

icH&Hpsy 2016 : 2nd International Conference on Health and Health Psychology

Perception of resilience and social support of adolescents and young adults with ulcerous colitis – research performed at 5 gastroenterological outpatient wards in the Czech Republic

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Abstract

<http://dx.doi.org/10.15405/epsbs.2016.07.02.42>

The goal of this study was to determine the perception of resilience in the notion of resilience and social support in a group of persons with ulcerous colitis (UC). To collect data we used a three-part questionnaire: own questions, standardized Resilience Scale and Perceived Social Support Scale. 92 respondents with UC took part in this research: 42 men and 50 women aged 12 to 35 (the average age of 22 years), who were treated in 5 gastroenterological outpatient wards in two regions of the Czech Republic.

Results: In selected groups of respondents (gender, work/study, classification of UC, course of UC, clinical symptoms, way of treatment, BMI, weight loss) medium resilience and a relatively highly perceived social support ($\bar{x} = 66.77$; SD = 14.51) were established. We can also state that persons, who feel a lot of resilience, also perceive a lot of social support.

Conclusion: Based on our research we can suppose that the group of persons with ulcerous colitis felt their resilience and social support as very good (average to very high). However, the results cannot be generalized. We will continue working on this study.

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Keywords: Ulcerous colitis; individual; resilience; social support; scales; adolescent; young adult

1. Introduction

Ulcerous colitis (UC) is a chronic inflammatory disease of the large intestine which spreads continually from the rectum proximally, varying only in scale, (Bronský, 2013, p. 13). The course of this disease is typical for the changing of periods of remissions and relapses (or flare-ups), clinically manifested by watery stool with a pathological additive 20-plus times a day, fatigue, increased body temperature, lack of appetite, stomachache



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after ingesting food, or defecation, vomiting, weight loss (Lukáš, 2013, p. 213; Čierna et al., 2015, p. 18). In approximately 36% of patients there is at least one parenteral symptom (anemia, skin disease, mouth, joint, eye and liver afflictions) (Gabalec, 2009, p. 277; Fuller, 2015, p. 21, Čierna et al., 2015, p. 23–24). The mechanism how these symptoms originate remains unclear.

Ulcerous colitis classification is determined based on the scale of inflammation of the large intestine and the degree of inflammatory activity (E1 – proctitis; around 25% of patients suffer from proctitis; E2 – left side form of UC, c. 45% of patients suffer from this; E3 – pancolitis, in c. 40% of patients) (Gabalec, 2009, p. 276; Lukáš, 2013, p. 213–214).

UC therapy is pharmacological and surgical. The goal of pharmacological induction therapy is to mitigate inflammatory activity and to ensure that clinical, laboratory and endoscopic manifestations of the disease are suppressed (Lukáš, 2012, p. 424-466). The surgical solution to UC is either performed urgently, or is planned (Gabalec, 2009, p. 280). The dietary regimen is a significant part of the therapy. It accommodates to the stage of relapse and remission of the disease. In its active stage it lies in adherence to no-leftover diet (Vránová, 2013, p. 37–38).

Resilience is defined as the ability to cope with, and respond successfully to, various life stressors and emerge stronger than before. Scores are summed to produce a total scale score - with a higher score corresponding to higher resilience (Wagnild, Young, 2009). The English term resilience means flexibility or toughness, staunchness and elasticity (Křivohlavý, 2009, p. 71).

Perceived measure of social support may also serve to increase personal effectiveness. This then strengthens individual repertory of handling life difficulties (Pierce, Sarason and Sarason, quoted by Křivohlavý, 2009, p. 93).

2. Goal of the study

The goal of the study was to map the perception of resilience and social support in persons with ulcerous colitis.

3. Research methods

The questionnaire consisted of three parts: a) Standardized Resilience Scale; b) Perceived Social Support Scale - PSSS; c) Supplementary questions (gender, work/study, classification of UC, course of UC, clinical symptoms, way of treatment, BMI, weight loss, etc.).

Add a) Standardized RS Scale – 14 items by authors G. M. Wagnild and Heather M. Young (2009) are connected to partial goal No. 1: To map the overall scale of resilience in a group of persons with ulcerous colitis; and hypotheses No. 1–5 (below). It consists of 14 items chosen from the original version Resilience Scale 25 Items (Wagnild, Young, 1993). It includes 5 items (No. 1, 5, 7, 12 and 14) focused on self-sufficiency, 3 items (No. 2, 9, and 13) focused on meaningfulness, 2 items (No. 3 and 10) focused on balance, 2 items (No. 6 and 8) focused on perseverance, and the remaining 2 items (No. 4 and 11) focused on existential loneliness (Domásio et al., 2011, p. 134). The respondents assess items on a seven-point assessment scale. The sum index of resilience can theoretically reach values 14–98 depending on its setting. The higher the value, the greater the scale of

resilience: very high (82–96 points); medium (64–81 points); average (49–63 points); low (31–48 points); very low (14–30 points) (Losoï et al., 2013, p. 4).

Add b) Perceived Social Support Scale – PSSS by J. A. Blumenthal et al. (1987) is connected to partial goals No. 2 and 3: To map the overall and partial scale of social support in a group of persons with ulcerous colitis, and to hypothesis No. 6 (below). The PSSS captures the scale of perception of social support. More exactly speaking it focuses on establishing a protective effect of interpersonal reactions, and the influence of their social network on the level of individual well-being and health. It contains 12 basic and 4 supplementary items on a seven-point assessment scale, within which an individual expresses a scale of agreement or disagreement with a statement (Gillern et al., 2011, p. 41).

Via the PSSS we establish the overall scale and three partial scales from three sources. The overall scale of social support as perceived by an individual is calculated as a sum of 12 items which are assessed individually, just like the remaining 4 complementary items. This was caused by the fact that nonworking respondents would not be able to assess support from colleagues and bosses. The lowest possible scale of social support is 12 points, while the highest possible is 84 points. Three partial scales of social support are from an undisclosed person (items No. 1, 2, 5 and 10), from the family (items No. 3, 4, 8 and 11), and from friends (items No. 6, 7, 9 and 12). Maximum value of one source is 28 points and minimum 4 points (Mačáková, 2009).

Reliability in the notion of inner consistency in case of 14 scales connected to resilience it reaches the value of Cronbach alpha .948. If we focus on 3 subareas of this scale, reliability of the man area reaches the value of .949; in the family area it is .956, and in the friends area reliability reaches the value of .943. Thus reliability is very high in all these cases.

Then we subjected the data acquired on the resilience and perceived social support scale to exploratory factor analysis (EFA) in order to acquire information regarding their construct validity. Although our set is composed of only 92 respondents, the basic requirements for performing factor analysis were fulfilled both for the resilience scale (KMO = .876; highly significant Bartlett's test of sphericity), and the perceived social support scale (KMO = .899; highly significant Bartlett's test of sphericity). Other parameters of both scales were also checked (communalities, anti-image correlations, and others). In case of both scales we applied the extraction method Principal Component Analysis and rotation method Varimax with Kaiser normalization. 14 statements connected to resilience can be clustered into one common factor, which will explain a total of 47.62% variability of the construct being scrutinized. As expected, perceived social support split into three areas. Family is the strongest component of perceived social support (explains 30.56% variability), then friends (29.00%), and man in third place (27.88%). In total we managed to explain 87.44% variability of the construct being scrutinized. From the viewpoint of reliability and construct validity we achieved expected results.

This study was performed between December 15, 2015 and March 15, 2016. The sample included respondents aged 12–35 (adolescents and younger adults) diagnosed with ulcerous colitis who were being treated in 5 gastroenterological outpatient wards in two regions of the Czech Republic (out of a total of 14 regions). In case of persons under 18 it was necessary to add an informed consent form signed by their parents (this was taken care of by a nurse from the gastroenterological outpatient ward). Other respondents were simply informed that filling out this questionnaire was anonymous and voluntary. Once the questionnaire was filled out, they inserted it into a box prepared in the waiting room. The return rate was 64%.

4. Findings

The sample we used for our research was made up of a total of 92 probands, out of whom there were 42 men and 50 women. A total of 44 were aged 12–21 (adolescents), and 48 were aged 22–35 (young adults who were treated at 2 gastroenterological outpatient wards for adults and 3 gastroenterological outpatient wards for children and youth. Their average age was 22. 34 probands had a job, 14 were unemployed, 50 were students, and 6 were disability pensioners. The length of their illness was between 2 months and 15 years. The disease (relapse) was active in 36 probands, in all the others it was quiescent (remission). BMI, which oscillated between 15.4 and 33.6 (21.9 on average) was monitored, too. Involuntary weight loss, which appeared in 31 probands, was monitored as well.

If we split the scale of resilience into the above mentioned categories (see methodology), the results are as follows (Table 1).

Table 1. Categories of resilience in respondents with UC

Scale of resilience	Frequency	Relative frequency (%)
Very high	21	22.8
Medium	41	44.6
Average	24	26.1
Low	5	5.4
Very low	1	1.1
Total	92	100.0

In selected subgroups of respondents (gender, work/study, UC classification, course of UC, clinical symptoms, way of treatment, BMI, weight loss) resilience median was established and perceived social support in these selected subgroups of respondents did not significantly vary.

4.1 Overall results on the scale of perceived social support

Based on the set up values the sum index of perceived social support may theoretically reach values 12–84; the higher the value, the greater perceived social support.

The scale is divided into three subareas (man, family, and friends), each having 4 items, thus they can reach values of 4–28 points. Again, the higher the value, the greater perceived social support.

The results are shown in Table 2.

Table 2. Results on the scale of perceived social support

Areas	N	Minimum	Maximum	Mean	SD
Social support total	92	17	84	66.77	14.51
Social support – area Man	92	5	28	23.32	5.40
Social support – area Family	92	4	28	22.74	5.92
Social support – area Friends	92	4	28	20.72	5.64

4.2 Connection between the scale of resilience and the scale of perceived social support

Spearman's correlation coefficient is .571, which is a medium strength positive correlation. Thus we can say that persons who perceive a high level of resilience also feel a high level of perceived social support.

In connection to ulcerous colitis, its variables, scale of resilience and perceived social support the following hypotheses were proposed:

- **H1:** We assume that more than 75% of persons suffering from ulcerous colitis for less than a year show an average to very low level of resilience.
- **H2:** We assume that more than 75% persons with a quiet course of ulcerous colitis show an average to very high level of resilience.
- **H3:** We assume that more than 75% of persons with pancolitis show an average to very low level of resilience.
- **H4:** We assume that more than 75% of persons with ulcerous colitis not using medicaments show an average to very high level of resilience.
- **H5:** We assume that adolescents show a lower level of resilience than young adults.
- **H6:** We assume that adolescents show a higher level of social support than young adults.

Table 3. Assessment of hypotheses

Hypothesis	Result	Comment
H1	Rejected	There were 11 persons in the set who claimed that they had been suffering from ulcerous colitis for less than a year. Their level of resilience was between 40 and 87 points, with the average value of 68.4 points. More than 75% of them reached the value of 50 points or more, thus at least average or higher level of resilience.
H2	Accepted	56 persons stated that they had a quiet course of the disease. Their level of resilience was between 29 and 94 points with the average value of 70.4 points. More than 75% of them reached the value of 59 points or more, thus average or higher resilience.
H3	Rejected	Pancolitis concerned 19 persons. Their level of resilience was between 53 and 89 points with the average value of 73.2. More than 75% of them reached the value of 65 points or more, thus medium and higher level of resilience.
H4	Accepted	18 persons stated that they were taking medicaments. Their level of resilience was between 29 and 93 points with the average value of 64.6. More than 75% of them reached the value of 58 points or more, thus average to very high level of resilience.
H5	Accepted	The average level of resilience in adolescents reaches the value of 67.6 points. In young adults the average is 71.3 points. The difference was 3.7 points, which is 4.5%.
H6	Rejected	The average level of perceived social support in adolescents reaches the value of 65.8 points. In young adults the average is 67.5 points. The difference is 1.7 points, which is 2.4%.

However, these results cannot be generalized, that is why we present only values being compared, of those of statistical significance.

5. Discussion

In the course of our life we are exposed to obstacles and difficulties which we overcome easily or with difficulties. While researching persons who had successfully overcome their life difficulties it turned out that they often possessed certain personal attributes which helped them overcome such difficulties (Křivohlavý, 2009, p. 71). In our study the respondents showed an average to very high level of resilience (Table 1).

Based on this finding many psychologists started wondering how it is possible that children are able to successfully cope with their life difficulties. It turned out that the source of resilience was the connection

between autonomy and the ability to ask other people for help (Křivohlavý, 2009, p. 72; Hoskovcová and Suchochlebová Ryntová, 2009, p. 20).

Currently there are various approaches to understanding and perceiving resilience. We either consider it a personal attribute, a multidimensional construct, or a result or process (Novotný, 2014, p. 10–11).

In our study we decided to scrutinize young persons with UC using an RS scale (through which the scale of a person's resilience is assessed). We asked for permission to use the RS scale in our study, translated it, and modified it to fit Czech conditions. Then we used the PSSS because it more accurately focuses on finding protective effect of interpersonal reactions and the influence of social network on the level of individual well-being and health. Research projects carried out in recent years which focused on multiple diseases (depression, arthritis, cardiovascular disease, etc.) have shown that support for patients coming from positive interpersonal relationships help people deal with their diseases, while the absence thereof creates a primary precondition of worse health (Cohen and MacKay, quoted by Křivohlavý, 2009, p. 93; Gruhl and Korbächer, 2013, p. 10; Paulík, 2010, p. 102). In our study the correlation coefficient was .571, which is medium positive correlation. Thus we can say that persons who feel a high level of resilience also feel a high level of perceived social support.

6. Conclusion

Based on our study we can assume that persons with ulcerous colitis perceive their resilience and social support on a very good level. We made a leaflet focused on ten pieces of advice to develop mental resilience in persons with ulcerous colitis.

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