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REPRESENTATIONS OF CHRONIC ILLNESS IN PATIENTS AND THEIR PARTNERS

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SUMMARY

Background: *Representations of chronic illness have a strong influence on quality of life and coping. Illness-related believes and attitudes depend on the medical condition itself (including illness type and duration), as well as individual and relational variables. Couples affected by chronic illness develop shared illness representations, which support the patients' adaptation process. Our study was focused on illness representations in five patient groups, considering variables of illness duration and relationship satisfaction.*

Subjects and methods: *The Illness Perception Questionnaire was administered to 154 subjects (79 male 75 femaile) and their partners in five illness groups (average illness duration 6.9 years). Marital satisfaction and similarity of illness representations as well as accuracy of estimates about the partner's illness representations were studied.*

Results: *The five patient groups significantly differed in their illness representations. In groups with longer illness duration, illness was perceived as chronical and more symptoms were experienced. Similarity of illness perceptions between subjects and their partners was highest for the asthma and lung cancer group, and spouses' scores differed most for the dimension of coherence. Marital satisfaction was related to similarity of illness perceptions, and more accurate estimates of the partners' perception.*

Conclusions: *Marital satisfaction has a remarkable influence on illness representation similarity and accuracy of the perception about the partner's illness representations. Patients and their partners are more likely to form similar illness representations if symptoms are clearly observable as in the case of asthma or lung cancer. The dimension of coherence has significant within-person variations, as illness usually has a deeply personal meaning to both the patients and their partners.*

Key words: *chronic illness - quality of life - asthma - lung cancer*

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INTRODUCTION

Illness-related believes are important predictors of quality of life and coping across a wide range of illnesses (Alsen et al. 2010, Tiemensma et al. 2011, Wu et al. 2013). According to the Common-Sense Model of Illness Representations (Leventhal et al. 1980, 1992) patients develop a dynamic set of cognitive and emotional representations about their condition which guides them in their short-term and long-term management of the illness (Leventhal et al. 2016). Cognitive illness representations refer to identity ("labels" and symptoms), cause (and causal attributions), consequences (social and physical), timeline (believes regarding the process of the condition) and control-related believes. Emotional representations include emotional reactions to the illness such as fear, anger, guilt and sadness (Leventhal et al. 2016). More negative evaluations of illness predictability and severity result in worse physical and psychological health (Hickman & Douglas 2010, Hagger & Koch 2017, Richardson et al. 2017). Illness representations can be shaped by additional factors, such as culture, ethnic background (Karasz 2005, Liddell et al. 2005), demographical variables (Grace et al. 2005, Aalto et al. 2005), parental attitudes (Crane-Martin 2002), social influences from caregivers and relatives (Barrowclough et al. 2001, Lobban et al. 2003) and illness factors, such as duration of illness (Leventhal et al. 1985, Aalto et al. 2005).

Patients in long-term relationships rely on their partner as the primary caregiver and a remarkable source of emotional support. The significant other also develops his or her own personal representations of the illness (Heijmans et al. 1999), that becomes an important external information source to the patient (Leventhal et al. 1980). Illness representations of caregivers influence both the patient's and the caregivers' own well-being (Searle et al. 2007, Karademas & Gianusi 2013, Dimitraki & Karademas 2014). Partners' attitudes toward illness may or may not be similar to subjects' illness perceptions; yet the couple may gradually form a common perspective of the condition which in turn may result in collaborative coping efforts (Bodenmann 2005, Berg & Upchurch 2007. Badr et al. 2010). Moreover, similarity or difference in patients' and partners illness representations may impact the patient's illness behavior and well-being (Benyamini et al. 2007, Figueiras & Weinman 2003, Sterba et al. 2008). If illness representations within the couple diverge, and partners perceive chronic illness as less severe, they may be overly critical and less supportive (Benyamini et al. 2007). Disagreement about illness is generally associated with worse adjustment to illness for both spouses (Merz et al. 2011). In contrast, similarity of opinions correlates negatively with psychological symptoms in both partners (Karademas & Giannousi 2013). When the couple shares the same view of the illness as being coherent, predictable and manageable, patients report using less wishful thinking and palliative coping, and more instrumental strategies (Karademas et al. 2010). As illness perceptions vary with time, longitudinal research has documented interdependence in mood variables among patient-caregiver dyads in different stages of illness (Hagedoorn et al. 2008). Emotional well-being of patients and partners may improve or deteriorate parallelly with the changes in the patients' status not only because of common stressors, but as a result of emotional interdependence in the couple as a system (Hagedoorn et al. 2008), and emotional contagion effects (Cook & Kenny 2005).

Our study has focused primarily on differences in representations of chronic health conditions of respiretory and cardiovascular illness groups. We have simultaneously addressed individual and couple-level representations of different health conditions, to provide a comprehensive picture of the burdens associated with these medical problems within a relational perspective. Better understanding of individual and dyadic coping is a crucial aspect of support provided to the patients in their adaptation to illness, and can contribute to elaboration of intervention initiatives.

SUBJECTS AND METHODS

Subjects

The sample consisted of 154 patients, 79 male and 75 female subjects and their spouses (79 females and 75 males). Patients were selected from 5 groups: asthma bronchiale (18), lung cancer (14), hypertension (47), myocardial infarction (42), and other cardiovascular diagnosis (33, primarily bypass patients). Ethical approval of the present study was granted by the Ethical Committee of Lajos Kossuth University, Institute of Psychology in Debrecen. Patients were requested to participate by the members of the medical team in two Hungarian hospitals, namely Gyula Kenézy Hospital in Debrecen, and the Cardiology and Rehabilitation Institute of the Hungarian Army in Balatonfüred. All patients were selected for study according to the following criteria: being married or living together in a committed relationship, and having a diagnosis of a chronic cardiovascular or respiratory illness. Patients living with multiple health conditions as well as couples in which both partners suffered from a similar chronic condition were excluded from participation.

The patients' mean age was 52.38 years (age range between 28 and 74), and partners' mean age was 52.56 (age range 27-80). The mean duration of the studied illnesses was 6.9 years (ranging from 4 months to 49 years). Gender and diagnosis distribution within the sample are summarized in Table 1.

Table 1. Gender distribution of the sample and number of patients in the five diagnosis groups

	Gender		Total
	Male	Female	
Hypertension	18	29	47
Infarction	30	12	42
Lung cancer	8	6	14
Asthma bronchiale	5	13	18
Other cardiovascular illness	18	15	33
Total	79	75	154

Measures

Illness perceptions of the patient. The Illness Perception Questionnaire-Revised (IPQ-R, Weinman et al. 1996, Moss-Morris et al. 2002) provides a quantitative assessment of illness representation components within Leventhal's Self-Regulatory Model (Leventhal et al. 1980) and is frequently used to study illness perceptions in chronic conditions. Its seven scales include identity (the number of symptoms identified as part of the disorder – 14 items), timeline, (the expected course of the disorder – acute/ chronic or cyclical – 10 items), consequences (how the illness would affect the patient's life – 6 items), personal and treatment control (the extent to which the illness would be controllable by the patient or the treatment – 11 items), causes (the patient's attributions as to what had led to or precipitated the illness – psychological factors, risk factors, immune problems or accident/chance – 18 items), emotional representations (how the patient responded to the illness emotionally – 6 items), and illness coherence (how structured view the patient had of the medical problem – 5 items). Respondents indicate their answers on a five-point Likert type scales (1=strongly disagree, to 5=strongly agree). In the present study, the Hungarian version of this measure was used, which has adequate reliability and validity indices. (Data of the 'causes' scale were not included in the present analysis).

Illness perception of the spouse. The slightly reworded version of IPQ-R was used to measure the partners' perception of the patients' illness, with the same dimensions and scoring system as in the original measure. The same approach has been adopted by a recent study of Giannousi et al. (2015).

Estimates of the partners' illness representations. We have prepared a slightly modified version of the IPQ measure which requested from the patients to provide an estimate of the partner's illness representations. The instruction for this measure was: „Please answer the following items in the questionnaire the way you perceive your partner's responses would be. Please rate your estimates without discussing the items with your partner. This measure was tested for internal consistency on a small pilot sample before administration. In the present study, all scales having adequate Cronbach's alpha values, ranging from 0.79 to 0.88.

From the latter measure, we have obtained scores indicating the differences between the partner's perceived and real attitude toward illness (perception accuracy indices).

Relationship satisfaction. Marital satisfaction was measured by the Relationship Assessment Scale (RAS) by Hendrick (1988). This instrument is a short 7-item inventory designed to measure relationship satisfaction on 5-point Likert scales.

Additionally, demographical data (age, education, gender, marital status) and data about duration of illness were collected.

Procedure

Patients as well as their partners were requested to fill a battery of questionnaires by a research psychologist during outpatient contacts with the patients' cardiologist, pulmonologist or oncologist. Questionnaire administration was performed under confidential and controlled circumstances, with only the research assistant being present, and providing help upon request.

Data analysis

Patients' data were categorized into four groups by illness duration: (1) initial phase, 0-1 year (N=23); (2) 2-7 years (N=85); (3) 8-16 years (N=31); (4) > 17 years (N=38). For marital satisfaction, according to the meaning of scores and distribution of data, groups with high, moderate and low satisfaction were distinguished.

Representation similarity and difference was operationalized as difference in IPQ dimension scores of patients and their partners. Perception accuracy was operationalized as the difference between the subjects' score on the IPQ dimensions and the partner's estimate about his/her opinion on the same dimensions.

In our analyses, illness representations, similarity and perception accuracy scores were compared by illness type, illness duration and marital satisfaction Group comparisons were produced by ANOVAs and Kruskal-Wallis tests within the SPSS 14.0 software.

Based on the literature reviewed so far, hypotheses for the current study were as follows:

- We have expected differences between representations of different illnesses in the patients;
- We have hypothesized differences of the IPQ scores between illness duration groups;
- We have expected differences in representations of particular illness types in the patients and their partners;
- We suggest that marital satisfaction would be related to increased similarity in illness representations and more accurate estimates about the partner's illness representations.

RESULTS

Illness representations

Patients in the five groups significantly differed in their illness representations by timeline, consequences, coherence and personal control (Table 2). Myocardial infarction was perceived as having the shortest timeline, and asthma as the most lasting condition. Cyclical timeline with recurring health problems was reported primarily for asthma while myocardial infarction was generally perceived as a more-or-less single event; the other illness groups scored mid-range on the 'cyclical' dimension. Subjects with hypertension and myocardial infarction perceived the strongest personal control over the illness; and in contrast, lung cancer patients reported having much lower control. Regarding treatment control, patients with hypertension recorded the least positive ratings, while subjects with myocardial infarction and lung cancer, put much more trust in their medical treatment (the latter difference being non-significant).

An interesting finding was, that cardiovascular patients – with the exception of hypertension – also scored higher on treatment control and lower on personal control. Additionally, they experienced lower emotional distress and a remarkable level of coherence. This implies that the forementioned patient groups might feel more actively involved in management of their problem. Interestingly, in the asthma group, personal sense of control was low, patients reported moderate distress and a tendency for illness coherence.

Comparing the four illness duration groups, significant differences were found for three illness representation dimensions: timeline (acute/chronic and cyclical), treatment control and identity (Table 3). As expected, patients with shorter illness history perceived significantly fewer symptoms. Illness timeline (its chronic or recurring nature) was estimated more positively at the onset of illness; and with time, patients might have ascertained about the chronic nature of their illness. Treatment control was perceived as lowest in the group with 8-16 year illness duration, suggesting that with time, patients can be less hopeful about full recovery, and more aware of the problem's permanent nature. Emotional response to the illness was most intense in the group with recent onset as well as in patients who belonged to the group with the longest illness duration.

Similarity of illness representations

Illness representation scores of patients and their partners were mostly comparable, with some significant differences regarding personal control and illness coherence (Table 4). In asthma and lung cancer, personal control was perceived similarly by the subjects and their spouses, but remarkable differences appeared in case of hypertension and other cardiovascular illness groups. Regarding illness coherence, the biggest discrepancy between ratings was apparent between subjects with asthma and their partners, spouses having higher coherence scores. Differences were also observed in cardiovascular patients; whose partners also had higher coherence ratings.

Table 2. Illness representations of patients

Dimension rank mean)	Hyper-tension	Myocardial infarction	Lung cancer	Asthma	Other cardio-vascular	Significance level (ANOVA)
Timeline (acute/chronical)	73.51	98.43	80.93	40.89	75.06	0.01
Timeline (cyclical)	58.41	108.93	57.43	45.03	90.91	0.01
Consequences	95.80	78.31	43.89	78.44	64.15	0.01
Personal control	87.46	86.63	57.29	63.97	67.65	0.03
Treatment control	69.80	88.70	79.79	75.39	74.39	0.36
Illness coherence	85.28	86.43	42.86	75.75	70.71	0.01
Emotional representations	87.71	89.65	30.39	76.42	68.06	0.01

Table 3. Illness representations of patients in four illness duration groups

Dimension	Rank mean				Significance level
	0-1 yrs	2-7 yrs	8-16 yrs	>17 yrs	
Identity	57.80	67.48	107.27	102.93	0.01
Timeline (acute/chronic)	96.83	82.12	64.77	48.00	0.01
Timeline (cyclical)	101.54	86.28	49.34	49.10	0.01
Treatment control	102.87	78.01	60.10	71.70	0.01
Illness coherence	85.83	76.05	67.97	92.63	0.25
Emotional representations	83.61	76.60	69.98	88.77	0.51
Personal control	97.13	72.43	75.48	80.3	0.12
Consequences	80.39	74.54	86.69	70.83	0.54

Table 4. Differences between illness representations of patients and their partners

Dimension	Hyper-tension	Myocardial infarction	Lung cancer	Asthma	Other cardiovascular	Significance level (ANOVA)
Personal control	-1.5106	1.4762	-1.0714	-2.5556	1.2727	0.01
Illness coherence	1.4894	-0.9524	0.5000	0.3333	-2.2424	0.01

Table 5. Differences between illness representations of patients and their partners

Dimension	0-1 yrs	2-7 yrs	8-16 yrs	>17 yrs	Significance level (ANOVA)
Treatment control	1.39	-0.15	-1.19	-1.06	0.010
Personal control	1.21	-1.44	1.35	1.46	0.001
Illness coherence	1.65	0.94	-4.19	-1.06	0.001

Table 6. Illness representations and marital satisfaction

Dimension	Unsatisfied	Moderately satisfied	Very satisfied	Significance level (ANOVA)
Identity	80.33	61.75	88.13	0.06
Consequences	62.14	86.96	81.28	0.03
Illness coherence	65.43	91.74	74.09	0.03

With increasing duration of illness, significant differences were found between illness representations of patients and their partners for dimensions of personal control, Treatment control and illness coherence (Table 5). The aspect of treatment control was rated most positively by the patients in the initial phase of the illness (in comparison to their spouses), however, with longer illness duration, an opposite tendency appeared, partners having a more favorable attitude. Regarding personal control, patients had a generally more positive view of their illness in comparison to their spouses for all categories except the 2-7 year duration froup. There was a similar tendency for the index of illness coherence, patients having lower scores in groups with longer illness duration.

Marital satisfaction significantly predicted some of the illness representation dimensions (Table 6) including identity, consequences and coherence. In general, illness representations were more positive in patients who were at least moderately satisfied with their marriages, with identity as an exception. For this latter aspect, moderately satisfied patients were less likely to match their symptoms to the illness label. Higher marital satisfaction scores predicted increasing similarity of illness representations in patients and their partners regarding personal control, and illness coherence (Table 7).

Table 7. Differences between illness representations of patients and their partners

Dimension	Unsatisfied	Moderately satisfied	Very satisfied	Significance level (ANOVA)
Personal control	-2.60	0.23	0.82	0.001
Illness coherence	0.28	0.87	-1.39	0.005

Table 8. Accuracy of estimates about the caregiver's illness representation

Dimension	Hypertension	Myocardial infarction	Lung cancer	Asthma	Other cardio-vascular	Significance level (ANOVA)
Illness coherence	2.23	-1.35	0.78	2.94	-0.6667	0.001
Emotional representation	-2.48	-0.83	-0.42	0.33	-0.8182	0.040

Table 9. Accuracy of estimates about illness representations by illness duration

Dimension	0-1 yrs	2-7 yrs	8-16 yrs	>17 yrs	Significance level (ANOVA)
Partner's illness					
Illness coherence	1.26	0.70	-2.38	-0.33	0.03
Patients' illness					
Treatment control	-1.86	-0.52	-0.29	-1.00	0.04
Personal control	-1.52	0.70	-1.00	-1.80	0.02
Illness coherence	-1.30	-0.50	4.61	1.33	0.001

Table 10. Accuracy of illness representation estimates by marital satisfaction

Dimension	Unsatisfied	Moderately satisfied	Very satisfied	Significance level (ANOVA)
In the patients				
Illness coherence	0.22	0.98	-0.80	0.020
Differences in accuracy of illness representation estimates in caregivers				
Treatment control	0.11	-1.00	-1.08	0.001
Illness coherence	0.25	-0.52	1.89	0.005

Accuracy of estimates about the partners' illness representations

We have found differences in accuracy estimates between the five illness groups, which were significant for the dimensions of illness coherence and emotional representation (Table 8). Hypertension and asthma patients have thus perceived their partners having higher illness coherence than their real opinion was (positive bias) and infarction patients estimated their spouses to have weaker coherence believes compared to their own judgment. Patients generally estimated their partners having more distressful emotions about the medical problem compared to the partner's actual reports.

Surprisingly, partners' estimates about the patients proved to be very accurate, with no significant differences from self-report scores of the patients in any of the illness groups.

In groups with longer illness duration, partners considered the patients to have a very clear understanding of their illness, in contrast to patients themselves, who provided more uncertain coherence ratings; suggesting a positive bias (Table 9). Patients perceived the partners' illness representations most accurately in the illness duration group of 2-7 years. A shorter or longer illness period resulted in decreased representation accuracy. Our hypothesis regarding the partner's increasing attunement to the patient's illness believes through a lasting time period thus, cannot be supported; for some aspects even an opposite tendency was found.

Lower marital satisfaction was related to increasing inaccuracy of illness representation estimates. For patients, lower satisfaction was associated with inaccuracy of estimates regarding illness coherence, and for partners, with inaccurate estimates regarding both treatment control and illness coherence (Table 10).

DISCUSSION

Our study was focused on differences in illness representations of chronically ill patients and their partners in different illness groups. We have also studied accuracy of estimates about the partner's illness perceptions in both patients and their caregivers. Illness type, illness duration and marital satisfaction were considered as background variables.

Based on our data we can conclude that illness representations have significant variations depending on the type of illness (Heid et al. 2018). Subjects with hypertension and myocardial infarction perceive themselves to be in personal control over their illness; in contrast, lung cancer patients report low personal, but high treatment control. This finding is in full accordance with data of Hopman & Rijken (2015), who reported low personal control, and firm trust in medical professionals in lung cancer patients. Our findings also match data of Hoogerwerf et al. (2012), who have found using the same measure that emotional reactions to illness can be rather weak and consequence estimates of illness can be quite positive in cancer patients as a result of denial, and unrealistic optimism. Our findings about low coherence in cancer also correspond to former studies which report low coherence with high inter-individual variations (Hoogerwerf et al. 2012, Rohani et al. 2015). Also, we must be aware that lung cancer is often discovered in later phases, limiting the patients' possibilities to form a coherent perspective of their problem. In contrast, cardiovascular patients felt higher coherence and lower distress, together with a moderate level of personal control which implies that these patients could preserve the capacity for active coping with their illness (Nur et al. 2017, Janssen et al. 2013), which in turn provides better chances for them to improve quality of life (Janssen et al. 2013). Personal control can be beneficial for adopting new forms of health behavior, which is definitely necessary for cardiovascular patients. Patients with asthma had a somewhat impaired sense of personal control, together with feelings of distress, with reasonable sense of coherence in the present study. This finding can be explained by the nature of asthma as a chronic, periodically recurring condition, with permanent need of medication, but low predictability of respiratory problems. Though asthma may imply loss of control, it has usually less fatal consequences, which sets the conditions of a long-term meaning making process, leading to higher coherence (Al-Kalemji et al. 2014).

At early stages of their illness, subjects had a more positive view of personal control, treatment control and illness coherence in comparison to their partners; who experienced illness-related changes more negatively. Being aware that cognitive system's general tendency is to maintain the same set of believes, this finding can be explained by the patients' initial tendency to deny or minimize the medical problems. Nevertheless, by continued experiences of illness related changes, a reformulation of the self, and a behavioural adaptation on different personal, interpersonal, familial, social and occupational levels may take place. With time, adaptation to chronic illness becomes a continuous process during which periodically different tasks arise both for the subject and the couple as a unit. For patients, who carry the primary illness burden, the meaning-making process is non-linear, with recurring crises of possible exhausttion and helplessness. Partners however are less immediately affected by these intermittent changes, so considering a longer illness period, there can be a higher discrepancy in illness-related attitudes between patients and their partners.

Partners' illness-related attitudes were most correctly estimated by the infarction group, and the biggest discrepancy was found between lung cancer patients and their partners, marked by higher illness coherence level for partners, and lower coherence, and supposedly high illness-related rumination for patients. This can be explained by the fact that lung cancer is generally a highly disruptive disease requiring invasive treatment and with poor prognosis. The cancer condition may produce intense emotional discomfort and raise serious existential fears in those affected; which may be hard to verbalize to the partner. Therefore, in this group some individual illness experiences can remain private and unrecognized. In the asthma group, partners had lower coherence estimates than the patients, probably due to the symptoms' episodic and fluctuating nature, which may prevent partners from establishing a stable representation of the condition. This means, that also in the asthma group patients and relatives may have slightly different illness-related concerns. In case of lung cancer, partners might worry about the possibility of losing their spouse, suffering from helplessness, not being able to master the situation. In case of asthma, partners might not always have the possibility to observe the respiratory symptoms consistently, so they could even under-estimate the illness burden. For the most part, results are in line with the study of Benyamini et al. (2007) who have found that patients perceived more support when the illness was estimated as controllable, and when it was characterized by clear symptoms.

Our data also verify that illness duration might be a significant factor of illness representations for both patients and their partners. Regarding timeline believes, it was a general tendency of our patients that with longer duration they gained more and more awareness of the problem's chronic nature (Tasmoc et al. 2013, Fortenberry et al. 2018). Some of our results regarding illness duration contradicted former findings on different samples (Tasmoc et al. 2013, Fortenberry et al. 2018), as our patients did not achieve a more coherent view of their illness or increasing personal control in groups with longer illness duration, neither did they rely more strongly on treatment control; rather, results regarding the forementioned aspects were inconsistent, with most positive ratings at the onset of illness.

The present study confirmed a general concordance in illness representations for highly satisfied couples. This similarity however was most remarkable for the dimensions of illness coherence, treatment control and personal control. We can conclude that in a supportive relationship climate, the patient's illness becomes a shared problem, rather than the patient's personal issue. Dyadic illness perceptions may thus lead to more adequate, joint management of the situation, forming the known link between partner behaviors and client illness management (Johnson et al. 2013, Bodenmann 2005). Relationship satisfaction in our study was not only associated with similarity of illness representations, but also with more accurate estimates about the partner's perspective of the illness, most obvious for the aspect of coherence. In summary, our study proves once again that relationship quality may affect the client's interpretation of the partner's behavior, and the impact of couple coping behaviors on health (Martire et al. 2010).

The present findings stress the importance of existential issues in understanding the experience of chronic illness. Many of the significant results here discussed were related to the aspect of coherence, the general ability to make sense of their illness. Life threatening illness can force patients to reconsider the question of existential meaning, while facing their deepest fears (Carvers et al. 2012). This process starts from a range of grief-related symptoms (Clarke et al. 2003) followed by gradual reconstruction of personal identity to include the condition of chronic illness (Gillies & Neimeyer 2006). Meaning making can be a longtime process requiring much effort on part of the patient; with a range of negative, particularly ruminative feelings (Michael & Snyder 2005). With time, a better adjustment to loss may develop, with evolving coping efforts both on an individual and on a couple level. It seems, that during this meaning-construction process, effective and productive couple communication can be a powerful resource that provides a safe background for negotiation of conjoint illness representations, leading to more and more adequate coping efforts (Karademas et al. 2010, Salewski & Vollmann 2010).

Our study has several limitations, including disadvantages of the cross-sectional design, therefore it is difficult to determine the direction of causality between the variables. Also, demographic and illness-related variables for patients in particular illness groups were not adequately matched, and that may result in possible background effects of third variables. Therefore, the present study should be replicated on a large heterogenous sample, using complex statistical modeling methods (e.g. moderation-mediation analyses), considering the context of various individual, social and contextual factors. It would be also fruitful to include measures of illness severity and more detailed measures of relationship satisfaction in future studies. Additionally, limitations of self-reported measures apply for the Illness Representation Questionnaire; and despite adequate cultural adaptation of this scale, there is limited experience with its use in Hungary. Nevertheless, in the face of these constraints, the present findings may inspire further research of the present topic.

CONCLUSIONS

Marital satisfaction has a remarkable influence on illness representation similarity and accuracy of the perception about the partner's illness representations. Patients and their partners are more likely to form similar illness representations if symptoms are clearly observable as in the case of asthma or lung cancer. The dimension of coherence has significant within-person variations, as illness usually has a deeply personal meaning to both the patients and their partners.

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Contribution of individual authors:

All authors reviewed and discussed the manuscript draft and contributed to the final manuscript and all authors give final approval of the version to be submitted.

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