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THE EFFECT OF STRESS ON THE MENSTRUAL CYCLE IN ADOLESCENTS

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Abstract

The menstrual cycle is ideally regular every month, and this menstrual cycle normally occurs in the period of 21-35 days and usually lasts for 2-7 days. This menstrual cycle affects many things, including stress levels. This stress or stressor can occur, such as increased learning activity in adolescents which affects psychological factors and with this will also affect the menstrual cycle in adolescents. At the beginning of the period leading up to menstruation, women are more likely to get angry easily, cry easily for no reason or easily feel sad. This condition can sometimes make women feel uncomfortable and less enthusiastic about their activities. The purpose of writing this paper is to determine the relationship between stress levels and the menstrual cycle in adolescents.

Keywords: Teens, Stress, Hormones, Menstrual Cycle

INTRODUCTION

According to Piaget's theory, he argued that psychologically adolescence is the age when individuals interact with adult society, the age when children no longer feel below the level of older people but are at the same level, at least in solving problems. Adolescence ranges from 12-21 years for women, and 13-23 years for men. According to Haditoro, the vulnerable ages of adolescents can be divided into three, namely early adolescents 12-15 years, mid-teens 51-18 years, and late adolescents 18-21 years (Hurlock & Elizabeth :1992).

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Menstruation is the process of discharge of blood from the uterus which occurs due to the decay of the inner uterine wall which contains many blood vessels and unfertilized eggs. The menstrual process can occur because the egg cells in the female organs are not fertilized, this causes the endometrium or lining of the uterine wall to thicken and decay which will then secrete blood through the female reproductive tract (Proverawati & Misaroh, 2009).

The menstrual cycle is the time from the first day of menstruation until the arrival of the next menstrual period, while the length of the menstrual cycle is the distance between the start date of the last menstruation and the start of the next menstruation. Menstrual cycles in women normally range from 21-35 days and only 10-15% have a 28-day permenstrual cycle with 3-5 days of menstruation, some 7-8 days. Menstrual disorders require careful evaluation because untreated menstrual disorders can affect quality of life and daily activities (Roswendi, 2011)

Stress is the body's response that is nonspecific to the demands of the load which is a physiological, psychological and behavioral response from humans who try to adapt and regulate both internal and external pressure. Sustained stress can lead to depression, that is, if a person's ability to deal with stress is not good. Excessive stress can affect hormones which can have a negative impact. When experiencing stress, the adrenal glands will pump adrenaline and cortisol into the bloodstream, putting the body in an alert position.

At the time of adolescence psychological changes occur, such as unstable emotions that can affect adolescents in dealing with and solving the problems they experience. If the problem is not handled properly, it will cause stress in adolescents. Various kinds of emotional changes due to stress have been associated with hormonal fluctuations during the menstrual cycle. Solutions that can be made to prevent menstrual cycle disorders are reducing stress by using coping mechanisms, for example by adjusting diet and nutrition, rest and sleep, exercing, managing weight and so on.

METHODS

This study uses a qualitative approach, namely by collecting data. The data collected comes from observations made on adolescents. Observation is a method of collecting data by direct observation of an object in a certain period and systematically recording certain things observed. The adolescents who were observed ranged in age from 12-18 years.

RESULTS AND DISCUSSION

A. Teenager

The definition of youth comes from the Latin word adolensence which means to grow or grow into adulthood. The term adolesence has a broader meaning which includes mental, emotional, social and physical maturity. At this time, it actually did not have a clear place because it was not included in the children's group but not also in the adult/elderly group. In other words, adolescence is a period of transition from childhood to adulthood, which includes all the developments experienced as preparation for entering adulthood.

According to Monks (2008) youth is a period of transition from children to adults. The adolescent phase reflects the way adolescents think that they are still in the corridor of concrete thinking, this condition is due to the fact that during this period a process of maturation occurs in adolescents.

1. Menstrual Cycle

   There are four menstrual cycles, including:

   a. Menstrual stage

      In this phase, the endometrium is detached from the uterine wall with bleeding, and the stratum basale is the only layer that is intact. This phase lasts for five days (range 3-5 days). At the beginning of the menstrual phase, levels of estrogen, progesterone, LH (Lutenizing Hormone) decrease or are at their lowest levels during the cycle, and FSH (Follicle Stimulating Hormone) levels are just beginning to increase.

   b. Proliferation Stage

      This stage is divided into two, including:

      1) Early proliferative stage

         In this condition the thin endometrium is approximately 2 mm thick, the glands are straight, the epithelium is low cuboidal and the nucleus is basal.

      2) Advanced proliferative stage

         In this condition the endometrium becomes thicker, this is due to the addition of stroma due to cell breakdown (Mulastin S : 2011:5)

c. The secretory or luteal phase

Stage of secretion is divided into two, including:

1) Early secretory stage

Under these conditions the early secretions are thinner than in the previous phase due to fluid loss, approximately 4-5 mm thick. At this stage of early secretion, the layer is divided into several parts, namely:

a) The basale stage, the deep layer adjacent to the muscle layer, is inactive except for mitoses in the glands

b) Stdium spongiosum, the middle layer which is woven like a sponge due to the many dilated and winding glands with a little stroma between them.

c) Compactum stage, the lining of the gland surface channel is narrow, the lumen is filled with secretions, the stroma is excessive and shows edema.

2) Advanced secretory stage

This stage is approximately 5-6 mm thick. Where the condition of the endometrium is very vascular, the glands are very numerous and tortuous, rich in glycogen and is ideal for nutrition and development of the ovum.

d. Premenstrual stage

This stage is characterized by infiltration of white blood cells. The stroma undergoes disintegration, with the loss of fluid and secretions it will become colabs of glands and arteries, vasoconstriction occurs then the blood vessels relax and eventually rupture.

B. Stress

Stress is a psychological, physiological and behavioral response to pressure, both internal and external. Stress can impact every aspect of a person's life, creating mental tension, changes in behavior, interpersonal difficulties, and physical complaints. Stress is a positive and even necessary state, but if it is excessively

stressed it can lead to negative things such as inability to cope with problems, poor adjustment, physical illness (Mesarini, 2013).

Stress is a person's physical and mental response to environmental changes that require adjustment. Stress is also a normal non-specific reaction to anything that threatens to exceed its compensatory capacity to protect homeostasis. The relationship between stress levels and menstruation in young women is a condition caused by the interaction between humans and their environment which creates the perception of a distance between the demands of the situation and one's biological, psychological, and social system resources (Saerang, 2014). Stress has an impact on menstrual cycle abnormalities. Stress affects bone elevation basal cartilage and reduces luteinizing hormone, causing systemic changes in the body, especially in the nervous system in the hypothalamus, through changes in prolactin or endogenopia.

Several factors affect this irregular menstrual cycle, among others. Hormonal changes caused by stress and mental instability. In addition, changes in weight in the amount of activity or fluctuations in body weight can also cause menstrual cycle irregularities, which is important because stress affects the body's systems, especially the nervous system in the hypothalamus, through changes in prolactin or endogenopia, which can cause an increase in basal cortisol in stressed female adolescents. produces hormonal disturbances, and there is a relationship between stress levels and the menstrual cycle. Follicle Stimulating Hormone and Luteinizing Hormone Estrogen will not cause egg growth, and if they do, estrogen and progesterone will not be produced, resulting in menstrual irregularities (Sianipar, 2009).

There are several factors that affect the length of menstruation (Verawaty, 2012) including:

1. Stress Stress causes systemic changes in the body, especially the nervous system in the hypothalamus through changes in reproductive hormones (Kusmiran, 2011).
2. Chronic diseases Chronic diseases such as diabetes, unstable blood sugar are closely related to hormonal changes so that if blood sugar is not controlled it will affect the duration of menstruation by affecting reproductive hormones (Kusmiran, 2011).

3. Malnutrition Acute weight loss will cause interference with ovarian function, depending on the degree of ovarian weight loss and duration. Pathological conditions such as underweight / underweight can cause amenorrhea.
4. Physical activity Moderate and strenuous levels of physical activity can affect the work of the hypothalamus which will affect menstrual hormones so that they can limit menstruation.
5. Consumption of certain drugs such as antipsychotic antidepressants, thyroid and some chemotherapy drugs. This is because drugs that contain chemicals if consumed too much can cause disruption of the hormonal system, such as reproductive hormones (Welch, 2012).

CONCLUSION

According to Piaget's theory, he argued that psychologically adolescence is the age when individuals interact with adult society, the age when children no longer feel below the level of older people but are at the same level, at least in solving problems. Adolescence ranges from 12-21 years for women, and 13-23 years for men. According to Haditoro, the vulnerable ages of adolescents can be divided into three, namely early adolescents 12-15 years, mid-teens 51-18 years, and late adolescents 18-21 years.

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