

**DYSMENORRHEA AMONG SECONDARY SCHOOL
STUDENTS IN TANAH MERAH KELANTAN: A
COMPARATIVE STUDY ON KNOWLEDGE AND
IMPACT**

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by

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**Dissertation submitted in partial fulfilment of the
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CERTIFICATE

This is to certify that the dissertation entitled 'Dysmenorrhea Among Secondary School Students In Tanah Merah: A Comparative Study on Knowledge and Impact' is the bonafide record of research work done by Siti Atikah Binti Md Shamsuddin, Matrix Number 105153 during the period of July 2012 to June 2013 under my supervision. This dissertation is submitted in partial fulfillment for the degree of Bachelor of Health Sciences (Nursing). Every research work and collection of data belongs to Universiti Sains Malaysia.

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LIST OF ABBREVIATIONS

BMI	-	Body Mass Index
ICT	-	Information and Communication Technology
PMR	-	Penilaian Menengah Rendah
SMKK	-	Sekolah Menengah Kebangsaan Kemahang
SMKTM1	-	Sekolah Menengah Kebangsaan Tanah Merah 1
SPSS	-	Statistical Package Social Science
SPM	-	Sijil Pelajaran Malaysia
MAQ	-	Menstrual Attitude Questionnaire
MKQ	-	Menstrual Knowledge Questionnaire

DYSMENORRHEA AMONG FEMALE SECONDARY SCHOOL STUDENTS IN TANAH MERAH KELANTAN: A COMPARATIVE STUDY ON THE KNOWLEDGE AND IMPACT

ABSTRACT

Dysmenorrhea is one of the common gynecologic complaints in adolescent girls seen in primary care. The purposes of this study are to identify the comparison of dysmenorrhea among the urban and rural secondary school students in Tanah Merah, Kelantan. The respondents were selected through a purposive sampling that meets the inclusion criteria for this study which are 200 female secondary school students from both urban and rural area schools. Data was collected consisted of four main sections which are a combination of self-developed and already validated questionnaires. It comprises of the impact of menstruation by using Menstrual Attitude Questionnaire (MAQ) that consists of 13 questions, menstruation history of the respondent and also mother's history that consists of 11 questions and the menstrual knowledge by using the Menstrual Knowledge Questionnaire (MKQ) that comprises of 14 questions. Significant associations were found in level of dysmenorrhea between urban and rural school with the p value is <0.001 and also in level of knowledge between urban and rural female secondary school students with the p value is 0.03. The *independent t test* and *correlations test* were performed to analyze the associations. Nurses need this understanding as a guideline in the planning of a more effective, strategic screening program among female adolescents and to treat them according to their setting of environment.

**SENGGUGUT DALAM KALANGAN PELAJAR PEREMPUAN SEKOLAH
MENENGAH DI TANAH MERAH KELANTAN: SATU KAJIAN
PERBANDINGAN TENTANG PENGETAHUAN DAN KESAN**

ABSTRAK

Senggugut adalah salah satu masalah ginekologi dalam kalangan gadis remaja yang dilihat dalam bidang kesihatan. Tujuan kajian ini adalah untuk mengenalpasti perbandingan senggugut dalam kalangan pelajar sekolah menengah bandar dan luarbandar di Tanah Merah, Kelantan. Responden dipilih melalui sampel dengan tujuan yang memenuhi kriteria kemasukan untuk kajian ini iaitu 200 pelajar perempuan sekolah menengah dari kedua-dua sekolah di bandar dan luar bandar. Data telah dikumpulkan yang terdiri daripada empat bahagian utama iaitu gabungan soal selidik sendiri dan sudah disahkan. Ia terdiri daripada kesan haid dengan menggunakan Soal Selidik Sikap Menstruasi (MAQ) yang terdiri daripada 13 soalan, sejarah haid daripada responden dan juga sejarah ibu yang mengandungi 11 soalan dan pengetahuan haid dengan menggunakan Soal Selidik Pengetahuan haid (MKQ) yang terdiri daripada 14 soalan. Hubungan yang signifikan bagi tahap senggugut pelajar antara sekolah bandar dan luar bandar dengan nilai p adalah <0.001 dan juga untuk tahap pengetahuan antara pelajar perempuan sekolah menengah bandar dan luar bandar dengan nilai p ialah 0.03. *Independent t test* dan *correlation test* telah dijalankan untuk menganalisis. Jururawat perlu pemahaman ini sebagai panduan dalam perancangan yang lebih berkesan, program saringan strategik di kalangan remaja perempuan dan untuk merawat mereka berdasarkan persekitaran mereka.

CHAPTER 1

INTRODUCTION

1.1 Background of the study

1.1.1 Dysmenorrhea

Dysmenorrhea is one of the common gynecologic complaints in adolescent girls seen in primary care. (Wong and Khoo 2010). Dysmenorrhea refers to cyclic lower abdominal or pelvic pain occurring just before and/or during menstruation (Ortiz 2010). Dysmenorrhea can be classified into 2 groups: primary (spasmodic) or secondary (congestive). Primary dysmenorrhea is defined as painful menses in women with normal pelvic anatomy. Its initial onset is usually shortly after menarche, occurring approximately 6 to 12 months after ovulatory cycles is established. It is characterized by a cramping pelvic pain beginning shortly before or at the onset of menses and lasting for 1 to 3 days (Ayranci, Ozerdogan, Sayiner, Unsal & Giray 2009).

Secondary dysmenorrhea is defined as menstrual pain resulting from anatomic and/or evidence of pelvic pathology, such as endometriosis (Ayranci et al. 2009). According to Polat, Celik, Gurates, Kaya, Nalbant, Kavak & Hanay (2008), the condition is defined as cramp-like pain in the lower abdomen at the onset of menstruation without any identifiable pelvic pathology. Besides being a gynecological problem, dysmenorrhea is an important health problem concerning public health, occupational health and family practice, as it affects both the quality of life and the national economy due to short term school absenteeism and loss of labor (Polat et al. 2008). This was supported by Kumbhar, Reddy, Sujana, Bhargavi

& Balkrishna (2011) that found the quality of life during dysmenorrhea is comparatively poor among dysmenorrhic girls such as loss of physical activity and work satisfaction, personal relationships, confidence and concentration at work also suffers. So, this indicates that dysmenorrhea is disturbing their life more when compared to non-dysmenorrhic girls. In a previous study, Avasarala and Panchangam (2008) argued dysmenorrhea not only disturbs their routine activities but also causes humiliating suffering.

The most common treatment for menstrual pain available and the mostly practice are self-care methods, analgesics such as paracetamol, warm compress and local application of hot oil (Wong 2011). In Avasarala and Panchangam (2008), the author found that urban girls cannot cope with dysmenorrhea and they usually took medication to release pain whereas rural girls manage the problem without drugs as they managed the pain with self-care methods such as took cold baths, lying supine, application of hot oil and also using home or traditional remedies (Avasarala and Panchangam 2008).

1.1.2 Impact of dysmenorrhea

Dysmenorrhea is believed to be associated with many factors including behavioral and psychological aspects. Although it is not a life threatening disorder, a study by Banikarim, Chacko & Kelder (2000) indicated that dysmenorrhea among female adolescents can adversely affects their personal life causing limitation of their social and academic performance. The study reported that the girls being more emotional during menstruation until they could not function well at school. There is also misperception among the public that menstruation affects a girl's ability to think rationally (Wong 2011).

According to Eryilmaz, Ozdemir & Pasinlioglu (2010), girls reported as having some type of problems with their families and friends because of dysmenorrhea. It adversely affects the moods, academic performance and also social interaction such as school absent, loss of concentration, failed to do homework, inability to participate in sports activities as well as failure in social compromising.

1.1.3 Dysmenorrhea in adolescent

The prevalence of dysmenorrhea among adolescent as reported by Liliwati, Verna & Khairani (2007) is 62.3% (n=187). In Malaysia, reproductive phase begin with the onset of menses at about 13 years old. The length of menstrual cycle varies widely in adolescent but on an average it extends to 28 days. The female adolescents are still young and yet do not know how to handle dysmenorrhea in a proper ways. But, this can also depend on the sociodemographic characteristics and environmental factors. Liliwati et al. (2007) also found that menses socialization and early exposure to menstruation shapes one's attitude towards menstruation. From the study, they also found that female adolescent from rural settings were more likely to obtain information from female family members whereas urban girls commonly obtain information from internet and magazines. Tanah Merah is a suburb area of Kelantan, Malaysia. While most of its population lives in rural area which is also known as 'kampung' and only a small number of people live in the town, the urban area which is called 'Bandar Tanah Merah'. Altogether there are 13 secondary schools in Tanah Merah in urban and rural areas. The total number of secondary school students are 12,843 and half of this number are female (n=6414) (Statistik Maklumat Asas Pendidikan

2012). Looking at this number, the researcher is eager to know how many of them (female adolescent) might have suffered dysmenorrhea and having trouble to manage the problem properly.

1.1.3 Nurses' role

Nurses play an important role to raise awareness on reproductive health among adolescents (Liliwati et al, 2007). This includes adequate knowledge about menstrual cycle, the risk of experiencing dysmenorrhea and ways to cope with it. In doing so, nurses also need to have an understanding of different cultural practices and social environment that may influences the way the girls manage the pain and their attitudes towards dysmenorrhea. According to Lee, Chen & Kaur (2006), urban-rural differences in the prevalence of dysmenorrhea were believed as the result of differences in culture surrounding these two different areas. This was proven in Ortiz, Eduardo, Carrillo & Humberto (2009), in a study among 1152 female adolescent aged between 17 to 26 years old at Mexico City and Mexico rural community. They found that the higher prevalence of dysmenorrhea in Mexico rural community due to cultural influences such as lifestyle, religion, education and employment.

Liliwati et al. (2007) added to this that it is very important to determine the problem in rural-urban settings as to enhance early diagnosis and proper management in order to reduce the negative social impact in the affected young girls. Nurses need this understanding as a guideline in the planning of a more effective, strategic screening program among female adolescents and to treat them according to their setting of environment.

1.1.4. Awareness of dysmenorrhea

Considering that dysmenorrhea had a negative impact among adolescent girls, school teachers and health care providers should have better awareness regarding this problem as the problem can be easily treated (Liliwati et al. 2007). It is also beneficial to develop educational programs of effective dysmenorrhea management to prevent, minimize or treat the symptoms among female adolescents so that it won't affect their school performance and social relationship. Thus, this study will assess the occurrence of dysmenorrhea among secondary school students at rural and urban schools simultaneously.

1.2 Problem statement

Dysmenorrhea is a common problem that young female often experience and it is proven to have a considerable impact to its sufferer. The adolescent often try to manage the painful menses by themselves without having adequate support from health professionals. One of the reasons is because of a misconception that dysmenorrhea is a normal condition and there is no treatment for it (Wong and Khoo, 2010).

Health education on reproductive health should start earlier before menarche so that the young girls are prepared psychologically and physically to deal with their menstrual period (Wong 2011). In Malaysia, health education at school has been carried out by community nurses. However, topics that they normally deliver at school include dental health, nutritional health, and sex education. For the sex education it covers the issues relating to human sexuality, including human sexual anatomy, sexual reproduction, sexual intercourse,

reproductive health, emotional relations, reproductive rights and responsibilities, birth control, and other aspects of human sexual behavior (Zahra, Maryam, Seyed, & Behroz 2011). Although topic on menstruation process is covered, the information however, is rather superficial as it does not include health problem related to it and how to manage the problem.

While school may be the only place for students to receive accurate information about reproductive health, the information however, is hardly approachable outside the formal school setting. Therefore, it is also important to raise the local school health authority awareness about this health problem in order to obtain their cooperation in facilitating the awareness program for adolescent at school. .

1.3 Research objectives

1.3.1 General Objective

To determine the prevalence of dysmenorrhea among urban and rural secondary school students in Tanah Merah, Kelantan.

1.3.2 Specific Objectives

1.3.2.1 To determine the prevalence of dysmenorrhea among secondary school students.

1.3.2.2 To determine the relationship between selected socio-demographic data with severity of dysmenorrhea.

1.3.2.3 To determine the impact of dysmenorrhea on the students school performance and students relationship with family and friends.

1.3.2.4 To determine the knowledge regarding menstruation among secondary school students.

1.4 Research question

1. What is the prevalence of dysmenorrhea among secondary school students?
2. What is the relationship between selected sociodemographic data with severity of dysmenorrhea?
3. What is the impact of dysmenorrhea on the students' school performance and their relationship with family and friends?
4. What is the students' level of knowledge regarding menstruation

1.5 Hypothesis

Hypothesis 1

H₀: There is no significant relationship between socio-demographic characteristics (age, BMI, urban-rural setting) and severity of dysmenorrhea among female secondary school student.

H_A: There is a significant relationship between socio-demographic characteristics and severity of dysmenorrhea among female secondary school student.

Hypothesis 2

H₀: There is no significant impact of severity of dysmenorrhea on the students' school performance.

H_A: There is a significant impact of severity of dysmenorrhea on students' school performance.

Hypothesis 3

H₀: There is no significant impact of severity of dysmenorrhea on the student's relationship with family and friends.

H_A: There is a significant impact of severity of dysmenorrhea on student's relationship with family and friends.

Hypothesis 4

H₀: There is no significant difference of mean between level of knowledge and urban-rural female secondary school students.

H_A: There is no significant difference of mean between level of knowledge and urban-rural female secondary school students.

1.6 Definition (Operational/Conceptual)

1.6.1 Dysmenorrhea

Ayranci et al. (2009) had identified that dysmenorrhea can be classified into 2 groups that are primary or spasmodic and secondary or congestive. Primary dysmenorrhea is defined as painful menses in women with normal pelvic anatomy while secondary dysmenorrhea is defined as menstrual pain resulting from anatomic or pelvic pathology such as endometriosis.

1.6.2 Secondary School Student

Secondary school student is a student at the age from 13 to 18 years old (Ministry of Education, 2011). In this study, the samples were female young adolescents at secondary school of two different setting school which are rural school and urban school. They were around 13 to 18 years old.

1.6.3 *Urban school*

According to Johnson and Strange (2005), the rural school is located in a place that inside the metropolitan areas with the population greater than 2,500 people. The improvement in education was attributed to the reduction in the teacher-student ratios in schools and the decline in the average size of classrooms. It means that students learning in a small class tend to achieve better learning outcomes than those studying in a big class. It was supported by Mitra, Dangwal & Thadani (2008), some governments regard schools as high quality ones if they “have good academic performance in examinations”. The school also has a good and adequate internet and ICT (Information and Communication Technology) infrastructures. Sekolah Menengah Kebangsaan Tanah Merah 1 which is situated 1 kilometer from Bandar Tanah Merah will represent urban school in this study.

1.6.4 *Rural school*

The rural school is located in a place outside the metropolitan area and has the population of less than 2,500 people (Johnson and Strange, 2005). The school is lack of teaching and learning resources that are available online and these should be accessible by the school communities. Rural school also does not have adequate instructional supplies such as well-equipped libraries, media centers, and laboratories, so that by all these facilities, students can learn to think critically, and enhance their readiness for higher education opportunities (Malhoit 2005). Sekolah Menengah

Kebangsaan Kemahang which is situated about 25 kilometers from Bandar Tanah Merah will represent the rural school in this study. According to Singh, Arba & Teoh (2006), the rural area is when it was situated within a distance of 25 kilometer from the border of the city.

1.7 Significance of study

It is acknowledged that dysmenorrhea is a common problem in young adolescent and the impact is considerable. However, this was not adequate to encourage adolescent to seek proper treatment as many of them believed to have lack of knowledge about the problem and the availability of treatment. This study will assess the important issues surrounding dysmenorrhea at school in Tanah Merah, Kelantan. According to Stenchever (2001), female adolescents were influenced by their mothers as they were the main source of information in reproductive related matters.

However, the concern here is whether the information received by the adolescent is sufficient and accurate enough to raise their awareness and should be questioned. This is because formal health education regarding dysmenorrhea by the health care providers was currently not available. Therefore, this study will explore the issues surrounding menstruation and dysmenorrhea so that the finding will be used to convince the healthcare providers of the needs to provide an adequate health education for female adolescent as well as the public.

Moreover, the health care provider appears to have overlooked dysmenorrhea as a common adolescent problem. These entire problem have inspires the researcher to explore dysmenorrhea among the adolescents in a different setting. The intention is to understand these reproductive disorders in

terms of its level, the impact, and also the knowledge regarding menstruation. It is hope that the findings of this study can be use to increase awareness of dysmenorrhea and improve the delivery of reproductive health care to adolescent, expand knowledge and help meet the demand for better quality of care services to the public.