

## DETERMINANT OF PREMENSTRUAL SYNDROME COMPLAINTS ON WOMEN WORKERS

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### Abstract

Pre-Menstrual Syndrome (PMS) complaints occur in women with different complaints and causes. This research aimed to determine the determinants of Pre-Menstrual Syndrome complaints in women workers in Makassar City. This type of research is analytics observational, with 203 women workers as a sample that was obtained through the purposive sampling technique. The research was conducted in Makassar City by distributing online questionnaires. This study showed that as many as 188 respondents (92.60%) had experienced PMS complaints with determinants of marital status, exercise, depression, consumption of foods high in salt, and knowledge about PMS. This study concludes that there is no relationship between marital status, exercise, depression, physical trauma, consuming high salt, and knowledge of PMS complaints. This study suggests that women workers, especially in Makassar City, can increase their knowledge about PMS and how to prevent it, improve sleep patterns, exercise regularly, avoid the consumption of foods high in salt, and increase the consumption of fruits and vegetables. Furthermore, the company should identify women workers who experience PMS complaints to carry out valid complaints. Women workers can find out the determinants of premenstrual syndrome complaints, and women workers can increase their knowledge about premenstrual syndrome and prevent the causes of premenstrual syndrome.

**Keywords: determinant; pre menstrual syndrome; women worker**

## INTRODUCTION

The reproductive period experienced by women is different from that of men. Puberty in women is followed by reproductive development, one of which is the beginning of menstruation. Many women experience physical discomfort for a few days before their menstrual period. Pain during menstruation is followed by

premenstrual syndrome (PMS). PMS is a collection of physical and emotional symptoms that occur a few days before menstruation in the luteal phase of the menstrual cycle (Christie et al., 2018). As many as 80-90% of reproductive women will complain of various symptoms, such as breast tenderness, bloating, acne, and constipation, that will warn their period (Rodiani & Rusfiana, 2016). Based on data from Nuvitasari et al., (2020), which conducted a study of 3000 women, it was found that around 90% of women experienced PMS before menstruation.

A study conducted by Ahmad (2020) on ICU nurses at the hospital Makassar City showed a relationship between PMS variables on PMS variables of nurse performance with a p-value = 0.001. When approaching menstruation, some nurses experience complaints such as lower abdomen pain, back pain, muscle joints, and feeling overwhelmed in dealing with patient demands, so the treatment process for patients is not optimal. These circumstances quite affect a person's performance.

Symptoms that arise in women during PMS vary. The complaints usually occur one week to a few days before the arrival of menstruation and disappear after menstruation. But sometimes, these complaints continue until menstruation stops (Rodiani & Rusfiana, 2016). As many as 20-40% of women of reproductive age experience severe symptoms of PMS and 5% are very stringent, which interferes with their lives, so they need to take menstrual leave (Mustafa, 2012). The Indonesian government has regulated the right to menstrual leave for women workers in Law No. 13 of 2003 concerning Manpower in article 81, where women workers during their menstruation period can be given leave rights on the first and second day of menstruation.

The cause of PMS most often is suspected due to hormonal disorders. Hormonal changes experienced by women affect mood changes (Anindyajati et al., 2021). Furthermore, various risk factors can increase the occurrence of PMS, including parity, marital status, age, stress, diet, nutritional deficiencies, and physical activity. Women who have given birth to several children experience increasing severe PMS. With increasing age, especially between 30-45 years old, PMS complaints are disturbing. Stress, eating habits (such as high sugar), lack of nutrients (especially B6), and lack of exercise and physical activity can aggravate premenstrual syndrome (Putri, 2017).

More than 90% of this sample reported that they had experienced at least one premenstrual symptom in the past four weeks; of these, 91.2% had experienced physical symptoms such as breast pain, headache, joint/muscle pain, bloating, weight gain; 84.5% experienced fatigue/lack of energy; 93.9% experienced anger or irritability. Women workers who experienced moderate to severe premenstrual symptoms reported significantly lower attendance scores than those with mild and no premenstrual symptoms. It is concluded that premenstrual symptoms affect their performance (Hardy & Hunter, 2021).

## **RESEARCH METHODS**

This study is analytical and observational. The population in this study were all women workers who worked in Makassar City. The number of samples in this study was 203 samples. The sampling technique was carried out to represent the population in the city of Makassar, namely as many as 203 respondents obtained through purposive sampling technique with the criteria of women aged 15-64 years, having a

job, working in Makassar city, and willing to be interviewed. The data collection technique was by distributing an online questionnaire (google form) to obtain information about the conducted. The data was then processed manually using the Statistical Package of the Social Science (SPSS) program. The data analysis of the data used in univariate analysis and bivariate analysis.

## **RESULTS AND DISCUSSION**

Table 1 shows that from 203 respondents, there were 72 respondents (93.50%) with single status experiencing PMS complaints, 109 respondents (91.60%) who were married experiencing PMS complaints, and seven respondents who were divorced (100%) and suffering from PMS. After analyzing the Chi-Square test, it was found that the  $p\text{-value} = 0.661 > 0.05$ , so there was no relationship between marital status and PMS complaints in women workers in Makassar City. There were 203 respondents; 173 respondents (93.5%) in the sports category experienced PMS complaints, while 15 respondents (83.3%) in the non-sports category experienced PMS complaints. After analyzing the Chi-Square test, it was found that the  $p\text{-value} = 0.115 > 0.05$  and that there was no relationship between exercise habits and PMS complaints in women in Makassar City.

Figure 1 shows 19 types of PMS symptom complaints in women workers in Makassar City. The complaints of PMS symptoms experienced by women workers in Makassar City consisted of irritability among as many as 188 respondents (92.60%) and type swelling of the hands or feet of as many as ten respondents (4.90%).

Figure 2 showed that from 203 respondents, 51 respondents (98.10%) in the depression category experienced PMS complaints, while 137 respondents (90.70%) in the non-depressed category experienced PMS complaints. After analyzing the Chi-Square test, it was found that the  $p\text{-value} = 0.081 > 0.05$ , so  $H_a$  was rejected and  $H_0$  was accepted, and there was no relationship between depression and PMS complaints in women workers in Makassar City.

Table 2 showed that from 203 respondents, 51 respondents (98.10%) in the depression category experienced PMS complaints, while 137 respondents (90.70%) in the non-depressed category experienced PMS complaints. After analyzing the Chi-Square test, it was found that the  $p\text{-value} = 0.081 > 0.05$ ,  $H_a$  was rejected, and  $H_0$  was accepted, and there was no relationship between depression and PMS complaints in women workers in Makassar City.

Table 3 showed that from 203 respondents, there were 95 respondents (93.10%) in the category of consuming high-salt foods as many as 1-3 times/week experiencing PMS complaints, 25 respondents (92.60%) in the category of consuming high-salt foods 4-6 times/week experienced PMS complaints, 41 respondents (95.30%) in the category of consuming high-salt foods every day, and 27 respondents (87.10%) in the category of never consuming high-salt foods experienced PMS complaints and experienced PMS complaints. After analyzing the Chi-Square test, it was found that the  $p\text{-value} = 0.596 > 0.05$ . It showed no relationship between consuming high-salt foods and PMS complaints in women workers in Makassar City.

Table 4 showed that from 203 respondents, there were 137 respondents (93.20%) in the category of having good PMS knowledge who experienced PMS complaints, while there were 51 respondents (91.10%) in the category of having PMS knowledge who had fewer PMS complaints. After analyzing the Chi-Square test, it was found that the  $p\text{-value} = 0.605 > 0.05$ , which means that  $H_a$  was rejected and  $H_0$  was accepted, so there was no relationship between knowledge and PMS complaints in women workers in Makassar City.

Premenstrual Syndrome (PMS) is a physical and mental symptom that appears when a woman is about to experience her menstrual cycle that causes discomfort. STDs usually attack women aged 20 - 30 (Nurrahmaton, 2021). Approximately 75% of women experience PMS symptoms, and 30% of women require treatment (Nurmiaty & Sudargo, 2011). The cause of this syndrome is still unclear. However, some theories state that PMS is closely related to hormonal factors such as sex hormones and steroids in women. The connection is that some women become more sensitive to progesterone and estrogen hormones. Furthermore, there is a theory that women who experience PMS have lower serotonin levels (Christie et al., 2018).

There are more than 150 symptoms associated with PMS, both in terms of physical and psychological symptoms. Complaints usually include feeling lazy, tired easily, body weakness, increasing appetite and liking sour foods, being easily irritable, emotionally unstable, sensitive, and other negative feelings and weight gain because the body stores large amounts of water. The head hurts, and the waist feels sore to fainting (Ramadhani, 2016). Experiencing physical symptoms such as breast tenderness, headache, joint/muscle pain, bloating, weight gain, fatigue/lack of energy, experiencing anger or irritability (Hardy & Hunter, 2021). Menstrual symptoms interfere with cooperation with coworkers, professional functioning deficiency and stress due to symptom burden, diverse experiences without a clear pattern, adjusted self-management with and without drug use, and stress because of symptom burden and use of medication for self-management (Yu et al., 2021).

#### **Relationship of Marital Status with PMS Complaints on Women Workers In Makassar City**

Marital status has implications for women's health, including PMS complaints. PMS complaints can be different between married women and unmarried women. Some women have not changed in PMS complaints before and after getting married. The chi-square test results showed no relationship between marital status and PMS complaints ( $p = 0.661 > 0.05$ ). The results of this study were in line with Mufida's (2015) research that there was no effect of marital status on premenstrual syndrome. Julianne Holt-Lunstad from Young University suggested that in maintaining one reproductive health, a harmonious marriage plays a major role in this (Mufida, 2015). However, the study's results were not in line with research conducted by Faiqah & Faiqah & Sopiatus, (2018) that married women experience more PMS than single women (Faiqah & Sopiatus, 2018).

#### **The Relationship of Sports Habits with PMS Complaints in Women Workers in Makassar City**

Exercise has a very positive effect on blood circulation in the body, especially for women workers who spend a lot of time at work. The results of this study showed that there was no relationship between exercise and PMS complaints ( $p = 0.115 > 0.05$ ). It is in line with the study conducted by Fatul, (2017) that there was no relationship between premenstrual syndrome and the level of physical activity ( $p = 0.678 > 0.05$ ) (Fatul, 2017). This study was not in line with research conducted by Nurrahmaton, (2021) that obtained the results of the chi-square test  $p = 0.000 < 0.05$ , which means that there was a relationship between sports and PMS respondents at SMP IT Foundation Hj. Fauziah Binjai in 2019 (Nurrahmaton, 2021). A lack of exercise routine can aggravate premenstrual syndrome because physical activity can increase oxygen transport in muscles, reduce cortisol levels, and improve the psychological state (Anggriawan, 2015).

#### **Relationship between depression and PMS complaints in women workers in Makassar City**

Many occupational factors can cause depression for women workers. It affects the reproductive health of women workers. The chi-square test results showed no relationship between depression and PMS complaints ( $p = 0.081 > 0.05$ ). This research is not in line with research conducted by (Ilmi & Utari, 2018). This study showed that psychological events in patients could exacerbate PMS. Psychological conditions can be in the form of anxiety or stress (Ilmi & Utari, 2018). Hormonal factors are the main factors causing PMS, an imbalance between estrogen and progesterone hormones, and changes in serotonin levels. Depression can affect the hormone system, affecting overall body function (Pratiwi, 2016).

#### **Relationship of Habits of Consumption of High-Salt Foods with PMS Complaints on Women Workers in Makassar City**

The chi-square test results showed no relationship between consuming foods high in salt ( $p = 0,596 > 0,05$ ) and PMS complaints. The results of this study were not in line with research conducted by Ramadhani, Setiawan & Evayanti (2016). The results of the chi-square statistical test of the study obtained  $p = 0.014$  so that there was a statistically significant relationship between eating habits high in salt and glucose and the incidence of PMS in adolescent girls at SMPN 5 Bandar Lampung in 2015 (Ramadhani, 2016). Increasing the consumption of fibrous foods such as vegetables and fruits can reduce PMS complaints (Ilmi & Utari, 2018).

#### **Relationship of Knowledge with PMS Complaints on Women Workers in Makassar City**

Knowledge is captured through the five senses of an object so it can be understood (Prihati et al., 2020). Knowledge is important in forming one behavior (Thamrin et al., 2019). The chi-square test results showed no relationship between knowledge and PMS complaints ( $p = 0.605 > 0.05$ ). Based on the results of this study, as many as 147 (72.40%) women workers in Makassar City already had good knowledge about PMS. It is supported by all information, especially about health, and it can be accessed by anyone through various sources, including print, written, electronic media, school education, and counseling (Purwasih et al., 2017). The absence of a relationship between knowledge and PMS complaints can be the good

knowledge possessed by respondents is not applied to overcome Premenstrual Syndrome (Husnida & Sutianingsih, 2016).

The epidemiological studies showed that approximately 20% of women of reproductive age experience moderate to severe PMS symptoms. About 3 - 8% have symptoms of a severe dysphoric disorder (PMDD, Premenstrual Dysphoric Disorder). Women who experience severe PMS symptoms can interfere with their daily activities, including social and personal functions, work performance, family and social activities, and sexual relations. As many as 80% of women who experience PMS report reduced productivity and work attendance for about one week per month due to PMS symptoms (Ramadhani, 2016).

It showed the results of absenteeism because of MRS. Although 13.8% of women (n=4514) reported absence due to MRS, 1,108 women (3.4%) reported absence each cycle or nearly every cycle. The percentage of absenteeism in each cycle or almost every cycle was 2.4% in the working group and 4.5% in the study group. The average absence of MRS is due to symptoms related to menstrual cycles (Schoep et al., 2019.)

More than 90% of this sample reported that they had experienced at least one premenstrual symptom in the past four weeks; as many as 91.2% had experienced physical symptoms such as breast pain, headache, joint/muscle pain, bloating, weight gain; 84.5% experienced fatigue/lack of energy; 93.9% experienced anger or irritability. Women staff who experienced moderate to severe premenstrual symptoms reported significantly lower attendance scores than those with mild and no premenstrual symptoms. It is concluded that premenstrual symptoms affect their performance (Hardy & Hunter, 2021).

PMS problems can affect work productivity. Disrupted work productivity for most workers will decrease company productivity (Thamrin, 2020). An online poll conducted by Schoep et al., (2019) on 32,748 Dutch women aged 15-45 years showed that a decrease in work productivity for nine days a year was caused by pain due to PMS symptoms. Around 81% of Dutch women claim to be less productive because they have to go to the toilet every hour, and they also find it difficult to concentrate when menstrual symptoms come Schoep et al., (2019). Increasing work productivity is one of the objectives of implementing Occupational Health and Safety (K3) programs in the workplace. The impact of PMS symptoms experienced by women workers is still underestimated in the workplace. The workplace should be more open about this and make it one of the topics in implementing the OHS program. Although the company must provide more budget for the K3 program, it is a form of profitable investment for the company (Nai'em et al., 2020).

## **CONCLUSION**

This research determined the determinants of PMS in women workers in Makassar City. It can be concluded that there was no relationship between marital status, exercise, depression, consumption high in salt, and knowledge of PMS complaints. This study concluded that there were no relationship between marital status ( $p=0.661$ ), exercise ( $p=0.115$ ), depression ( $p=0.081$ ), physical trauma ( $p=0.639$ ), consuming high in salt ( $p=0.596$ ), and knowledge ( $p=0.605$ ) towards PMS complaints. This study suggests that



women workers, especially in Makassar City. It can increase their knowledge about PMS, and to prevent it, it improves sleep patterns, exercises regularly, avoids high salt consumption, and increase consumption of fruits and vegetables. Furthermore, the company should identify women workers who experience PMS complaints so that the interventions can be carried out accurately. For company leaders or workplaces, in collaboration with the government, implement the Productive Healthy Women's Movement Program (GP2SP).

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