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Attachment Style in Parents of Children with Chronic Gastrointestinal Disease

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A B S T R A C T

Attachment is a point of interest in psychosomatic research since it influences a wide array of biopsychosocial phenomena. Data from literature highlights the role of this concept in the context of Inflammatory Bowel disease (IBD), still, there is a lack of data regarding attachment among parents of children with chronic gastrointestinal diseases. The main hypothesis for the current study is that parents of children with IBD will have a more insecure attachment than parents of children with celiac disease (CD) and parents of healthy children. The second hypothesis is that insecure attachment among parents of sick children will be associated with lower parental quality of life (QoL). 46 parents of children with IBD, 42 parents of children with CD and 43 parents of healthy children completed the validated modification of the Brennan's Experiences in Close Relationship Inventory. Results were categorized as secure and insecure attachment. In order to assess parental QoL, the WHOQOL-BREF questionnaire was used. The Total QoL was calculated as a sum of all domain items. Secure attachment was found in 45.7% parents of children with IBD, in 35.7% parents of children with CD and in 32.6% parents of healthy children. Surprisingly, the lowest rate of secure attachment was found in parents of healthy children. However, significant differences among groups do not exist. For all groups of parents the attachment style is associated with Total QoL, although only among parents of children with IBD, the secure attachment independently and significantly predicts higher parental Total QoL. According to results, we might say that parental attachment style does not have a role that exclusively belongs in the context of paediatric chronic gastrointestinal diseases. However, parents of children with IBD who have insecure attachment represent target group for psychosocial support in order to improve their QoL.

Key words*: object attachment, psychosomatic medicine, child, parents, inflammatory bowel disease, celiac disease*

Introduction

Acute, short-term illnesses are very often present in children, however some children develop chronic illnesses[1]. Among chronic gastrointestinal disorders we may find inflammatory bowel disease (IBD) as well as Celiac disease (CD). IBD is a generic term used to describe a group of chronic inflammatory disorders of the gastrointestinal tract, among which Crohn's disease and ulcerative colitis are the most common ones[2]. Celiac disease or gluten enteropathy is a chronic autoimmune disease of the gastrointestinal system[3]. While for CD individuals are genetically predisposed[3], on the other hand, the etiology of IBD is unknown[2]. Historically, Crohn's disease and ulcerative colitis were considered psychosomatic diseases[4] and among possible factors that may influence IBD, the concept of attachment should be considered.

Attachment is a measure of the affective tie[5], it is showed as a factor that influences broad spectra of biopsychosocial phenomena, and thus it becomes an important focus of the psychosomatic research[6]. In the context of IBD disturbed mothers-child attachment is detected as a possible pathogenic cause in a not negligible percent of IBD cases[7]. However, there are a limited number of studies on this topic. One that caught our interest was a study that, although it used a small number of participants, found an insecure attachment style in 86% of

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mothers of children with IBD[5]. Although it is an imposing rate, since the study had no control group or second group of parents who have children with other disease, this results should be take in along with study limitations.

The four attachment styles can be determined according to the level of anxiety and avoidance[8]. One is labelled as a secure attachment, while insecure attachment includes preoccupied, fearful and dismissing style. Attachment style is a typical pattern of how a person relates to others in close relationships[9]. Preoccupied attachment style represents positive model of others and negative about oneself while dismissing represents positive model of oneself and negative model of others. Secure attachment has positive model of others and oneself while fearful has both model negative. The attachment security allows adults to have a secure base, caring and assures quality of the family relationships[10]. Harmonious family relationships are important since they make one of the basic preconditions for a normal development of the child[11]. Since attachment security allows adults to serve as secure bases[10] it may play an even more important factor among parents who have a child with chronic disease. Thus, increased emotional needs, which child's chronic disease might bring, are addressed in the case of insecure attachment towards the relationship that is already vulnerable[5]. Therefore, these should be taken into account when approaching different phenomena, as well as in the process of the patient management care. Among dimensions that might also be measured, in order to comprehend broader aspects of health, is the concept named quality of life (QoL). The questionnaire WHOQOL--BREF might be used to measure QoL, which is conceptualized as a perception of one's own position in life in relation to goals, expectations, standards and concerns in four domains (physical and psychological health, social relationship and environment)[12].

As we mentioned, the insecure attachment was found in a large proportion among mothers of children with IBD, while in the area of CD there is a lack of data regarding its connections with particular attachment styles. According to the genetic etiology for CD, those connections are not expected. Taking into consideration results of a high prevalence of insecure attachment style among mothers of children with IBD[5], and according to the different etiology of CD and IBD, we hypotheses that parents of children with IBD will have a more insecure attachment style than parents of children with CD or parents of healthy children. According to higher demands that child's chronic disease might bring to parents, our second hypothesis is that insecure attachment style will predict lower parental quality of life (QoL) among parents of children with chronic gastrointestinal disorders.

Participants and Methods

Participants were parents of children with IBD, parents of children with CD and parents of healthy children. Children were aged 7–18 years. All subjects were from families where both parents live together. Divorced or separated parents were not included since living in a single-parent family might expose the child to influences from a much wider context of psychosocial situations[13]. The other exclusion criteria were parental life treating health condition and refusing to participate in the study. The Ethics Committee of the Hospital approved the study protocol. All the participants signed an informed consent. In all children with chronic gastrointestinal disease, time since diagnosis was at least one year. Parents were successively recruited during 2010, on scheduled visits at the University Hospital Centre Rijeka. Disease activity (DA) for IBD was calculated by a paediatrician according to the use of Paediatric Crohn disease activity index (PCDAI)[14] and Paediatric Ulcerative colitis activity index (PUCAI)[15]. Parents of healthy children were randomly recruited at regional schools.

The modified version of the Brennan's Experiences in Close Relationship Inventory was used in order to assess attachment style in parents[16]. This inventory was created for relations toward romantic partners, but this modified version is allowed to be used to access attachment to the family members too. Following the author's instructions, first reverse coded items were recoded and computed into subscales: odd items were computed into Avoidance subscale and even items into Anxiety subscale. Based on the intensity of each dimension combined, the four-attachment style is determined. Secure (low anxiety and low avoidance), dismissing (low anxiety and high avoidance), preoccupied (high anxiety and low avoidance) and fearful (high anxiety and high avoidance)[8]. For the purpose of further analysis, results were categorized in two groups; first represents a secure attachment and the second group insecure attachment (preoccupied, fearful and dismissing). Only those participants who fulfilled all items on the questionnaire were included in the analysis.

Croatian version of the WHOQOL-BREF was used to assess parental QoL[17]. It is composed of 26 items and divided in 4 domains (physical health, psychological health, social relationship and environment). Among those domains, the questionnaire also has two items that represent Overall QoL and the estimation of the General Health. The Total QoL was calculated as a sum of all domain items on WHOQOL-BREF.

Statistical analysis was performed using SPSS 11.5.0. (SPSS Inc., 2002). In the modified version of the Brennan's Experiences in Close Relationship, as well as for the WHOQOL-BREF, distribution of results for each subscale, including variability and data range, was examined. Cronbach alpha was used to show the level of internal consistency of the subscales. Data for age of parents and children, as well as disease duration are noted as categorical variables, so descriptive parameters that presume continuous variables, such as M and SD, are not available. Only correlation coefficients were calculated (with level of statistical significance). Spearman coefficient of correlation (two continuous variables), eta coeffi-

cient of correlation (one categorical and one continuous), and chi-square (two categorical variables) were used as measures of association between variables. MANOVA and ANOVA were calculated to examine differences between three groups in dependent variables (domains of QoL and total QoL). Statistically significant were considered those variables that had correlation coefficient with QoL at $p<0.05$. Only those variables were considered potential predictors of QoL so they were included in the hierarchical regression in two steps.

Results

Participants were 155 parents and since 24 participants did not fulfil all items on questionnaires, they were excluded from the analysis. The final sample consisted of 46 parents of children with IBD (21 fathers and 25 mothers), 42 parents of children with CD (16 fathers and 26 mothers) and 43 parents of healthy children (16 fathers and 27 mothers). Parents of 85 children (boys n=40 and girls n=45), aged 7–18 years, were included in analysis. Majority of the children (n=46) had both parents included. The number of children in each group was in IBD n=25, in CD n=28 and n= 32 in the group of healthy children. 52 (39.7%) parents were aged 40 and less, while 79 (60.3%) parents has 41 year or more. The majority of parents in each group have completed an elementary or high school (in total sample 80.8%), while others have higher education level. Majority of parents in each group were employed (in total sample 84%), while others were unemployed. Significant differences among groups were not found in the variables of the parental sex, age, educational level and employment status, as well as in child's age and sex. However, groups of parents of children with chronic gastrointestinal disease have different distributions of the child's disease duration; 43.5% child in IBD group had diagnosis from 1 to 3 years while 17.4% had diagnosis for longer than 8 years. Among children with CD 31% had diagnosis from 1 to 3 years and 42.9% had CD for longer than 8 years. All children with CD were in remission, following a gluten-free diet and without symptoms. Among children with IBD, the majority (72.1%) was in remission and the rest of them had a different degree of active disease.

In the modified version of the Brennan's Experiences in Close Relationship Inventory, Cronbach alpha for the avoidance dimension was $\alpha=0.66$ while for the anxiety dimension was $\alpha=0.81$. Distribution of the parental attachment style, according to the presence of chronic gastrointestinal disorders in children, is shown in Table 1. Chi- -square test found no differences among groups ($\chi^2= 5.496$, ss=6, $p=0.482$) according to the four attachment styles or when results were grouped as secure or insecure attachment ($\chi^2=1.772$, ss=2, $p=0.412$). The percentages of parents, according to secure or insecure attachment style and duration of illness, were not statistically significant ($\chi^2=2.848$, ss=3, $p=0.416$) as well as not significant difference was found in relation to DA ($\chi^2=0.582$, ss=1, $p=0.531$). Significant difference between child's age and parental attachment style was not found in neither one of the 4 groups; among parents of healthy children ($\chi^2= 0.015$, ss=1, $p=0.903$); parents of children with chronic gastrointestinal disease ($\chi^2=0.752$, ss=1, $p=0.386$); separately among parents of children with IBD ($\chi^2=0.545$, ss=1, $p=0.460$) and among parents of children with CD ($\chi^2=0.036$, ss=1, $p=0.850$).

Measures of associations between parental attachment styles and parental QoL domains are shown in Table 2. Among the anxiety and avoidance scale, associations between anxiety and Overall QoL were found only in parents of children with CD. Better Overall QoL have parents of children with CD who scored lower on the anxiety scale. Attachment style was associated with Total QoL in all 3 groups. Parents with a secure attachment have better Total QoL. Significant correlations were found for parents of children with IBD ($r=0.40$, $p<0.05$); parents of children with CD ($r=0.59$, $p<0.05$) and for parents of healthy children ($r=0.55$, $p<0.05$).

In order to assess which percentage of the Total QoL explains each of the variable such as sociodemografic variable, disease parameters or attachment style, a serial of hierarchic regressions analysis were taken separately for each group of participants. In all 3 series, the dependent criteria were parental Total QoL. As variables that predict it, only those that were significantly connected

TABLE 1
NUMBER AND PERCENTAGE OF THE PARTICIPANTS ACCORDING TO THE PARENTAL ATTACHMENT STYLE AND PRESENCE OF THE DISEASE IN THEIR CHILDREN

Attachment	Children's diagnosis					
	None (healthy)		IBD		Celiac disease	
	N	(%)	N	(%)	N	(%)
Secure	14	(32.6)	21	(45.7)	15	(35.7)
Insecure total	29	(67.4)	25	(54.3)	27	(64,3)
Preoccupied	10	(23.3)	5	(10.9)	8	(19.0)
Fearful	12	(27.9)	16	(34.8)	11	(26.2)
Dismissing	7	(16.3)	4	(8.7)	8	(19.0)

IBD – Inflammatory bowel disease

TABLE 2
MEASURES OF ASSOCIATION BETWEEN PARENTAL ATTACHMENTS WITH RESULTS ON WHOQOL-BREF

	Physical health	Psychological health	Social relationships	Environment	Overall QOL	Total QOL
Parents of children with IBD						
Attachment style	0.26	0.39	0.24	0.44	0.45	0.40*
Avoidance	–0.15	–0.24	–0.09	–0.20	–0.09	0.14
Anxiety	–0.08	–0.22	–0.26	–0.15	–0.09	0.08
Parents of children with celiac disease						
Attachment style	0.35	0.52	0.66	0.60	0.60	0.59*
Avoidance	–0.19	–0.15	–0.09	–0.18	–0.19	0.02
Anxiety	–0.28	–0.48**	–0.58**	–0.53**	–0.44**	–0.21
Parents of healthy children						
Attachment style	0.58*	0.57*	0.32	0.48	0.36	0.55*
Avoidance	–0.45**	–0.46**	–0.01	–0.37**	–0.23	–0.14
Anxiety	–0.49**	–0.40**	–0.39**	–0.44**	–0.23	–0.13

*p<0.05, **p<0.01, QOL – quality of life, IBD – inflammatory bowel disease

with the criteria were taken into account. Sociodemografic variables were included first, and later on attachment categories. The attachment style was independently and significantly a predictor of the parental Total QoL only in the group of parents with children with IBD, in the way that secure attachment predicts better parental Total QoL.

Discussion

The main hypothesis that in the group of parents with children with IBD more insecure attachment style will be found, was not confirmed. Since differences in parental attachment among our groups were not found to be significant, we will discuss our results that are not in line with the data from literature. Thus, by addressing some possible explanations we might better understand what might have influenced this.

The first reason might be due to differences in the instruments that were used in order to assess the parental attachment. In a study, which emphasises a significant proportion of the insecure maternal attachment, Adult attachment interview was used[5]. However, in our study self-reported questionnaire, in which participants rate their attitudes in the context of family members, were applied. The other explanation for the fact that we did not confirm our main hypothesis might be due to the inclusion of parents of both sexes, while in previous study only maternal attachment was assessed[5]. Since originally, psychoanalytically derived hypothesis, focused on the presence of a symbiotic relationship between the individual affected with IBD and his or her mother[18], the presence of fathers in our sample might conceal the results.

Both studies were cross-sectional. However, the main distinguish is in the period since the child was diagnosed. While previous study was performed at the time when IBD in children has been diagnosed, in our case only parents with child diagnosed for more than a year have been involved. This point might help to elucidate the differences in study results according to parental attachment since attachment style is a quite stable, but not rigid, personality trait[9]. Thus, it may shift under the influence of some life-experiences. Applying this into the context of possible explanations for differences in results of these two studies, we may propose that insecure parental attachment might preceded diagnosis of IBD and, as results of the child being diagnosed with chronic disease, might shift to a more stable form of the secure parental attachment. In the context of family dynamic system, by applying a future longitudinal study, we may observe if the child's illness does have effect on parental attachment style or does parental attachment influence child's health. In such study, parental attachment style might be assessed at the time of child's diagnosis and in subsequent years, in order to identify directions and the degree to which parental attachment style may shift in the context of the child chronic disease. This may underline the importance of the need for expanding the medical theory and practices, which currently emphasise narrow biomedical approach, to that approach which will comprehend psychological and social factors as well[19].

The second hypothesis of our study regarding association between parental attachment style and parental QoL was only partially confirmed. Although secure parental attachment was indeed connected to a better parental Total QoL, this association was regardless to the presence of the child's disease. However, after a serial of regression analysis, parental secure attachment independently and significantly predicts better Total QoL only among parents of children with IBD. Since the dif-

ferences between CD and IBD groups were in the disease activity and by different nature of the diseases itself, with more insecurity of the IBD relapse, these results are not surprising. The attachment security represents an emotional resource for the individual[10], and a person with secure attachment is comfortable turning to others for help[9]. Therefore, and based on the results of this study, we might recommend that parents of children with IBD, especially those who have insecure attachment style, might benefit from psychosocial programs since secure base and help from others are even more important issues when parents have to deal with demands of the child's chronic disease.

Limitations

The main limitation to our study might be due to a small number of participants in each group. According to that, and since the hypothesis were not conceptualized in that way, the differences among parents based on their sex were not calculated. Due to the participants being only parents from the completely family, results may not be applied on single parents. In further, the study was cross-sectional and thus not allowing us exploration of influences on attachment style in timeframe and its possible shifting over time of parenting or during time since child diagnosis was established. Since diagnosis in our study must last at least one year, findings do not represent parental attachment at the time of newly diagnosed child's disease that might influence how ones relates to others. Possible limitations might also be due to the use of only one questionnaire and to its type used in this study. Regardless all limitations, this study brings some new lights in the context of attachment theory in the framework of paediatric chronic gastrointestinal disorders, especially IBD, and therefore should be seen as one whose results might have influence on the design of future longitudinal researches that will address many of these issues which represent a limitation in our study. It will also be interesting, in future study, to measure both parental and children attachment in the same time.

Conclusions

According to our results, we might say that parental attachment style does not have a role that exclusively belongs into the contexts of paediatric chronic gastrointestinal disease. The presence neither of IBD or CD in children was connected with more prevalent particular attachment style, as well as there were no differences in attachment style and parameters of chronic gastrointestinal disorders. However, the parental attachment style was associated with parental Total QoL regardless of the disease presence and more over, among the parents of children with IBD insecure attachment independently and significantly predicts lower Total QoL. Thus, we might say that parents of children with chronic gastrointestinal disorders, especially parents of children with IBD, represent a target group for the psychosocial support in order to improve their QoL.

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STILOVI PRIVRŽENOSTI U RODITELJA DJECE S KRONIČNIM BOLESTIMA GASTROINTESTINALNOG SUSTAVA

S A Ž E T A K

Privrženost predstavlja značajnu odrednicu istraživanja u psihosomatskoj medicini s obzirom da utječe na širok spektar različitih biopsihosocijalnih fenomena. Podaci iz literature govore o ulozi koncepta privrženosti u okviru upalnih bolesti crijeva no malo je podataka o privrženosti roditelja djece koja boluju od kroničnih bolesti gastrointestinalnog sustava. Glavna hipoteza ovog istraživanja je da će u roditelja djece s upalnim bolestima crijeva biti više nesigurne privrženosti nego u roditelja djece s celijakijom i roditelja zdrave djece. Druga hipoteza je da će nesigurna privrženost u roditelja bolesne djece biti povezana s njihovom lošijom kvalitetom života. Ispitanici su roditelji djece starosti 7–18 godina. Ukupno je bilo 131 ispitanika; 46 roditelja djece s upalnim bolestima crijeva; 42 roditelja djece s celijakijom i 43 roditelja zdrave djece koji su ispunili validiran, skraćeni upitnik za mjerenje privrženosti. Temeljem rezultata na skalama upitnika, dobivena su 4 stila privrženosti roditelja koja su grupirana u dvije kategorije; sigurna i nesigurna privrženost. Za mjerenje kvalitete života roditelja upotrebljen je WHOQOL-BREF upitnik. Ukupna kvaliteta života izračunata je zbrojem svih čestica domena. Sigurna privrženost je pronađena u 45,7% roditelja djece s upalnim bolestima crijeva, 35,7% roditelja djece s celijakijom te 32,6% roditelja zdrave djece. U svim grupama sigurna je privrženost bila povezana s boljom ukupnom kvalitetom života, no samostalno i nezavisno je predviđala bolju kvalitetu života jedino u roditelja djece s upalnim bolestima crijeva. Temeljem rezultata ove studije možemo reći da stil privrženosti roditelja nema ulogu koja specifično pripada kontekstu pedijatrijskih kroničnih bolesti. Međutim, roditelji djece s upalnim bolestima crijeva koji imaju nesigurnu privrženost mogu predstavljati ciljnu skupinu za programe psihosocijalne podrške u cilju poboljšanja kvalitete života.