Experience dysmenorrhoea tend to have another disease. The pain usually begins menstrual pain that occurs frequently and is not caused "secondary". Primary menstrual pain is regular.

There are two types of menstrual cramps: "primary" and "secondary". Primary menstrual pain is regular menstrual pain that occurs frequently and is not caused by another disease. The pain usually begins a day or two before your period or when menstrual bleeding begins and occurs in the lower abdomen, back, or thighs [4].

According to the World Health Organization (WHO), the global incidence of dysmenorrhoea is very high. The average prevalence of dysmenorrhoea in adolescent girls ranges from 16.8 to 81%. On average, 45% and 97% of women in Europe experience menstrual bleeding, with the lowest prevalence in Bulgaria at 8.8% and the highest prevalence in Finland at 94%. The prevalence of menstrual pain is high among young women, ranging from 20-90%. In Indonesia, 55% of women of childbearing age suffer from menstrual pain. [5]. A person's lifestyle, such as exercise, smoking, and diet, are factors that may cause early symptoms. Women who experience dysmenorrhoea tend to have lower levels of physical activity, high levels of stress, and frequent consumption of fast food than those who do not experience dysmenorrhoea [6].
MATERIAL AND METHODS

Literature Search

We searched articles published between 2014 and 2020 in PubMed, Proquest, and Google Scholar with the keywords "primary dysmenorrhea" AND "student lifestyle." Before reviewing abstracts and full texts of selected studies, two authors independently evaluated article titles to identify articles that did not meet our inclusion criteria. Our research approach followed the Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P). This assessment was not recorded.

Eligibility Criteria

Studies selected for review met the following criteria: (i) experimental, observational, and qualitative updates of recent studies published from 2014 to 2020 (ii) Focusing on the relationship between the lifestyle of female students and the incidence of primary dysmenorrhea (iii) language Indonesian and English. We excluded low-quality studies, journal abstracts, systematic reviews, conference abstracts, case reports, opinion articles, news articles, and literature specifically reporting epidemiological outcomes.

Data Extraction

Based on the results of searches using the keywords "student lifestyle" and "primary dysmenorrhea," 16,943 journals were obtained. Of the journals that matched the keywords of this research, there were 1,299 journals which were then screened 1,299 of these journals. In the screening results, it was found that 1,276 journals had to be excluded because the full text was not available. From the evaluation results, as many as 13 journals were excluded because they did not meet the inclusion criteria, and thus 10 full-text journals emerged from this process, which will be reviewed.

Data Analysis

Data analysis is done by analyzing the journals obtained from the data collection process. The stages of analyzing these journals include finding similarities (comparison), finding differences (contrast), recording (criticism), comparing (synthesis), and summarizing all the journals reviewed (summary).

RESULTS

Research was conducted in various regions in Indonesia and two countries, i.e., Iran and China.
Sample sizes ranged from 48 to 4604 female students. This research was conducted in 2015 - 2020 (Table 1).

**DISCUSSION**

Of the ten articles, there are several similarities (compare). Some similarities were found in variables such as stress levels, physical activity, and fast food consumption. There are also several other similarities, namely, the research design used is a cross-sectional design, and the sample used is female students. Then, we also have the same measuring tool to measure stress levels, namely using the DASS (Depression Anxiety Stress Scala) questionnaire. Apart from that, of the 10 articles, there were 8 with the same research results. The results of the same study show that lifestyle is related to the occurrence of dysmenorrhea in female students. A person's lifestyle, such as exercise, stress, eating fast food, smoking, and diet are all factors that may lead to primary menstrual pain [17]. Women who experience dysmenorrhea tend to have low activity levels, high-stress levels, and frequent consumption of fast food [16].

The differences between the ten articles above are in the year of research, population and sample size, sampling technique, and analysis results found. Several studies show that female students who experience high levels of stress, often consume fast food, and rarely do physical activity tend to experience primary dysmenorrhea [7]. Women who consume less caffeine have less pain during their periods [18]. According to Sari Diana et al. [10], the cause of primary dysmenorrhea is the frequency of consuming fast food. High levels of stress have a greater influence on the occurrence of primary dysmenorrhea. So, the higher the level of stress, the higher a person's level of primary dysmenorrhea. Respondents who experienced primary dysmenorrhea were likelier to have light activity than respondents with heavy physical activity levels [11].

Two reviewed studies elucidated that there is no relationship between stress levels and primary dysmenorrhea. The reason put forward by this article as to why the results of the research are not in line with the theory that has been put forward is because the study has a weakness, namely that it does not assess other risk factors related to primary dysmenorrhea and the obstacles to research that use questionnaires are not being able to measure the honesty of respondents and obtain data when filling in the questionnaire is not fixed because it depends on mood and cannot measure cortisol levels directly [12].

In primary dysmenorrhea, the patient refers to a low abdominal pain that is moderate to intense and is usually accompanied by symptoms such as nausea, tiredness, irritability, headache, dizziness, vomiting and diarrhea. The symptoms may occur before and/or during menstruation, and last up to three days after menstruation, decreasing in intensity from the first day [19]. Several risk factors cause primary dysmenorrhea, including family history, age < 30 years, early menarche (< 12 years), longer menstrual cycle, nulliparous, low body mass index, low socioeconomic status and lifestyle [17].

Primary dysmenorrhea is influenced by the age of the woman [20]. The relationship between exercise, stress levels, fast food consumption, and the incidence of primary dysmenorrhea explains that when stressed, the body will produce excessive estrogen and prostaglandin hormones. These estrogens and prostaglandins excessive contraction of the uterus, causing menstrual cramps [21]. The hormone adrenaline also increases, causing muscle tension in the
body, including the muscles of the uterus, and leading to pain during menstruation. Fast food contains high levels of omega-6 unsaturated fatty acids, low levels of omega-3 fatty acids, and lots of salt and refined sugar. The intake of fatty acids in the diet begins the release of prostaglandins, which cause dysmenorrhea. Physical activity can reduce sympathetic activity so that pain is reduced. Physical activity also increases blood flow to the pelvis and can reduce stress in primary dysmenorrhea [10].

Results for all reviewed articles showed that the measuring tool used to measure stress levels was the DASS (Depression Anxiety Stress Scala) questionnaire. Then, efforts to reduce the incidence of primary dysmenorrhea in female students are by providing education regarding a good and correct lifestyle, such as reducing consumption of fast food and frequently doing physical activity in daily life, at least doing light exercises such as sports or doing housework.

CONCLUSION

The lifestyle of a female student tends to have a greater influence on the incidence of primary dysmenorrhea. Eating fast food is more likely to experience primary dysmenorrhea. Rarely doing physical activity and frequently experiencing stress are at risk of experiencing primary dysmenorrhea. Education regarding a good and correct lifestyle is needed to minimize the incidence of primary dysmenorrhea in female students.

ACKNOWLEDGMENT

The authors thank all authors of the articles reviewed in this article.

CONFLICT OF INTEREST

The authors declared no conflict of interest.

REFERENCES


