

Psychological characteristics of patients with primary dysmenorrhea

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Abstract

Aim. To study the psychological characteristics of women with primary dysmenorrhea.

Methods. We examined 77 women of childbearing age, divided into the main (40 women) and control (37 women) groups. The criterion for inclusion in the main group was a clinically confirmed diagnosis of “primary dysmenorrhea” with a regular menstrual cycle. The exclusion criteria were an organic gynecological pathology, a diagnosis of secondary dysmenorrhea and an irregular menstrual cycle. The criterion for inclusion in the control group was absolute painlessness of menstruation and the absence of gynecological diseases. The survey was conducted using psychodiagnostic techniques: a method for self-assessment of anxiety, rigidity, and extroversion; test “Express diagnosis of the level of self-esteem”; a technique for studying accentuation of personality traits; test-questionnaire of psychological defense mechanisms “Life Style Index”; questionnaire “Methods of coping behavior”, statistical methods. Also, a specially developed questionnaire was used, including questions related to socio-psychological parameters, as well as the nature and intensity of pain.

Results. Significant differences between the groups characterizing coping strategies were found: distance ($p < 0.002$); escape-avoidance ($p < 0.029$); psychological defenses: denial ($p < 0.006$), regression ($p < 0.011$). The subjects of the main group were characterized by significantly high anxiety levels ($p < 0.020$) with the average score 47.2 ± 1.15 corresponding to a hyperanxious and low self-esteem ($p < 0.001$) with the average score 30.1 ± 1.43 compared to women in the control group: 42.7 ± 1.53 — average anxiety level and 27.4 ± 1.31 — normal self-esteem.

Conclusion. The features of the relationship of the psychological characteristics of women with “primary dysmenorrhea” were revealed; it was proved that the subjects of the main and control groups differ in the features of coping behavior, psychological defenses and accentuation of personality traits, and also have reliably distinguishable levels of anxiety and self-esteem.

Keywords: primary dysmenorrhea, anxiety, self-esteem, accentuation of personality traits, psychological defense, defence mechanism.

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Background. Dysmenorrhea is a cyclical pathological process in which the patient has pain in the lower abdomen during menstruation, along with a wide range of concomitant vegetative, emotional, and mental symptoms [1,2], which leads to a significant decrease in the quality of life, having a negative impact on all areas of a woman’s activity, including disability for 1–3 days a month [3,4].

According to various authors, 15–85% of women on average experience dysmenorrhea, but the intensity of pain varies [5,6].

Primary dysmenorrhea is of particular interest, since it is not due to gynecological causes but develops against the background of etiological fac-

tors, such as psychogenic disorders, metabolic disorders, chronic somatic pathology, etc. [7].

The works of T. A. Kanonova aimed to study the value sphere; data that indicate the presence of a conflict between existing values and coping behavior were obtained, leading to emotional and mental stress and increased “psychosomatic discomfort” [8], which is confirmed by the data obtained in the course of other studies, additionally revealing the presence of anxiety-depressive neurotic disorders in the subjects and their relationship with the menstrual cycle [9, 10].

Some authors note that both the number of stress factors of varying intensities and durations

and personality traits and ways of coping with stress contribute to the transition of the body's adaptation mechanisms from protective to damaging, which is the basis or part of the development of the pathological process [11,12].

The relevance of this study is studying the psychological state of patients to further develop corrective and therapeutic measures that can help improve the quality of life and reduce disability [13–15].

This study aims to examine the psychological characteristics of women with primary dysmenorrhea.

Research objectives:

- to study the level of anxiety and self-esteem of the main and control groups and then compare the results;

- to identify the differences between the main and control groups that characterize coping strategies and psychological defenses;

- to identify the specifics of coping behavior, psychological defenses, and accentuations of personality for each of the examined groups.

Material and methods. We used the following methods:

- the method of anxiety, rigidity, and extroversion self-assessment (according to D. Maudsley) [16];

- test “Express diagnostics of the level of self-esteem” (Fetikin N.P., Kozlov V.V., Manuilov G.M.) [17];

- methodology to study the accentuations of the personality of K. Leonhard (modification of S. Shmishek) [18];

- test questionnaire of psychological defense mechanisms “Life style index” (Plutchik R., Kellerman G., Conte H.R.) [19];

- questionnaire “Ways of coping behavior” (Lazarus R., Folkman S.) [20].

In addition, we used a specially developed questionnaire with questions related to socio-psychological parameters and the nature and intensity of pain.

Statistical processing was made using the following statistical methods: Spearman's rank correlation coefficient and Student's t-test for independent samples.

The study included 77 women with an average age of 21.6 ± 0.14 years. The first (main) group consisted of 40 (52%) women diagnosed with primary dysmenorrhea, and the second (control) consisted of 37 (48%) women. At the time of the survey, 31 (40%) women were married and 46 (60%) unmarried; 53 (69%) were students, 7 (9%) housewives, 13 (17%) office workers, and 4 (5%) engaged in professional sports; and 58 (75%) had an incomplete higher education and 19 (25%) higher education.

Both the control and experimental groups were deliberately selected to be comparable and have no significant difference in terms of the above characteristics. Thus, the average age ($p \geq 0.05$) of the control and experimental groups was 21.62 ± 0.35 and 21.53 ± 0.34 years, respectively. At the time of the survey, 17 (46%) and 14 (35%) women were married in the control and main groups, respectively ($p \geq 0.05$), while 20 (54%) and 26 (65%) women were single. By level of education ($p \geq 0.05$) and social activity ($p \geq 0.05$), no significant differences were noted: 27 (73%) incomplete higher education and 31 (77%) higher education; 10 (27%) and 9 (23%) women; 25 (67%) and 28 (70%) female students; 4 (11%) and 3 (7%) housewives; 7 (19%) and 6 (15%) office workers and professional in sports; and 1 (3%) and 3 (8%) in the control and experimental groups, respectively.

The exclusion criteria were irregular menstrual cycles and other gynecological diseases excluding dysmenorrhea.

Results and discussion. Patients' complaints about the burden of menstruation with somatic and emotional disorders in the group of women diagnosed with primary dysmenorrhea and in the group of women who are not were distributed, accordingly: vegetative disorders (nausea, frequent urination, bloating, fainting, headache, dizziness, hyperthermia, etc.), 74.5 and 33.3%, and emotional disorders (irritability, depression, tearfulness, lack of appetite, drowsiness, insomnia, intolerance to odors, perversion of taste), 95.7 and 10%. A total of 10.6% of women with painful menstruation reported a disability of up to 2 days inclusive, but no such cases were noted in the control group. The pain score on a scale from 1 to 10 in the first group was distributed as follows: 4 points, 10.6%; 5, 14.9%; 6, 31.9%; 7, 19.1%; 8, 17.1%; and 9, 6.4%. Smoking was noted in 21% and 17% in the first and second groups, respectively.

The level of self-esteem studied using the rapid test of N.P. Fetikin, V.V. Kozlov and G.M. Mainulov in the first sample was underestimated in 34% of the subjects, while in the second sample, this indicator was low only in 17% of women. The average level of self-esteem in the first and second samples was registered in 64% and 80% of women, respectively; the remaining 2% and 3% for the first and second samples, respectively, are the average scores on the “self-esteem” scale. For the first and second groups of subjects, they were 30.1 ± 1.43 (low self-esteem) and 27.4 ± 1.31 (normal self-esteem), respectively.

During the study of the anxiety level in the examined women with a “primary dysmenorrhea” diagnosis and the control group using the method of

D. Maudsley, the results were distributed accordingly: low level of anxiety, 2% and 0%; average level, 45% and 67%; and high level, 53 and 33%. The average score on the “anxiety” scale in the first group was 47.2 ± 1.15 , corresponding to a high level of anxiety, while in the second group, it was 42.7 ± 1.53 , corresponding to an average level of anxiety.

The study of personality accentuations using the K. Leonhard questionnaire allowed us to determine the frequency and specificity of accentuations. So, in the first sample, the following accentuations prevail in a descending order:

- exalted (91.5%), which is characterized by excessively intense reactions to any stimuli, being disproportionately bright, and strong appearances of emotions;

- emotional (85%), characterized by emotional lability, a sharp change of mood depending on the situation, a high level of empathy, and soft-heartedness;

- stuck type (83%) with excessive stability of affect, resentment, and conflict.

In the second sample, the distribution was as follows: emotive and stuck types of accentuation (90%) and exalted type (83%).

The structure of the character of women in the first and second samples is determined by comparing the results of average values, which is as follows: the group of women diagnosed with primary dysmenorrhea is characterized by exalted (15.4 ± 0.79 points) and emotive (14.9 ± 0.66 points) accentuation, whereas for the control group, it is emotive (15.2 ± 0.69 points) and hyperthymic (15.1 ± 1.12 points).

With the help of the test, “Index lifestyle” (Plutchik R., Kellerman H., Conte H. R. a) was diagnosed with psychological defense mechanisms. The most common of them in the first sample were the following:

- projection (51%)—mistaken perception of internal events for external, unconscious projection of one’s own motives and desires;

- regression (38%)—a protective mechanism in which, during anxiety or conflict, a person unconsciously returns to earlier stages of mental development while less mature and adequate;

- denial (30%)—shifting attention to ignore potentially dangerous, disturbing, or conflicting information.

The results of the second sample are as follows: negation (63%), projection (47%), regression (30%), and compensation (30%), a protective mechanism by which a person replaces a real or imaginary disadvantage with another quality, fantasizing or appropriating the desired qualities.

When comparing the average values of the two samples, the regression indicators were most expressed (6.3 ± 0.67 points) for the first sample while negative (6.8 ± 0.47 points) for the second, followed by the compensation mechanism (7 ± 0.63 points) for both.

During the study of ways to cope with stress using the questionnaire “Ways of coping behavior” by R. Lazarus and S. Folkman, a number of prevailing coping strategies were identified.

In the group of women diagnosed with “primary dysmenorrhea,” the following strategies prevail:

- “distancing” (64%)—this strategy is characterized by attempts to subjectively reduce the significance of negative experiences that have arisen due to a particular problem as well as attempts to reduce emotional involvement;

- “escape-avoidance” (51%)—ways for a person to overcome negative experiences that have arisen due to problems by responding to the type of evasion.

In the control group, the leading position was taken by the “escape-avoidance” strategy (47%) followed by confrontational coping (40%), wherein attempts are made to solve problems by implementing specific actions aimed at either changing the situation or responding to negative emotions and then “planning to solve the problem” (40%), wherein attempts are made to solve problems by analyzing the situation and possible behaviors.

When comparing the average values of two samples, “escape-avoidance” (61.7 ± 1.5 and 55.6 ± 2.3 points) and “distancing” (66.7 ± 1.33 and 58.6 ± 2.1 points) strategies were most expressed in the first and second samples, respectively.

Thus, when analyzing the obtained data, it can be noted that the subjects of both groups are similar in most parameters; the only differences were in the degree of severity of some indicators.

As a result of using the Student’s t-test for independent samples, significant differences in the indicators of two samples were obtained:

- the level of anxiety ($p < 0.020$)—the average score for the first and second samples, accordingly, was 47.2 ± 1.15 (high level of anxiety) and 42.7 ± 1.53 (average level of anxiety);

- self-assessment level ($p < 0.001$)—the average score for the first and second samples was 30.1 ± 1.43 (low self-assessment level) and 23.4 ± 1.31 (normal self-assessment level);

- psychological defenses (negative ($p < 0.006$))—the average score of the main and control groups was 5.2 ± 0.32 and 6.8 ± 0.47 , respectively, while for regression ($p < 0.011$), the average score of the main and control groups was 6.3 ± 0.67 and 4.4 ± 0.24 , respectively;

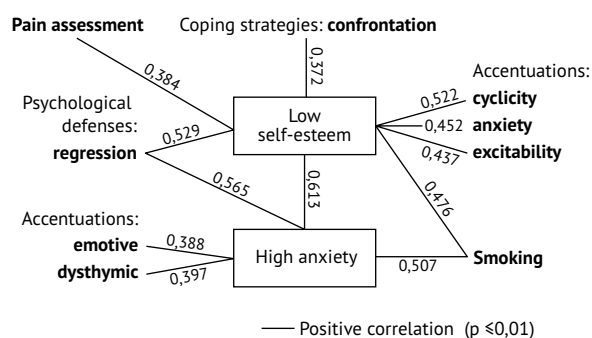


Fig. 1. Correlation pleiad (main group)

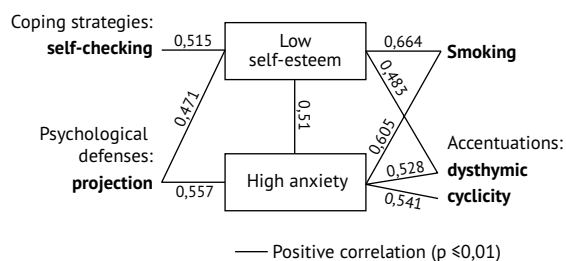


Fig. 2. Correlation pleiad (control group)

– coping strategies (distancing ($p < 0.002$))— the average score of the main and control groups was 66.7 ± 1.33 and 58.6 ± 2.1 , respectively, while for “escape-avoidance” ($p < 0.029$), the average score of the main and control groups was 61.7 ± 1.5 and 55.6 ± 2.3 , respectively.

Based on statistical analysis, the factors “low self-esteem” and “high anxiety” were identified, which had the closest and most numerous connections in the group of women with primary dysmenorrhea. These parameters were equally identified as system forming, and therefore, to achieve the goal of this work, a correlation pleiad was constructed (Fig. 1). For comparison, a similar correlation analysis of data from the control group was made. The results of the analysis are also presented as a correlation pleiad (Fig. 2).

As can be seen from Figure 1, in the group of women with primary dysmenorrhea, a close direct link was found between low self-esteem and high levels of anxiety, allowing us to conclude that a person with low self-esteem expressed psychological protection in the form of regression, that is, protection will consist in an unconscious return to earlier, less mature, and less adequate patterns of behavior. This personality is characterized by such accentuated personality traits as cyclothymia, excitability, and anxiety, which indicates its characteristic state of anxiety, a wave-like change of mood. A conscious response to stress is realized through confrontational coping, which shows

a certain degree of hostility and risk-taking. In addition, a direct link was found between low self-esteem and self-assessment of pain, a direct link with smoking.

A high level of anxiety in this sample is associated with such accentuations of the personality as dysthymia and emotivity, which characterizes the personality as emotionally labile, with a long stay under strong impressions of the events experienced, and is prone to an inadequate sharp change of mood. Psychological defenses are implemented through regression, and a close direct link with smoking is also noted.

Figure 2 shows the subjects in the control group also have a close direct link between low self-esteem and high anxiety. In contrast to the first sample, the association of low self-esteem was determined with a strategy such as self-control, which is characterized by attempts to purposefully contain emotions and minimize their impact on the current situation. A direct link between low self-esteem and personality accentuations for this sample was determined with dysthymia. High anxiety is directly related to dysthymia and cyclothymia. Projection is a psychological defense that is directly related to both low self-esteem and high anxiety. As for the first sample, a direct link was found between low self-esteem and smoking. High anxiety is also directly related to smoking.

Table 1 presents the characteristics of the links between the studied features.

CONCLUSION

1. The subjects of the main group are characterized by a significantly expressed high anxiety ($p < 0.020$) and low self-esteem ($p < 0.001$) compared to women in the control group.

2. Significant differences were identified in the coping strategies (distancing ($p < 0.002$) and “escape-avoidance” ($p < 0.029$)) and psychological defenses (denial ($p < 0.006$) and regression ($p < 0.011$)).

3. In both groups, the main system-forming factors were a low level of self-esteem and a high level of anxiety associated with a direct close link ($r = 0.613$ for the main group, $r = 0.51$ for the control group). However, both groups of subjects differ in the specifics of coping behavior, psychological defenses, and personality accentuations.

4. The importance of a comprehensive approach in the treatment of patients with dysmenorrhea is necessary to be noted; it should not be limited to the observation and treatment by a gynecologist. Our data allow us to develop psychocorrective and psychotherapeutic methods that aimed to

Table 1. Characteristics of links between the studied features

Major group	Spearman's correlation coefficient (p)	Link between the studied features	The closeness (strength) of relations on a scale of Chedoke	Number of degrees of freedom (f)	Critical value of Spearman's criterion for a given number of degrees of freedom = 0,313	Significance of statistical dependence of the studied features	$p \leq 0,05$ or $p \leq 0,01$
Low self-esteem-high anxiety	0,613	Straight	Noticeable	38	$p_{nbl} > p_{crit}$	Statistically significant	$p \leq 0,01$
Low self-esteem-coping strategy "confrontation"	0,372	Straight	Moderate	38	$p_{nbl} > p_{crit}$	Statistically significant	$p \leq 0,01$
Low self-esteem-accentuation "cyclothyme"	0,522	Straight	Noticeable	38	$p_{nbl} > p_{crit}$	Statistically significant	$p \leq 0,01$
Low self-esteem-anxiety	0,452	Straight	Moderate	38	$p_{nbl} > p_{crit}$	Statistically significant	$p \leq 0,01$
Low self-esteem-excitability	0,437	Straight	Moderate	38	$p_{nbl} > p_{crit}$	Statistically significant	$p \leq 0,01$
Low self-esteem-smoking	0,476	Straight	Moderate	38	$p_{nbl} > p_{crit}$	Statistically significant	$p \leq 0,01$
Low self-esteem-pain assessment	0,384	Straight	Moderate	38	$p_{nbl} > p_{crit}$	Statistically significant	$p \leq 0,01$
Low self-esteem-psychological protection "regression"	0,529	Straight	Noticeable	38	$p_{nbl} > p_{crit}$	Statistically significant	$p \leq 0,01$
High anxiety-smoking	0,507	Straight	Noticeable	38	$p_{nbl} > p_{crit}$	Statistically significant	$p \leq 0,01$
High anxiety-accentuation "emotivity"	0,388	Straight	Moderate	38	$p_{nbl} > p_{crit}$	Statistically significant	$p \leq 0,01$
High anxiety-accentuation "dysthymia"	0,397	Straight	Moderate	38	$p_{nbl} > p_{crit}$	Statistically significant	$p \leq 0,01$
High anxiety-psychological protection "regression"	0,565	Straight	Noticeable	38	$p_{nbl} > p_{crit}$	Statistically significant	$p \leq 0,01$
Control group	Spearman correlation coefficient (p)	Links between the studied features	The closeness (strength) of links on a scale of Chedoke	Number of degrees of freedom (f)	Critical value of Spearman's criterion for a given number of degrees of freedom = 0,325	Significance of statistical dependence of the studied features	$p \leq 0,05$ or $p \leq 0,01$
Low self-esteem-smoking	0,664	Straight	Noticeable	35	$p_{nbl} > p_{crit}$	Statistically significant	$p \leq 0,01$
Low self-esteem-accentuation of "dysthymia"	0,483	Straight	Moderate	35	$p_{nbl} > p_{crit}$	Statistically significant	$p \leq 0,01$
Low self-esteem-high anxiety	0,51	Straight	Noticeable	35	$p_{nbl} > p_{crit}$	Statistically significant	$p \leq 0,01$
Low self-esteem-self-control coping strategy	0,515	Straight	Noticeable	35	$p_{nbl} > p_{crit}$	Statistically significant	$p \leq 0,01$
Low self-esteem-psychological protection "projection"	0,471	Straight	Moderate	35	$p_{nbl} > p_{crit}$	Statistically significant	$p \leq 0,01$
High anxiety-accentuation "dysthymic"	0,528	Straight	Noticeable	35	$p_{nbl} > p_{crit}$	Statistically significant	$p \leq 0,01$
High anxiety-accentuation "cyclothymic"	0,541	Straight	Noticeable	35	$p_{nbl} > p_{crit}$	Statistically significant	$p \leq 0,01$
High anxiety-smoking	0,605	Straight	Noticeable	35	$p_{nbl} > p_{crit}$	Statistically significant	$p \leq 0,01$
High anxiety is a psychological defense "projection"	0,557	Straight	Noticeable	35	$p_{nbl} > p_{crit}$	Statistically significant	$p \leq 0,01$

reduce anxiety, increase self-esteem, and develop harmonious coping strategies, which in general can improve the quality of life of patients with dysmenorrhea.

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