

## The Brief Illness Perception Questionnaire

Elizabeth Broadbent<sup>a,\*</sup>, Keith J. Petrie<sup>a</sup>, Jodie Main<sup>a</sup>, John Weinman<sup>b</sup>

<sup>a</sup>Department of Psychological Medicine, Faculty of Medical and Health Sciences, University of Auckland, Private Bag 92019, Auckland, New Zealand

<sup>b</sup>Health Psychology Section, Department of Psychology (at Guy's), Institute of Psychiatry, 5th floor Thomas Guy House, London Bridge, London SE1 9RT, UK

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### Abstract

**Objective:** This study evaluates the Brief Illness Perception Questionnaire (Brief IPQ), a nine-item scale designed to rapidly assess the cognitive and emotional representations of illness. **Methods:** We assessed the test–retest reliability of the scale in 132 renal outpatients. We assessed concurrent validity by comparing the Brief IPQ with the Illness Perception Questionnaire–Revised (IPQ-R) and other relevant measures in 309 asthma, 132 renal, and 119 diabetes outpatients. Predictive validity was established by examining the relationship of Brief IPQ scores to outcomes in a sample of 103 myocardial infarction (MI) patients. Discriminant validity was examined by comparing scores on the Brief IPQ between five different illness groups. **Results:** The

Brief IPQ showed good test–retest reliability and concurrent validity with relevant measures. The scale also demonstrated good predictive validity in patients recovering from MI with individual items being related to mental and physical functioning at 3 months' follow-up, cardiac rehabilitation class attendance, and speed of return to work. The discriminant validity of the Brief IPQ was supported by its ability to distinguish between different illnesses. **Conclusion:** The Brief IPQ provides a rapid assessment of illness perceptions, which could be particularly helpful in ill populations, large-scale studies, and in repeated measures research designs.

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**Keywords:** Illness perceptions; Questionnaire; Reliability; Validity; Brief IPQ; Chronic illness

### Introduction

The study of individuals' perceptions of illness stemmed from research into the communication of health threats in the 1960s. Leventhal et al. [1] developed the self-regulatory model to describe the process by which individuals respond to a perceived health threat. The model proposes that situational stimuli (such as symptoms) generate both cognitive and emotional representations of the illness or health threat. These representations are processed in parallel through three stages. The individual first forms the representation of the illness or health threat, next, they adopt behaviours to cope with this, and, lastly, they appraise the efficacy of these behaviours. The model incorporates a continuous feedback loop in which the results of the appraisal process are fed back into the formation of the illness/threat representation and the adoption of coping responses.

Early research identified five dimensions within the cognitive representation of illness: *identity*—the label the person uses to describe the illness and the symptoms they view as being part of the disease; *consequences*—the expected effects and outcome of the illness; *cause*—personal ideas about the cause of the illness; *timeline*—how long the patient believes the illness will last; and *cure or control*—the extent to which the patient believes that they can recover from or control the illness [1,2]. The emotional representation incorporates negative reactions such as fear, anger, and distress. Ongoing research over the past 30 years has demonstrated the importance of illness representations to patient behaviour [3]. Changing patients' illness perceptions has been shown to improve recovery following myocardial infarction (MI) [4], and other self-regulatory interventions in illnesses as diverse as diabetes and AIDS have also improved patient outcomes [5].

Early research investigating the content of illness representations largely involved open-ended interviews. As knowledge has grown and Leventhal's self-regulatory model

\* Corresponding author. Tel.: +64 9 3737599x84511; fax: +64 9 3737013.  
E-mail address: e.broadbent@auckland.ac.nz (E. Broadbent).

has become more widely used, more objective measures have been developed. The Illness Perception Questionnaire (IPQ) [6] is a widely used multifactorial pencil-and-paper questionnaire which assesses the five cognitive illness representations on a five-point Likert scale. A revised version of this scale, the Illness Perception Questionnaire–Revised (IPQ-R), extended the original scale by adding more items, splitting the control dimension into personal control and treatment control, and incorporating a cyclical timeline dimension, an overall comprehension of illness factor, and an emotional representation [7].

The IPQ-R has over 80 items, and in some situations such a long questionnaire is prohibitive. This is particularly the case when patients are very ill or when there is limited time available for assessment. A shorter questionnaire would be more suitable for patients who are very ill or elderly because it would be less taxing and much quicker to complete. It may also be more acceptable to those who are limited in their reading and writing ability. The shorter questionnaire offers the potential for illness perceptions to be investigated in a wider range of patient groups [8] and would be especially useful when illness perceptions are measured as only one part of a larger set of psychological constructs, in large population-based studies, and when repeated measures are taken on a frequent basis.

This research aimed not only to construct a very short and simple measure of illness perceptions, but also to construct a measure with an alternative format to the multifactorial Likert scale approach used in the IPQ and IPQ-R. The Brief Illness Perception Questionnaire (Brief IPQ) uses a single-item scale approach to assess perceptions on a continuous linear scale. This paper assesses the psychometric properties of the Brief IPQ using samples from several illness groups and investigates the value of a brief scale to assess illness perceptions.

## Method

### Scale development

The Brief IPQ has nine items and is shown in Appendix A. The items were developed by forming one question that best summarised the items contained in each subscale of the IPQ-R. The Brief IPQ therefore has eight new items plus part of the causal scale previously used in the IPQ-R. All of the items except the causal question are rated using a 0-to-10 response scale. Five of the items assess cognitive illness representations: consequences (Item 1), timeline (Item 2), personal control (Item 3), treatment control (Item 4), and identity (Item 5). Two of the items assess emotional representations: concern (Item 6) and emotions (Item 8). One item assesses illness comprehensibility (Item 7). Assessment of the causal representation is by an open-ended response item adapted from the IPQ-R, which asks patients to list the three most important causal factors in

their illness (Item 9). Responses to the causal item can be grouped into categories such as stress, lifestyle, hereditary, etc., determined by the particular illness studied, and categorical analysis can then be performed.

Like the IPQ and IPQ-R, the most general version of the Brief IPQ uses the word ‘illness’, but it is possible to replace this with the name of a particular illness such as diabetes or asthma. Similarly, the treatment control item uses the word ‘treatment’, but this can be replaced by a particular treatment such as ‘surgery’ or ‘inhaler’ if researchers are interested in a particular treatment.

### Participants

Data were collected from six illness groups to evaluate the psychometric properties of the scale: MI ( $N=103$ ), renal disease ( $N=132$ ), type 2 diabetes ( $N=119$ ), asthma ( $N=309$ ), minor illnesses (allergies, colds, headaches) ( $N=166$ ), and a group with chest pain undergoing stress-exercise testing prior to diagnosis ( $N=62$ ). The MI group was involved in a psychological intervention trial at Auckland Hospital aimed at improving recovery, and in these analyses only the control group was used. The renal, diabetes, and stress-exercise test groups were recruited from outpatient clinics at Auckland Hospital. The asthma patients were recruited from general practitioner clinics around the UK by postal questionnaire. The minor illness group was recruited from undergraduate classes at The University of Texas who were asked to recall a recent illness. Patient characteristics of these samples are presented in Table 1.

## Results

### Reliability

The test–retest reliability of the Brief IPQ was assessed in renal patients attending outpatient clinics. The first questionnaire was filled in at the clinic and then follow-up questionnaires were sent to half of the participants after 3 weeks and to the other half of the participants after 6 weeks.

Table 1  
Characteristics of patient samples used in the validation of the Brief IPQ

Illness group	<i>N</i>	Gender (% male)	Age mean (S.D.)	Length of illness mean (S.D.) years
Myocardial infarction	103	88.3	54.7 (8.1)	in hospital post-infarct
Renal disease	132	70.7	58.0 (17.4)	8.8 (13.3)
Type 2 diabetes	119	52.9	57.2 (13.2)	11.0 (11.1)
Asthma	309	41.1	39.8 (10.1)	22.3 (13.4)
Minor illnesses	166	39.8	18.4 (1.7)	
Allergies	65	53.3	18.75 (2.6)	
Colds	49	43.5	18.0 (0.5)	
Headaches	52	28.6	18.3 (0.9)	
Prediagnosis stress exercise testing	62	54.8	52.3 (11.3)	

Table 2  
Test–retest reliability of the Brief IPQ

Item	Renal sample	
	3 weeks	6 weeks
Consequences	.70**	.71**
Timeline	.67**	.73**
Personal control	.63**	.42*
Treatment control	.55**	.70**
Identity	.65**	.75**
Concern	.66**	.66**
Understanding	.48**	.61**
Emotional response	.65**	.72**

\*  $P < .01$ .

\*\*  $P < .001$ .

Pearson correlations demonstrate that the items have good test–retest reliability over both time periods (see Table 2).

### Concurrent validity

#### Illness Perception Questionnaire–Revised

To assess the concurrent validity of the Brief IPQ, we asked patients in the renal, diabetes, and asthma samples to complete both the Brief IPQ and IPQ-R (the questionnaires were presented in alternate order between patients). The correlations between the scales are presented in Table 3 and show that the equivalent scales of the Brief IPQ and the IPQ-R are appropriately correlated.

To establish the validity of the causal item, patients' answers to the Brief IPQ were compared with the causal factors they endorsed in the IPQ-R list. The top four rated causes of asthma in the Brief IPQ were hereditary, respiratory virus, pollution, and allergies. These same answers were the most commonly endorsed causes of asthma in the IPQ-R (except allergies because it was not included in the IPQ-R). Of all causes given in response to the Brief IPQ, 75% could be categorised within the 20 causal factors listed in the asthma IPQ-R. In the renal sample, the top four rated causes in the Brief IPQ were another medical condition or medication for it (e.g., lupus SLE or reaction to arthritis medication), diet, diabetes, and chance. These same answers were the highest rated causes in the IPQ-R (except

other medical conditions or medication for them because it was not included in the IPQ-R), and 82% of Brief IPQ answers could be categorised into the 21 causal items listed in the IPQ-R.

### Self-efficacy

Because the correlations between the Brief IPQ and IPQ-R personal control and treatment control subscales were comparatively low, further validity testing was performed on these dimensions. In social cognitive theory, perceived control is measured in terms of self-efficacy, which is an individual's belief or level of confidence that they can successfully perform a particular task. Previous research with diabetes patients has shown significant moderate correlations between self-efficacy and perceived control [9], and we expected to find similar correlations between the Brief IPQ personal control item and self-efficacy. We tested the association between the Brief IPQ personal control item and self-efficacy, using previously validated measures. These were the self-efficacy scales from The Knowledge, Attitude, and Self-Efficacy Asthma Questionnaire [10] and The Multidimensional Diabetes Questionnaire [11]. The Brief IPQ personal control item was significantly correlated with diabetes self-efficacy ( $r = .61$ ,  $P < .001$ ) and with asthma self-efficacy ( $r = .47$ ,  $P < .001$ ). In comparison, the IPQ-R personal control item was not significantly correlated with diabetes self-efficacy ( $r = .26$ ,  $P = .09$ ) but was significantly correlated with asthma self-efficacy ( $r = .39$ ,  $P < .001$ ).

### HbA<sub>1c</sub>

To further validate the Brief IPQ scale in type 2 diabetes patients, we tested its associations with HbA<sub>1c</sub>, an estimate of blood glucose control over the past 3 months. Higher HbA<sub>1c</sub> indicates poorer metabolic control. The closest regular blood test to the date of questionnaire completion was chosen for each patient. Previous research has found higher perceived control beliefs and self-efficacy to be related to better self-reported adherence to diet, medication, and exercise, as well as better metabolic control [9]. We therefore expected that higher personal control

Table 3  
Pearson correlations between the Brief IPQ and the IPQ-R

IPQ-R	Brief IPQ							
	Identity	Timeline	Consequences	Personal control	Treatment control	Concern	Emotional response	Coherence
Identity	.48***	.10	.46***	-.01	.01	.31***	.29***	.08
Timeline	.19***	.53***	.30***	-.18***	.06	.24***	.10*	.12*
Timeline cyclical	.34***	.01	.17***	-.03	-.02	.07	.21***	-.10*
Consequences	.40***	.18***	.62***	-.22***	-.08*	.54***	.47***	.08
Personal control	-.08	.03	-.06	.33***	.22***	.01	-.07	.14***
Treatment control	-.14***	-.08	-.18***	.34***	.32***	-.16***	-.16***	.10*
Emotional representation	.27***	.03	.42***	-.24***	-.12*	.49***	.63***	-.02
Illness coherence	-.04	.12**	-.04	.23***	.24***	-.05	-.13**	.46***

\*  $P < .05$ .

\*\*  $P < .01$ .

\*\*\*  $P < .001$ .

Table 4

Correlations between Illness Perception Scales, the Jones Asthma Morbidity Index, and the Beliefs About Medication Questionnaire (BMQ) in an asthma sample

	Jones Asthma Morbidity Index		BMQ necessity		BMQ concerns	
	Brief IPQ	IPQ-R	Brief IPQ	IPQ-R	Brief IPQ	IPQ-R
Consequences	.39***	.37***	.46***	.46***	.13*	.28***
Timeline	.02	.11	.24***	.39***	-.09	-.11
Personal control	-.18**	-.10	-.13*	-.11	-.24***	-.08
Treatment control	-.13*	-.16**	.12*	-.03	-.35***	-.33***
Identity	.42***	.28***	.34***	.26***	.08	.25***
Concern	.32***		.40***		.29***	
Understanding	-.09	-.08	.13*	.02	-.26***	-.35***
Emotional response	.25***	.32***	.34***	.34***	.26***	.35***

\*  $P < .05$ .

\*\*  $P < .01$ .

\*\*\*  $P < .001$ .

beliefs measured by the Brief IPQ would also be associated with better metabolic control. Because HbA<sub>1c</sub> was significantly correlated with the duration of diabetes ( $r = .33$ ,  $P = .001$ ), we conducted partial correlations controlling for length of illness.

The partial correlations indicate that, as hypothesised, higher personal control measured by the Brief IPQ was associated with lower HbA<sub>1c</sub>, which indicates better metabolic control ( $r = -.30$ ,  $P < .01$ ). Also in line with previous research [9], higher identity beliefs measured by the Brief IPQ were associated with poorer metabolic control ( $r = .25$ ,  $P < .05$ ). In addition, higher treatment control beliefs were associated with poorer metabolic control ( $r = .21$ ,  $P < .05$ ). There were no significant correlations with the other items. In contrast, HbA<sub>1c</sub> was not significantly correlated with the IPQ-R identity ( $r = .10$ ,  $P = .37$ ), treatment ( $r = .18$ ,  $P = .09$ ), or personal control ( $r = .02$ ,  $P = .86$ ) scales.

#### Asthma morbidity and beliefs about medication

In the asthma sample, we investigated how the Brief IPQ was related to the Jones Asthma Morbidity Index [12] and the Beliefs about Medicines Questionnaire [13]. In previous studies, we have found that illness representations are associated with medication beliefs [14] and we expected

that the Brief IPQ would display similar patterns to those found previously with the IPQ-R. We expected that poorer perceptions would be associated with higher asthma morbidity. The correlations with the Brief IPQ displayed logical relationships that confirmed these hypotheses and were similar to the correlations found with the IPQ-R (see Table 4).

#### Predictive validity

We investigated whether the Brief IPQ predicted a number of key outcomes following MI. A multivariate analysis of variance found that those who attended rehabilitation classes had a higher identity score at hospital discharge (mean = 3.37, S.E. = .47) than nonattendees (mean = 1.67, S.E. = .59) [ $F(39,1) = 5.11$ ,  $P = .03$ ]. We also found that slower return to work was significantly associated with higher concern ( $r = .43$ ;  $P = .03$ ) and with higher treatment control beliefs ( $r = .44$ ;  $P = .03$ ). The Brief IPQ at discharge also predicted cardiac anxiety measured by the Cardiac Anxiety Questionnaire [15] and quality of life measured by the Seattle Angina Questionnaire [16] and the SF-36 vitality and mental health scales [17] (only these parts of the SF-36 were used) 3 months after the MI. These associations are shown in Table 5.

Table 5

Associations between the Brief IPQ and 3-month outcomes in myocardial infarction patients

	Cardiac Anxiety Questionnaire total score	SF36		Seattle Angina Questionnaire <sup>a</sup>				
		Vitality	Mental health	Physical limitation	Angina frequency	Angina stability	Treatment satisfaction	Disease perception
Consequences	.33*	-.52***	-.58***	-.11	.09	-.13	-.20	-.27
Timeline	-.08	-.09	.10	.24	.18	-.30	-.04	.04
Personal control	-.09	.12	.11	.07	-.05	.36*	.08	.01
Treatment control	-.02	.20	.24	.17	-.21	.08	.25	.09
Identity	.36*	-.45**	-.45**	-.50***	-.36*	-.08	-.05	-.34*
Concern	.36*	-.32*	-.46**	-.36*	-.24	.29	-.04	-.38*
Understanding	-.21	.39*	.20	.25	.03	.16	.40*	.33*
Emotional response	.47**	-.21	-.45**	-.32*	-.06	.01	-.05	-.45**

<sup>a</sup> Higher scores on the Seattle Angina Questionnaire indicate better functioning.

\*  $P < .05$ .

\*\*  $P < .01$ .

\*\*\*  $P < .001$ .

Table 6  
Brief IPQ mean scores (S.D.) in diabetes, asthma, colds, prediagnosis, and MI

	Diabetes	Asthma	Colds	MI (discharge)	Prediagnosis	F
Consequences	4.7 (2.9) <sup>a</sup>	3.5 (2.3) <sup>a,b</sup>	3.8 (2.2)	4.1 (2.8)	4.6 (2.6) <sup>b</sup>	6.6*
Timeline	9.2 (1.9) <sup>a,b,c</sup>	8.8 (2.2) <sup>d,e,f</sup>	5.4 (3.1) <sup>a,d,g</sup>	7.2 (3.1) <sup>c,f,g,h</sup>	4.5 (3.0) <sup>b,e,h</sup>	67.7*
Personal control	6.7 (2.3) <sup>a,b</sup>	6.7 (2.4) <sup>c,d</sup>	4.7 (2.5) <sup>a,c,e</sup>	7.7 (1.7) <sup>e,f</sup>	5.2 (2.8) <sup>b,d,f</sup>	15.2*
Treatment control	8.0 (2.3) <sup>a,b</sup>	7.9 (2.0) <sup>c,d</sup>	5.5 (2.9) <sup>a,c,e</sup>	8.8 (1.2) <sup>e,f</sup>	5.3 (2.8) <sup>b,d,f</sup>	32.7*
Identity	4.6 (2.8) <sup>a</sup>	4.5 (2.3) <sup>b</sup>	4.5 (2.4)	3.1 (2.6) <sup>a,b,c</sup>	5.1 (2.5) <sup>c</sup>	4.7*
Concern	7.0 (3.1) <sup>a,b</sup>	4.6 (2.8) <sup>a,c,d,e</sup>	2.5 (2.5) <sup>b,c,f,g</sup>	6.2 (3.4) <sup>e,g</sup>	6.0 (3.0) <sup>d,f</sup>	28.3*
Understanding	7.9 (2.3) <sup>a,b,c</sup>	6.5 (2.6) <sup>a,d</sup>	6.4 (2.7) <sup>b</sup>	8.0 (2.2) <sup>d,e</sup>	6.1 (2.9) <sup>c,e</sup>	11.6*
Emotional response	4.3 (3.3) <sup>a</sup>	3.3 (2.9) <sup>a,b</sup>	3.8 (2.9)	4.2 (3.1)	5.2 (2.8) <sup>b</sup>	7.4*

Superscripts (a, b, etc.) denote pairs of groups different at .05 level Scheffe test.

\*  $P < .001$ .

### Discriminant validity

To assess the extent to which the Brief IPQ could distinguish between different illnesses, we compared mean scores across people with diabetes, asthma, colds, MI patients prior to discharge, and prediagnosis chest pain patients awaiting stress-exercise testing. Each of these illnesses varies in presentation, chronicity, effects on patients lives, and manageability, and the chest pain group has no formal diagnosis. We were interested in whether the Brief IPQ could identify distinct patient beliefs in these groups. A series of one-way ANOVA with Scheffe post hoc tests showed significant differences between illnesses as indicated in Table 6. The differences were in line with expectations. For example, those with chronic illnesses (asthma and diabetes) had much longer timeline perceptions than all of those in the other illness groups, and MI patients had longer timeline perceptions than the colds and prediagnosis groups. Patients with the greatest control beliefs both in terms of personal control and treatment control were the hospitalised MI patients who were at the time receiving new medical and surgical treatments as well as lifestyle advice. Patients with the lowest control beliefs were those with colds (a virus for which antibiotics are ineffective) and those who were not yet diagnosed and therefore had no information on appropriate behaviours or treatments. In terms of emotional representations, as would be expected, people with colds were the least concerned, while those with diabetes, an illness with potentially severe long-term complications, were the most concerned.

### Discussion

This paper reports the psychometric properties of a new nine-item scale, the Brief IPQ. The scale measures patients' cognitive and emotional representations of their illness including consequences, timeline, personal control, treatment control, identity, coherence, concern, emotional response, and causes. The Brief IPQ allows very simple interpretation of scores: increases in item scores represent linear increases in the dimension measured. Results indicate that the Brief IPQ has good test-retest reliability, and there are moderate to good associations between the Brief IPQ and the IPQ-R

on all the equivalent dimensions. The lowest associations are between the control dimensions. Measuring control perceptions on a single-item scale corresponds with the traditional measurement of self-efficacy strength (percentage confidence that one can perform a behaviour) [18]. Support for the validity of the Brief IPQ personal control item is provided by its association with self-efficacy. Furthermore, diabetes patients' blood glucose control was associated with the Brief IPQ personal control, treatment control, and identity items. Overall, the pattern between the Brief IPQ and the IPQ-R is fairly comparable, but perhaps in the control area the more direct and straightforward approach of the Brief IPQ may have an advantage.

The causal question in the Brief IPQ identified the same top-rating causal factors as did the IPQ-R in both asthma and renal samples. This is in line with a recent systematic review that found no differences between studies that measured experimenter-generated causal beliefs and studies that measured respondent-generated causal beliefs [19]. It is of note that not all the responses to the Brief IPQ causal question could be categorised into the items listed in the IPQ-R. This highlights the advantage of the open-ended causal question in the Brief IPQ to identify causal beliefs that are not listed, for example, allergies in the asthma population.

The method of analysing the causal dimension in the Brief IPQ is likely to depend on the aims of the study. In some cases, it may be best to analyse only the first-ranked cause, and in other cases it may be better to include all three of the causes generated by patients. Another method may be to categorise answers into groups that fit the particular illness, such as risk factors for MI that cannot be changed (e.g., hereditary, ageing) and risk factors that can be changed (e.g., diet, lack of exercise). In large datasets, we suggest that researchers first look at a sample of responses to the causal question to work out the appropriate range of causal categories. Data can be coded into these categories, which, if required, can be later collapsed into smaller clusters of causal beliefs.

The Brief IPQ demonstrated good predictive validity in patients recovering from MI. The consequences, identity, concern, understanding, and emotional response at discharge were all fairly consistently related to mental and physical functioning at 3 months' follow-up. Identity also predicted

cardiac rehabilitation class attendance, while concern and treatment beliefs predicted speed of return to work.

An interesting finding in these studies is the different pattern of correlates of personal and treatment control. Higher personal control is related to better blood glucose control, while higher treatment control is related to poorer blood glucose control in patients with type 2 diabetes. Similarly, higher treatment control beliefs predict slower return to work in the MI patients. Personal control may be reflecting internal locus of control beliefs, while treatment control may be picking up external locus of control beliefs, and this aspect may be worthy of further research.

The discriminant validity of the Brief IPQ is supported by its ability to distinguish between different illnesses. These differences show logical patterns, for example, diabetes patients have significantly longer timeline representations than people with colds, MI, or those who are prediagnosis, but have similar timeline beliefs to those with asthma, another chronic condition. Personal and treatment control perceptions and understanding are highest in hospitalised MI patients who have just received a lot of information about atherosclerosis and preventative health behaviours as well as many drugs, an angiogram, and, in some cases, surgical treatment. People who have not yet received a diagnosis for their symptoms report the highest identity, lowest understanding, shortest timeline perceptions, lowest treatment control beliefs, and highest emotional response, describing a high fear response to an unknown health threat. While there were some differences in sampling methods between patient populations, for example, postal questionnaires vs. clinical recruitment, these are unlikely to have had a major effect on perceptions and we feel that differences between groups are due to different experiences inherent to each illness rather than sampling method.

When should researchers choose to use the Brief IPQ over the IPQ-R? The IPQ-R offers advantages when researchers want to perform a more detailed analysis of the patient's identity beliefs, that is, the specific symptoms the patient associates with their illness. The IPQ-R also provides information on cyclical timeline beliefs, which are not assessed by the Brief IPQ. The IPQ-R scale may also be more sensitive to changes in illness perceptions due to the larger score range of the subscales. The main advantages offered by the Brief IPQ to researchers are brevity and speed of completion for patients, as well as the easy interpretation of scores. The Brief IPQ is most useful for ill and elderly populations who would find completion of a long questionnaire difficult. The Brief IPQ also offers advantages when researchers are already using a number of other pencil-and-paper measures but wish to also include an assessment of illness perceptions, or researchers need to assess illness perceptions repeatedly over a relatively short period, to reduce the burden on research participants.

Evidence shows the Brief IPQ to be a valid and reliable measure of illness perceptions in a variety of illness groups. Patients find the Brief IPQ easy to understand and to

complete. The results from the scale can be easily scored and are readily interpretable by researchers and clinicians. We believe the development of a brief measure will have applicability in a wide range of research settings and further stimulate research in the illness perception area.

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**Appendix A. The Brief Illness Perception Questionnaire**

For the following questions, please circle the number that best corresponds to your views:

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How much does your illness affect your life?	0	1	2	3	4	5	6	7	8	9	10
no affect at all											severely affects my life
How long do you think your illness will continue?	0	1	2	3	4	5	6	7	8	9	10
a very short time											forever
How much control do you feel you have over your illness?	0	1	2	3	4	5	6	7	8	9	10
absolutely no control											extreme amount of control
How much do you think your treatment can help your illness?	0	1	2	3	4	5	6	7	8	9	10
not at all											extremely helpful
How much do you experience symptoms from your illness?	0	1	2	3	4	5	6	7	8	9	10
no symptoms at all											many severe symptoms
How concerned are you about your illness?	0	1	2	3	4	5	6	7	8	9	10
not at all concerned											extremely concerned
How well do you feel you understand your illness?	0	1	2	3	4	5	6	7	8	9	10
don't understand at all											understand very clearly
How much does your illness affect you emotionally? (e.g. does it make you angry, scared, upset or depressed?)	0	1	2	3	4	5	6	7	8	9	10
not at all affected emotionally											extremely affected emotionally

Please list in rank-order the three most important factors that you believe caused your illness.

The most important causes for me:-

1. \_\_\_\_\_
  2. \_\_\_\_\_
  3. \_\_\_\_\_
-