Common causes of these disorders include irregular menstruation, menstrual disorders such as prolonged bleeding, pain disorders, premenstrual syndrome or dysmenorrhea. The average menstrual cycle is 28 days. Some women have long menstrual cycles that can last up to 35 days, but this length varies greatly between women. The average blood loss is 30-40 ml and varies between 3-10 days during menstruation (Olivia, 2013).

According to WHO (2018), in the world 80% of women experience irregular menstruation.

Based on Riskesdas data (2018), it shows that as many as 11.7% of women in Indonesia are irregular and as many as 14.9% of women are in urban parts of Indonesia (Hikmatun, Susan and Nurhaeni, 2023).

Disturbances in the menstrual cycle that are not treated immediately and properly will result in fertility problems, the body loses a lot of blood which can trigger anemia which is characterized by fatigue, paleness, inability to concentrate attention and other symptoms of anemia (Rohan, 2017). Menstrual cycle irregularities are also an important indicator of disorders in the reproductive system, which in turn may be associated with an increased risk of reproductive system diseases, such as uterine cancer and infertility. Changes in the menstrual cycle should receive more attention because they can affect the quality of life of adolescents in the future (Sharma, 2014).

Gangguan menstruasi dapat disebabkan oleh kelainan biologis (organik atau disfungsional) atau Menstrual disorders can be caused by biological (organic or dysfunctional) or psychological disorders, such as stress and emotional disorders or a combination of biology and psychology. The causal factors are (1) psychological factors such as life pressure, stress, anxiety, physical and mental fatigue. (2) Hormonal disorders, namely an imbalance of the hormones estrogen, progesterone and prostaglandin. (3) Excessive prolactin hormone, an increase in the prolactin hormone automatically reduces the hormones estrogen and progesterone. (4) Significant weight gain or loss. (5) Nutritional status (underweight if BMI 27.0) affects labor by increasing, balancing or decreasing hormones. (6) Organic disorders such as inflammation, tumors, trauma and so on (Sarwono, 2012).

The menstrual cycle sometimes varies from month to month, resulting in women's menstruation becoming irregular (Pertwi et al, 2021). The menstrual cycle is a recurring event starting from the beginning of menstruation until the end of the next menstruation. Stress, lack of physical activity or fatigue, nutritional status and the age at which menstruation begins can weaken GnRH if these factors are disturbed (Sabila, Fujiana and Budiharto, 2023).

Generally menstrual disorders in women are caused by fatigue of working women. Female official employees automatically have two positions, namely housewife and of course permanent employee. However, full-time workers or residents who work 35 hours or more per week are more susceptible to burnout than part-time workers. Work fatigue is a condition where the body experiences a decrease in work capacity and a decrease in the energy needed to carry out an activity (Gaol, Camelia and Rahmiwati, 2018).

Work fatigue is a condition experienced by a worker that can weaken the enthusiasm and productivity of their work. The work fatigue considered in this study is the general fatigue of workers which is characterized by slow reaction time and a feeling of tiredness. According to Pines and Aronsoon (Rahmati, 2015) there are three aspects of work fatigue, namely: physical fatigue, emotional fatigue, and mental fatigue (Rahmati, 2015).

Based on the results of a preliminary study on Sleman Police Women through interviews with 10 Police Women, it was discovered that 5 Police Women experienced irregular menstrual cycles due to work fatigue. With the following data description: 1 person experienced physical, emotional and mental fatigue, 3 people experienced physical fatigue only and 1 person experienced physical and emotional fatigue. It is known that of the 5 nurses who experienced irregular menstrual cycles, 3 experienced shorter menstrual cycles (polymenorrhea) and 2 experienced longer menstrual cycles (oligomenorrhea).

From the description above, the author is interested in researching the relationship between work fatigue and the menstrual cycle in Sleman Police Women in 2023.

Methods

Research design

Observational (non-experimental) research design with the research approach used in this research, namely cross-sectional (Sugiyono, 2016).

Population and Sample

The population in this study was 106 Sleman Policewomen. The sample search formula is in the Slovin formula. So the sample required is 51 respondents using simple random sampling technique.

Research Instrument

The instrument in this research was to use a questionnaire. This research consists of 2 variables, namely the independent variable and the dependent variable. The independent variable in this research is work fatigue, while the dependent variable in this research is the menstrual cycle

Data analysis

The research uses univariate analysis to describe each variable studied. Researchers used the Chi Square test with a confidence level of 95% or a significance level of 5%.

Result

Table 1 Frequency Distribution of Respondent Characteristics for Sleman Police Women in 2023

Characteristics	Frequency (f)	Percentage (%)
Age		
31-40 years	25	49,0
21-30 years	17	33,3
41-50 years	9	17,6
Marital status		
Married	36	70,6
Not married	15	29,4

Based on table 1, it is known that the frequency distribution of characteristics of respondents in the Sleman Policewomen Police in 2023 shows that there are 25 respondents in the 31-40 year age category, namely 25 respondents (49%), the 21-30-year-old category, namely 17 respondents (33.3%) and in the 41-50 year age category, there were 9 respondents (17.6%), while the marital status of the Sleman Police Policewomen in 2023 was known to be 36 respondents (70.6%) with married status and 15 respondents with unmarried status. (29.4%).

Table 2 Frequency Distribution of Work Fatigue among Policewomen at Sleman Police in 2023

No	Work Fatigue	Frequency (f)	Percentage (%)
1.	Light	30	58,8
2.	Weight	21	41,2
Total		51	100%

Based on table 5.2, it is known that the frequency distribution of work fatigue among policewomen from the Sleman Police in 2023 shows that respondents who experienced light work

fatigue were 30 out of 51 respondents (58,8%) and respondents who experienced severe work fatigue were 21 out of 51 respondents (41,2%).

Table 3 Frequency Distribution of Menstrual Cycles in Sleman Police Women in 2023

No	Menstrual cycle	Frequency (f)	Percentage (%)
1.	Regular	33	64,7
2.	Irregular	18	35,3
Total		51	100%

Based on table 3, it is known that the distribution of menstrual cycle frequency among Sleman Policewomen in 2023 shows that respondents who experience regular menstrual cycles are 33 out of 51 respondents (64,7%) and respondents who experience regular menstrual cycles are 18 out of 51 respondents (35,3%)

Table 4: The Relationship between Work Fatigue and the Menstrual Cycle in Sleman Police Women in 2023

Work Fatigue	Menstrual Cycle				Total		P value	OR
	Regular		Irregular		f	%		
	f	%	f	%				
Light	24	80	6	20	30	100	0,015	5,333
Weight	9	42,9	12	57,1	21	100		
Jumlah	33	64,7	18	35,3	51	100		

From table 4, it was found that there was a relationship between work fatigue and the menstrual cycle in Sleman Policewomen in 2023. It was found that respondents who experienced light work fatigue and experienced regular menstrual cycles were 24 out of 30 respondents (80%) while respondents who experienced light work fatigue and experienced irregular menstrual cycles, namely 6 out of 30 respondents (20%). Severe work fatigue and experiencing a regular menstrual cycle was 9 out of 21 respondents (42.9%) while severe work fatigue and experiencing an irregular menstrual cycle was 12 out of 21 respondents (57.1%). The statistical test results showed that the P value = 0.015 means $p \text{ value} < \alpha (0.05)$ so it can be concluded that there is a relationship between work fatigue and the menstrual cycle in Sleman Police Women in 2023. From the analysis results, the OR value is 5.333, meaning that if work fatigue is mild, the chance is 5, 3 times experiencing regular menstrual cycles compared to heavy work fatigue.

Discussion

Frequency Distribution of Respondent Characteristics Based on Age and Marital Status

Based on the research results, it is known that the frequency distribution of the characteristics of respondents in the Sleman Police Women in 2023 shows that more respondents are in the 31-40 year age category, namely 25 respondents (49%).. In line with Utami research (2018), it is known that high work fatigue among workers is found in the majority aged 36-45 years as much as 76.7%. According to researchers' assumptions, a person's age influences their physical condition, young people can do hard work, and vice versa, as one gets older, a person's ability to do hard work decreases, and older workers will feel tired. be quick and don't move quickly when working. fulfill their obligations and thereby influence the fulfillment of their performance.

Based on the research results, it was found that the marital status was greater than that of 36 respondents (70.6%). In line with Sari's 2021 research, it is known that the majority of workers with

marital status are married, namely 58.3%. According to researchers' assumptions, marital status can influence employment. Married people tend to have lower stress levels than single people. This is because if employees receive support from their partners in their careers, the work stress they experience will be reduced thanks to the support from their partners. Work fatigue is a decrease in physical work ability, a feeling of tiredness and a reduction in workforce. motivation and work. productivity Fatigue cannot be defined, but can be felt so that the meaning of work fatigue is known subjectively based on the feelings experienced by employees. Fatigue can have an impact on work stress due to the large number of work activities

Frequency Distribution of Work Fatigue among Policewomen at Sleman Police in 2023

Based on the research results, it is known that the frequency distribution of work fatigue among policewomen at the Sleman Police in 2023 shows that respondents who experienced light work fatigue were 30 out of 51 respondents (58,8%) and respondents who experienced severe work fatigue were 21 out of 51 respondents (41,2%).

In line with Nurul Khikmah's research, it shows that the description of work fatigue among female nurses at Kebayoran Lama Regional Hospital in 2022 is that the majority experienced mild work fatigue, namely 20 people or 58.8% (Khikmah, 2023).

In theory, work fatigue is a condition experienced by employees which can result in decreased energy and work productivity. The work fatigue considered in this study is the general fatigue of workers which is characterized by slow reaction time and a feeling of tiredness. According to Pines and Aronsoo (Rahmati, 2015) work fatigue has three aspects, namely: physical fatigue, emotional fatigue, and mental fatigue (Rahmati, 2015).

The result of work fatigue is the weakening of workers' ability to concentrate which can increase the negative impact in the form of work accidents. Fatigue has a negative impact both on themselves and the company. Discomfort and reduced job satisfaction are the result of people's work fatigue, while the negative consequences of work fatigue are decreased productivity due to the speed of work implementation, decreased product quality, loss of originality, increased errors and damage. for companies (Fatona, 2015).

According to the researcher's assumption, a female worker, in this case a policewoman, is physically used to any working conditions, so she does not get tired easily in her work. However, this does not rule out the possibility of experiencing fatigue because women can automatically hold a double title, namely as a domestic worker and as a worker or career woman.

Frequency Distribution of Menstrual Cycles in Sleman Police Women in 2023

Based on the research results, it is known that the distribution of menstrual cycle frequency among Sleman Police Women in 2023 is known to be 33 out of 51 respondents (64.7%) and respondents who experience regular menstrual cycles are 18 out of 51 respondents (35,3%)

In line with Nurul Khikmah's research, research results showed that the description of the menstrual cycle of female nurses at Kebayoran Lama Regional Hospital in 2022 was that the majority experienced regular menstrual cycles, namely 22 people or 64,7% (Khikmah, 2023).

In theory, the menstrual cycle is a natural change that occurs in a woman's reproductive organs every month. The menstrual cycle is said to be normal if it is at least 21 days and a maximum of 35 days. One of the important factors related to the menstrual cycle is the hormones estrogen and progesterone. (Sarwono, 2012). Untreated menstrual disorders can affect the quality of life and daily activities (Setiawati, 2015). Menstrual disorders cause physical discomfort due to desmenorrhea, late menstruation (menstrual disorders) and PMS symptoms (premenstrual syndrome). Where menstrual disorders can be used as a sign of infertility in a woman (Setiawati, 2015).

According to researchers' assumptions, menstrual cycle irregularities are also an important indicator for detecting reproductive disorders. systemic disorders, which can later be associated with an increased risk of various diseases of the reproductive system.

The Relationship between Work Fatigue and the Menstrual Cycle in Sleman Police Women in 2023

Based on the research results, it was found that there was a relationship between work fatigue and the menstrual cycle in Sleman Policewomen in 2023. It was found that respondents who experienced light work fatigue and experienced regular menstrual cycles were 24 out of 30 respondents (80%) while respondents who experienced light work fatigue and experienced irregular menstrual cycles, namely 6 out of 30 respondents (20%). Severe work fatigue and experiencing a regular menstrual cycle was 9 out of 21 respondents (42.9%) while severe work fatigue and experiencing an irregular menstrual cycle was 12 out of 21 respondents (57.1%). The statistical test results showed that the P value = 0.015 means $p \text{ value} < \alpha (0.05)$ so it can be concluded that there is a relationship between work fatigue and the menstrual cycle in Sleman Police Women in 2023. From the analysis results, the OR value is 5.333, meaning that if work fatigue is mild, the chance is 5, 3 times experiencing regular menstrual cycles compared to heavy work fatigue.

In line with Nurul Khikmah's research, it shows that from the results of statistical tests, the P value = 0.002, meaning $p \text{ value} < \alpha (0.05)$, so it can be concluded that there is a relationship between work fatigue and the menstrual cycle in female nurses at Kebayoran Lama Regional Hospital in 2022(Khikmah, 2023). In line with Rahmawati's research in 2020, it was stated that there was work fatigue with the menstrual cycle ($p=0.001$; $r= 0.384$) (Rahmawati, 2020).

According to the theory, in general menstrual cycle disorders in women are caused by work fatigue for working women. Formal workers who are female will automatically have a double title, namely as a housewife and of course as a full-time worker. However, full-time workers or residents who work 35 hours or more per week are more susceptible to burnout than part-time workers. Fatigue is a condition where the body experiences a decrease in work capacity and a decrease in energy to carry out an activity (Gaol, Camelia and Rahmiwati, 2018).

According to researchers' assumptions, menstrual disorders in women are usually caused by work fatigue. for working women. Persistent irregular menstrual cycles can cause problems with the reproductive system, which can be associated with an increased risk of various diseases such as ovarian cancer, breast cancer and infertility.

Implication and Limitations

Filling out the questionnaire is filled in by the respondent himself so that there could be (information bias), namely the information conveyed by the respondent is subjective. The results of the respondent's answers depend on the respondent's honesty. Questionnaires with closed questions so that information cannot be explored in depth.

Conclusions and Recommendations

Based on the results of the research and discussion presented by the researcher, the following conclusions can be drawn: The frequency distribution of work fatigue among policewomen at the Sleman Police Station in 2023 shows that more respondents had mild work fatigue, namely 30 out of 51 respondents (58.8%). The distribution of menstrual cycle frequency among Sleman Police Women in 2023 shows that more respondents have regular menstrual cycles, namely 33 out of 51 respondents (64.7%). The results of statistical tests obtained a P value = 0.015, meaning p value < α (0.05) so it can be concluded that there is a relationship between work fatigue and the menstrual cycle in Sleman Police Women in 2023.

Suggestions for research sites are that policewomen are expected to pay more attention to their physical condition by managing work fatigue, such as stretching between work and paying attention to rest or pause times when they feel indications of work fatigue. It is hoped that the Sleman Police will be able to consider workers' rest times to minimize work fatigue so that they can increase work productivity.

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Author Contribution

Author 1 and Author 2 contributed to the design and implementation of the research, to the analysis of the results and to the writing of the manuscript.

Conflict of interest

The results of this research can be used as an additional literature for the development of nursing science, and to meet the requirements of obtaining Bachelor of Nursing Degree

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