

## **The Role of Psychological Correction in Inflammatory Bowel Diseases**

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### **Authors' contributions**

*This work was carried out in collaboration among all authors. Author JK designed the study, carried out clinical observation, managed the literature searches and wrote the first draft of the manuscript. Author NI designed and conducted the program of psychological correction, managed the analyses of the study. Author ZR performed the statistical analysis, author AD wrote the protocol, managed the literature searches. All authors read and approved the final manuscript.*

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### **ABSTRACT**

Inflammatory bowel diseases (IBD), are the life-lasting progressive diseases with destruction of gastrointestinal tissue and patients disability. The influence of stress or psychosocial factors as pathology triggers well known in ulcerative colitis and Crohn's disease diseases [5-9]. During a comprehensive psycho-correctional program that included individual and then group work with IBD patients various cognitive-behavioral therapy techniques were used. The results obtained testify not only about the need for individual psychological support, but also about the great benefits of group analysis. The usage of various methods of cognitive-behavioral therapy allows you to optimize psychological assistance to patients with IBD.

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## 1. INTRODUCTION

Inflammatory bowel diseases (IBD) - Crohn's disease and ulcerative colitis, are chronic conditions leading to disability, and characterized by systemic and enteric manifestations of unknown etiology. Currently the role of psychological factors and stress as disease underpinning factors and triggers is being discussed [1-4].

The purpose of our study was to identify possible psychological problems related to IBD and their possible psycho- correction [5].

### 1.1 Patients and Methods

In the 8 weeks course three individual and eight group sessions have been held with 7 IBD patients (3 women and 4 men). Individual counseling, psycho-diagnostics, group analysis, gestalt therapy, sandplay-therapy, phototherapy and metaphorical maps, positive Pezeshkian psychotherapy, Assagioli psychosynthesis, transactional analysis, Imaginative psychotherapy of the body according to Doctor Wolfgang Lech, symbol-drama, neuro-linguistic programming, coaching [6-9].

The given piloting psycho-correcting exposure includes diagnostic, orientation, correction and evaluation blocks.

1. The goal of the diagnostic block: study of a patient's individual specifics, analysis of factors leading him to emotional health affecting problems.
2. The goal of the orientation block: to develop positive orientation of a patient at group work.
3. The goal of the correction block: to harmonize the process of a person's individual development with emotional problems affecting his health through group therapy.
4. Evaluation block: evaluation of the psychological correction effectiveness, work analysis, summing up and reporting the results.

The first two blocks (diagnostic and orientation) included individual work with each patient within 3 consultative meetings with the aim to interview patients covering their medical history and their life stories, identification of the problems affecting

their health and also to establish contact at emotional level in order to create emotionally warm, confidential and good relations.

Then correction block followed, which was actually a group work.

### 1.2 Study Materials

Since 2008, the IBD patients undergo observation in Research Institute of cardiology and internal diseases (National IBD center). In total 7 patients (4 men with ulcerative colitis and 3 women (2 with ulcerative colitis, 1 with Crohn's disease) at the age from 23 to 38 took part in the study; the median age – 29,8 years.

Clinical characteristics. Disease activity at the time of inclusion into the group was from moderate to minimal: Mayo activity index for ulcerative colitis made up 4,2 (mild-moderate disease), for Crohn's Disease Activity Index made up 188 (mild disease). Inflammatory process localization: for ulcerative colitis E2-E3 (sub-total/total colitis); for Crohn's disease - L2 (proctitis).

## 2. MATERIALS AND METHODS

To study personality and emotional peculiarities of the patients we used: Cattell's personality factors questionnaire [10], Lusher color test [11], Clinical questionnaire to identify and assess neuroticisms [12]. To study the attitude of patients to disease and pain the following methods were used: «Unfinished sentences» by Kagan V.Y., Shats I.K. (modification by Vakhrushev I.A.) [13-15], ccouching method «The wheel of life balance» [16], pictoraltest by Zinkevich – Yevstigneyev T.D., «Fairylend of Feelings»[17]. To identify coping behavior coping strategies research method of Lazarus R. has been used [18,19].

### 2.1 Methods of Data Processing

Sessions have been held by the specialists – psychologist individually with each study participating two stages – entrance testing and testing upon completion of psycho-correction.

To process study results we used: calculation of result percentage, factor appraisal by points, content-analysis.

### 3. RESULTS OF THE EXPERIMENTAL-PSYCHOLOGICAL STUDY

During the course of psychocorrection we've noted the stabilization of the somatic state and positive attitude toward treatment in the main part of patients (see Fig. 1 and Table 1). Undoubtedly, the value of group sessions rises since the people in the group suffering from the same somatic problems but personally faced to different physical aspects. The patients have an opportunity to show solidarity, reassess their attitude to the disease and their possibilities

By the Cattell's Questionnaire that include 187 questions, we can get comprehensive information about a person and diagnose those personality features (16 constitutional factors in total). Using this Questionnaire we tried to identify the common psychological peculiarities or personality traits that would impact on patients physical condition. We've found that in general there are the following characteristics: independence and induration (Factor E: «Dependence - dominance»), self-exactingness and responsibility (Factor G: «Low behavioral rule-consciousness high behavioral rule-consciousness»), suspiciousness and distrustfulness (Factor L: «Trustiness-suspiciousness»), strong control of one's emotions and behavior (Factor Q3: «Low self-control – high self-control»), high energy tensity and frustration (Factor Q4: «Relaxation – tensity»).

Overall, the patients felling high tensity would manifest strong emotional control. In that situations patients trying to controlee (forced out) feelings and emotions from their lives.

The Fig. 2 clearly demonstrate the «Fairyland of Feelings» (the picture test by the Zinkevich-Yevstegneyeva T.).The “body map” shows negative feeling that localized in the stomach/abdominal area, i.e. in sites of physical sufferings. Thus, at «psyche» level a patient on the one hand is oriented at high behavioral rule-consciousness (G), controls his emotions and behavior (Q3), and on the other hand is stubborn, self-governed (E), distrustful (L) experiences intrapersonal conflict between antagonistic needs, which he forces out into «somatic».

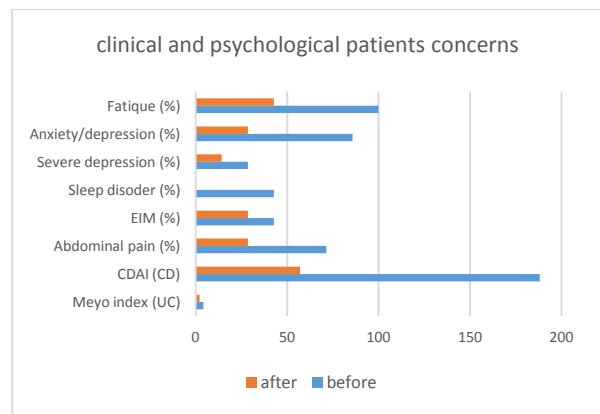


Fig. 1. Main clinical and psychological patients concerns

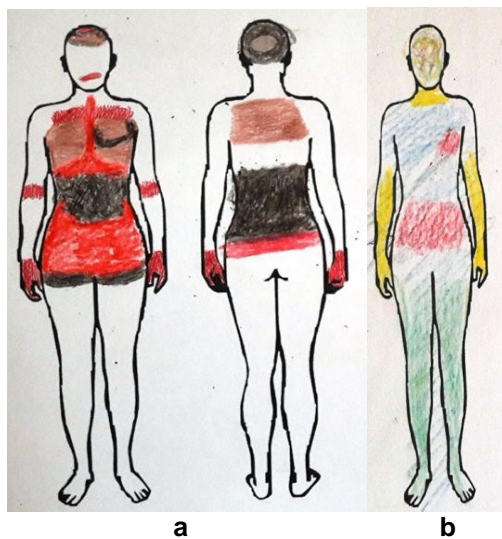





Fig. 2. Anxiety, anger and sadness feelings

**Table 1. Clinical questionnaire to identify and assess neurotic conditions**

	Patient 1			Patient 2			Patient 3			Patient 4			Patient 5			Patient 6			Patient 7		
	before	after	differences	before	after	differences	before	After	differences	before	after	differences	before	after	differences	before	after	differences	before	after	differences
Anxiety scale	-0.15	3.24	3,09	1,41	5.05	3,64	-9.79	-9.93	0,14	0.93	4.41	3,48	2.54	2.82	0,28	1.62	7.79	6,17	3.36	4.89	1,53
Neuroticdepression scale	-0.69	5.44	4,75	-2.08	3.87	1,79	-7.11	-6.41	0,7	1.54	6.36	4,82	0.81	0.64	0,17	2.17	5.72	3,55	-4.03	5	0,97
Astheniascale	2.25	6.6	4.35	-8.04	3.75	11.79	-9.33	-5.57	3,76	4	9.53	5,53	2.38	6.28	3,9	4.53	8.9	4,37	3.18	8.5	5,32
Scale reaction type	-1.58	0.39	1,19	1.58	4.47	2.89	-9.87	-7.3	2,57	2.08	6.79	4,71	2.01	3.45	1,44	1.76	5.69	3,93	-2.55	3.42	0,87
Scale of obsessive - phobic disorders	-5.4	-	2,42	1.19	1	0,19	-5.13	-5.29	0,16	2.54	2.55	0,01	-0.32	2.56	2,24	1.02	3.83	2,81	3.79	4.14	0,35
Scale of vegetative disorders	5.88	9.38	3,5	1.45	7.5	6,05	-12.9	-8.29	4,61	7.87	9.38	1,51	2.97	7.86	4,89	3.28	9.08	5,8	1.7	14.68	12,98

\* Values below -1.28 suggest neurotic condition. Values of 1.28 suggest healthy condition

-  - stable psychological adaptation
-  - unstable psychological adaptation
-  - psychological dysadaptation

Obviously, that reaction to such internal conflicts could lead to functional disorders or neuroses. The test "Clinical Questionnaire to identify and evaluate neurotic conditions" for measuring of psychological concerns before and after program has been used (Yakhnin K., Mendelevich D.), see Table 1.

You may pay attention that one patient (№3) shows unsatisfactory results and remains in the «red zone» that mean psychological dysadaptation condition. Detailed anamnesis analysis and psychological tests demonstrated these patient's benefits from his disease.

- «If only all knew...how much I am afraid of being healthy and being rejected by all of them».
- «The feeling of being cared... is associated with my disease»
- «When I have some pain... I feel like complaining and whimpering to all in a row, but in fact I have a very high threshold and I am able to endure much».

During the sandplay technique this patient (№ 3) interprets his symptoms in a very contradictory way: «Symptom – as a maniac in the film "The Lovely Bones" assaulting 13-year-old girls. The disease hurts like this fire. Its benefit is the attention of the family, which I missed in my childhood». On the one hand the disease causes «burning» sufferings and on the other – valuable and long-awaited attention of the family (Fig. 3). The meaning of a lit up candle seems contradictory as well – when dangerous flame causing sufferings but if burns incense, praising and protecting a precious disease, «praising and worshiping» it.

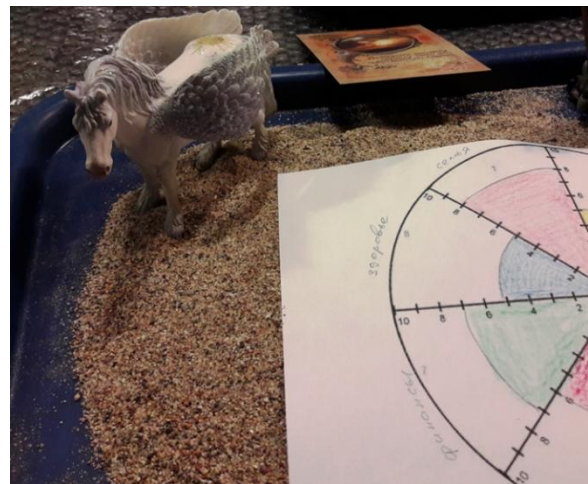
The same could be said about the work with metaphorical cards that reflected the patient's view of his relations with the symptom. The patients concerns were either antagonistic; or the disease is huge and attacking (and «I» am small and helpless); or «we work hand in hand with the disease». The position of «I» is unclear – it is so multiple and contradictory (upper line of portraits in Fig. 3) that it may be suggested the presence of intrapersonal conflict.

The talk about «relations with the symptoms» means the patients perception and coping strategies. The term "coping" stems from the English "cope" (overcome), i.e. these are the personality conscious efforts that it undertakes in the situation of a psychological of danger, in this specific case – in condition of adaption to sickness.



**Fig. 3. Composition-sandplay: "Myself, my symptom and our relations"**

The goal of the sandplay – therapy is to describe, «Who am I, my symptom and our relations». Alongside with understanding their coping strategies patients can improve their self-esteem and develop an adequate "I" image, which is very important for such somatic patients. These is no more a diffuse «I», but very clear understanding of «what am I » and «what I am able to do».



**Fig. 4. "Wheel of Life Balance" and looking for resources to improve the quality of life**

At the end stage of psychological program we've suggested to fill "Wheel of Life Balance". Obviously that the results may help to find new constructive ways of harmonic optimizing all spheres of life, to ensure maximum life quality and productivity. The patients were offered the coaching method, which allowed them more clearly identify their desires and needs, assess their success degree, and draw conclusions contributing to positive life changes (Fig. 4).

#### 4. CONCLUSION

Psychological support allowed our patients not only to identify and realize the possible psychological disease's causes, but also to design new, more environmentally-friendly coping strategies for their behavior, to discover resources for their life quality improvement. Recognition and reveal of intrapersonal conflicts, as well as primary and secondary benefits of the disease contributes to formation of new and mature attitude to life and health.

1. The results demonstrate significant improvement psychological problems as anxiety and fears in some patients.
2. The life threat that has arisen in connection with the disease and it requires rethinking and searching for new goals, which is important for stabilizing their somatic status and attitude towards treatment.
3. A person should not be alone coping with the difficulties, support of other people is very important for him. Trying to cope with their anxiety, tormented by many questions, such patients unite into group chats, and thereby quite often enhance anxiety, telling that someone "already has been cut off half of the bowel".

#### IMPLICATIONS FOR CLINICAL PRACTICE

We believe that it is necessary to give the psychological support for IBD patients. Moreover, the group work demonstrates more sufficient improvements in patient's conditions that influence on somatic wellness too.

The key question is what is the best way to integrate psychological screening and treatment into standard health care for IBD patients [20-22]. How it is recommended in world guidelines the psychologist should be a part of IBD multidisciplinary team [23,24].

#### DISCLOSURE

The program of psychological correction for IBD patients supported by representative offices in Kazakhstan: Abbvie, Janssen, Egis, Takeda, Ferring pharmaceuticals, Polifloks. The results presented in the 1-st National IBD Forum (Almaty, 2017).

#### CONSENT

It is not applicable.

#### ETHICAL APPROVAL

Ethical approval for this study was obtained from Local Ethical committee (Research Institute of cardiology and Internal diseases).

Ethical approval and legal expertise of the study have been carried out by the Local Ethical Committee (Research Institute of Cardiology and Internal Diseases) and approval has been obtained for the implementation.

#### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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