

Research Article

Assessment of Dysmenorrhea using WaLIDD Score Instruments on Nursing Students

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ORCIDJuwitasari: <https://orcid.org/0000-0001-9161-091X>**Abstract.**

Dysmenorrhea or menstrual pain is pain or cramps in the lower abdomen that occurs during menstruation in some women, experienced primarily at ages 18-25 years, ending at around the age of 40. The impact of dysmenorrhea can affect nursing students' performance during class, causing concentration difficulties, anxiety, and psychological stress. The variety of respondents' characteristics caused the different capacities to adapt to the dysmenorrhea sign and symptoms. Menstrual pain can be measured by the WaLIDD score, which consists of Working ability, location, intensity, and day of pain. This cross-sectional study identified the level of dysmenorrhea using the WaLIDD Score Instrument. This research was carried out starting October 11, 2021, with nursing student respondents from the 2019 and 2020 batches. The population in this study was 313 nursing students. The accidental sampling technique was used in this study, and as many as 180 female students who met the inclusion criteria participated. The analysis of 91 female students who experienced severe dysmenorrhea showed that most female students had severe dysmenorrhea based on the WaLIDD Score table. As many as 80 (44.4%) female students felt that, at the time of dysmenorrhea, their activities were disrupted. 64 (35.6%) female students felt pain in four locations during dysmenorrhea. 83 (46.1%) female students at the time of dysmenorrhea felt the intensity was excruciating. 71 (39.4%) of female students felt dysmenorrhea for 1-2 days. Adolescent and young adult women often experience severe dysmenorrhea. Female students stated that dysmenorrhea constantly interfered with work activities, and many had more than four locations of pain.

Keywords: Assessment, Dysmenorrhea, WaLIDD Score, Nursing Students.

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1. INTRODUCTION

The menstrual phase in women aged 19-40 is repeated every 28 days. The first cycle will be the follicular phase and In the second half of the cycle is called the luteal phase. During the luteal phase, a high level of progesterone secretion occurs, and if there is no fertilization (3 days before the onset of menstrual bleeding) causes a low level of progesterone secretion. A lower level of progesterone can cause a release of acid phosphatase and lytic enzymes present in lysosomes into the cytoplasm. These

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enzymes digest endometrium cells, causing the release of prostaglandins. Pain or cramp sensation called dysmenorrhea due to the elevated prostaglandin level in the endometrium. Therefore it causes muscular contractions in the myometrium, constricting blood vessels, and endometrial disintegration (1). This condition can induce moderate to severe pain/cramp sensation in the lower quadrant abdominal region, called dysmenorrhea. Excessive uterine contractions may cause hypoxia and ischemia of the uterus and lead to typical pain in the endometrium (2).

Dysmenorrhea can be classified into primary and secondary dysmenorrhea. Secondary dysmenorrhea impacts pelvic diseases such as endometriosis (3). The worst pain/cramp sensation during dysmenorrhea will worsen the quality of life among nursing students, limiting social interaction during academic settings, especially when it is accompanied by several physical symptoms such as fatigue, nausea, headache, vomiting, diarrhea, insomnia and muscle cramps (4). The negative impacts of dysmenorrhea include lowering academic performance, inability to concentrate, decreased participation during class and nursing skills among adolescents and young adult in Bachelor degree of nursing school students (5). However, the previous study showed that the impact of dysmenorrhea might vary due to the cultural value around menstrual tradition and the lack of resources and support at nursing school for example, to facilitate the student with the opportunity to change their sanitary products regularly (5). Therefore, Dysmenorrhea become an academic challenge in nursing field due to its high impact, high prevalence, the high costs of medications and lowering students' productivity during performing nursing skills (6)

Promoting a healthier lifestyle and self-care in young women nursing school students should be one of the aims of socio-sanitary care during menstruation. The nursing profession must provide comprehensive interventions or support groups to their nursing students by including complementary/alternative therapies that may improve the quality of life of nursing students with dysmenorrhea (2). The proper assessment of Dysmenorrhea level of pain will help avoid the side effect of the intervention. Dysmenorrhea women rarely seek help from the clinician and prefer self-medication using Non-steroidal anti-inflammatory drugs (NSAIDs) to alleviate the pain. Furthermore, the prevention of secondary effects due to prolonged use of NSAIDs and the cost burden for the nursing student should be avoided to keep them focused on their competencies (7). The assessment of dysmenorrhea used the WaLLID Score (Working ability, location, intensity, days of pain, dysmenorrhea). WaLLID score was designed to diagnose dysmenorrhea and predict medical leave score as a standard survey that validated and constructed the classification of the severity of dysmenorrhea(8).

2. MATERIALS AND METHODS

2.1. Study design and settings

A cross-sectional survey was conducted among female nursing students aged 18-25 years old at private nursing school, Bachelor Degree of Nursing batch 2019-2020, Regular Class, in Malang town, East Java Province, Indonesia from October 11 – November 10th, 2021. The inclusion criteria of the participants were Female students who underwent their education in Nursing Science, could participate in this study, and had no sexual and reproductive medical problems.

The study participants were recruited by accidental sampling, with 180 female nursing students meeting the inclusion criteria. Data collection tools and procedures applied structured WaLLID score (A working ability, location, intensity, days of pain, dysmenorrhea) questionnaire. The questionnaire for identifying dysmenorrhea had adopted from previous literature (8). The instrument used in this study was the WaLIDD questionnaire, namely (Working ability, Location, Intensity, Days of pain).

The WaLIDD score questions measuring tool functions to collect data for the study of dysmenorrhea in female students class 2019-2020 by filling in according to what the respondents experienced. The WaLIDD questionnaire contains 4 questions with indicators: Working ability 1 question = 0: never, 1: sometimes, 2: regularly, 3: always; Location = 0: none, 1: 1 location, 2: 2-3 locations, 3: 4 locations; Intensity = 0: never, 1: sometimes, 2: regularly, 3: always; Day of Pain = 0: none, 1: 1-2 days, 2: 3-4 days, 3: more than 5 days

The interpretation of the WaLIDD questionnaire is as follows: 0 = No Dysmenorrhea; 1-4 = Mild Dysmenorrhea; 5-7 = Moderate dysmenorrhea; 8-12 = Severe Dysmenorrhea

The self-developed questionnaire was used for participants' socio-demographic characteristics and obstetric/gynecological-related conditions. The data were collected by two nurses (one as data collector and one as supervisor) by using a Google Form Online technique. Data processing and Data analysis were checked, coded, and entered into SPSS version 26.

3. RESULTS

TABLE 1: Socio-Demographic Characteristics of Participants.

Age	Frequency (f)	Percentage (%)
18	25	13,9
19	36	20
20	96	53,3
21	23	12,8
A batch of Regular Class	Frequency (f)	Percentage (%)
2019	100	55,6%
2020	80	44,4%

3.1. Socio-Demographic Characteristics of Participants

Based on the table above, data were obtained from 180 female respondents aged 18-21; more than half of the (53.3%) experienced severe dysmenorrhea, and 100 female students from regular class batch 2019 (55.6%) experienced severe dysmenorrhea.

3.2. WaLLID score (A working ability, location, intensity, days of pain, dysmenorrhea)

TABLE 2: Working ability.

Working ability	Frequency (f)	Percentage (%)
0	20	11,1
1	54	30
2	26	14,4
3	80	44,4

Based on the table 2, almost half of them (44,4%) stated that dysmenorrhea always interfered with work activities, then 11,1% of them stated that dysmenorrhea did not interfere with activities, and 30% of them stated that sometimes dysmenorrhea interfered with work activities.

TABLE 3: Location.

Location	Frequency (f)	Percentage (%)
0	17	9,4
1	49	27,2
2	50	27,8
3	64	35,6

Based on table 3 above, the majority experienced 3 pain locations of dysmenorrhea (35.6%), and only a few people (9.4%) experienced 0 (no) pain locations of dysmenorrhea.

TABLE 4: Intensity (Wong-Baker).

Intensity	Frequency (f)	Percentage (%)
0	16	8,9
1	48	26,7
2	33	18,3
3	83	46,1

Based on table 4 above, almost half of the participants experience intensity, always dysmenorrhea (46.1%), and few participants never had intense dysmenorrhea (8.9%).

TABLE 5: Day Of Pain.

Days f pain	Frequency (f)	Percentage (%)
0	16	8,9
1	71	39,4
2	29	16,1
3	64	35,6

Based on table 4 above, respondents felt dysmenorrhea for more than 3 days (35.6%), felt dysmenorrhea 1-2 days (39.4%) and never felt dysmenorrhea (8.9%).

4. DISCUSSION

4.1. Working Ability

Based on research conducted at the Private University of Malang, 44.4% of female students stated that dysmenorrhea constantly interfered with work activities. At the time of dysmenorrhea, you will experience diarrhea, pelvic pain, nausea, vomiting and dizziness. These complaints appear at the time of dysmenorrhea which results in disrupting student learning activities. On the other hand, women who experience dysmenorrhea must continue to carry out activities as usual, like women who do not experience dysmenorrhea. Some women experience severe and continuous dysmenorrhea, which will cause them to feel weak, weak and even faint and have to go to the doctor because the dysmenorrhea they are experiencing is very disturbing and painful (7).

4.2. Locations

Based on the results of research conducted at the Private University of Malang on female students as much as 35.6% chose 4 locations of pain when menstruation comes. The

location for dysmenorrhea is the lower abdomen, lower back, calves and symphysis pubis. Pain during menstruation is generally felt in the abdomen or lower abdomen, centered on the suprapubic in the form of deep pain or cramps, which can spread to the lower back, calves and legs on the feet. Students who do not experience dysmenorrhea will be more flexible in carrying out lecture activities, but students who experience dysmenorrhea will find it difficult to do physical activities such as going up and down stairs(2).

4.3. Intensity (Wong-Baker)

Based on research conducted at the Private University on female students, 46.1% chose very painful dysmenorrhea. Intensity is the feeling during dysmenorrhea that is not painful, slightly painful, and very painful. Young adult women who experience very painful dysmenorrhea will limit learning activities because when dysmenorrhea results in being unable to concentrate on studying and learning motivation will decrease and even affect mentally (1,3)

4.4. Day of pain

Based on research conducted at the Private University Malang, 39.4% of female students chose 1-2 days to experience dysmenorrhea. Day of pain in dysmenorrhea has 4 answers: no dysmenorrhea, 1-2 days, 3-4 days, and more than 5 days. And not infrequently, this makes female students not attend lectures while experiencing dysmenorrhea which will affect class attendance and skip lecture material (5).

5. CONCLUSION

Based on the results of the study, it is concluded that 180 female participants aged 18-21 years old at a Private Nursing School in Malang town showed that As many as 80 (44.4%) of female students at the time of dysmenorrhea felt that their activities were disrupted. There were sixty-four, or 35.6% of female students at the time of dysmenorrhea felt 4 locations of pain during dysmenorrhea. Furthermore, 83 or 46.1% of female students at the time of dysmenorrhea felt the intensity was excruciating and As many as 71 or 39.4% of female students felt dysmenorrhea for 1-2 days.

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