

# Role of psychological factors in course of the rosacea

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## Abstract

**Purpose:** 1 – Investigation of dependence between first symptoms of the rosacea and with surviving of critical life events. 2 – Describe of the dissimilarity in intensity of the stress at illness and healthy. 3 – Estimation of impact of stressful situations for escalating of changes in course of the disease. 4 – Comparison of the subjective estimation of patients' health.

**Material and methods:** 40 persons with rosacea, in the age of 25-75 years, were examined and 40 healthy volunteers, matched to the sex, age, social-economic background. The Holms' and Rahe's modified Social Readjustment Rating Scale questionnaire was applied and the WZS questionnaire by Sęk and Szaladziński.

**Results:** Investigations showed dissimilarities of events met in the number and intensity of the stress between sick people and volunteers. Symptoms of the acne are escalating as a result of caused emotions with primary evaluation. The image of the subjective estimation of patients' health is showing their motivation to recover.

**Conclusions:** 1 – Patients with rosacea in the period before the occurring of first symptoms of the disease, comparatively with persons from the control group, they experienced the bigger number of critical life events. 2 – The stress intensity resulting from the number of critical life events, is significantly higher at sick people in the relation to the control group. 3 – At patients with rosacea emotions resulting of the estimation of the primary stressful situation tightening symptoms of the disease. 4 – The subjective estimation of

patients' health is essential predicate of psychodermatological therapy releasing potential health possibilities at the patient.

**Key words:** rosacea, critical life events, stress, stressful situations.

## Introduction

Rosacea is a common dermatologic disorder that is located on the face. There is a large variety of visible skin changes, which change from hardly visible to very burdensome. The first symptoms of rosacea are flushing, persistent central facial erythema. With time the flushing stays there permanently, a lot of telangiectasias and central facial papules and pustules are becoming apparent, and then we can see irregular surface nodularities, rhinophyma, cutaneous signs and symptoms located on forehead, cheeks and chin [1-3].

Patients with this problem take their illness as a cosmetic problem rather than a real disease. The outward appearance is very important for them, as everyone has a picture of their own body in the mind. It is more than attractiveness or beauty. This mind picture image of ourselves brings emotions, takes effect on our behaviour and self-opinion, takes control of our plans, decides what sort of people we choose to meet and if we are happy in life [5].

Etiology of rosacea is still unexplained. In the literature we read: genetic predisposition, psychic basis, hormonal imbalance, autonomous nervous system hyperexcitability, diseases of the digestive system, facial seborrhoea based, infections, and immune based disorder. The stress is also very important for the development of the disease. Nowadays more and more of the researchers will put this dermatological entity, to the group of diseases with psychoimmunological basis. That's why the diagnostic-therapeutic cooperation is very important between doctors and psychologists.

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## The aim of the research

The main purpose of work was evaluation of chosen factors of aetiology of rosacea in the light of their effects on aggravation (exacerbation) of the symptoms of the disease, so the main tasks were:

1. examination if the patients in the time preceding the first symptoms of rosacea, had any critical life events (CLE);
2. defining the difference between the depth of the stress under the critical life events in patients with rosacea with patients in the control group;
3. showing the dependencies between the subjective opinion of the stressful situations and aggravation of the clinical changes in the course of the rosacea in the studied patients;
4. comparison of the subjective estimation of patients' health in the different age groups.

## Material and methods

40 persons with the disease have taken part in the research. There were 29 women (72.5%) and 11 men (27.5%) aged from 25 to 75 years old. The average age for men was 53.1 years, for women it was 49.4 years. There was also a control group of 40 healthy volunteers matched to sex, age, social-economic background.

On the basis of clinical research and classification of rosacea done by Expert Committee National Rosacea Society (NRS) the patients with rosacea were divided into 5 groups, depending on the clinical character of the illness (Fig. 1). The patients with rosacea and the people from the control group were examined in 3 age groups: early adulthood (from 25 to 35 y. o.), middle adulthood (from 36 to 55 y. o. for women and from 36 to 60 y. o. for men) and late adulthood (from 56 y. o. for women and from 60 y. o. for men).

In the research 4 types of factors were taken: sociodemographic elements, critical life events, primary evaluation and subjective estimation of health.

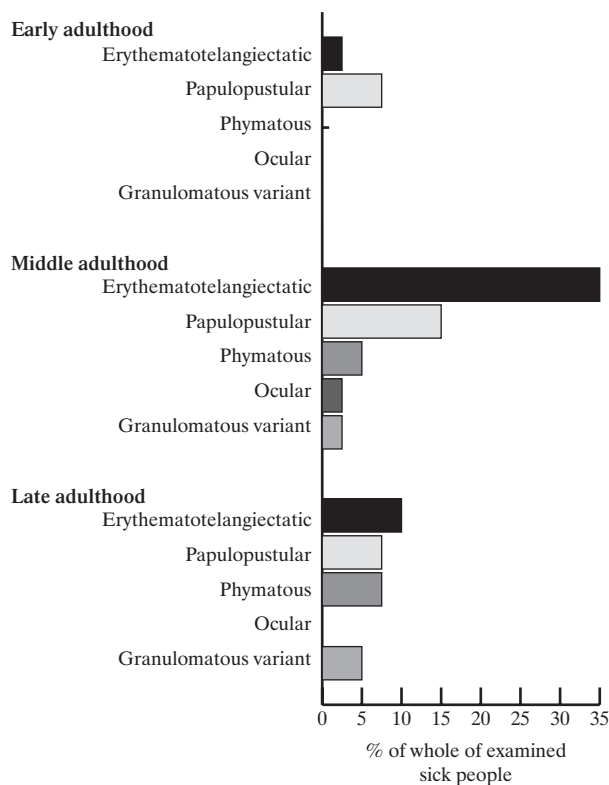
In the group of sociodemographic elements the following factors were taken: sex, age, marital status, education, occupation and income source.

In the group of critical life events 2 measures were taken. First one was the number of the critical events, which the subject experienced in the time between 6 months and 2 years (before the first symptoms of illness in the patients group and before the research in the control group). The second measure was the level of stress received with the events. The person was estimating the level of stress in each event on a 5 point scale. The index was the average of these levels.

The primary evaluation is the opinion in the following categories: challenge, danger and loss – proposed by Lazarus. [9-11]. It is an inside process, allowing recognition of the surrounding reality and describing the important things for the subject. The primary evaluation is an essential condition for showing emotion. With loss the following are connected: anger, sorrow, sadness, worrying.

The emotional picture of challenge is the most complicated and covers both negative emotions, similar to the ones accompa-

Figure 1. Dermatological profile of patients with the Rosacea



National Rosacea Society Classification of Rosacea Subtypes

nying danger, and positive ones – hope, enthusiasm, excitement [11].

The measures of trends to perceive stressors in these categories are the results of the questionnaire WZS (challenge, danger and loss). The subjects have rated their reactions to stress in 12 seven-point scales. Testing positions are in the three further scales. The outcome is the sum of results of all the testing positions connected with the type of primary evaluation. The higher result, the higher tendency to rate the particular type.

In the category subjective estimation of health the following belong: quantification (as a percentage) of health and illness, where the total for both measures of somatic state of patient is 100% [13-16].

The basis for construction of the list of life events was the Holms' and Rahe's Social Readjustment Rating Scale questionnaire modified by Pasikowski. The list contains 39 different events. The 40th position was left blank for the patient to write their own event not included in the list. Additionally the subjects were asked to estimate the stress level connected with these events, which they have chosen from the 40 possible ones. The rating was done in a 5 point scale, starting from 1 (minimum stress) to 5 (maximum stress) [8,17].

The WZS questionnaire was created by Sek and Szaladzin-ski. It is used to measure the tendency to see stressful situations as challenge, danger and loss. The theoretic basis of this method is transactional conception of stress by Lazarus. The subject rates the first reaction in stressful situations by marking a point

Figure 2. Comparing the number of critical life events at patients with the rosacea and in the control group

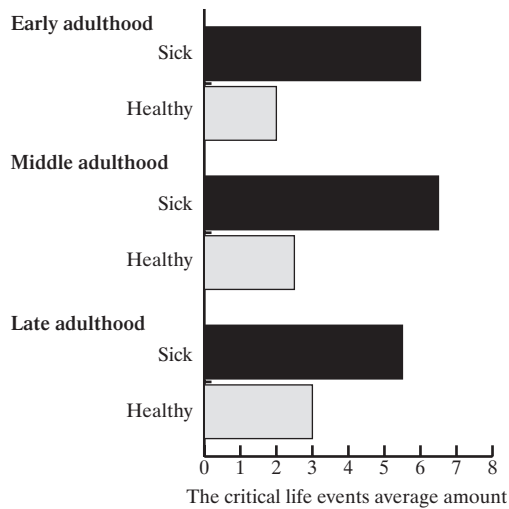
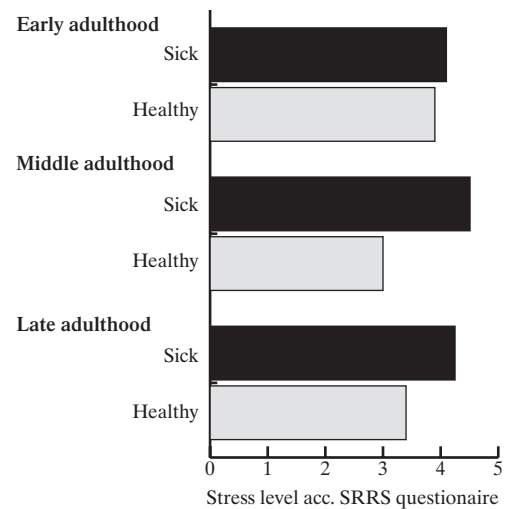


Figure 3. Comparing the level of the stress at patients with the rosacea and in the control group



on each of the 12 scales. The results in each of the further scale (three of them) of the questionnaire are calculated separately by summing the scores in appropriate points by the means of keys.

In the questionnaire, especially created for the purpose of this research, there were questions, which were to obtain information about the demographic and sociologic elements.

The last part of the questionnaire contained projection questions to subjects to make a subjective estimation of health in the progress of rosacea. With available 100% for measures: health – illness, the subject rated in what percentage he was ill or healthy. The chosen percentage of health is a measure of the subjective estimation of own biopsychophysical state and it shows motivation for treatment.

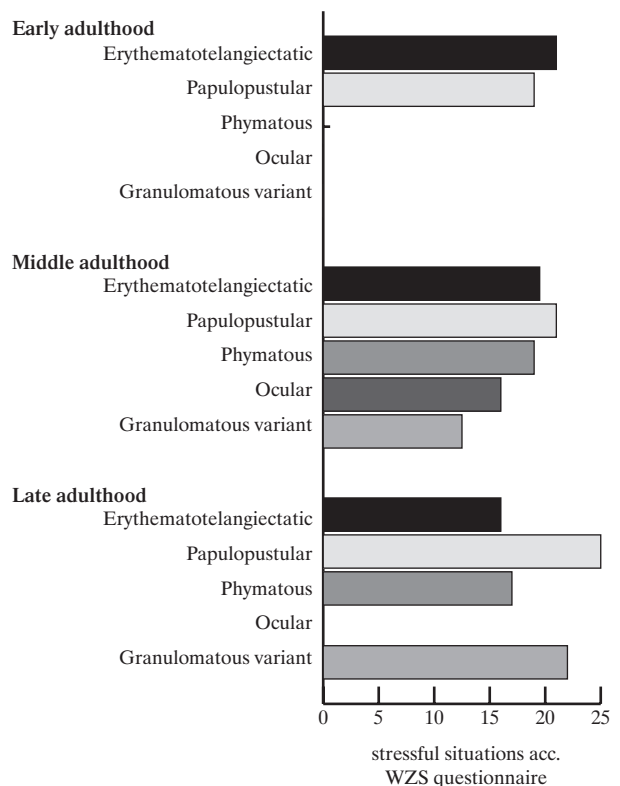
### Results and comments

From the data shown on Fig. 2 we can see that the number of critical life events at the patients with rosacea in the ages of early, mid and late adulthood is higher than in the control group in the same age groups.

The level of stress in the critical life events at the patients in the first age group (early adulthood) is high (average 3.0), but in the healthy people it is mostly placed just below this value, showing that in this phase of life a human being is subjected to most of life’s stressful situations. In middle and late adulthood the level of stress under critical life events is higher in the ill patients than in the healthy ones, for whose the level of stress is around the average value. The completion of progress tasks in these times is conditioned by the changes on the family, career and hormonal changes for the middle adulthood and for the late adulthood by biological changes in the body and the process of getting old (Fig. 3).

The symptoms of rosacea were getting worse in the stressful situations as a result of emotional picture of primary evaluation of type (Fig. 4,5,6):

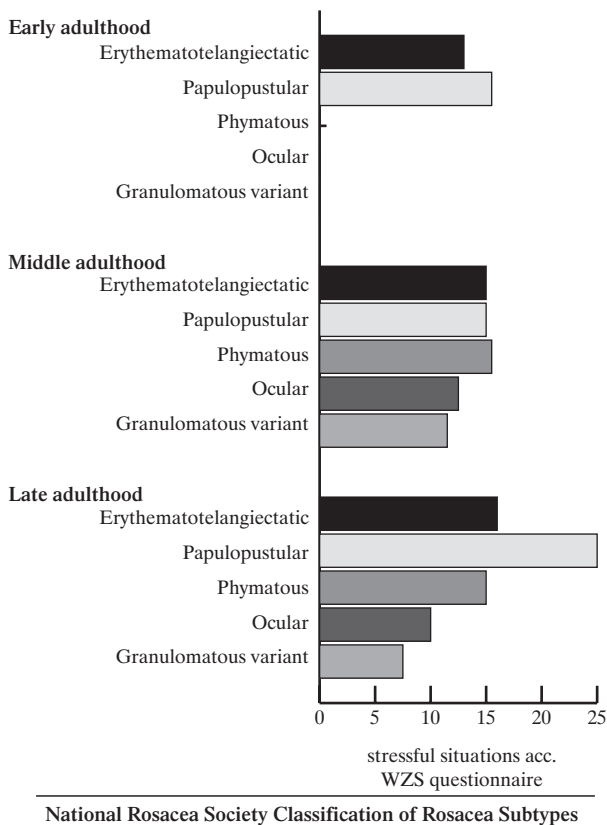
Figure 4. Comparison of stressful of primary estimation at the “challenge” type patients between groups with each rosacea subtypes



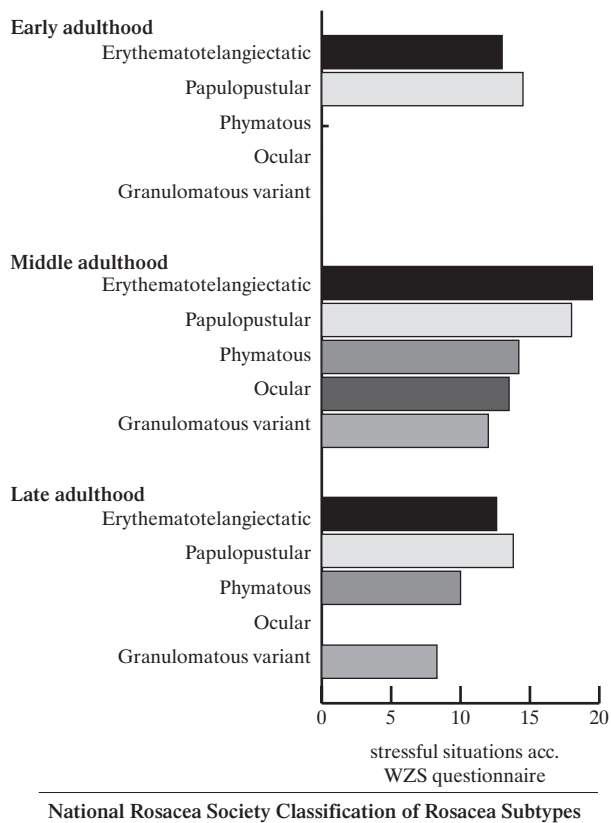
National Rosacea Society Classification of Rosacea Subtypes

- “challenge” (average value – 19.0) in the early adulthood for the erythematotelangiectatic form; in the middle adulthood for the following forms: papulopustular, erythematotelangiectatic and phymatous; in the late adulthood for forms: papulopustular, and granulomatous variant of rosacea

**Figure 5.** Comparison of stressful of primary estimation at the “danger” type patients between groups with each rosacea subtypes



**Figure 6.** Comparison of stressful of primary estimation at the “loss” type patients between groups with each rosacea subtypes



- “danger” (average value – 13.0) in the early adulthood for the papulopustular form; in the middle adulthood for the following forms: papulopustular, erythematotelangiectatic and phymatous; in the late adulthood for erythematotelangiectatic form
- “loss” (average value – 13.0) in the early adulthood for the papulopustular form; in the middle adulthood for the following forms: papulopustular, erythematotelangiectatic and phymatous; in the late adulthood for papulopustular form.

Visually data of the subjective health estimate of the patients with rosacea shows that the subjects in all age groups can see a large potential of somatic health (Fig. 7). The greatest percentage of the subjective health in the ill people have the ones from the late adulthood group for the granulomatous variant, and the papulopustular form of rosacea; slightly smaller for the phymatous type and the lowest (60% of health) for the erythematotelangiectatic form. In the remaining development stages (early and middle adulthood) the subjective estimate of health in the patients with rosacea is similar. Comparing to late adulthood, the patients are less content from their potential health prospects. But still these values are high. The patients with granulomatous variant of rosacea have the highest measure of subjective health in the middle adulthood (80%). The types papulopustular and phymatous have the lower values (60-62.5% of health). The low value (50% of health) characterises the

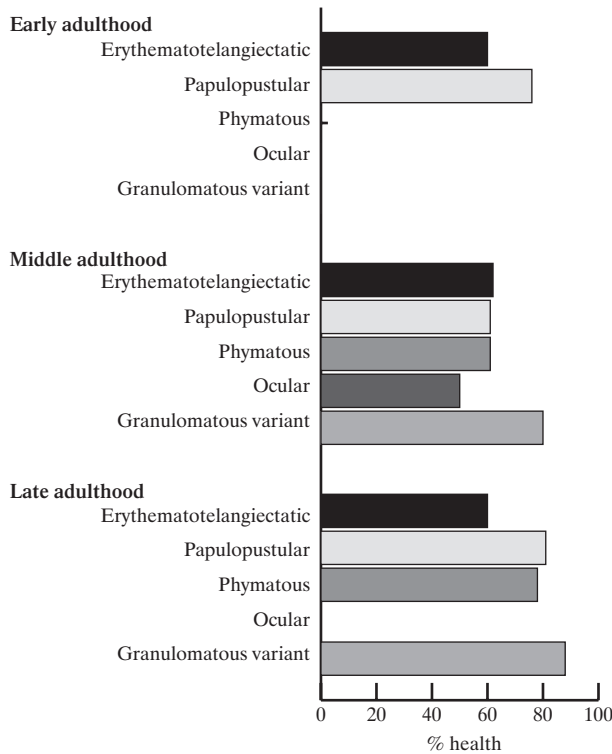
ocular type of rosacea. In the early adulthood the subjective health estimation has the highest value (76.8%) for the papulopustular type and for the erythematotelangiectatic type the value is 60%.

The above data shows that the human being in an illness, which is a difficult situation, is not helpless. He has resources that motivate him to a long-term therapy. The results are important for the psychologist, as they show the area of patient's health where the psychological help is needed. It should be done in the form of therapy that will activate the potential health possibilities in the patient.

## Conclusions

1. Patients with rosacea in the period before the occurring of first symptoms of the disease, comparatively with persons from the control group, have experienced the bigger number of critical life events in the middle adulthood.
2. The stress intensity resulting from the number of critical life events, is significantly higher at sick people in the relation to the control group.
3. At patients with rosacea emotions resulting of the estimation of the primary stressful situation of types “challenge”, “danger” and “loss” causes tightening symptoms of the disease.

Figure 7. Subjective estimation of health between patients' groups with each subtypes of the rosacea



National Rosacea Society Classification of Rosacea Subtypes

4. The subjective estimation of patients' health is essential predicate of psychodermatological therapy releasing potential health possibilities in the patient.

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