

Relationship between Psychological Factors and Quality of Life in Patients with Heart Disease and Those with Diabetes

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Abstract

Background: The coronary disease and diabetes are the most common diseases in Tetovo, therefore the aim of this study is the evaluation of quality of life of patients and of the control group under stress, depression and anxiety influence. In this study has been used a purposeful sampling. The research instrument used consists of socio-demographic questions and four tests: Cohen's stress measurement questionnaire, Beck's depression measurement questionnaire, Beck's anxiety measurement questionnaire and the quality of life measurement questionnaire (WHOQOL). The sample of the study consists of N=300, including patients with heart coronary diseases, patients with diabetes and respondents from the control groups. The results of the study proved the hypothesis that: stress, depression, and anxiety have a negative significant impact in quality of life in the study sample ($p < .001$). The findings of this study reveals the fact that patients with chronic disease have a reduced quality of life under the influence of psychological factors.

Keywords: coronary heart diseases, diabetes, stress, depression, anxiety, quality of life

Introduction

According to the data of Institute for Public Health (2015), from all chronic diseases in the country, the largest share take people with coronary disease (93 833), and those with diabetes (75 805). Diagnosis with a chronic disease can deeply impact the person and his family. Changes arising from the disease can affect the quality of life of the individual, affecting the way he chooses to face the situation. The disease causes changes in personality, its social and family environment and views for the future. Very often, adaptation to the disease is difficult to achieve. Studies show that it takes at least a year to overcome the idea and the presence of the disease, which causes changes in the emotional state and behavior of the person, indicating symptoms of anxiety, depression and influence how this person will face the disease. About 50% of deaths are directly related to human behavior, yet we spend very little time on research and implementation of programs related to it. Psychologists and doctors share the same opinion that stress control is essential on prevention of the disease and health enhancement (Morris, 2008). Study topics, such as diabetes and coronary disease, were found more prevalent in the Tetovo area (Table 1, According to the Public Health Unit in Tetovo, 2014). Each individual, with its personal concerns, fears, hopes and ambitions represents an integral whole, and not only an organ carrier. As such, it becomes subject to psychological clinical researches. Therefore, it is believed that there are different ways in which psychological and physiological processes can mutually affect the outbreak of the disease. Psychological factors can directly affect the physiological function of certain organs, and thus cause some somatic disorders (Wulsin, 2007). At the same time, several physiological processes may contribute on the appearance of some specific psychological conditions, hence anxiety and depression are psychological aspects associated with coronary disease at patients with diabetes mellitus; but also affect the person's concept of life satisfaction.

The complexity and interdependency of various biopsychosocial health factors and diseases, it is very well described on the World Health Organization definition, according to which *health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity*. The definition emphasizes these key health components as equally important factors of health, and therefore is completely included on the biopsychosociological health models and diseases. The scope of the definition offers space for multiple nonmedical fields to resolve health problems of individuals and the society in overall. Such an approach, encourages the involvement of psychologists, and also others scientific profiles on resolving contemporary health issues.

The homeostasis theory assumes that the impact of disease on the quality of life on a patient it's not very dominant if the disease itself doesn't last long and it is difficult to cure, but in the case of chronic diseases and diseases with heavy pain, a non proper psychological management it can disequilibrate and reduce opportunities for a quality life (Cummins, 1995 to 2003). Thus, a more accurate observation of emotional reactions at chronic diseases should be conducted, in order to understand what kind of emotions are experienced. Based on studies of Joki-Begi, Tadinac, Lauri Korajlija and Hromatko (2004), in which was reported stress, depression and anxiety, can be assumed that those are the factors that affect the quality of life, even though it's outlined the: purpose of the study, analysis of the relationship between stress, depression, anxiety and quality of life in patients with coronary diseases and those with diabetes; and the question of whether there are differences in the level of stress, depression, anxiety and quality of life of both groups with relevant diseases.

Chronic diseases

In each season, 50% of the population faces problems caused by chronic diseases that require medical treatment. For decades, psychologists theorists and doctors have speculated why some people adapt well on the constant stress caused by a chronic disease, while others show significant emotional and interpersonal failure. Chronic diseases are diseases that last; they are not resolved spontaneously and are rarely fully recovered [Centers for Disease Control and Prevention (CDC) in 2003]. However, in psychological terms, the definition of chronic disease is complex:

Does cancer goes away, after the patient has completed the treatment? The majority of researchers, agree that the disease process should last at least few months more, in order to categorize as a chronic disease, i.e the "chronic" meaning depends from the views of the observers (Rabin, Leventhal, Goodin, 2004). In general, chronic diseases develop slowly, have long duration and first of all require medical treatment.

Most of the diseases carry on the potential of health deterioration of the patients, by restricting their life potential, productivity and life satisfaction, and affect the cost of health services (Devins, 1983). Diseases classified on this group are cancer, heart diseases, diabetes, bowel diseases, allergies, HIV, kidney diseases, renal and central nervous system diseases.

According to Devins, Blinik and Hutchinson (1983), chronic diseases impair life of the patients by disorting their well-being, i.e the quality of life. Psycho-social well-being it's a compromis which derives from two constraints: by reducing their chances of involvement in valuous activities and achieve positive results and self-control, as by reducing the possibility of achieving positive results and avoid the evil. In terms of chronic diseases, health studies align the quality of life as primary or secondary cause. Quality of life related to health, is an important measure which assesses the impact of the disease and the effects of medical intervention; therefore, an improved quality of life is considered essential and determinant result, in terms of the therapeutic process (Staquet, 1998).

2. RESEARCH METHODOLOGY

2.1. Study goal

The aim of this study is to recognize the quality of life on patients with coronary disease and patients with diabetes under the influence of stress, depression and anxiety. The logic of this study is based on the fact that during coexistence with a chronic disease, patients very often psychologically can not manage the disease, and thus tend to have stress, depression and anxiety, which reduces their life quality.

The world literature counts a number of studies that have analyzed the psychological aspects and the quality of life on patients with chronic diseases (Dickrns, McGowen, Percival, 2006; Durmaz, Odzemir, Akyunak, 2009; Paile, Wahlbeck, Eriksson, 2007), while similar studies are not found in Tetovo area and nationwide. Due to this incentive, this study will be one of the first studies for the corresponding area.

2.2. Study sample

In this study has been used a purposeful sampling. First, sampling techniques derive logically from the conceptual framework of research queries. Second, the sample should generate sufficient information on the issue that it's being studied. Thirdly, the sample should create the possibility of making generalizations clear or data reliable (Jeanty and Albizu, 2011).

Inclusion and exclusion criteria

An important issue on the selection of the sample for this study was to define the diagnosis by medical specialists in the field of endocrinology and cardiology. The study sample was homogeneous in terms of gender and subspecies of the coronary disease and diabetes.

Inclusion criteria

The patient has to be from Tetovo and its area (Tetovo's villages);

Have a concrete diagnosis from a medical specialist of the field;

On age between 30 to 70 years;

Patients with disease duration up to 5 years;

Patients with diabetes, but without chronic complications;

Patients with a single diagnosis, non comorbid diagnosis of diseases;

Control group participants are healthy people, carefully were selected patients without diabetes and coronary heart diseases.

Exclusion criteria

A criteria for exclusion from this study was the duration of the disease and its type. Excluded from the research were patients with other types of coronary disease, beside those with myocardial infarction and angina pectoris. Only these two diseases were selected, because they are more frequent comparing with other types of heart diseases, and their rough symptomatology compared with diseases such as inflammation of the heart muscle (pericarditis), born anomalies of the heart etc.

Moreover, in such cases we have changes in psychological terms of disease management. Meanwhile, the study included patients with diabetes type 1 and 2, excluding the type of diabetes that occurs in pregnant women, due to the fact that this represents a completely different category.

As regards to the duration of the disease, from the research were excluded patients with disease duration more than 5 years. The duration of disease criteria, was set in conversation with medical specialists which are familiar with the course of disease and prognosis. In order to avoid chronic complications of diabetes, as well as the possibility of having a second myocardial infarction and appearance of secondary disease, was set the cohabitation with the disease of 5 years.

Table 1. Descriptive analysis of demographic variables for the three study groups

	<i>Frequency</i>	<i>Percentage</i>	<i>Valid percentage</i>	<i>Cumulative percentage</i>	<i>Total</i>
Gender					
Male/Female	150 /150	50/ 50	50/50	50/100	300
Age					
30-40 / 41-50	100 / 88	33.3/ 29.3	33/ 29	33/62.7/	300
51-60 / 61-70	78 / 34	26.0/11.3	26/11	88.7/100	
Residence					
Country/city	106 /194	35.3 / 64.7	35.3/64.7	35.3/ 100	300
Civil status					
Single/married/divorced/widowed	38/250/12/0	12.7/83.3/4 .0	12.7/83.3/4.0	12.7/96.0/ 100	300
Education					
Noneducated/primaryschool/ secondary.school/university/postgraduate	2/ 68/ 104/ 111/ 15	7/ 22.7/34.7 37.0/ 5.0	7/ 22.7/34.7 37.0/ 5.0	7/23.3/58.0/ 95.0/ 100	300
Employment					
Yes/No	174/ 125	58/ 42	58/ 42	58/ 100	300

Economic class					
<i>Low/Middle /High</i>	49/ 197/ 54	16.3/65.7/1 8	16.3/65.7/ 18	16.3/82.0/ 100	300

This research included 300 participants in total, divided into 2 groups:

The first group consists by 200 participants, of whom 100 patients with coronary disease and 100 with diabetes mellitus, as an experimental group.

The second group consists by 100 healthy people (without diabetes and without coronary heart disease) as a control group.

The tables below at first will describe the frequencies and percentages of the total study sample and later separately for the three groups of participants in the study. The study sample was consisted of (n=300), the sample was homogeneous by gender (50% females, 50% males), most represented age group is 30-40 years (33.3%), most consisted on the sample belonged to urban areas (64.7%), 83.3% have marital civil status, 37% are university graduates, 58% are employed and 65.7% belong to the middle economic class.

2.3. Study procedures

The research was conducted at Tetovo's Clinical Hospital, respectively on the relevant ambulances (units) for endocrine and cardiology diseases, within October 2014 until April 2015. Purposeful sample was selected. The entrance at the hospital, and the eased procedures to establish communication with the medical staff, were facilitated by a special permit from the director of the hospital.

Questionnaires were managed by the petitioner, and in a few cases by other interviewers (doctors or nurses) trained in advance by the petitioner. The researchers followed medical visits, a recent work model in hospitals of the Republic of Macedonia, which operates according to the rule "visit date", where patients at first are examined by the primary care provider (PCP) and through the electronic system are directed to a relevant medical specialist. Afterwards, the system application of Ministry of Health, messages the patients about the date and time of appointment. Thereby, we tried to choose a purposful sample.¹

As regards to the testing of the control group, in principle, these participants must be healthy people (without any disease), but unable to control their health cards, the sample was selected on convenience basis (through friends and people we have met earlier). This sampling technique selects only those sample units that can be easily used in a certain period of time.

2.4. Measuring instruments

Cohen's stress perception questionnaire (Cohen, Kamarach, Mermelstein, 1983) it is one of the most popular tools for the measurement of psychological stress. It is a self reporting questionnaire, which is scheduled to measure the degree to which each individual estimates stressful situations in his life (Cohen, Janicki, 2007). PPS questionnaire assesses the degree to which the individual believes that his life was unpredictable, uncontrollable and overloaded during the last month. The questionnaire contains 10 questions in total with one answer from the alternatives offered. Questions are coded from 0 (never) to 4 (very often).

Beck depression questionnaire (BDI) is observes the mood disorders, diminished hope, the feeling of abandonment, guilt feeling, the need for punishment, self-blame, thoughts and suicidal bents, weeping, harassment, breaking relations with others, the negative picture for yourself, inability to work, sleep disruption, decreased appetite, hypochondria and decreased libido (Beck, Guth, Steer and Ball, 1997 & Steer, Cavalieri, Leonard, Beck, 1999). The questionnaire contains 21 questions with four answer responding alternative, scaled from 0 to 3.

Beck questionnaire for the determination of anxiety is designed from the same materia, that Beck used to determine the depression scale. At first, the questionnaire was found to serve as a facilitator for the classification of symptoms of anxiety

¹Law on health insurance, official gazette of Republic of Macedonia, nr. 25/2000, 96/2000, 113/2004.

neurosis, but today BAI is used for tracking the changes of anxiety at any stage of the participants (Beck, 1997). It contains 21 data, which cover somatic symptoms (12 questions) and subjective evaluation of anxiety (9 questions).

World Health Organization Quality of Life- WHOQOL questionnaire is a short version of Whoqol's (0-100), a self-guide that contains 26 questions, which evaluate the quality of life in four dimensions/aspects (WHOQOL, 1995): *physical health, mental health, social relations, environment.*

Analysis of credibility

The credibility of a translated questionnaire can be tested by checking the internal consistency and test-retest credibility. Cronbach's alpha or coefficient of credibility, can be used to measure the internal credibility. As a rule, the Cronbach's alpha over 0.70 is considered as an acceptable credibility coefficient. The higher is alpha or the credibility coefficient, the more reliable is the generated degree. In this study, the questionnaires showed an acceptable internal consistency, because the coefficient of Cronbach's alpha has a minimum value of .841 minimum, and a maximum value of 0.943. The value of Cronbach's alpha of all questionnaires is .811, which can be considered as relatively high.

Table 1. *Analysis of credibility of measuring instruments*

Questionnaire	Number of questions	Cronbach's alpha
COHEN	10	0.841
BDI	21	0.943
BAI	21	0.926
WHQOL	24	0.936
Total analyze	78	0.811

2.5. Study design

The study was designed as quasi-experimental (almost an experiment), a method of applied research which serves to measure the impact of the independent variable on the dependent variable. The quasi experiment takes place when the researcher does not have full control of the independent variable and the control group is not equivalent to the experimental group (Goodwin, 2010). Quasi experiments are used as one of the most prevalent forms of psychology research, involving an experimental group and a control group that is being tested, but not necessarily in equal sampling conditions (Campbell, 1963).

The experimental study group included 200 patients: 100 patients with coronary disease and 100 others with diabetes, who were tested in cardiology and endocrine units, before being exposed to medical visits. The control group included 100 healthy people, which were tested at home conditions or in their work places.

The study was implemented using quantitative method of data collection. The quantitative analysis is used to establish the relationship between the variables (Cohen, Manion and Morrison, 2000) and to determine the direction and magnitude of the relationship between these variables. The quantitative analysis is used because the nature of this study requires detection of numerical data, which can report the relationship between stress, depression, anxiety and the quality of life in patients with diabetes and coronary disease, and afterwards to be able to compare the results between diseases, and in the end we can compare the level of stress, depression, anxiety and quality of life between patients with coronary disease, diabetics and the control group. Closed models of questionnaires were used in this study, typical for quantitative studies. The petitioner have only supervised the research. Statistical analysis was used for data processing and hypothesis testing, therefore generalizations are exclusively based on data.

3. Results and Discussion

3.1. Categories of stress, depression, anxiety and quality of life at study groups

At 77% of patients with coronary disease were noticed high levels of stress and only in 2% a slight stress, while regarding to patients with diabetes, 59% notice high levels of stress and only 7% have a low levels of stress. While at the control group, 30% of participants are at the higher category of stress and 37% notice a light form of stress.

Accentuated levels of depression are found in 46% of diabetic patients, 40% at patients with coronary disease and only 1% at the participants of the control group, while high levels are found in 35% of diabetic patients, 41% at patients with coronary disease and 7% on the control group. In normal state (without depression), 69% belong to the control group, 15 diabetic patients and 2% of patients with coronary disease.

High anxiety levels are found in 76% of patients with coronary disease and only 3% noticed light levels. At patients with diabetes are found high levels of anxiety in 33% of participants, while a moderated anxiety is noticed in 67% of patients. High anxiety level were found in 7% of the control group, and a light levels of anxiety at 65% of the participants of the control group.

The categories of quality of life at the three study groups. 58 % of patients with coronary disease self-reported moderated quality of life, 2% lower life quality and 39% ranked on good quality of life. 11% of patients with diabetes, self-reported low quality of life, 38% moderated quality of life, 40% good quality of life and 11% very good quality of life. At the very good quality of life category ranked were 59% of the control group, while 3% of them noticed moderated quality of life.

Table 2. Categories of stress, depression, anxiety and quality of life at study groups

	Coronary disease	Diabetes mellitus	Control group
Stress			
<i>Slight</i>	2 %	7 %	37 %
<i>Moderate</i>	21 %	34 %	33 %
<i>high</i>	77%	59 %	30 %
<i>Total</i>	100%	100%	100%
Depression			
<i>Normal</i>	2 %	1 %	69 %
<i>Light</i>	3 %	7 %	16 %
<i>Moderate</i>	14 %	11 %	7 %
<i>High</i>	41 %	35 %	7 %
<i>Accentuated</i>	40 %	46 %	1 %
<i>Total</i>	100%	100%	100%
Anxiety			
<i>Light</i>	3 %	0 %	65 %
<i>Moderate</i>	21 %	67 %	28 %
<i>High</i>	76 %	33 %	7 %
<i>Total</i>	100%	100%	100%
Quality of life			
<i>Very low</i>	0%	0 %	0 %
<i>Low</i>	2 %	11 %	0%
<i>Moderate</i>	58 %	38 %	3 %
<i>Good</i>	39 %	40 %	38 %
<i>Very good</i>	1 %	11 %	59 %
<i>Total</i>	100%	100%	100%

3.2. Correlative relation of stress, depression, anxiety and quality of life at the study groups

Correlations analyzed between independent variables (stress, depression and anxiety) and the dependent variable: quality of life along with its dimensions. Patients with coronary disease resulted with a significant negative correlation between stress and the quality of life ($r = -.277, p < .005$), stress and mental health ($r = -.228, p < .001$), stress and social relations ($r = .290, p < .001$), thus a low connection strength is found between stress and the environment ($r = .277, p < .001$), while there is significant statistical correlation between stress and physical health. The correlative analysis table shows that stress is in positive correlation with mental health ($r = .228, p < .005$) thus a moderated strength connection is found between stress and social relations ($r = .277, p < .001$).

Depression indicates significant negative correlations with quality of life ($r = -243, p < 0.01$), while the connection strength is small. Depression results to have also low significant negative connection with dimensions of quality of life, which means there is a negative relation between depression and physical health ($r = -237, p < .005$); mental health ($r = -225, p < .005$); and social relations ($r = -232, p < .005$). The greater depression is, the lower will be physical health, mental health and social relations.

Anxiety doesn't indicates significant correlation with quality of life ($r = -.176, p < 0.05$), but it is on negative important significance with the physical health ($r = -265, p < .001$); and mental health ($r = -.224, p < .001$). In these cases, the connection value is moderated. Anxiety in our respondents with coronary disease was higher than depression. Anxiety in myocardial infarction patients is a reaction to existential trauma, because even though life challenges, survival opportunities are great. Our findings are in line with the research of Januzzi, Steam, Pasternak and other associates (2000), which confirm the presence of anxiety after myocardial infarction.

Also, the high presence of comorbid depression is three times more common in patients with coronary heart disease compared to healthy participants (Fraser-Smith, Lesperance and Talajic, 1995). Our findings are consistent with certain studies, which point out that depression compared to anxiety has a greater impact on lowering the quality of life after suffering from myocardial infarction (Kiessling and Henriksson, 2004). Depressive condition, together with coronary angiography, causes disorder of the general physical condition and malfunction of the organism, leading to a reduction in the will of life (Kiessling and Henriksson, 2007; Thombs, Bass, Ford and Stewart, 2006).

Table 3. Correlative relations between study variables at CD patients

	<i>Stress</i>	<i>Depression</i>	<i>Anxiety</i>
<i>Quality of life</i>	-.277*	-.243*	-.176
<i>Physical health</i>	-.067	-.237*	-.265**
<i>Mental health</i>	-.228*	-.225*	-.224**
<i>Social relations</i>	.290**	-.232*	-.183
<i>Environment</i>	.277**	-.147	-.171

Stress as an independent variable at patients with diabetes indicates significant negative correlation with quality of life ($r = -596, p < 0.01$), with a moderated strength connection. Stress also indicates negative significant correlation with quality of life dimensions and the physical health ($r = -535, p < 0.01$) with a moderated strength connection; mental health ($r = -540, p < 0.01$) high connection; social relations ($r = -286, p < 0.01$); small connection, and the environment ($r = -562, p < 0.01$); the connection strength in this case is high, since a significant negative relation is noticed between stress and other variables, which means that by increasing the stress we decrease the quality of life and its dimensions, reduce the physical health, mental health, social relations and environment.

The results indicate that depression results in significant negative with quality of life ($r = -629, p < 0.01$), in this case strength connection is high, as well as its dimensions, physical health ($r = -656, p < 0.01$); mental health ($r = -607, p < 0.01$); social relations ($r = -409, p < 0.01$); and environment ($r = -405, p < 0.01$); strength connection between depression and dimensions of quality of life is high. The higher levels of depression decrease the quality of life levels and the dimensions levels of quality of life. The greater depression is, the lower will be quality of life.

Anxiety as an independent variable in patients with diabetes indicates significant negative correlation with quality of life ($r = -611, p < 0.01$), the strength connection is high. A significant negative correlation it also shown with the quality of life, its dimensions, and the physical health ($r = -655, p < 0.01$); mental health ($r = -595, p < 0.01$); social relations ($r = -411, p < 0.01$); and environment ($r = -419, p < 0.01$), the strength connection in all cases is high.

Researching the quality of life in patients with diabetes mellitus, we have confirmed that the disease in conjunction with stress, anxiety and depression promotes a reduced quality of life in all spheres, which coincides with the results of some other studies (Catalano, Martines and Spadaro, 2000). It is thought that psychological stress affects the neuro-endocrine system and acts at the level of blood glucose (Konen, Summerson and Dignan, 1993).

Table 4. Correlative relations between study variables at diabet mellitus patients

	Stress	Depression	Anxiety
Quality of life	-.553*	-.624**	-.611**
Physical health	-.506*	-.656**	-.655**
Mental health	-.517**	-.607**	-.595**
Social relations	-.274*	-.409**	-.411**
Enviroment	-.541**	-.405**	-.419**

As regards to the third study group, i.e the control group it is noticed that stress indicates significant negative correlation with quality of life ($r = -.268, p < 001$), physical health ($r = -.269, p < 001$), mental health ($r = -.288, p < 001$), moderated strength connection, while stress indicates non significant negative correlation with social relations ($r = -.030, p > 001$) and the environment ($r = -.186, p > 001$). It resulted a significant negative correlation between depression and the quality of life ($r = -.592, p < 001$) and its dimensions, physical health ($r = -.513, p < 001$), mental health ($r = -.490, p < 001$), social relations ($r = -.408, p < 001$) and the environment ($r = -.464, p < 001$), relatively high strength connection.

Anxiety as an independent variable at the control group has significant negative impact on quality of life ($r = -.406, p < 001$), and the dimensions of quality of life, physical health ($r = -.392, p < 001$), mental health ($r = -.438, p < 001$), the environment ($r = -.328, p < 001$), with moderated strength connection, whereas anxiety has negative nonsignificant impact on social relations ($r = -.056, p > 001$).

A correlation between stress, depression, and quality of life is also noted in the control group (Hadi, Asadollahi and Talei, 2009)

Table 5. Correlative relations between study variables at the control group

	Stress	Depression	Anxiety
Quality of life	-.268**	-.592**	-.406**
Physical health	-.269**	-.513**	-.392**
Mental health	-.288**	-.490**	-.438**
Social relations	-.030	-.408**	-.056
Enviroment	-.186	-.464**	-.328**

4. CONCLUSIONS

According to the recent psychological theories it is considered that mental phenomena that occur during chronic diseases appear also because of damaged self-regulation of the individual. It is correct that everything that happens to us, our private life, emotions, our imagination, they influence and manage our behavior. The inner life of a human is very wealthy and a significant source of his actions, reactions, behaviors. This concept corresponds with the latest insights, to which now precedes a better development and treatment, based on evidence, which would give a specific response to the present enigma of the mutual influence of psychological, biological, somatic and cerebral action during the functioning, reacting and the behavior of the person. Until then, patients' reactions and pathology have the right to expect help from doctors, which are left to act on their personal belief and knowledge, personal experience, inter-reaction and abilities, when facing a person with somatic or psychological symptoms.

However, according to researches done so far, it is known that stress is a more serious threat to human health and contributes in the appearing of chronic disease, such as coronary disease and diabetes mellitus. It is quite clear that these

diseases, besides physical difficulties, carry with them also psychological difficulties, which make the everyday function even more difficult for the person. Many researchers have explored this case, entering to this problem from different aspects. That is why this research is projected in such ways that it can perceive this problem, taking into consideration different psychological aspects.

The results and conclusions represent confirmation of earlier studies, and can interconnect with the main theoretical concepts displayed in this paper. By summarizing the results and the gained knowledge for the connection between stress, anxiety, depression and the quality of life on patients that suffer from coronary disease and diabetes mellitus, it can be concluded that this has enabled the verification of the submitted hypotheses, some verifications to be repeated, but also to gain new knowledge which have theoretical-scientific and practical significance for the phenomenon. Based on this prospective study, the overall track of psychological parameters of the patients who suffer from coronary disease and diabetes, in order to separate their common comorbidity, we have concluded the following:

Coronary disease is a chronic disease, with a fast appearance, and that is the reason why in our study, a large percent of patients have shown a high level of stress and anxiety. Meanwhile, almost half of them have resulted with accentuated depression and approximate quality of life.

Diabetes is a chronic disease, which develops slowly, that is why half of the diabetic participants have shown accentuated level of stress and depression; whereas the quality of life is approximate. In a small percent it is noticed a lower level of anxiety.

A considerable percent of the control group does not demonstrate signs of depression, but on the other hand result with a light anxiety and have self-reported a good quality of life.

In patients with diabetes it is noticed that stress, depression and anxiety have a negative significant influence on the quality of life and its dimensions, physical health, mental health, social relations and the relations with the environment.

In patients with chronic diseases can be noticed the negative significant influence of depression and stress on the quality of life, although there is a low relation power. It is concluded that stress is in a positive correlation with social relations, whereas it is not in a significant correlation with physical health. Compared to the quality of life, anxiety does not show that has statistical significance, while at life dimensions it has influence only on physical and mental health.

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