Perimenstrual Discomforts among College Women

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Abstract. The purpose of this study was to examine perimenstrual discomforts among college women. As a cross-sectional study, a questionnaire survey was conducted in S university and an investigation carried out by a structured survey of 233 college women. The results are as follows: The mean score of perimenstrual discomforts was 2.51±0.80 (range: 1.00~4.26). The mean score of subcategories of perimenstrual discomforts was 2.61 (range: 1.00~4.80) for pain, 2.14 (range: 1.00~4.60) for impaired concentration, 2.52 (range: 1.00~4.60) for behavior change, 2.31 (range: 1.00~4.70) for autonomic reactions, 2.69 (range: 1.00~5.00) for water retention, and 2.82 (range: 1.00~5.00) for negative affect.

Keywords: Perimenstrual Discomforts, Women

1   Introduction

Overall a large number of menstruating women suffer from one or more menstrual symptoms. Among these symptoms, premenstrual syndrome and dysmenorrhea are the two most prevalent [1].

Premenstrual syndrome is the monthly recurrence of several physiological and mood symptoms in the luteal phase of the menstrual cycle, which are serious enough to interfere with everyday interpersonal, social and work functions [2]. Dysmenorrhea is characterised by a particularly intense pain that is localised in the abdominal inferior quadrants and, that radiates in the inner thigh. This symptom begins many hours before menstruation or contemporaneously at the beginning of the same. It is intense in the first day; it rarely continues beyond the first day [3].

One of the most striking characteristics of menstrually related symptoms is its variability, reflected both in the variety of symptoms women experience and in the large variation in the prevalence of these symptoms from one population to another [4].

Epidemiological surveys have estimated that the frequency of PMS symptoms is quite high (about 80-90%), and about 5% of women experience severe symptoms that interfere with their daily activities [5, 6]. However, despite extensive research on the etiology and treatment of menstrual related symptoms, the mechanisms producing them remain unclear. Therefore, it is necessary to have a correct understanding and

analysis of menstrual symptoms. A better understanding of these disorders will allow us to have a more precise diagnosis and provide direction for targeted therapeutic interventions.

The purpose of this study was to examine degree of perimenstrual discomforts among college women and to provide basic data for nursing a menstrual disorder.

2   Methods

2.1 Research procedure

This study was conducted by a female student who attends a college located in J city. Before conducting the study, the goal of the study was explained to the participants and the cooperation of the leader of the department was requested. The survey questionnaire was composed by NAVER Form and was sent to 300 participants by email messenger; 233 subjects from the original survey pool agreed to participate in the study and completed the questionnaire.

SPSS program 19.0 (SPSS Inc., Chicago, IL, USA) was used to analyze the data. General characteristics of the participants were analyzed using means of continuous variables, in addition to the frequencies and percentages of categorical variables were also examined. The levels of perimenstrual discomforts were analyzed using means and standard deviations. Furthermore, the statistical differences of perimenstrual discomforts according to the participants' general characteristics were analyzed with t tests and ANOVA with Duncan *post hoc* testing. A value of $p < 0.05$ was considered statistically significant.

2.2   Survey instrument

The measurement of perimenstrual discomforts was determined by 30 items that were modified from the Menstrual Distress Questionnaire(MDQ) [7] and instrument of Menstrual Symptoms [8] modified by Jung [9].

The items of this perimenstrual discomfort questionnaire are grouped into six scales: Pain (5 items), Impaired Concentration (3 items), Behavior Change (5 items), Autonomic Reactions (9 items), Water Retention (2 items), and Negative Affect (6 items).

It consists of 30 items and participants are asked to respond on a 5-point Likert-type scale, where 1 represented "not present" and 5 represented "extreme." This indicates that as the point is higher, subjects display more perimenstrual symptoms. Cronbach's alpha for the present study was 0.95.

3   Results

3.1 General characteristics and menstruation related characteristics of subjects

Women who participated in the study ranged in age from 19 to 26, with a mean age of 21.12 years. The mean menarche age was 12.85 year old, and it varied from 8 year old to 18 year old.

59.7% of participants (139 subjects) reported that their period is regular and the mean of cycle length is 28.87 days (range of 21 ~ 40 days). 24% of participants indicated that they have heavy bleeding, 58.4% stated that they have regular bleeding, and 17.6% participants reported that they have light bleeding. 57.7% of participants indicated that they feel perimenstrual discomforts 3~4 days before the period, 20.1% reported having discomfort when the period starts, 9.4% during the period, and 7.7% of participants indicated that they do not have any perimenstrual discomforts.

According to the analysis on how the participants feel about the period, they have expressed various feelings such as experiencing discomforts (78.1%), feeling sick (53.6%), feeling dirty (10.3%), etc.

3.2 Perimenstrual discomforts of subjects

The mean of perimenstrual discomforts experienced by participants was 2.51 in a scale of 1 to 5. 'Negative Affect' showed the highest score with a mean of 2.82, followed by 'Pain' at 2.61, 'Impaired Concentration' at 2.14, 'Behavior Change' with 2.52, 'Autonomic Reactions' at 2.31, and 'Water Retention' with 2.69.

The most commonly experienced symptoms of perimenstrual discomfort items are feeling 'sensitive' (mean: 3.45), 'abdominal pain and discomfort' (mean: 3.33), 'lower back pain' (mean: 3.33), and 'nervousness' (mean: 3.33).

3.3 Perimenstrual discomforts according to general characteristics of subjects

The study found significant differences or correlations in perimenstrual discomforts according to age ($r=0.19$, $p=0.002$), health status ($F=3.41$, $p=0.018$), stress level ($F=7.70$, $p=0.001$), menstrual amount ($F=7.99$, $p<0.001$), onset of menstrual discomforts ($t=3.76$, $p<0.001$) and the feeling on the period that is sick ($t=3.41$, $p=0.001$).

The older the participants were, the worse they experienced perimenstrual discomforts and participants with health conditions expressed more perimenstrual discomforts than those who considered themselves healthy. In addition, participants who experienced severe stress expressed more perimenstrual discomforts than those who experienced medium or low levels of stress.

Women with heavier menstrual flows reported more severe perimenstrual discomforts than did their counterparts with less or moderate flow. Moreover, participants experiencing perimenstrual discomforts 3~4 days before their period expressed more overall discomfort than those who expressed perimenstrual

discomforts during their period. Lastly, regarding feelings towards menstruation, participants who consider the period as being sick expressed more perimenstrual discomforts than those who did not.

4 Conclusions

The study results indicated that the majority of female college students expressed various perimenstrual discomforts such as abdominal pain or lower back pain, feeling sensitive and nervous and so on. The study results also indicated that perimenstrual discomforts were very closely related to participants' health conditions, degree of stress, the amount of menstrual bleeding, and feelings on the period. Therefore, it is very important to provide appropriate education on the period so that female college students can understand it as an important health matter and manage their symptoms in a proper way.

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