

Assessment of knowledge about dysmenorrhea among women of childbearing age in Yangambi

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Abstract : This study aims to assess the knowledge of dysmenorrhea among women of childbearing age in Yangambi. This was a descriptive cross-sectional study. We used a non-probability convenience sample of 120 women aged 15-49 years to collect the data. The descriptive analysis allowed us to compare our results with previous work. At the end of our work, we observed that hereditary history (47.5%), organic pathologies (34%), obstetrical history (31%) and gynecological history (11.6%) were the main causes of dysmenorrhea. Among the factors hindering medical consultation, we noted the lack of financial means, taboo, self-medication and the psychocultural context. Non-steroidal anti-inflammatory drugs have been used to alleviate this condition, as well as traditional medicine. However, dysmenorrhea has produced serious consequences in the female population of Yangambi, including school and work absenteeism, decreased physical and intellectual performance, and discomfort during travel. These results showed that women of childbearing age have sufficient knowledge about dysmenorrhea. Thus, we suggest to other researchers to deepen this theme to further enlighten the problematic related to dysmenorrhea in the Tshopo province and to test the efficacy or the harmlessness of treatment based on medicinal plants.

Key words: dysmenorrhea, self-medication, women of reproductive age, Yangambi, Tshopo

I. Introduction

Since ancient times, menstruation has always been tainted by a negative perception and fed by popular and religious prejudices, synonymous with illness, impurity and isolation. Its occurrence still causes many discomforts to the point that some women experience it as a physical and psychological handicap [1, 2, 3]. Dysmenorrhea has been considered for a long time as a minor disorder of menstruation due to psychological problems. Ignorance of its high prevalence, its trivialization by the families themselves, and self-medication passed on from generation to generation have all contributed to this lack of interest by the doctors themselves [4,5].

In recent years, dysmenorrhea has received renewed interest. Several studies have been carried out to shed light on the recognized points, the social and economic repercussions as well as the school, university and professional absenteeism of dysmenorrheic young adult girls. Some recent works have indeed underlined the role of a uterine hypercontractility associated with a dysregulation of the synthesis of some uterine prostaglandins. The result is a more coherent pathophysiological conception and a well adapted management [4,6].

Among the pains of women, dysmenorrhea is identified as the most distressing. It is far ahead of pelvic pain and dyspareunia. It has a social and economic dimension due to the high rate of recurrent absenteeism in 10 to 15% of students and 5 to 10% of young women. Secondly, it has a physical and intellectual performance dimension for 30 to 50% of the people interviewed [4].

The prevalence of primary dysmenorrhea is relatively high in the adolescent female population. On average, 72% of young girls have dysmenorrhea, of which 20% are severe, yet adolescents consult less for this symptom, but more often resort to self-medication [4,5].

Vercelini found 8.4% of congenital malformations in 47 girls with dysmenorrhea resistant to medical treatment [4].

Of course, as with any pelvic pain, a rigorous diagnostic approach to any dysmenorrhea is necessary in order not to ignore an organic origin of this pathology. Simple, specific and effective medications are available,

and it is alarming to note that a very small minority of women who really suffer during their menstruation benefit from them among so many others who self-medicate daily from one generation to another [6].

In the Democratic Republic of Congo, many of the traditional partners in the health sector and non-governmental health organizations are not interested in the issue of women's dysmenorrhea. In the province of Tshopo in general and the city of Yangambi in particular, information on dysmenorrhea is insufficient.

For this reason, we initiated this study to assess the knowledge of women in Yangambi about dysmenorrhea. Specifically, we wanted to identify the main etiological factors and those limiting medical consultation for dysmenorrhea in order to evaluate its management.

On a practical level, this work can be used by the health authorities to raise awareness among the population regarding the rational medical management of dysmenorrhea in the city of Yangambi. In addition, the data from this survey will allow researchers to use it as a basis for discussion of scientific knowledge related to this health issue.

Dysmenorrhea is not necessarily observed at every cycle. Thus, in a population where 90% of women between 18 and 45 years of age reported varying degrees of dysmenorrhea during their lives, only 22% had pain at each menstrual period [4].

II. Methodology

Our research was conducted in Yangambi, approximately 100 km on the right bank of the Congo River, downstream from the city of Kisangani. The city of Yangambi is located at 24°29' East longitude, 0°48' North latitude and 470 m above sea level in the territory of Isangi, Tshopo province in DR Congo.

This was a descriptive cross-sectional study. The study population consisted of 1395 women of childbearing age divided into two homogeneous groups: Yangambi North 39% and Yangambi South 61%. Due to the lack of a reliable sampling frame, we used a non-probability convenience sample of 120 women.

All women of childbearing age residing in Yangambi for at least six months and who agreed to answer our questionnaire were included in the study.

To collect the data, we used a structured interview. However, descriptive analysis allowed us to compare our data with previous work.

III. Results

3.1 Sociodemographic characteristics

Table I: Distribution of respondents according to sociodemographic characteristics.

| Socio-demographic variables | Number of students | % |
|-----------------------------|--------------------|--------------|
| Age (years) | | |
| 33 – 37 | 17 | 14,2 |
| 28 – 32 | 52 | 43,3 |
| 17 – 22 | 36 | 30,0 |
| 12 – 16 | 15 | 12,5 |
| Level of education | | |
| Illiterate | 5 | 4,2 |
| Primary | 45 | 37,5 |
| Secondary | 59 | 49,2 |
| Higher and University | 11 | 9,1 |
| Marital status | | |
| Single | 31 | 25,8 |
| Married | 69 | 57,5 |
| Divorced | 12 | 10,0 |
| Widowed | 8 | 6,7 |
| Activity carried out | | |
| Student | 46 | 38,3 |
| Saleswoman | 34 | 28,3 |
| Housewife | 11 | 9,2 |
| Teacher | 8 | 6,7 |
| Civil servant | 13 | 10,8 |
| Farmer | 8 | 6,7 |
| Total | 120 | 100,0 |

3.2. Prevalence of dysmenorrhea

Table II: Prevalence of dysmenorrhea in the city of Yangambi

| Woman dysmenorrhea | Effectif | % |
|--------------------|------------|--------------|
| Yes | 95 | 79,2 |
| No | 25 | 20,8 |
| Total | 120 | 100,0 |

During the period of our study, we interviewed 120 adult and adolescent women, of whom 79% were dysmenorrheic and 21% were non-dysmenorrheic.

3.3. Clinical data

3.3.1. History

Table III: Distribution of respondents by gynecological history

| Gynecological history | Effectif | % |
|-----------------------|------------|--------------|
| Parity | | |
| Nulliparous | 37 | 30,8 |
| Primiparous | 20 | 16,7 |
| Multiparous | 63 | 52,5 |
| Menarche age | | |
| ≤ 12 | 14 | 11,6 |
| 13 | 41 | 34,1 |
| 14 | 46 | 38,3 |
| ≥ 15 | 19 | 16,8 |
| Hereditary | | |
| Yes | 57 | 47,5 |
| No | 33 | 27,5 |
| Don't know | 30 | 25,0 |
| Total | 120 | 100,0 |

We found 52.5% of multiparous women, among which 38.3% had seen menarche at 14 years of age, while 47.5% supported heredity in dysmenorrhea.

3.3.2. Characteristics of menstruation

Table IV: Distribution of respondents according to the characteristics of their menstrual periods

| Characteristics of the rules | Effectif | % |
|------------------------------|------------|--------------|
| Duration (days) | | |
| < 4 | 30 | 25,0 |
| 4 – 6 | 54 | 45,0 |
| > 6 | 23 | 19,2 |
| ≥ 15 | 13 | 10,8 |
| Quantity | | |
| Minimal | 35 | 15,0 |
| Average/Good | 58 | 63,5 |
| Abundant | 27 | 21,5 |
| Aspect | | |
| Red | 69 | 57,5 |
| Blackish | 26 | 21,5 |
| Don't know | 25 | 21,0 |
| Total | 120 | 100,0 |

More than 45% of women said that menstruation lasted 4 to 6 days with a good quantity (57.5%) and a reddish appearance (57.5%).

3.3.3. Characteristics of pain

Table V: Distribution of surveys according to the characteristics of pain during menstruation

| Characteristics of pain | Effectif | % |
|--------------------------|----------|------|
| Incidence of pain | | |
| Directly with menarche | 18 | 15,0 |
| At age 24 | 30 | 25,0 |
| 25 - 41 years old | 50 | 42,0 |

| | | |
|-----------------------------------|------------|--------------|
| Don't know | 22 | 18,0 |
| Frequency of pain | | |
| Constant | 32 | 26,7 |
| Frequent | 45 | 37,5 |
| Occasional | 17 | 14,2 |
| None | 26 | 21,6 |
| Timing of pain | | |
| 24 - 48 hours before menstruation | 28 | 29,5 |
| Coincidence with menstrual flow | 54 | 56,8 |
| 1 - 2 days after menstruation | 13 | 13,7 |
| Amplitude of pain | | |
| Very severe | 22 | 18,0 |
| Moderate | 48 | 40,0 |
| Mild | 25 | 21,0 |
| None | 20 | 21,0 |
| Site of pain | | |
| Hypogastric region | 81 | 67,5 |
| Lumbosacral region | 4 | 3,3 |
| Hypogastric and lumbosacral | 15 | 12,5 |
| No pain | 20 | 16,7 |
| Total | 120 | 100,0 |

Menstrual pain was frequent (37.5%) and more pronounced between the ages of 25 and 41 (41.5%), but coincided with menstrual flow (45.0%). On the other hand, 40% said that the amplitude of this pain was moderate and located in the hypogastric region (67.5%).

3.4. Women's attitudes toward these pains

Table VI: Distribution of respondents according to their perception of dysmenorrhea

| Perception of dysmenorrhea | Effectif | % |
|--------------------------------|------------|--------------|
| Bad spirit | 12 | 10,0 |
| Natural situation of the woman | 60 | 50,0 |
| Gynecological disease | 48 | 40,0 |
| Total | 120 | 100,0 |

Half of the subjects interviewed said that dysmenorrhea is a natural situation for women.

3.5. Management of dysmenorrhea

Table VII: Distribution of women surveyed according to medical management of dysmenorrhea (n=120)

| Medications used | Effectif | % |
|---------------------------------------|----------|------|
| Vitamins | 10 | 8,3 |
| Antispasmodics | 20 | 16,7 |
| Analgesics | 16 | 13,3 |
| Non-steroidal anti-inflammatory drugs | 14 | 11,7 |
| Antibiotics | 25 | 20,8 |
| Medicinal plants | 35 | 29,2 |

Medicinal plants were mentioned by 29.2% of our respondents to relieve dysmenorrhea.

3.6. Factors that hinder medical consultation

Table VIII: Factors that explain the low level of medical consultation in cases of dysmenorrhea

| Factors hindering medical consultation | Effectif | % |
|----------------------------------------|----------|------|
| Effectiveness of traditional treatment | 51 | 42,5 |
| Lack of financial means | 25 | 20,8 |
| Shame | 16 | 13,3 |
| Self-medication | 23 | 19,1 |
| Don't know | 38 | 31,6 |

The effectiveness of the traditional treatment is the first explanatory factor for low medical consultation (42.5%), followed by financial insufficiency (20.8%).

3.7. Social repercussions

Table IX: Knowledge of respondents about the social consequences of dysmenorrhea (n=120)

| Social consequences of dysmenorrhea | Effectif | % |
|-------------------------------------|----------|---|
|-------------------------------------|----------|---|

| | | |
|------------------------------------|----|------|
| School absenteeism | 18 | 15,0 |
| Absenteeism from work | 20 | 16,6 |
| Decreased intellectual performance | 25 | 20,8 |
| Decreased physical performance | 35 | 29,1 |
| Discomfort during travel | 10 | 8,3 |
| Don't know | 65 | 54,1 |

More than 50% of the women did not know the social consequences of dysmenorrhea. However, many of them mentioned the decrease in physical performance (29.1%) and intellectual concentration (20.8%).

IV. Discussion

4.1. Socio-demographic characteristics

Our results on this subject showed that the age group between 28 and 32 years was more represented, i.e. 33.5% of cases. These results can be explained by the effect of the sample, the variability of the demographic and geographic data.

Slightly more than half of the women surveyed had a secondary education (49%). This preponderance would be due to the socio-cultural situation of our urban-rural environment, according to which many parents are not motivated to send their daughters to school at the age of adolescence. It is only necessary for the child to reach the age of adolescence for her to be forced to abandon her studies and enter into marriage.

In our study, it appears that married surveys are in the majority (57.5%). This is due to the fact that certain churches and civilizations have certain norms that allow for procreation provided that one is married, regardless of the circumstances. Moreover, the population of Yangambi attaches this ideology to early marriages in order to comply with the rules.

With regard to the activity carried out, we found 51.8% who are engaged in informal work and the majority of whom reside in the southern region of Yangambi (61%). In fact, the city of Yangambi, which was the prerogative of the National Institute for Study and Agronomic Research, is being invaded by people from other sectors following the development of other survival activities such as agriculture, small trade, local oil refining, alcohol distillation, etc.

4.2 Prevalence of dysmenorrhea

Our study revealed a very high frequency of dysmenorrhea (79%). This prevalence is low compared to that of Jamieson in the United States observed in a population of 355 women aged 18 to 45 years (90%). But it is higher than another study in Singapore in 415 women aged 15-54 years 51.3% [4,5]. This variation in results could be explained by the presence of a high morbidity of dysmenorrhea in Yangambi City.

4.3 Clinical data

Dysmenorrhea began in most of our respondents between the ages of 25 and 41 (41%). The pain was localized for the majority of cases in the hypogastric region and was always accompanied by neurotic and digestive signs such as: headache, physical asthenia, mastodynia and lumbago.

These results corroborate those found by Sultan. In addition, Balbi and the Casablanca study show that hypogastric pain was the most frequent [5].

According to Gabriel, the age of less than 25 years is the age of functional pathology, especially essential dysmenorrhea. But age greater than or equal to 25 years is the age of the so-called organic pathology.

4.4 Etiological factors of dysmenorrhea

Our research revealed 5 main etiological factors, but these were predominantly hereditary, organic pathologies and obstetrical history.

These results corroborate those of Widholm who found in his study frequent pain in the daughters of dysmenorrheic mothers (70%) against 30% in the daughters of non-dysmenorrheic mothers. Some authors explain this relationship through genetic factors and others, on the other hand, link it to psychological factors such as: daughter-mother mimicry and inadequate sexual education [5].

Other studies explain that the beneficial effect of the first pregnancy, which ends in a voluntary or spontaneous abortion, has no influence on dysmenorrhea. On the other hand, the regression of dysmenorrhea is frequent after the first child whatever the mode of delivery (vaginal or caesarean). Sjoberg's histological study reports an almost complete disappearance of uterine adrenergic neurotransmitters in the last trimester of pregnancy and a partial regeneration after delivery. This physiological partial uterine denervation is considered to be a factor in the regression of dysmenorrhea by a mechanism that remains poorly understood. Moreover, pre-sacral neurotomy and laser uterine denervation often have an effective analgesic effect in dysmenorrhea that is resistant to medical treatment [5,7].

Finally, the early age of menarche seems indisputable. It has been established as a risk factor for the prevalence of dysmenorrhea by several studies [5].

Clinically, in the study of etiological factors, organic pathologies, are very often observed in dysmenorrhea of severe precession and late intensity. In this regard, our results show that most of the dysmenorrheic women had pain coinciding with menstrual flow (45%), while 24% complained of precession dysmenorrhea.

In fact, the study conducted in Casablanca reported that the majority of women surveyed (49%) had pain that began with menstrual flow, 24.6% of whom reported precession dysmenorrhea.

In addition, 23% of cases had periods lasting more than 6 days, while 21.5% had very long periods. Curiously, 21.5% of our respondents had poor quality menses. This symptomatology could also explain the presence of the following benign uterine pathologies: fibroid, endometrial hyperplasia, functional menorrhagia in elderly women and pelvic infectious diseases [4,7].

In addition, severe pain prevents any activity and forces the woman to rest in bed and not to take ordinary painkillers. These reinforce the results of Jamieson [29]. His study was carried out on 533 women in which 90% complained of dysmenorrhea but only 249 had it constantly. In addition, for Sultan [12] and Clein [16], dysmenorrhea that forced absenteeism was noted in 35 and 37% of cases respectively.

Essential dysmenorrhea is repeated from month to month without a tendency to worsen; pain that progressively increases in intensity is suspicious of organicity even in adolescent girls [15].

Precessional and late dysmenorrhea should again be considered as a possible organic pathology [4, 5, 7].

Under normal conditions, dysmenorrhea is delayed from the first menstrual period by a few months to a few years. This delay between menarche and dysmenorrhea is related to the anovulatory character of the first menstrual cycles [4].

Curiously, our research reports 16.5% of women who experienced their pain directly with menarche. The same results were found by Sultan in an adolescent population (31%).

Safa and other authors state that all dysmenorrheic women should always have a look at the opening of the cervix in order to discover a possible mechanical factor responsible for early, paroxysmal, very intense spasmodic pain accompanied by vomiting and diarrhea. In addition, certain congenital malformations may also favor dysmenorrhea [5, 7, 14].

4.5. Factors hindering medical consultation

In this survey, we found that 20.8% explicitly stated that they did not go to the medical consultation due to financial means. This financial reason was one of the reasons for not going to the doctor in case of dysmenorrhea. There are people who are able to support themselves while others are unable to support themselves due to financial inadequacy [15].

During our research, we realized that 13.3% of the women surveyed did not see the importance of medical consultation. Moreover, they are ashamed to ask the health care providers for an explanation of what is happening to them.

In fact, menstruation is tainted by a negative perception and is fed by popular and religious prejudices, which are often associated with illness, impurity and isolation. Its occurrence causes many illnesses and discomforts to the point that some women experience it as a physical and psychological handicap [1, 2, 3].

It has been noted in the problem of dysmenorrhea that the female population only contacts self-medication [5].

The results of our research show us that the population of Yangambi has different beliefs or myths regarding dysmenorrhea. These factors may indirectly influence the non consultation of our respondents.

More than 42% of the women surveyed considered traditional treatment to be more effective than modern treatment. These results are consistent with those of Safa, who showed that more than half of the girls with dysmenorrhea (51.5%) have already had experience with traditional treatment, and among them, 78.5% said that it was effective and did not have side effects.

4.6. Management of dysmenorrhea

The medical management of essential dysmenorrhea is evaluated in the context of its effectiveness by non-steroidal anti-inflammatory drugs [5,7].

In our study, a very small minority of 5 respondents, i.e. 4% of cases, regularly use non-steroidal anti-inflammatory drugs, while the majority, 48.5%, use drugs that are not related to the treatment of dysmenorrhea. Only 8.3% consult the medical service for cases of dysmenorrhea.

In fact, the therapeutic proportions of essential dysmenorrhea are derived from the pathophysiological mechanisms [15]. Non-steroidal anti-inflammatory drugs act through inhibition of prostaglandin synthesis, inhibiting cyclooxygenase. The decrease in prostaglandin levels results in pain relief by decreasing uterine contractions [15,16]. While most non-steroidal anti-inflammatory drugs inhibit only cyclooxygenase, fenamates have been shown in vitro to inhibit both cyclooxygenase and lipo-oxygenase.

Several studies have found the following nonsteroidal anti-inflammatory drugs to be effective in the treatment of primary dysmenorrhea: Naproxen sodium, Mefenamic acid, Ketoprofen, Ibuprofen and Diclofenac. However, Owen found superiority of Fenamate over Ibuprofen, Indometacin and Naproxen [5].

The introduction of specific anticyclooxygenase2 was aimed at improving the inflammatory process under gastrointestinal effects. These products are essential for the integrity of the gastric mucosa and are effective in the treatment of primary dysmenorrhea in girls at the age of 18 years or older [5].

Certainly, Sultan reported that more than half of the adolescents consider dysmenorrhea as a normal phenomenon and do not take any treatment. In addition, he noted that the treatments used are mainly analgesics (29%) non-steroidal anti-inflammatory drugs are used in only 11% of cases and contraceptives in 4% of cases. For Safa, nearly 59% of dysmenorrheic girls had already taken a medical treatment to relieve pain [5].

Our study revealed that some natural plants were used to treat dysmenorrhea. Indeed, it has been agreed for centuries that women use alternative and complementary remedies to relieve their pain. Some herbal medicines such as chasteberry can help reduce the psychological symptoms associated with dysmenorrhea, while borage oil and evening primrose oil, can help reduce the physical disorders [5].

4.7. Social repercussions

Our research reported a high rate of school and work absenteeism (31.6%). The majority of women complained of reduced physical and intellectual performance (49.9%).

In fact, dysmenorrhea is the leading cause of school and work absenteeism among adolescents and young women. It is estimated that pain causes recurrent absenteeism in 10 to 15% of schoolgirls and 5 to 10% of young women. This absenteeism has been estimated for industry at 140 million work hours per year in the United States and 30 million in France [4]. In addition, the Australian study of 384 young people revealed 52% of dysmenorrheic girls who reported a limitation in their activities: 45% in school activities, 48% in sports activities and 46% in social activities. These activities were limited for at least 24 hours in 48% of cases and 18% were limited for more than 48 hours [5].

V. Conclusion

At the end of our work we observed that hereditary history (47.5%), organic pathologies (34%), obstetrical history (31%) and gynecological history (11.6%) are the main causes of dysmenorrhea. Among the factors hindering medical consultation in case of dysmenorrhea we have cost, taboo, self-medication and psychocultural context. Non-steroidal anti-inflammatory drugs have been used to alleviate this condition, as well as the practice of traditional medicine. However, dysmenorrhea has produced serious consequences in the female population of Yangambi, including school and work absenteeism, reduced physical and intellectual performance, and discomfort during travel.

These results allow us to say that women of childbearing age in Yangambi have sufficient knowledge about dysmenorrhea.

To other investigators to continue to conduct in-depth research to shed more light on the problem of dysmenorrhea in Tshopo Province and to test the efficacy or safety of medicinal plants.

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