

# Determinants of the level of anxiety and fears in a group of patients with ulcerative colitis

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## Abstract

**Introduction.** Ulcerative colitis is a chronic, inflammatory disease of the mucous membrane of the large intestine manifesting itself through diarrhoea with blood, mucous and pus. It progresses with periods of relapses and remissions. The treatment is a long-term process which should aim at improving the patient's clinical condition and quality of life, as well as minimising the disease-related anxiety and fears.

**Objective.** The aim of the study was recognition of the determinants of the level of anxiety and fears in a group of patients with ulcerative colitis.

**Materials and method.** The prospective study comprised 102 patients with diagnosed ulcerative colitis. The data were collected by means of the following tools: Clinical Disease Activity Index, Rating Form of IBD Patients Concerns (RFIPC), and a questionnaire by the authors. Statistical parametric and non-parametric tests were used to analyse the data, depending on the type of scale and nature of the variable distribution.

**Results.** Most of the patients (64%) were in the active phase of the disease. A high level of fear and anxiety occurred in 73% of the patients and concerned the impact of the disease, intimate life, complications and stigmatisation. The highest levels of fears and anxiety were observed in the field of complications and the impact of the disease on the patients' lives.

**Conclusions.** The disease activity and high levels of anxiety and fears influenced the psychosocial functioning of the patients with ulcerative colitis.

## Key words:

disease activity, ulcerative colitis, anxiety and fears

## INTRODUCTION

Ulcerative colitis is diffused, non-specific inflammatory process that occurs in the mucosa of the part of the large intestine that widens ascending from the anus towards the caecum. The majority of patients are white people from highly developed countries. The annual incidence is more or less constant and amounts to approximately 10 cases per 100,000 population. The disease is manifested by the presence of ecchymosis or ulceration [1]. Due to unknown ethiology, it is classified as one of conditions referred to as inflammatory bowel disease (IBD). Etiopathogenesis of ulcerative colitis is multifactorial and complex [1, 2, 3]. Current knowledge indicates a few factors affecting the disease occurrence, for instance: genetic predisposition, environmental factors, immunological and psychosomatic factors. The nuisance of the disease is caused by periods of relapse and accompanying symptoms: bloody diarrhoea, fever, pains which significantly impair the life and professional activity of the patients [4]. Ulcerative colitis is particularly stressful for the patients. Numerous fears and anxieties related to the endoscopic examination, possible mutilating surgery and the risk of colorectal cancer development have an enormous impact on the patients' mental sphere [5].

## OBJECTIVE

The recognition of determinants of the level of anxiety and fears in patients with ulcerative colitis.

## MATERIALS AND METHOD

The sample group consisted of 102 patients with confirmed clinical diagnosis of ulcerative colitis, under non-invasive treatment in the Department of Gastroenterology and in the Gastrology Clinic of the Regional Specialised Hospital in Częstochowa, Poland. Women constituted 52% of the sample group, men – 48%. The patients' age range was between 18–79, mean – 41.02 years. 85% of the patients had secondary and higher education, 73% were professionally active. Patients living in the city dominated in the sample group. The ulcerative colitis duration fluctuated between 1–27 years.

The data were collected by means of the following tools: Clinical Disease Activity Index [6], Rating Form of IBD Patients Concerns (RFIPC) [7, 8, 9], and the authors' questionnaire.

The disease activity was evaluated by means of the Clinical Activity Index, described by Rachmilewitz, which contains 4 basic questions concerning the disease symptoms and 4 additional questions about parenteral symptoms. The maximum number of points in the questionnaire is 23, the minimal – 0. The Rachmilewitz Activity Index of 4 or less

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points indicates remission of the disease. The Rachmilewitz score (RWS), otherwise known as the endoscopic index (EI), reflects the endoscopic picture. Also very popular in clinical everyday practice is the Mayo score. The Rachmilewitz score has been chosen because this EI has been used in clinical practice and data collected from the patients' medical documentation.

The patients' fears and anxiety, stemming from the course of disease and treatment of inflammatory bowel diseases were evaluated with the Rating Form of IBD Patients Concerns (RFIPC) questionnaire, which takes into account symptoms often unnoticed by the clinicians, but are extremely important not only for the patient but also for the patient's family. The questionnaire includes 25 questions referring to the level of fears in the following areas: impact of the disease on family life, intimate life, complications, and own body image with relation to stigmatisation. The system of responses is based on the Visual Analogue Scale (VAS), measuring 100 mm, where 0 means no symptoms and 100 the greatest intensity. The RFIPC questionnaire result below the mean of 38.7 indicates less fears and better quality of life.

The data was analysed with descriptive statistics and parametric and non-parametric tests depending on the type of scale and the character of distribution of variables. Correlation analyses for the variables expressed on ordinal scales were performed by Pearson's  $r$  correlation coefficient. The results were considered statistically significant at  $p < 0.05$ . The research was permitted by the Regional Medical Chamber in Czestochowa (Nr. K.B.Cz.-9/2012).

## RESULTS

Data analysis showed that the vast majority of patients (64%) obtained a result between 5–17 points on the Rachmilewitz scale which indicated the disease activity. The mean disease activity index in remission was observed at the level of 2.19, and in the active phase at 6.45. Men displayed a slightly higher disease activity (mean – 5.0; dispersion – 0–17), than women (mean – 4.8; dispersion – 0–12).

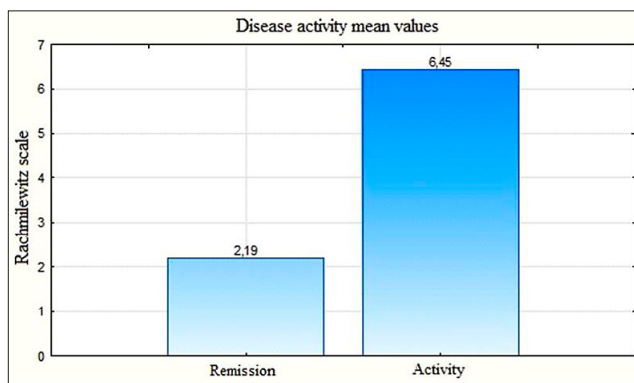


Figure 1. Mean values of disease remission and activity

Data analysis showed that 73% of patients showed a result above 38.7 mm (mean – 65.3 mm), which indicated a lower level of quality of life due to disease-related fears anxieties. A higher quality of life was found in 27% of patients, and more than a half (52%) of this group were women.

The influence of the disease on the level of fears and anxieties was significant – 80% of patients showed a mean

result of 63.7 mm, indicating negative disease effect on the quality of life.

In the sphere of intimate life, the mean result was 49.1 mm which was presented by 60% of the researched patients.

Analysis of complications accompanying ulcerative colitis showed a very high level, with the mean result of 60.7 mm in 85% of patients, which indicated a high level of fears and anxiety.

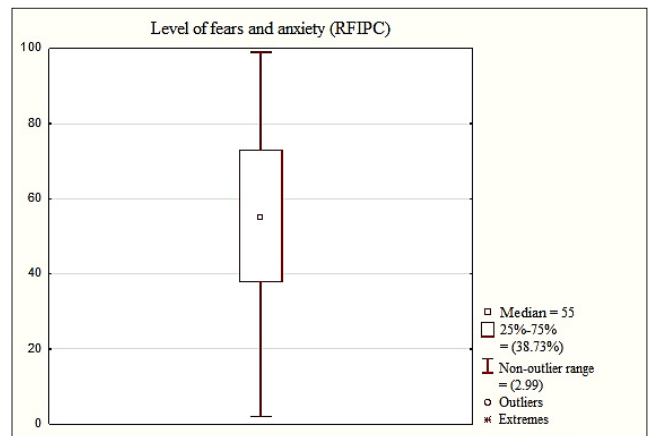


Figure 2. Level of fears and anxiety in the sample group

The sphere of stigmatisation showed a mean value of fears and anxieties at the level of 53.1, which was displayed by 60% of the patients.

The highest level of fears and anxieties was observed in the spheres concerning complications and disease impact on the patients' lives. An only slightly lower value was observed with reference to stigmatisation. A lower level of fears and anxieties accompanied the intimate life of the researched patients.

Table 1. Descriptive statistics of particular REIPC spheres

Descriptive statistics					
	No. of patients	Mean	Minimum	Maximum	SD
Disease impact	102	55,11	1,57	99,30	21,73
Intimate life	102	49,10	0,5	100,00	32,06
Complications	102	60,73	3	99,60	23,48
Stigmatisation	102	53,12	0	100,00	30,62

SD – standard deviation

In the sample group, an almost complete correlation was found between the general level of fears and anxieties RFIPC and the disease impact ( $r=0.98$ ;  $p < 0.001$ ), and the level of fears and anxiety RFIPC and intimate life ( $r=0.91$ ;  $p < 0.001$ ).

A very high correlation was observed between the level of fears and anxieties RFIPC and stigmatisation ( $r=0.90$ ;  $p < 0.001$ ) and the level of fears and anxieties RFIPC and complications ( $r=0.84$ ;  $p < 0.001$ ).

The presented results may indicate that the higher the level of fears and anxieties, the higher the levels of particular spheres: disease impact on life, fears related to intimate life, stigmatisation and complications. The researched women displayed a higher level of fears (mean – 57.8 mm) compared to men (mean – 52.4 mm), but this difference was not statistically significant.

**Table 2.** Dependence between general level of fears and anxieties and particular life spheres of patients

RFIPC/particular diseases	Pearson correlation coefficient r	Statistical significance p
RFIPC/disease impact	0.98	<0.001
RFIPC/intimate life	0.91	<0.001
RFIPC/complications	0.84	<0.001
RFIPC/stigmatisation	0.90	<0.001

In order to compare the levels of fears and anxieties with reference to age, the division into 2 age groups was made: under 50 years of age and over 50 years. A lower level of fears and anxieties was observed in older patients, with a mean level of 47.50 mm, and in patients under 50 the mean level was 57.80 mm. The differences were not statistically significant.

**Table 3.** Level of fear and anxiety with reference to patients' age

Patients' age	Mean of fears and anxieties	Minimum	Maximum	SD
<50	57.80	2	99	24.90
>50	47.50	25	75	24.90

SD – standard deviation

A higher level of fears and anxieties was observed in patients with a longer course of disease. Patients with a lower levels of fears and anxieties showed a medium course of disease – 4.8 years, patients with higher level of fears and anxieties – 7.92 years.

Analysis of the relationship between the activity and remission of ulcerative colitis showed that the patients in remission displayed a lower level of fears and anxieties (mean – 52.40 mm), compared to the group in the active phase (mean – 56.70 mm).

## DISCUSSION

The presented study analyses the level of fears and anxiety, as well as the disease activity in a group of patients with ulcerative colitis. The active phase was observed in 64% of patients, which indicates a chronic process. Numerous authors indicate the chronic character of ulcerative colitis [10, 11, 12].

The clinical condition of the patient influences their physical and mental functioning, and on the quality of life related to health. J. Andrzejewska and D. Talarska draw attention to the fears and anxieties present in patients with ulcerative colitis, often unnoticed by the therapeutic team, and even the patients themselves [7]. The presence of fears and anxieties in these patients is also confirmed by J. E. Mawdsley and D. S. Ramptom [13], according to whom fears and anxieties are the dominant emotions accompanying chronic diseases, and may lead to problems with the reception and processing of information, misinterpretation of facts, as well as impairment of cognitive functions, i.e. memory and concentration [13]. Numerous authors [14, 15, 16] have confirmed that anxiety is common in patients with ulcerative colitis and stems from, among others, fear of deterioration in health, the feeling of pain, numerous diagnostic examinations and medical appointments, and the necessity of frequent hospitalisation [17, 18].

Ulcerative colitis impacts on every sphere of the patient's life and lowers its quality. This aspect has been frequently referred to by authors researching the evaluation of biopsychosocial functioning of this group of patients [7, 10, 19, 20, 21, 22, 23, 24, 26].

The author's own research showed that the mean level of fears and anxiety in the sample group amounted to 46.2 mm, and the highest level was observed in the sphere of complications – 6.7, and the disease impact on the patients' life – 55.1 mm. The above results differ slightly from those described by D. A. Drossman et al. [8] and by J. Andrzejewska et al. [27]. However, similar results for the levels of fear and anxiety were obtained with reference to gender. Women displayed a higher level of fears and anxiety than men [8, 28].

## CONCLUSIONS

- 1) The patients presented high levels of fear and anxiety which determined the low quality of their lives.
- 2) There is a correlation between the disease activity, gender, age and duration of disease, and the level of fear and anxiety.
- 3) A relationship was observed between the general level of fear and anxiety and the patients' spheres of life, i.e. the disease impact, intimate life, complications and stigmatisation.

**Limitation of the study.** The main limitation of this study is that the examined patients represented a very wide range of age (18–79 years) which could potentially cause bias. Further research should therefore be undertaken.

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