PERSONALITY AS A SUBJECT OF LIFE: PROBLEMS OF HEALTH AND DISEASE

DOI:10.23888/humJ20204418-426

ЛИЧНОСТНЫЕ ОСОБЕННОСТИ ПРИВЕРЖЕННОСТИ ЛЕЧЕНИЮ ПАЦИЕНТОВ С ЗАБОЛЕВАНИЯМИ СЕРДЕЧНО-СОСУДИСТОЙ СИСТЕМЫ

PERSONAL FEATURES OF ADHERENCE TO TREATMENT IN PATIENTS
WITH DISEASES OF THE CARDIOVASCULAR SYSTEM

Яковлев В.В., Эктова Т.К.

Рязанский государственный медицинский
университет имени академика И.П. Павлова

Yakovlev V.V., Ektova T.K.

Ryazan State Medical University

Аннотация:

В статье рассматриваются личностные особенности пациентов с заболеваниями сердечно-сосудистой системы (ишемическая болезнь сердца и гипертоническая болезнь сердца) в связи с формированием приверженности лечению.

В исследовании выявлены личностные факторы, взаимосвязанные с различными аспектами приверженности, которые рассматриваются в русле авторского подхода (информированность, медицинское доверие, здоровьесберегающее поведение). Так, в качестве личностных факторов, благоприятствующих эффективной информированности пациента об образе жизни и терапии, выступают высокий самоконтроль, чувствительность, гибкость и социальная смелость, тогда как доминантность выступает в этой связи психологическим барьером. Формирование доверия положительно связано с высокой нормативностью поведения, дипломатичностью и самоконтролем и отрицательно – с

Abstract:

The article examines the personal characteristics of patients with diseases of the cardiovascular system (ischemic heart disease and hypertensive heart disease) in connection with the formation of adherence to treatment.

The study identified personal factors interrelated with various aspects of adherence, which are considered in line with the author's approach (awareness, medical trust, health-preserving behavior). Thus, the personality factors that favor the effective awareness of the patient about the lifestyle and therapy are high self-control, sensitivity, flexibility and social courage, while dominance acts as a psychological barrier in this regard. The formation of trust is positively associated with a high standard of behavior, diplomacy and self-control, and negatively with non-conformism. The behavioral aspect of adherence is determined by emotional stability, low anxiety and, in part, intelligence. At the same time,

нонконформизмом. Поведенческий аспект приверженности определяется эмоциональной стабильностью, низкой тревожностью и, отчасти, интеллектом. В тоже время экспрессивность, независимость имеют с данным компонентом отрицательную взаимосвязь. Были обнаружены различия в средних показателях по шкале приверженности у мужчин и женщин, а также в выборках пациентов с различной нозологией. Подтвердилась гипотеза о различиях в распределении типов отношения к болезни у пациентов с гипертонией и ишемической болезнью сердца.

Ключевые слова:

приверженность лечению, пациенты, личностные особенности, отношение к болезни, заболевания сердечно-сосудистой системы.

expressiveness and independence have a negative relationship with this component. Differences were found in the mean values on the adherence scale in men and women, as well as in samples of patients with different nosologies. The hypothesis of differences in the distribution of types of attitudes towards the disease in patients with hypertension and coronary heart disease was confirmed.

Keywords:

adherence to treatment, patients, personality traits, attitude to illness, diseases of the cardiovascular system.

Cardiovascular diseases are among the most common causes of disability and death in Russia and in the world in general. Currently, most experts do not doubt that the effectiveness of patient treatment depends not only on the correctness and timeliness of the diagnosis, choice of treatment strategy and tactics, the promptness of therapeutic and surgical intervention, but also on the behavior of the patients themselves, their responsibility for their health. In other words, adherence of patients to treatment plays a critical role in the treatment of diseases of the cardiovascular system.

The actual issues facing the complex of sciences, including psychology, are determining the degree of influence of adherence on the effectiveness of treatment of diseases of the cardiovascular system, identifying factors that reduce adherence to treatment, assessing the level of adherence to treatment and developing modern methods for its diagnosis and correction.

The concept of adherence to treatment corresponds to two English-language terms: adherence (in fact, adherence) and compliance (consent, obedience, obedience), which are often considered synonymous. In the definition of the concept itself, specialists at the moment are not unanimous: some authors emphasize the degree of the patient's behavioral readiness to follow all the doctor's recommendations (lifestyle, taking medications in accordance with the prescriptions, timely access to a doctor), others emphasize that adherence is, first of all, a conscious cooperation with a doctor and a voluntary intention to take responsibility for their health [1,2].

Like any complex phenomenon, adherence to treatment is determined by a complex of various factors: socio-economic (social status, financial situation, level of education) associated with medical personnel and the health care system (degree of development of the

health care system, qualifications and experience of medical personnel, cost of treatment), therapy-related (medication regimen, duration of treatment, side effects) associated with the patient's personality (motivation, subjective expectations, psychological characteristics) and his/her condition (severity of disease symptoms, rate of disease progression, presence of concomitant pathology) [3-5]. Previously, one of the authors of the article (in co-authorship) proposed an approach according to which the patient's awareness of various aspects of the disease and therapy (cognitive component of adherence), the level of trust in the doctor, treatment methods, medicine in general, the family in terms of providing conditions should be highlighted in the structure of adherence therapy (socio-psychological context) and psychological characteristics that determine the patient's behavior during treatment (behavioral component) [6].

Since in this study the subject of the study is the personality characteristics of patients with diseases of the cardiovascular system, it makes sense to analyze this very aspect, possibly associated with the formation of adherence to treatment. According to the already classical two-factor concept of types of behavior (types A and B) M. Friedman and R. Rosenman, people with the following behavioral style and emotional characteristics are at risk of developing coronary heart disease and severe forms of hypertension: excessive involvement in various activities, a tendency to an accelerated rhythm of life, excessive striving for success, craving for competition, social recognition and power, emotional tension, impatience, aggressiveness [7,8]. At the same time, while studying the psychological characteristics of cardiovascular patients, a number of authors pay attention to the psychological changes manifested in already "established" cardiovascular patients; these include an increased level of anxiety, depression, apathy, depressive manifestations, fixation on any, even minor, unpleasant sensations in the heart, the emergence or exacerbation of a sense of fear of death, loss of self-sufficiency. In patients with ischemic and hypertensive disease, the parameters of the hypochondria scale are significantly increased in comparison with healthy people [9,10].

Research in the mainstream of gender medicine, which fixes the specific features of the differences in the course of diseases in men and women, is also of increasing scientific interest. Research in this direction includes an analysis of the differences not in the course of the disease itself, but in the attitudes of men and women with coronary artery disease and hypertensive heart disease to their disease and differences in treatment adherence. Previous studies show that men are more likely to have a paranoid type of attitude towards coronary artery disease and hypertensive heart disease, while women have an anxious type of attitude towards the disease. This indirectly indicates a greater adherence to treatment in women, who more adequately perceive information about their disease, although they fear that treatment may be ineffective [11,12].

Aim

Is to study the relationship between the individual characteristics of patients with diseases of the cardiovascular system and adherence to treatment. The consistently solved research tasks were ultimately aimed at confirming or refuting the following hypotheses:

1. Adherence to treatment in patients with diseases of the cardiovascular system is associated with some individual and personal characteristics (psychological, due to the gender of the patient).
2. There are specific differences in the type of attitude towards the disease of patients with various diseases of the cardiovascular system.

Materials and Methods

Our study involved 60 patients with diagnoses of ischemic heart disease (30 individuals) and hypertensive heart disease (30 individuals), who were hospitalized at the cardiology department № 1 of the Ryazan Regional Clinical Cardiology Center. The age range of the subjects was 45-70 years old; the mean age of men (58.4 years) and women (59.2 years) did not differ significantly.

To identify the prevailing type of attitude towards the disease, the method "Type of attitude towards the disease" was used (TOBOL, L. Wasserman, B. Iovlev, E. Karpova, A. Vuks, 2005) [13], general level adherence was measured by the Morisky-Green scale (D. Morisky, L. Green, 1986) [14,15], the structure of adherence to treatment was diagnosed using the author's test questionnaire "Treatment adherence" (N. Yakovleva, V. Yakovlev, 2015) [16]. To study the structure of personal dispositions, the method of multifactorial personality research (16PF, R. Cattell, form A) was chosen. As methods of statistical processing, we used Pearson linear correlation coefficient and nonparametric the Mann-Whitney and ϕ -Fisher tests for the differences between samples.

Results and Discussion

1. To prove the first hypothesis, a correlation analysis of the results of the test questionnaire "Treatment adherence" and the 16 PF questionnaire was carried out.

Correlation analysis data show that personal characteristics such as high self-control, sensitivity, flexibility and social courage contribute to increasing patient awareness of the characteristics of his disease and treatment options as a component of adherence; at the same time, dominance acts in this connection as a psychological barrier.

Responsibility, balance, conscious observance of generally accepted moral rules and norms, persistence in achieving goals, diplomacy and emotional consistency of the patient determine the formation of a high level of trust in relation to the attending physician, the method of treatment, and the medical institution as a whole.

Table 1

**Correlation coefficients between patient indicators according to 16PF (Cattell)
 and "Treatment adherence" methods**

Scales 16 PF	Scales of the test questionnaire "Adherence to treatment"							
	1A	2A	3A	4A	1B	2B	3B	4B
A	-0,27*		0,31*					
E	-0,45**							
G					0,42**		0,46**	0,26*
H		0,35**			0,31*		0,34**	
I	0,35**							
N			0,29*		0,28*	0,26*		0,35**
O			-0,28*					
Q2	0,28*						-0,32*	
Q3				0,42**		0,28*	0,3*	0,3*
F2	-0,33**	0,41**					0,31*	
F3			0,3*					
F4					-0,26*			

Tables 1 and 2 show only significant correlation coefficients: * - significance level ≤ 0.05 ; ** - significance level ≤ 0.01 .

Abbreviated designations of the scales of the "Treatment adherence" method: 1A – awareness of the lifestyle in this disease; 2A – awareness of the content of therapy; 3A – awareness of the organization of therapy; 4A – awareness of the family's capabilities in treating the disease; 1B – attitude to the lifestyle with the disease; 2B – confidence in the method of treatment; 3B – trust in medical personnel and clinic; 4B – trust in family members; 1C – health-preserving behavior of the patient; 2C – patient behavior during treatment; 3C – formation of the patient's compliance; 4C – acceptance of the patient's lifestyle by the family due to the disease.

Table 2

**Correlation coefficients between patient indicators according to 16PF (Cattell)
 and "Treatment adherence" methods (continued)**

Scales 16 PF	Scales of the test questionnaire "Adherence to treatment"						
	1C	2C	3C	Total score	Unit A	Unit B	Unit C
B	0,3*						
C			0,29*		0,32**		
E	-0,36**						
F	-0,45**						-0,27*
G				0,38**		0,44**	
H					0,29*		
N		0,28*				0,33**	
O			-0,37**				
Q3		0,3*			0,44**		
Q4			-0,36**				
F1			-0,43**				
F2		-0,28*					
F3		-0,26*					
F4		-0,26*					

The behavioral component of adherence is positively associated with such personal characteristics of the patient as emotional stability, low anxiety and the level of intelligence; at the same time, expressiveness and independence have a negative relationship with this component. Data from a survey of samples according to the Morisky-Green Scale showed that the level of adherence to treatment in patients with coronary heart disease (2.87 points out of 4) is significantly higher than in patients with essential hypertension (2.17 points). At the same time, differences were found in the average indicators on the scale for men and women. If in men with essential hypertension the level of adherence to treatment is higher than in women (2.6 points versus 1.73), then in the group of patients with ischemic heart disease the picture completely changes: the average adherence rate of women is slightly higher than in male patients (2.93 points versus 2.8). Apparently, the symptoms of hypertension by many patients (especially women) are not yet perceived as a serious health problem. The diagnosis of coronary heart disease encourages a more responsible attitude to the state of health, to the need to comply with the doctor's prescriptions for taking medications and undergoing examinations. However, in men, the prolonged course of the disease and deterioration in health do not lead to a significant development of adherence to treatment, in contrast to women. The data obtained show the urgent need to focus more deeply on gender characteristics of the formation of adherence to treatment in further research.

Fig. 1. The proportion of the occurrence of types of attitudes towards the disease (according to the TOBOL method, %) in the samples of patients with hypertensive and ischemic heart disease

2. Comparison of data using the TOBOL method showed that between the samples of patients with hypertension and coronary heart disease there are certain differences (at the significance level of 0.05 according to the ϕ -Fisher test) in the distribution of types of attitudes towards the disease in the corresponding samples. Among patients with hypertensive heart

disease, the proportion of ergopathic (36.7%), anosognosic (15.7%) and diffuse (13.3%) types of attitudes towards the disease is statistically higher, while in the sample of patients with coronary heart disease, a statistically dominant proportion sensitive (21.7%), anxious (18.3%) and hypochondriacal (11.7%) types. Calculating the proportional ratio of types, we took into account both "pure" and mixed types of attitudes towards the disease (from two to three types included in the diagnostic zone, with the exception of the harmonious one). The diffuse type was not taken into account in the interpretation of the results.

Obviously, hypertension is assessed as a "milder" disease, therefore, many patients are characterized by discarding thoughts about the disease and the possible severe consequences of inattention to their health and/or leaving for work. Patients with coronary heart disease listen much more to their inner feelings, physical condition in general, are concerned about the possible adverse consequences of the disease, show anxiety and suspiciousness, demanding detailed information from doctors about the disease and treatment methods, often focus on subjective painful and other unpleasant sensations. strive to tell doctors and others about them.

Conclusions

1. The result of the work was data on the psychological characteristics of patients with diseases of the cardiovascular system. In general, the hypotheses about the relationship of adherence to treatment in patients with cardiovascular diseases with their personal characteristics, and about the differences in the types of attitudes towards the disease in patients with hypertensive and ischemic heart diseases, were confirmed.

2. These studies can be useful in determining the targets of psychological correction, differentiated depending on personal characteristics and the type of attitude to the disease and having a negative impact on the formation of adherence to treatment in patients with diseases of the cardiovascular system.

There is no conflict of interest.

СПИСОК ЛИТЕРАТУРЫ:

1. Наумова Е.А., Семенова О.Н., Строкова Е.В. и др. Оценка приверженности пациента к длительному лечению с точки зрения его сознательного и несознательного поведения // Инновация в науке: материалы 15 международной заочной научно-практической конференции. 2012.
2. Булаева Ю.В., Наумова Е.А., Семенова О.Н. Исследование приверженности к лекарственной терапии пациентов с сердечно-сосудистыми заболеваниями районной больницы малого города Саратовской области и кардиологического отделения университетской клиники г. Саратова // Рациональная фармакотерапия в кардиологии.

REFERENCES:

1. Naumova EA, Semenova ON, Strokovaya EV. et al. Otsenka priverzhennosti patsienta k dlitel'nomu lecheniyu s tochki zreniya ego soznatel'nogo i nesoznatel'nogo povedeniya. *Innovatsiya v nauke. Materialy 15 mezhdunarodnoi zaachnoi nauchno-prakticheskoi konferentsii*. 2012. (In Russ).
2. Bulaeva YV, Naumova EA, Semenova ON. Study of adherence to drug therapy of patients with cardiovascular diseases of the district hospital of a small town in Saratov region and the cardiology department of the university clinic in Saratov. *Rational Pharmacotherapy in Cardiology*. 2018;14(3):337-43. (In Russ). doi:10.20996/

2018. Т. 14, №3. С. 337-343. doi:10.20996/1819-6446-2018-14-3-337-343

3. Гусев Е.И., Бойко А.Н., Сидоренко Т.В., и др. Приверженность основной терапии у больных с постинсультной депрессией // Неврологический журнал. 2011. №4. С. 54-59.

4. Кайчуев А.А. Приверженность в лечении: методики оценки, технологии коррекции недостаточной приверженности терапии // Медицинский вестник Северного Кавказа. 2013. Т. 8, №3. С. 65-69. doi:10.14300/mnnc.2013.08016

5. Фесенко Э.В., Коновалов Я.С., Аксенов Д.В., и др. Современные проблемы обеспечения приверженности пациентов пожилого возраста с сердечно-сосудистой патологией к фармакотерапии // Научные ведомости Белгородского государственного университета. Серия Медицина. Фармация. 2011. Т. 22 (117), № 16/1. С. 95-99.

6. Яковлева Н.В., Яковлев В.В. Методология и методы исследования здоровьесберегающей деятельности субъекта. Рязань: РязГМУ; 2014. С. 121-134.

7. Митрушина Н.А. Социально-перцептивные и личностные корреляты поведенческих типов А и Б. Дис. ... канд. психол. наук. Ярославль; 2007. Доступно по: <https://www.dissercat.com/content/sotsialno-pertseptivnye-i-lichnostnye-korrelyaty-povedencheskikh-tipov-i-b>. Ссылка активна на 15 октября 2020.

8. Friedman M., Rosenman R.H. Association of specific overt behavior pattern with blood and cardiovascular findings; blood cholesterol level, blood clotting time, incidence of arcus senilis, and clinical coronary artery disease // Journal of the American Medical Association. 1959. Т. 169, №12. С. 1286-1296.

9. Веснина Е.С. Сравнительная характеристика клинико-психологических особенностей больных, страдающих ишемической болезнью сердца. В сб.: Материалы XIV Международной заочной научно-практической конференции «Тенденции и перспективы развития современного научного знания». М.; 2015. С. 98-102.

10. Ефремова Е.В. Коморбидность и приверженность к лечению при хронической сердечной недостаточности. Дис. ... канд. мед. наук. Ульяновск; 2013. Доступно по: <https://www.dissercat.com/content/komorbidnost-i-priverzhennost-k-lecheniyu-pri-khronicheskoi-serdechnoi-nedostatochnosti>. Ссылка активна на 15 октября 2020.

1819-6446-2018-14-3-337-343

3. Gusev EI, Bojko AN, Sidorenko TV, et al. Priverzhennost' osnovnoj terapii u bol'nyh s postinsul'tnoj depressiej. *Nevrologicheskij zhurnal*. 2011;(4):54-9. (In Russ).

4. Koychuev AA. Adherence to treatment: techniques, technologies correcting inadequate adherence to therapy. *Medical news of North Caucasus*. 2013;8(3):65-9. (In Russ). doi:10.14300/mnnc.2013.08016

5. Fesenko JV, Konovalov JS, Aksenov DV. et al. Modern problems in securing in adherence of older patients with cardiovascular diseases to pharmacotherapy. *Nauchnye vedomosti Belgorodskogo gosudarstvennogo universiteta. Seriya Medicina. Farmacija*. 2011;22(16/1):95-9. (In Russ).

6. Yakovleva NV, Yakovlev VV. *Metodologiya i metody issledovaniya zdorov'esberegayushchej deyatel'nosti sub#ekta*. Rjazan': RjazGMU; 2014. (In Russ.)

7. Mitrushina NA. Social'no-perceptivnye i lichnostnye korrelyaty povedencheskih tipov A i B [dissertation]. Yaroslavl'; 2007. Available at: <https://www.dissercat.com/content/sotsialno-pertseptivnye-i-lichnostnye-korrelyaty-povedencheskikh-tipov-i-b>. Accessed: 2020 October 15. (In Russ).

8. Friedman M, Rosenman RH. Association of specific overt behavior pattern with blood and cardiovascular findings; blood cholesterol level, blood clotting time, incidence of arcus senilis, and clinical coronary artery disease. *Journal of the American Medical Association*. 1959;169(12): 1286-96.

9. Vesnina E.S. Sravnitel'naja harakteristika kliniko-psihologicheskikh osobennostej bol'nyh, stradajushhih ishemicheskoj bolezni serdca. In: *Materialy XIV Mezhdunarodnoj zaочноj nauchno-prakticheskoj konferencii «Tendencii i perspektivy razvitija sovremennogo nauchnogo znanija»*. Moscow; 2015. P. 98-102. (In Russ).

10. Efremova EV. Komorbidnost' i priverzhennost' k lecheniju pri hronicheskoj serdechnoj nedostatochnosti [dissertation]. Ul'janovsk; 2013. Available at: <https://www.dissercat.com/content/komorbidnost-i-priverzhennost-k-lecheniyu-pri-khronicheskoi-serdechnoi-nedostatochnosti>. Accessed: 2020 October 15. (In Russ).

11. Скибицкий В.В., Городецкая Е.В., Фендрикова А.В., и др. Гендерные особенности эффективности комбинированной антигипертензивной терапии у пациентов с артериальной гипертензией и ишемической болезнью сердца // Кардиоваскулярная терапия и профилактика. 2014. №5. С. 14-21.
12. Шевцова В.И., Котова Ю.А., Филатова О.Н. Приверженность к лечению и модификации образа жизни пациентов с заболеваниями сердечно-сосудистой системы. В сб.: Материалы IV Всероссийской научно-практической конференции молодых ученых, аспирантов, студентов «Актуальные проблемы медико-биологических дисциплин». Саранск; 2019. С. 68-71.
13. Вассерман Л.И., Иовлев Б.В., Карпова Э.Б., и др. Психологическая диагностика отношения к болезни. СПб.; 2005.
14. Лукина Ю.В., Марцевич С.Ю., Кутишенко Н.П. Шкала Мориски-Грина: плюсы и минусы универсального теста, работа над ошибками // Рациональная фармакотерапия в кардиологии 2016. Т. 12, №1. С. 63-65.
15. Morisky D.E., Green L., Levine D.M. Concurrent and predictive validity of a self-reported measure of medication adherence // Med Care. 1986. Vol. 24, №1. P. 67-74.
16. Яковлева Н.В., Яковлев В.В. Новый подход к исследованию приверженности лечению как аспекту здоровьесберегающей деятельности субъекта // Личность в меняющемся мире: здоровье, адаптация, развитие 2015. №2(9). Доступно по: <http://humjournal.rzgmu.ru/art&id=148>. Ссылка активна на 15 октября 2020.

СВЕДЕНИЯ ОБ АВТОРАХ:

Яковлев Василий Васильевич – кандидат психологических наук, начальник Центра практической психологии, Рязанский государственный медицинский университет имени академика И.П. Павлова; 390026, Рязань, ул. Высоковольная, д.9. E-mail: vasvasyak@mail.ru

Эктова Татьяна Константиновна – студент факультета клинической психологии Рязанского государственного медицинского университета имени академика И.П. Павлова; 390026, Рязань, ул. Высоковольная, д.9. E-mail: nyvottake@mail.ru

ДАТА ПОСТУПЛЕНИЯ: 15.10.2020.

ДАТА ПРИНЯТИЯ В ПЕЧАТЬ: 01.12.2020.

ССЫЛКА ДЛЯ ЦИТИРОВАНИЯ:

Яковлев В.В., Эктова Т.К. Личностные особенности приверженности лечению пациентов с заболеваниями сердечно-сосудистой системы // Личность в меняющемся мире: здоровье, адаптация, развитие. 2020. Т. 8, №4(31). С. 418-426. Доступно по: <http://humjournal.rzgmu.ru/art&id=457>. Ссылка активна на чч.мм.гггг. doi:10.23888/humJ20204418-426

11. Skibitsky VV, Gorodetskaya EV, Fendrikova AV, et al. Gender specifics of the combination antihypertension therapy efficacy in patients with arterial hypertension and ischemic heart disease. *Cardiovascular Therapy and Prevention*. 2014;(5):14-21. (In Russ).
12. Shevcova VI, Kotova JuA, Filatova ON. Priverzhennost' k lecheniju i modifikacii obraza zhizni pacientov s zabolevanijami serdechno-sosudistoj sistemy. In: *Materialy IV Vserossijskoj nauchno-prakticheskoj konferencii molodyh uchenyh, aspirantov, studentov «Aktual'nye problemy mediko-biologicheskikh disciplin»*. Saransk; 2019. (In Russ).
13. Vasserman LI, Iovlev BV, Karpova JB, et al. Psihologicheskaja diagnostika otnoshenija k bolezni. Saint-Petersburg; 2005. (In Russ).
14. Lukina YuV, Martsevich SYu, Kutishenko NP. The Moriscos-Green scale: the pros and cons of universal test, correction of mistakes. *Rational Pharmacotherapy in Cardiology*. 2016;12(1):63-5. (In Russ).
15. Morisky DE, Green L, Levine DM. Concurrent and predictive validity of a self-reported measure of medication adherence. *Med Care*. 1986;24(1):67-74.
16. Yakovleva NV, Yakovlev VV. New approach to the study of adherence to treatment as aspect health-saving activities of the subject. *Personality in a changing world: health, adaptation, development*. 2015;(2):69-75. Available at: <http://humjournal.rzgmu.ru/art&id=148>. Accessed: 2020 October 15. (In Russ).

INFORMATION ABOUT AUTHORS:

Yakovlev V.V. – PhD (Psychology), Head of the Center for Practical Psychology, Ryazan State Medical University; 9, Vysokovoltnaya Street, 3900026, Ryazan. E-mail: vasvasyak@mail.ru

Ektova T.K. – Clinical Psychology student; Ryazan State Medical University; 9, Vysokovoltnaya Street, 390026, Ryazan. E-mail: nyvottake@mail.ru

PAPER RECEIVED: 15.10.2020.

PAPER ACCEPTED: 01.12.2020.

REFERENCE FOR CITING:

Yakovlev VV, Ektova TK. Personal features of adherence to treatment in patients with diseases of the cardiovascular system. *Personality in a changing world: health, adaptation, development*. 2020;8(4):418-26. Available at: <http://humjournal.rzgmu.ru/art&id=457>. Accessed: dd Month yyyy. doi:10.23888/humJ20204418-426